

# A synthesis for the structural/inherent case distinction and its comparative and diachronic consequences

One the Place of Case in Grammar, Rethymno, October 18th, 2018

Thomas McFadden

Leibniz-Zentrum Allgemeine Sprachwissenschaft, Berlin

mcfadden@leibniz-zas.de

## 1 Introduction

Decades of theoretical work have produced two rather distinct ideas about case that have emerged as alternatives to standard case theory:

**M-case:** Case is morphological, assigned based on the output of the syntax, but too late to affect the syntactic derivation (e.g. Marantz, 1991, Harley, 1995, McFadden, 2004, Sigurðsson, 2009).

**KP:** Cases are not just features on N or D, but represent their own syntactic projections (Bittner and Hale, 1996, Neeleman and Weerman, 1999, Caha, 2009).

- ☞ M-case and KP would seem to be incompatible, but in this talk I'm going to explore the (not completely original) idea that the best theory would incorporate them both.
- ☞ The idea is to map them onto the divide between **structural** and **inherent** cases.
- ☞ If we do it right, we can also handle phenomena that straddle the structural/inherent divide and get novel insight into certain comparative and diachronic patterns.

## 2 Crash course on structural vs. inherent case

There's a well-established distinction between two types of case (Haider, 1985, Yip et al., 1987, Sigurðsson, 1989, Freidin and Sprouse, 1991, Bayer et al., 2001, and many others):

**Structural case:** determined by and sensitive to the configurational syntactic environment in which a DP appears and nothing else

**Inherent case:** determined by and sensitive to semantic and lexical factors (potentially in addition to configurational ones)

Let's review the main empirical differences, based on examples from German.

1. Inherent case is thematically and lexically restricted, while structural case is assigned purely on the basis of structural configuration.
  - (Inherent) dative is assigned to the thematically restricted 'indirect object' of di-transitives, the object of specific transitives like *helfen* 'help', *gehorschen* 'obey', *folgen* 'follow', and the object of specific Ps like *aus* 'out', *mit* 'with', *zu* 'to'.

- (Structural) accusative is assigned (roughly) to any DP that is c-commanded by a distinct structural case-marked DP in the same clause. This includes the (thematically unrestricted) object of the open class of transitive verbs. . .

- (1) Der Metallurge mag/bekommt/klaut/verbrennt **den Cricketschläger**.  
 the metallurgist likes/receives/steals/burns the cricket-bat.ACC

. . . the (thematically unrestricted) 'direct object' of ditransitive verbs. . .

- (2) Der Metallurge gab/klaute/schnitzte/zerstörte/gönnte/neidete  
 the metallurgist gave/stole/whittled/destroyed/not-begrudged/envied  
 dem Dekan **den Cricketschläger**.  
 the dean the cricket-bat.ACC

'The metallurgist gave the dean the cricket bat, stole it from him, whittled it for him, destroyed it on him, didn't begrudge him it, envied him it'

. . . and the (thematically unrestricted) subject of any verb embedded under causative *lassen* 'let' or the perception verbs *hören* 'hear' and *sehen* 'see':

- (3) Der Dekan ließ **den M.en** verlieren/töten/den Cricketschläger klauen.  
 the dean.NOM let the m.ACC lose/kill/the cricket-bat.ACC steal  
 'The dean let the m. lose, had him killed, had him steal the cricket bat.'

2. When both could be assigned, inherent case takes precedence over structural.

- E.g. the highest DP under causative *lassen* is assigned structural accusative, as we saw in (3) above. But in (4) this is superseded on 'the metallurgist' by the inherent dative assigned by the verb *helfen*:

- (4) Der Dekan ließ **dem M.en/\*den M.en** helfen.  
 the dean.NOM let the m.DAT/\*ACC help  
 'The dean had someone help the metallurgist.'

3. Structural cases alternate under A-movement and when argument structure is modified, e.g. in the passive (5), while inherent ones do not (6).

- (5) a. Der Metallurge hat **den Cricketschläger** geklaut.  
 the metallurgist.NOM has the cricket-bat.ACC stolen  
 'The metallurgist stole the cricket bat.'  
 b. **Der Cricketschläger** wurde geklaut.  
 the cricket-bat.NOM was stolen  
 'The cricket bat was stolen.'
- (6) a. Der Metallurge hat **dem Dekan** nicht gehorcht.  
 the metallurgist.NOM has the dean.DAT not obeyed  
 'The metallurgist didn't obey the dean.'

- b. **Dem Dekan** ist nicht gehorcht worden.  
 the dean.DAT is not obeyed become  
 'The dean was not obeyed.'

4. In some languages, inherent case blocks certain syntactic processes and relations associated with subjecthood (like being controlled PRO). This happens in German:

- (7) Der Metallurge hofft [ PRO unterstützt zu werden ]  
 the metallurgist hopes [ PRO supported to become ]  
 'The metallurgist hopes to be supported.'  
 (8) \* Der Metallurge hofft [ PRO geholfen zu werden ]  
 the metallurgist hopes [ PRO helped to become ]  
 'The metallurgist hopes to be helped.'

... but not in Icelandic. When it doesn't, we call it **quirky case**.

- (9) Henni leiðist bókin.  
 her.DAT bores book-the.NOM  
 'She finds the book boring.'  
 (10) Hún vonast til [ að PRO leiðast ekki bókin. ]  
 she.NOM hopes for [ to PRO bore not book-the.NOM ]  
 'She hopes not to find the book boring.'

5. Whether a nominal has inherent or structural case can affect the structural case assigned to another nominal below it.

- So with dyadic verbs in German and Icelandic, if the higher argument gets structural case, the lower argument will get structural accusative, as in (11a).
- But if the higher argument gets an inherent case, like the dative in (11b), the lower argument will get structural nominative.

- (11) a. Der Metallurge verehrt **den Cricketschläger**.  
 the metallurgist.NOM worships the cricket-bat.ACC  
 'The metallurgist worships the cricket bat.'  
 b. Dem Metallurgen gefällt **der Cricketschläger**.  
 the metallurgist.DAT likes the cricket-bat.NOM  
 'The metallurgist likes the cricket bat.'

6. Inherent case-marked nominals are often blocked from triggering agreement, while structural case-marked ones are generally not.

- (12) a. Den Metallurgen ist geholfen worden.  
 the metallurgists.DAT is.3SG helped become  
 'The metallurgists were helped