# Taxonomies of case and ontologies of case

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## 1. Introduction

This chapter is an attempt to clarify the logical structure of the portion of linguistic theory that deals with the assignment of case, and in so doing, to correct some persistent misconceptions about this theoretical landscape. I should note from the outset what is meant here by *case*:

(1) case := the set of contextually-assigned syntactic features that, on a language-specific basis, can (but do not have to) be spelled out in the extended nominal projection

What the *context* referenced in (1) consists in—and in particular, whether it is structural or thematic, and, if structural, what the nature of the relevant structural conditions is—will constitute the bulk of our focus here.

One unfortunate facet of many discussions of case in generative linguistics is that pretheoretic, descriptivist *taxonomies* of case ('nominative', 'accusative', 'ergative', 'absolutive', and so on) are frequently conflated with theoretical *ontologies* of case (the ways in which case may depend on syntactic context, however many such ways there may be). As a result, one frequently comes across arguments resembling (2) (see section 4 for some concrete examples):

(2) Linguist A: "The assignment of accusative case works like *this*!"

Linguist B: "No, the assignment of accusative case works like that!"

One of my central goals in this contribution is to clarify that arguments of this sort are ill-founded. They are based on the tacit presupposition that our pretheoretic taxonomic labels for case (e.g. 'accusative') align perfectly with the ontological categories at play (case assigned by a functional head, dependent case, and so forth). As I will discuss, this presupposition is without basis and exceedingly unlikely to be correct.

Another unfortunate facet of many discussions of case in generative linguistics is its frequent association with the idea of 'nominal licensing': the idea that there is a set of general constraints on the distribution of nominals (either overt nominals, or all nominals). It is by now quite clear that, despite earlier claims to the contrary (Chomsky 1981, Vergnaud 1977), the two have nothing to do with one another—except in the trivial sense that nominal licensing, if such a thing exists, may also depend on structural context, just as (1) does. It is not at all clear that a sui generis mechanism of nominal licensing, above and beyond the independently necessary mechanism of c-selection, even exists (McFadden 2004, 2012; and as it concerns the distribution of PRO in particular, see Bobaljik & Landau 2009 and references therein). But even if it does, it cannot possibly be based on case, since it has been shown that some (if not all) instances of so-called 'nominative' and 'absolutive' consist in precisely the failure of the nominal in question to acquire a case value of any kind in the course of the derivation (Bittner & Hale 1996, Kornfilt & Preminger 2015, Preminger 2011a,

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2014). Yet the occurrence of these nominals is obviously not impeded. Thus, even if nominal licensing is a real phenomenon above and beyond c-selection (which is not at all clear), it is obviously not one that is case-related. I therefore set it aside for the purposes of the current chapter.

What I will ultimately argue is that something close (but not identical) to Marantz's (1991) configurational system is both necessary and sufficient to account for case (as defined in (1)), cross-linguistically. Furthermore, it will be shown that for the most part, the relevant modifications to Marantz's original proposal arise from independent developments in our understanding of the architecture of verb phrases and, consequently, of the putative division of heads into lexical vs. functional.

The major alternative to be discussed is case-assignment under  $\varphi$ -agreement (i.e., syntactic agreement in  $\varphi$ -features: PERSON, NUMBER, and GENDER), as proposed by Chomsky (2000, 2001). I will show that, on its own, this mode of case-assignment is inadequate to capture case in natural language; and that adding it to a configurational ontology of the kind discussed above is vacuous, as far as the expressive power of the theory is concerned. In particular, I will show that given recent developments in our understanding of the syntax of  $\varphi$ -agreement, any putative instance of case-assignment-under- $\varphi$ -agreement can be recast in configurational terms, without any change in the predictions generated. The overall conclusion will be that case-assignment under  $\varphi$ -agreement is inadequate on its own, and redundant as an accoutrement.

Before we can carry out a comparison of these models in earnest, I turn first to configurational case-assignment, and how we are to think of it from the perspective of contemporary syntactic theory.

## 2. Configurational case-assignment: the view from the 21st century

The proposal of case-assignment under  $\varphi$ -agreement was put forth in the context of a syntactic theory that is more or less current (specifically, in Chomsky's 2000, 2001 papers, which laid much of the foundation for current syntactic theory). In contrast, configurational case-assignment was formulated by Marantz (1991) in the context of a previous theoretical framework, Government & Binding (Chomsky 1981). Thus, for example, one finds *government* (by I<sup>0</sup>+V<sup>0</sup>) as an operative notion in the proposal's original formulation.

The goal of the current section is to update configurational case-assignment in light of the developments in syntactic theory that have transpired since its proposal. As we will see, this will have particularly important consequences for how the category of LEXICALLY-GOVERNED CASE in Marantz's original proposal should be conceived of now.

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Consider Marantz's (1991) disjunctive case hierarchy, given in (3):
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(3) UNMARKED CASE  $\ll$  DEPENDENT CASE  $\ll$  LEXICALLY-GOVERNED CASE [Marantz 1991]

The proposal, in brief, is as follows. For every local domain, all instances of LEXICALLY-GOVERNED CASE are assigned. Next, for every pair of as-of-yet caseless noun phrases, one of the two is assigned DEPENDENT CASE (typically, those cases which are taxonomically labeled 'accusative' or 'erga-tive'; but see Baker 2015:131–145 for a DEPENDENT CASE treatment of certain instances of 'dative',

'oblique', and 'partitive' cases). Finally, all remaining noun phrases are assigned UNMARKED CASE (typically, those cases which are taxonomically labeled 'nominative', 'absolutive', or 'genitive').<sup>1</sup>

#### 2.1. Three clarifications

Some clarifications are in order before we can properly evaluate (3) from the perspective of contemporary syntactic theory. The first concerns DEFAULT CASE, which, in Marantz's original formulation, is set up as a fourth category separate from UNMARKED CASE (see also Schütze 2001). This separation is redundant, even on the proposal's original terms. That is because the spellout system already needs to "know" the identity of the domain being spelled out. Both 'nominative' and 'genitive', per the original proposal, are the spellout of UNMARKED CASE. They differ only in the identity of the domain in which they occur: 'nominative' if the enclosing domain is a clause, and 'genitive' if the enclosing domain is itself a (separate) nominal. Given the independent need for domain-sensitive spellout of UNMARKED CASE, I see no serious obstacle to treating so-called default case as the spellout of the very same category when the enclosing domain is neither a clause nor another nominal. In other words, default case is just the *elsewhere* spellout of UNMARKED CASE.<sup>2</sup> Such a view is even more natural in a system where UNMARKED CASE itself is nothing but the outright absence of case values on a nominal (Bittner & Hale 1996, Kornfilt & Preminger 2015, Preminger 2011a, 2014; see section 4 for discussion).

The second point of clarification concerns the modular locus of the disjunctive case hierarchy (3) within the grammar. Marantz posits (3) as a mechanism that operates "at morphological structure"—that is, as part of the computation occurring in the postsyntactic PF branch of the derivation. This choice is based on the conjecture that the results of this computation never serve as input to operations that occur in narrow syntax (see also Bobaljik 2008:301–302). However, there is reason to think this conjecture is false (Preminger 2014:182–186). In brief, the reason is as follows. First, Bobaljik (2008) shows that where the hierarchy in (3) diverges from grammatical function (and/or so-called "Abstract Case"), as it does in Icelandic for example,  $\varphi$ -agreement falls in line with (3). Second,  $\varphi$ -agreement is causally implicated in movement to canonical subject position (at least in some languages; see Preminger 2014:157–170). Finally, since movement to canonical subject position is inescapably syntactic (it has effects on scope, for example), it follows that both (3) and the computation of  $\varphi$ -agreement must operate within syntax.<sup>3</sup>

The third point of clarification concerns the abstractness of the case features associated with the disjunctive case hierarchy (3). Some have misunderstood Marantz's claim that (3) operates in morphological structure to mean that it is a theory of morpho-phonologically realized case forms. This, to put it bluntly, could not possibly be so. For one thing, the modularity considerations just laid out foreclose any such possibility: we have seen that (3) must operate in syntax, and syntax is modularly encapsulated from morpho-phonological realization. But even if we were to set such

<sup>&</sup>lt;sup>1</sup>Here and throughout, I write traditional taxonomical case labels like 'nominative' or 'accusative' in quotes, to signify that these terms have absolutely no theoretical import. See section 4 for further discussion.

<sup>&</sup>lt;sup>2</sup>If there is such a thing as a true noun phrase fragment (i.e., a noun-phrase spelled out in the absence of any structural context, overt or otherwise), then this condition—of UNMARKED CASE *not* in the context of an enclosing DP or TP/CP—would naturally extend to that scenario, as well.

 $<sup>^{3}</sup>$ On the considerations associated with situating the mechanism of DEPENDENT CASE within narrow syntax, see Preminger (2014:204ff.).

considerations aside, there are other reasons to reject this position. Let us turn to Icelandic, the poster-child for the need for, and success of, the disjunctive case hierarchy. One of its central successes is in predicting the distribution of 'accusative' in Icelandic, and in particular, the fact that 'accusative' is not found on the direct objects of verbs whose subject is marked with quirky case (see Andrews 1976, Sigurðsson 1989, Thráinsson 1979, Zaenen, Maling & Thráinsson 1985, and related literature). Thus, for example, a verb such as *líka* ("like") in Icelandic requires a 'dative' subject, and its object, consequently, shows up as 'nominative' rather than the 'accusative' typically associated with direct objects in Icelandic.

Importantly, certain nominal declensions in Icelandic are syncretic between 'nominative' and 'dative'. Now consider instances where a nominal of this type serves as the subject of a 'dative'-subject verb:

 (4) [<u>Rut</u>]
 líkuðu / ??líkaði [þessir sokkar]
 (Icelandic)

 [<u>Rut</u>].DAT(=NOM) like.pl
 ??like.sg [ these socks ].NOM
 'Rut likes these socks.'

 'Rut likes these socks.'
 [Halldór Ármann Sigurðsson, p.c.]

As noted above, overt  $\varphi$ -agreement tracks the results of (3) (Bobaljik 2008), and Icelandic is one of the clearest demonstrations of this. Therefore, if (3) were about case *forms* in any meaningful sense, we would expect the subject *Rut* to be able to control finite agreement, since it is form-identical with 'nominative' (the UNMARKED CASE), the typical case of controllers of  $\varphi$ -agreement in Icelandic. But as (4) shows, this is not borne out. Similarly, if (3) were indeed about case *forms*, we might expect the object in (4) to show up as 'accusative', as is typical of objects when the clausemate subject is in the UNMARKED CASE. Again, this is not possible.

Taken together, this indicates that the features relevant to (3) are fundamentally *abstract*. This is already what we would expect, given the modularity considerations just articulated (*viz.* the second clarification, above). But data like (4) provide additional evidence for this abstractness. To be sure, the form of morpho-phonologically overt case markers is computed *based on* these abstract features, but importantly, the latter is a separate computation. As should be clear, this also extends to the fact that so-called UNMARKED CASE need not be morpho-phonological unmarked.

#### 2.2. LEXICALLY-GOVERNED CASE: a re-examination

With these details in place, let us now return to the category of LEXICALLY-GOVERNED CASE in (3). Marantz (1991) states the conditions on LEXICALLY-GOVERNED CASE as being "part of a chain governed by a lexical case [assigner]."<sup>4</sup> But what is a *lexical case assigner*? For Marantz, the answer was fairly straightforward. The term referred to instances where a given case only occurs because of the particular lexical item that was chosen. Thus, for example, particular verbs in Icelandic may specify a particular case on one of their arguments, including the one that ultimately surfaces as the subject (see section 2.1). Crucially, whether a verb does or does not specify such a case is an entirely idiosyncratic matter. (Famously, while the verb "like" in Icelandic is a 'dative'-subject verb, the verb "love" is not.)

Given the theory of the time, item-conditioned case seemed to align well with the distinction between *lexical* elements, such as V, and *functional* elements, such as T (or I(nfl), in the parlance

<sup>&</sup>lt;sup>4</sup>Marantz (1991) uses the term "lexical case *determiner*" (emphasis added), but it is clear from the context that this has nothing to do with 'determiner' in its more common usage (*viz.* an element in the extend projection of a nominal). I have therefore opted for the less ambiguous 'assigner' here.

of Government & Binding theory). In particular, it made sense to associate the property of itemconditioned case with the class of lexical elements, such as verbs, to the exclusion of functional ones, such as tense.

However, given subsequent developments in syntactic theory, this delineation no longer makes sense. For one thing, verbs are now understood to arise through merger of a category-neutral root with a verbalizing head (Marantz 1997, among many others):<sup>5</sup>



There is debate in the literature about whether roots are individuated in the syntax (see Harley 2014a,b, and references therein). If they are not, it would be impossible for the case-related differences between one transitive verb and another to be encoded on the root itself. But even if roots are individuated in the syntax, it is usually assumed that roots lack the kind of formal features relevant to syntax.<sup>6</sup> Thus, the difference between a quirky-subject verb and a normal transitive would need to be encoded not on the root itself, but on the functional heads (v, Appl, etc.) that are able to stand in a selectional relation with that root.

But if being, e.g., a "dative-subject verb" amounts to being selected by a particular kind of v or Appl equipped with 'dative'-assigning capabilities (call these  $v_{DAT}$  or Appl<sub>DAT</sub>)—in what sense can one maintain that Marantz's LEXICALLY-GOVERNED CASE is still a property of lexical, rather than functional, items?  $v_{DAT}$  and Appl<sub>DAT</sub> are, after all, functional heads par excellence.

The problems that arise when taking the 'lexical' in LEXICALLY-GOVERNED CASE literally are even more general than that. Consider the 'dative' case typically found on Goal arguments in ditransitives. This case is usually thought of as LEXICALLY-GOVERNED CASE, inasmuch as it is associated with a particular thematic role (Goal), and its occurrence is therefore tied to the choice of verb. An exception is Baker (2015:131–145), who proposes a treatment of 'dative' in ditransitives as a DEPENDENT CASE, assigned to the higher of two arguments within the verb phrase (see also Baker & Vinokurova 2010). But as Anagnostopoulou & Sevdali (2018) show, this treatment is correct for some but crucially not all instances of 'dative' in ditransitives. This is, in fact, a parametric difference between Classical Greek and Standard Modern Greek: 'dative' is LEXICALLY-GOVERNED CASE (in Marantzian terms) in the former, but DEPENDENT CASE (à la Baker 2015) in the latter.

There are thus at least some instances of 'dative' in ditransitives which do not behave like instances of DEPENDENT CASE. What is the status of these instances of 'dative', vis-à-vis Marantz's disjunctive case hierarchy (3)? If we take the term LEXICALLY-GOVERNED CASE at face value, we are led once again to the conclusion that this must be case associated with the particular lexeme chosen, i.e., the verb root. But this flies in the face of what we now know about the syntax of ditransitives. If there is a head within the verb phrase responsible for assigning 'dative' case, that head is Appl<sup>0</sup>,

<sup>&</sup>lt;sup>5</sup>Strictly speaking, this is only one sub-case. Verbs can also arise when a verbalizing head merges with a previouslycategorized root, as is the case for example with denominal verbs.

<sup>&</sup>lt;sup>6</sup>One often encounters the claim that roots lack formal features altogether. While this is logically possible, it is an overstatement of Marantz's (1996, 1997) original position, which does make allowances for certain formal features like [count] and [animate] on roots.

not the verb root (see Pylkkänen 2008 and related work). Importantly, Appl<sup>0</sup> is a functional head; in many languages, it even spells out as a distinct grammatical morpheme.

Having established that so-called LEXICALLY-GOVERNED CASE can be assigned by functional items, let us now turn to the structural conditions on its assignment. In its original conception, LEXICALLY-GOVERNED CASE involved predicate-argument relations. These are typically thought to involve sisterhood between (some projection of) the predicate and (the base position of) its argument. As I will show here, the same sisterhood relation is sufficient to cover case-assignment by Appl<sup>0</sup> as well. Consider first the case of high applicatives:<sup>7</sup>

(6) <u>high-applicative structure</u>



The indirect object in (6) stands in a sisterhood relation with a projection of Appl. Given the assumptions of Bare Phrase Structure (Chomsky 1994), this projection (labeled Appl' in (6)) is in fact nothing but another instance of the same syntactic object labeled Appl<sup>0</sup> (*viz.* the "head"). As noted by Béjar & Rezac (2009), Keine & Dash (2018), and others, this means that a configuration like (6) amounts to a sisterhood configuration between Appl and the indirect object.

A similar outcome obtains in the case of low applicatives:

(7) <u>low-applicative structure</u>



Here, again, the indirect object stands in a sisterhood relation with a projection of Appl.

So far, then, there seems to be no need to go beyond sisterhood as the operative structural relation. We therefore might be tempted to revise LEXICALLY-GOVERNED CASE as in (8), where, crucially, there is no requirement that the assigning head be specifically lexical (rather than functional):

(8) <u>proposed revision to LEXICALLY-GOVERNED CASE:</u> (*first version*) case assigned under sisterhood with a designated head

<sup>&</sup>lt;sup>7</sup>The trees in (6) and (7) contain roots and root-projections, rather than Vs and VPs (as in Pylkkänen's original work), to sharpen the issue concerning lexical vs. functional heads. See (5) above, and the surrounding discussion.

However, once we have departed from the original definition of LEXICALLY-GOVERNED CASE (as is, again, forced by independent developments in our understanding of the lexical-vs.-functional divide), there is an opportunity to address another shortcoming in the original formulation. The issue in question concerns prepositional complementizers, as in (9):

(9) For them to win would be impossible.

There is only one noun phrase argument (overt or otherwise) in (9) (the thematic role associated with *impossible* is assigned to the infinitival clause, and the one associated with *win* is assigned to *them*, exhausting the potential for argument nominals in this utterance). Therefore, whatever case is associated with *them*, it cannot be DEPENDENT CASE. There are two logical options here. The more traditional route would associate the form of *them* (specifically, the fact that it is not *they*) with the presence of *for*. But now consider: what is the nature of the relation between *for* and *them*? As is well known, *them* here is neither an argument of *for*, thematically speaking, nor is it a sister of *for*, structurally speaking (see Haegeman 1994:167–169 for a review):

(10) [[For [them to win]] would be impossible].

The conclusion, if we were to go this route, is that *for* assigns case to *them* under local c-command, that is, c-command that is not interrupted by an intervener or a locality boundary. But what kind of case is that, from the perspective of the disjunctive case hierarchy?

(11) UNMARKED CASE 
$$\ll$$
 DEPENDENT CASE  $\ll$  LEXICALLY-GOVERNED CASE [=(3)]

It is certainly not DEPENDENT CASE (*for* is not a noun phrase), nor is it UNMARKED CASE (there *are* structural conditions on its assignment). Moreover, it very much *is* associated with the presence of a particular item (*for*). It is just that this item is a functional item, and its relation to the case-assignee is neither a sisterhood relation nor a predicate-argument relation.

An alternative treatment of (9)/(10) would be to assume that forms like *them* (and *us*, *me*, etc.) actually represent what is, grammatically speaking, the UNMARKED CASE in English. I will defer a more detailed discussion of this alternative until section 3.1.2, but I will note here that this route also ends with the need for case assigned under local c-command by a functional head, to account for the distribution of the so-called 'nominative' forms (*they*, *we*, etc.).

The overall conclusion is that the category of LEXICALLY-GOVERNED CASE should be recast as follows:

(12) proposed revision to LEXICALLY-GOVERNED CASE: (final version) case assigned under local c-command by a designated head

This allows the head in question to be a functional head, and it allows for more than just sisterhood as the operative structural relation between assigner and assignee (contra Preminger 2014:204–208, for example). This still leaves room for case-assignment by lexical heads and/or case-assignment under sisterhood. That is because the functional vs. lexical status of the head is not specified in this definition, and because sisterhood is a subcase of local c-command. To head off one potential source of misunderstanding, it is important to highlight how (12) differs from Chomsky's (2000, 2001) conception of case. For the latter, case is assigned (or checked) as a reflex of Agree in  $\varphi$ -features. In contrast,  $\varphi$ -features are not implicated in (12) in any way whatsoever.

A reviewer wonders whether (12) is not in effect a return to the theory of Chomsky (1981) and Vergnaud (1977). As discussed in section 1, the theory of Chomsky was fundamentally a theory of *nominal licensing*, and the extent to which its predictions aligned with the discernible case forms in a given language was considered secondary. Thus, while it is certainly true that functional heads played a key role in Chomsky's (1981) theory of Abstract Case, the explanandum was fundamentally different. Furthermore, as discussed below, assignment by a head is but one of the different modes of case assignment that an adequate theory must advert to. That itself is a departure from Chomsky's (1981) proposal, as well.

I will use the term HEAD CASE to refer to the mode of case-assignment given in (12). Accordingly, the revised disjunctive case hierarchy will look like (13):

(13) revised disjunctive case hierarchy

UNMARKED CASE  $\ll$  DEPENDENT CASE  $\ll$  HEAD CASE

I would like to stress that (13) is not so much an *alternative* to Marantz's (1991) proposal as it is an *updating* of that proposal in light of independent developments in syntactic theory (in particular, the decompositionalist approach to verb phrase syntax; see Harley 2012 for a review), and in light of the behavior of prepositional complementizers (previously overlooked in the context of a configurational theory).

One last issue worth mentioning concerns how the notion of HEAD CASE relates to the distinction between structural and non-structural cases. I will address two ways this distinction might be thought of. First, if the distinction concerns the ability of a given case to be "overridden" (descriptively speaking) as a result of various alternations and differing syntactic configurations, it stands to reason that the closer the assigner is to the DP it assigns case to, the less likely a given alternation or change in configuration is to affect the relation between the two. In the limiting case, discussed in Preminger (2014:204–208), the assigning head is also the head that introduces (i.e., externalmerges with) the DP. Arguably, this close of a structural relation could not be disrupted at all while still maintaining the predicate-argument relation the DP is a involved in. This yields the traditional description of "inherent case" familiar from Chomsky (1981) and Haegeman (1994), among others.

A second way one may think of the distinction between structural and non-structural cases concerns the degree to which the occurrence of a given case is thematically predictable. To the extent that there are cases whose distribution is wholly predictable from the distribution of a given thematic role ('instrumental case' in some languages may be a good candidate), this could be captured on the present model as well. Specifically, one could assume that the case features in question are only ever found, in the language under consideration, as HEAD CASE assigned by the head that also assigns the relevant thematic role.

#### **3.** Comparing the models

We are now in a position to compare the three models of case-assignment under considerations. Let us label them as follows:

- (14) a. **m1** := case-assignment under  $\varphi$ -agreement (Chomsky 2000, 2001)
  - b. **m2** := configurational case-assignment (cf. Marantz 1991, but see also section 2)
  - c. m3 := m2 + m1 (cf. Baker 2015)

#### **3.1.** $m2 \equiv m3$

Having come to terms with what a theory of configurational case-assignment would look like in contemporary syntactic terms (section 2), let us now demonstrate that the addition of case-assignment under  $\varphi$ -agreement to a configurational system—as pursued by Baker (2015)—is empirically vacuous given the independently necessary updating of the configurational theory (section 2). I will demonstrate this by presenting a "recipe" for translating *any* account in terms of **m3** (a hybrid theory) into an account in terms of **m2** (a configurational theory).

## **3.1.1.** Recipe: $m3 \rightarrow m2$

Let  $C_X$  be an instance of case that, per **m3**, is assigned under  $\varphi$ -agreement with some head H<sup>0</sup>. Here is how one can recast  $C_X$  in purely configurational terms. First, assume that H<sup>0</sup> enters the derivation with unvalued  $\varphi$ -features. (This assumption is also necessary on the **m3** account.) Next, we know that  $\varphi$ -agreement probes can be *case-relativized* to target bearers of a given case only (Bobaljik 2008, Preminger 2014). Let us therefore assume that H<sup>0</sup> is case-relativized to only target noun phrases that already bear the case  $C_X$ . Finally, let  $C_X$  itself be assigned configurationally, in some **m2**-compliant way—possibly even as an instance of HEAD CASE, assigned under local c-command by H<sup>0</sup> itself.

To make sure our recipe is successful, let us examine the predictions of the new **m2**-compliant account. First, we will see nontrivial (i.e., covarying)  $\varphi$ -agreement on H<sup>0</sup> **iff** there is a  $C_X$ -marked DP in the local c-command domain of H<sup>0</sup>. This is exactly the same prediction that the **m3** account makes. When no such DP is available, the prediction is that  $\varphi$ -probing by H<sup>0</sup> will simply fail. This, as shown in Preminger 2014, will not cause any adverse consequences (*viz.* "crashes").<sup>8</sup> We can therefore assume, under the new **m2**-compliant account, that H<sup>0</sup> is uniformly base-generated with unvalued  $\varphi$ -features, whether there ends up being a target DP to value them or not. This is important, because it allows us to capture the fact that nontrivial agreement on H<sup>0</sup> will show up only when a  $C_X$ -marked DP is present, without recourse to a bidirectional causal link between the two. (See Levin & Preminger 2015 for an illustration.)

This may seem like little more than theory-internal rejiggering, given that there is no empirical payoff here. But recall that this is precisely our goal: to substantiate the claim that **m3** and **m2** have exactly the same expressive power (and that, therefore, the addition of case-assignment-under- $\varphi$ -agreement to a system of configurational case is vacuous). All that said, there can be *explanatory* payoff to such rejiggering, and I will demonstrate one case of this in section 3.1.2.

#### 3.1.2. A demonstration: English 'nominative'

In this subsection, I will apply the recipe laid out in section 3.1.1 to the English 'nominative', and its interaction with  $\varphi$ -agreement.

At first glance, the English 'nominative' looks like a prime candidate for case assigned under  $\varphi$ -agreement:

<sup>&</sup>lt;sup>8</sup>It seems to me that the origins of the misconception behind **m1/m3**—that  $\varphi$ -agreement plays a causal role in caseassignment—can be traced precisely to the mistaken assumption that failed agreement causes "crashes" (see Levin & Preminger 2015:239 for a concrete example).

(15) a. She/\*her arrive\*(s) on time.

b. It is possible for her/\*she to arrive(\*s) on time.

Certainly, as a matter of co-occurrence, the 'nominative' forms of English pronouns (*she*, *he*, *they*, *I*, *we*) seem to be associated with subject  $\varphi$ -agreement.

Consider now cases of coordinated subjects. As noted by Sobin (1997:328–332), this corner of English grammar is somewhat "polluted" by prescriptive norms. But as Sobin (*ibid.*, 329) notes, there are ways to neutralize these prescriptive influences. One prescriptive edict concerning coordinations is that if one of the conjuncts is a 1st person singular pronoun, that pronoun must occur last. (Apparently, it is impolite to mention oneself before others.) Consequently, choosing a coordination in which the first conjunct is a 1st person singular pronoun places the utterance squarely outside the bounds of the relevant prescriptive norms. Importantly, when we do this, it becomes abundantly clear that only the so-called 'accusative' form of the pronoun is possible:<sup>9</sup>

- (16) a. Me and Kim are coming over.
  - b. \*! I and Kim are coming over.

If this is correct, it looks so far like even more evidence in favor of case-assignment under  $\varphi$ -agreement, i.e., a **m1/m3** account. That is because what is targeted for  $\varphi$ -agreement in (16) is the entire coordination, not the pronominal conjunct individually (note the plural form of the finite copula, *are*); whereas in (15a), the relevant pronoun constitutes the entirety of what is targeted for  $\varphi$ -agreement.

Nevertheless, let us now apply the recipe from section 3.1.1. Assume that so-called 'nominative' in English (= $C_X$ ) is assigned under *closest c-command by finite*  $T^0$ . As per the recipe, we carry over the assumption that T<sup>0</sup> comes into the derivation with unvalued  $\varphi$ -features. If the coordination itself counts as a target with respect to *closest c-command*, minimality will prevent T<sup>0</sup> from establishing a relation with goals located farther away, within that target. We can thus recoup the same predictions made by the **m1/m3** account, and derive the contrast between cases like (15a) and (16).

When two accounts stand in this kind of equivalence of expressive power, we usually adjudicate between them in terms of two main criteria:

- (17) i. simplicity of the analysis
  - **ii. explanatory adequacy** (*viz.* how reasonable and, crucially, straightforward for the learner to acquire the "maneuvers" are that are needed to fit the proposal to attested data)

Granting, for now, that one cannot do entirely without a configurational case component (a matter I return to in section 3.2), it is a truism that **m2** (configurational case only) does better than **m3** (which is **m2** + case-assignment under  $\varphi$ -agreement) on the simplicity criterion (17.i).

- (i) a. Her and Kim are coming over.
  - b. She and Kim are coming over.

 $<sup>^{9}</sup>$ The reader may wonder why, when we replace the 1st person pronoun in (16) with a 3rd person one, both options appear to be fine:

The reason (i.b) differs from (16b) is that, unlike 1st person singular pronouns, there is no prescriptive norm requiring 3rd person pronouns to be the last in a conjunction. Consequently, we have no comparable way of ensuring that (i.b) is judged without the influence of prescriptivism (in contrast with (16b), which is outside prescriptive norms due to conjunct order).

What I would like to demonstrate now is that m2 also does better than m3 on the explanatory adequacy criterion (17.ii). Consider the English subjunctive:<sup>10</sup>

- (18) a. I demanded that he/\*him be on time.
  - b. She demanded that [me and Kim]/\*[I and Kim] be on time.

It is worth keeping in mind that cases like (18b)—that is, instances of embedded subjunctives with coordinated pronominal subjects—are probably rare-to-nonexistent in the linguistic input of English speakers. Yet all speakers seem to exhibit the same pattern of competence exemplified in (18).

Crucially, as shown in (18a–b), the behavior of pronouns in or inside the subject position of subjunctives is identical to their behavior in the subject position of regular finite clauses. This is noteworthy because unlike in finite clauses, there is no overt  $\varphi$ -agreement to speak of here.

It is logically possible that subjunctives like (18a–b) have a phonologically-null counterpart of the overt agreement found in (15a, 16). But in taking such a view, we risk losing our account of the difference between the finite (15a) and its infinitive counterpart, (15b). The infinitive also lacks agreement, and yet its behavior differs from the subjunctive. These facts are summarized in (19):

(10)		case on	case on subpart	overt
(19)		entire subject	of coordination	agreement?
	finite:	'nominative'	'accusative'	yes
	subjunctive:	'nominative'	'accusative'	no
	infinitive:	'accusative'	'accusative'	no

An account of these facts in terms of case-assignment under  $\varphi$ -agreement would therefore require drawing the following distinctions:

- (20) a. overt agreement (in finite clauses; (15a, 16))
  - b. null agreement (in subjunctives; (18a–b))
  - c. no agreement at all (in infinitives; (15b))

This is a logically possible state of affairs. As stressed earlier—in the context of the abstractness of the features associated with the disjunctive case hierarchy, and the fact that they stand at some remove from case morphology per se (section 2.1)—the presence or absence of overt morphology is not a foolproof window into the presence or absence of syntactic features.

But the distinction between (20b) and (20c) poses nontrivial challenges for language acquisition. In this regard, it is important to note that, cross-linguistically, there exist both agreeing and non-agreeing subjunctives, as well as both agreeing and non-agreeing infinitives. This means the learner cannot simply assume (20), a priori.

<sup>&</sup>lt;sup>10</sup>One may legitimately wonder about the status of the English subjunctive vis-à-vis the discussion of prescriptive influences, earlier in this section. While it is possible that the English subjunctive is a prescriptive construct, it is likely that the prescriptive norm in question involves the verb (and in particular, its uninflected form), rather than anything to do with how pronominal subjects (much less *coordinated* pronominal subjects) will behave in this construction. I therefore tentatively conclude that this construction can still be submitted to meaningful grammatical exploration as it pertains to the form of the subject.

Finally, (20b) runs afoul of the *no null agreement* generalization (Preminger 2019), which states that learners never assume syntactically real agreement unless there is morphological evidence of agreement or clitic doubling at the probe.

Compare this state of affairs with what would be required to account for the same facts in a purely configurational model (m2):

(21) a. infinitival T<sup>0</sup>: lacks the ability to assign  $C_X$  (so-called 'nominative')

b. all other instances of  $T^0$ : assign  $C_X$  (so-called 'nominative') under closest c-command

The learner still needs to figure out that subjunctive  $T^0$  is not equipped with unvalued  $\varphi$ -features (and thus does not trigger agreement, overt or otherwise), while finite  $T^0$  is (and thus does trigger agreement). Crucially, however, that much aligns well with the presence vs. absence of overt morphophonological covariance (see Preminger 2019 for an independent argument that learners attend to overt morpho-phonological covariance of this sort). Thus, it would constitute a very straightforward starting assumption for the learner to adopt. Similarly, the settings in (21a–b) are well aligned with the surface morphology. Importantly, all that is required for the learner to set these starting assumptions regarding the different types of  $T^0$  is a single instance of a 3sg animate pronoun in the subject position of each.

On this view, so-called 'nominative' in English ends up looking nothing like UNMARKED CASE (in the Marantzian sense). Instead,  $C_X$  in English is HEAD CASE assigned by finite T<sup>0</sup>, which we could call 'subjective'. Conversely, so-called 'accusative' is, ontologically speaking, an instance of UNMARKED CASE (that is, case which arises when none of the structural conditions arise to assign other types of case). This is line with the age-old observation that the case with the *elsewhere* distribution in English is this one, and not the one referred to as 'nominative'. See section 4 for further discussion of this point.

To summarize, we have seen a demonstration of the "recipe" presented in section 3.1.1, applied here to translate a case-assignment-under- $\varphi$ -agreement analysis of English 'nominative' into purely configurational terms. We saw, furthermore, that the resulting analysis is in fact more explanatory than its agreement-based counterpart, once data from the English subjunctive, coupled with considerations of language acquisition, are brought into the fold.

It is worth noting that if we go this route, the specific argument presented in section 2.2 that prepositional complementizers in English require HEAD CASE (*viz.* case assigned under local c-command by *for*) dissolves. That is because the case found with prepositional complementizers in English is the one commonly referred to as 'accusative' which, on the analysis presented here, is UNMARKED CASE. On the other hand, the same analysis requires HEAD CASE elsewhere, to account for the case assigned by  $T^0$  (so-called 'nominative'). Therefore, the claim that the English case system as a whole requires recourse to HEAD CASE still stands.

#### **3.2.** m1 < m2

We have seen, in section 3.1, that any instance of case-assignment under  $\varphi$ -agreement can be recast in purely configurational terms. This means that the expressive power of configurational case-assignment (**m2**) is, at the very least, equal to the expressive power of case-assignment under  $\varphi$ -agreement (**m1**).

Conversely, configurational case-assignment can account for facts that case-assignment under  $\varphi$ -agreement simply cannot. Examples from the literature include Icelandic (Marantz 1991, McFadden 2004, Yip, Maling & Jackendoff 1987), as well as Shipibo (Baker 2014). But perhaps the most pertinent example concerns Sakha. Baker & Vinokurova (2010) show that the distribution of 'accusative' in Sakha (an instance of DEPENDENT CASE) cannot be recouped under a theory where the assigner is a head in the clausal spine. See in particular their discussion of raising-to-'accusative' (*ibid.*, 617–619).<sup>11</sup>

To the best of my knowledge, this point has never been seriously contested in the literature. There have been theories proposed where something like DEPENDENT CASE is implemented via mediation by an intermediate functional head (e.g. Bittner & Hale 1996). (Though it is worth noting that the Sakha raising-to-'accusative' facts just mentioned cast serious doubts on such mediated DEPENDENT CASE theories.) But the need for something like DEPENDENT CASE, and the fact that case-assignment by functional heads (à la Chomsky 2000, 2001) cannot account for the relevant facts, has not been genuinely challenged.<sup>12</sup>

Taken together with the fact that any account in terms of case assignment under  $\varphi$ -agreement can be recast in configurational terms (section 3.1.1), this means that the expressive power of case-assignment by  $\varphi$ -agreement (**m1**) is a *proper subset* of the expressive power of the configurational model (**m2**).

#### 3.3. m2 is necessary, sufficient, and restrictive

The previous subsections showed that the expressive power of m2 (a configurational theory of case, as outlined in section 2) is greater than that of m1 (case-assignment under  $\varphi$ -agreement; Chomsky 2000, 2001), but is equal to that of m3 (a hybrid theory combining both; Baker 2015). It was shown that the simpler m2 was also, at least in some cases, more explanatory than m3.

Given that there are empirical domains (Icelandic, Shipibo, Sakha) that demonstrate that the more powerful theory is required, one would think that this would have settled the debate once and for all in favor of **m2**. This has not, in reality, settled the debate, at least between **m1** and the others. That, I contend, is the result of a conflation between taxonomies of case and ontologies of case. This is what I turn to in the next section.

One more issue that deserves our attention concerns the question of whether **m2** constitutes a *restrictive* theory of case. That is: whether there are reasonable—or even merely conceivable—systems of case that **m2** rules out. Legate (this volume), for example, advances the claim that UG places no restrictions whatsoever on possible systems of case, and instead, that the full range of case systems that the rest of the grammatical architecture could logically make available are

<sup>&</sup>lt;sup>11</sup>Given the discussion in section 3.1.2, this means that 'accusative' in English (UNMARKED CASE) is ontologically unrelated to 'accusative' in Sakha (DEPENDENT CASE). But as discussed in section 1, this is precisely the kind of thing that we would expect linguistic research to reveal.

<sup>&</sup>lt;sup>12</sup>Legate's 2008 paper, titled *Abstract and Morphological Case*, proposes a system based solely on case-assignment by functional heads in syntax, combined with a set of syntax-morphology mapping rules. Tellingly, while the paper mentions Marantz's (1991) DEPENDENT CASE, as well as various facts from Icelandic (mostly related to case in Control infinitives), it never offers a working alternative to DEPENDENT CASE that would account for the distribution of 'accusative' in Icelandic. Legate (this volume) offers an account of 'dative'-subject verbs in Icelandic that is based solely on case assignment by functional heads, but similarly fails to account for the distribution of 'accusative' in the language, and in particular for the fact that 'dative'-subject will never have 'accusative' objects in simple monoclausal constructions. (See, e.g., Thráinsson 2007:167.)

all indeed attested. This claim strikes me as plainly false; even if we restrict our attention to attested interactions between pairs of DPs in language, we find for example that the relation R(x, y) = x c-commands y at an unbounded distance is an operative, available relation in natural language. (Its effects can be seen both in the workings of Condition C and in the restrictions on the distribution of pronouns with quantificational antecedents.) Whatever one's architectural assumptions about locality, phases, etc., it is obvious that the language faculty has recourse to the relation R in question. And yet no case system I am aware of has a case marking  $C_X$  that is restricted to DPs that are c-commanded at whatever distance by another DP of a particular type, or of any type.<sup>13</sup> Crucially, such a system would go beyond what **m2** allows; and so **m2** is not only restrictive, but, it appears, restrictive in the right way.

## 4. Case: taxonomies vs. ontologies

As noted in the Introduction, one often encounters exchanges in the literature resembling (22):

(22) Linguist A: "The assignment of accusative case works like *this*!"

Linguist B: "No, the assignment of accusative case works like *that*!" [=(2)]

A decidedly non-exhaustive list of examples is given below:

- (23) a. Chomsky 1981: accusative is assigned under government by  $V^0$ 
  - b. Chomsky 1991: accusative is assigned under spec-head agreement with  $Agr_{O(bi)}^{0}$
  - c. Kratzer 1996: accusative is assigned by Voice<sup>0</sup>
  - d. Legate 2014: accusative is assigned under Agree with Voice<sup>0</sup> (which is distinct from  $v^0$ )

On the one hand, this is laudable. We should all seek to go beyond traditional terminology like 'accusative' and strive to understand the underlying workings of the phenomena that these terms serve as a label for. But notice that the way debates like (23a–d) are framed, it seems to be taken for granted that 'accusative' names a natural kind. The quibble, it seems, is only about what the true nature of that natural kind is.

That is quite odd, given that more or less the entire history of modern linguistic theory has been a demonstration that traditional grammatical descriptions fall short of identifying the true underlying grammatical ontology. Take the term 'passive' as an example: traditionally, this term referred to a collection of properties or processes having to do with thematic roles, case, grammatical function, information structure, and, of course, voice morphology. Later work revealed that virtually every one of these could be manipulated independently of the others (at least if one looks at a sufficiently wide sample of languages), and that the original term 'passive' therefore did not refer to an ontological primitive of the theory at all. Given our current understanding of these matters, one could debate which of the aforementioned properties or processes are more or less "central" to the phenomenon pretheoretically identified as 'passive', but that seems (to me, at least) to be a remarkably uninteresting debate.

If things like 'passive' have turned out not to be an object of the grammatical ontology, where does the confidence that 'accusative' is ontologically valid come from? Perhaps it comes from an

<sup>&</sup>lt;sup>13</sup>Similarly, language is rife with "second position" effects, and yet I know of no serious claims of a "second position" case-marking system, where a particular case-marking is assigned to a DP by virtue of that DP being linearly second (in whatever applicable sense).

observation like Burzio's Generalization (Burzio 1986), which suggests that 'accusative' is a property directly referenced by the grammar. However, we know by now that Burzio's Generalization is incorrect (Harley 1995, Marantz 1991, among many others), so with that, the attendant confidence in 'accusative' as a natural kind should have been discarded, as well.

It is worth taking a step back and asking just how it is that a case marking C in a language L comes to be labeled 'accusative' in the first place. As best I can tell, for most languages (and setting aside, somewhat artificially, issues of ergativity), the answer is something like the following. The first time L is described by linguists who were trained in a Western philological tradition (or its descendants), if there is morphological marking that seems to be associated with typical objects of monotransitive verbs, that marking will usually be labeled 'accusative'.<sup>14</sup> Whether that particular reconstruction is or is not accurate, though, it is unquestionable that 'accusative' is—always—a label assigned by a person (or persons). It therefore strikes me as highly unlikely that all instances where the label 'accusative' has been applied will pick out the same underlying grammatical property or process. This would amount to the (unfounded) belief that these persons are infallible in their assignment of terminology—that they have some sort of X-ray vision into underlying grammatical entities.

There is thus a sharp distinction between 'accusative' as a label, and any claim about a particular underlying case mechanism. The former is by definition an informal, inexact label for a class of phenomena that may or may not be internally coherent. The latter is proposal regarding a part of the grammatical ontology.<sup>15</sup>

We have in fact already seen three different examples in this very chapter where taxonomical characterizations of case and ontological case categories diverge from one another. The first, mentioned in section 2, involves Anagnostopoulou & Sevdali's (2018) findings. They show that so-called 'dative' (a taxonomical label) in Classical Greek was in fact different, in terms of the underlying mechanism, from 'dative' in Standard Modern Greek. In terms of the ontological categories identified in this chapter, the former was HEAD CASE, while the latter is DEPENDENT CASE. Taxonomically speaking, both of these are the typical case found on Goal arguments in ditransitive constructions in their respective languages, and therefore both merit the label 'dative'. It is just that this label (like all taxonomical case labels) is not guaranteed to, and likely does not, identify a unique and consistent part of the grammatical ontology.

The second example, also noted in section 2, concerns the status of UNMARKED CASE. Preminger (2011a, 2014) argues that instances of UNMARKED CASE are best understood, representationally, as the *absence* of valued case features on a given nominal (because, among other things, this derives its ordering in the disjunctive case hierarchy from simple principles of valuation).<sup>16</sup> Kornfilt & Preminger (2015) go further, providing an empirical argument in favor of this position, from raising-to-'accusative' in Sakha. But this means that taxonomical labels like 'nominative' and 'absolutive' in their typical use (though not in English; see below) correspond not so much to any

<sup>&</sup>lt;sup>14</sup>Causally speaking, this can probably be traced to the philology of Latin and Classical Greek, through the renewed interest in the Classics during the Renaissance period, all the way to the linguistic frameworks that dominated the latter half of the 20th century.

<sup>&</sup>lt;sup>15</sup>This seems to have been recognized by Marantz (1991), who frames 'accusative' as basically a descriptive label for one flavor of DEPENDENT CASE (specifically, the downward-assigned flavor).

<sup>&</sup>lt;sup>16</sup>See Bittner & Hale (1996) for a related position concerning cases like 'nominative'.

particular ontological entity, but rather to the absence of a set of such entities (specifically, the ontological entities of DEPENDENT CASE and HEAD CASE).

The third example concerns the analysis of English given in section 3.1.2. There, it was suggested (following work by Sobin 1997, among others) that so-called 'nominative' in English is actually an instance of HEAD CASE, whereas the forms typically referred to as 'accusative' in English are, ontologically speaking, instances of UNMARKED CASE. If true, English represents an instance where the typical taxonomical labels of 'nominative' and 'accusative' pick out different ontological categories than they do in the majority of languages where these labels have been deployed.

It should be clear from all of this that there is no argument to be had against configurational case-assignment (the aforementioned m2) on the basis of, e.g., 'accusative' in language *L* behaving this way or that way. Indeed, as noted at the end of section 3, a valid argument against configurational case-assignment would have to take the form of an account of patterns like Icelandic, Sakha, Shipibo and others that does not make reference to DEPENDENT CASE. So far, no such argument has been forthcoming.

## 5. Conclusion

This chapter has discussed the important distinction between taxonomies of case (involving categories such as 'nominative', 'absolutive', 'accusative', 'ergative', etc.) and ontologies of case (involving categories such as DEPENDENT CASE and HEAD CASE). Taxonomies of case are fundamentally not theoretical entities. Therefore, a given taxonomical category like 'accusative' behaving differently in one language than it does in another is not an argument for anything except the inadequacy of the taxonomical inventory. This should make it clear that the configurational theory of case (Marantz 1991 and much related work) cannot be judged on whether or not 'accusative' in some language behaves as DEPENDENT CASE or not, or on any equivalent taxonomically-grounded comparison.

The chapter also discussed certain updates that apply to the configurational case theory, originally proposed in the context of Government & Binding theory (Chomsky 1981), in light of subsequent developments in syntactic theory. Furthermore, it discussed how this theory could account for an empirical domain that the original proposal by Marantz (1991) did not address, namely, the case found with prepositional complementizers.

Finally, the chapter laid out the argument that in light of all this, the revised configurational theory (given in section 2) is both necessary and sufficient as a theory of case. On its own, case-assignment under  $\varphi$ -agreement is insufficient to account for the facts. And once configurational case-assignment is adopted, it turns out that case-assignment under  $\varphi$ -agreement is fully redundant.

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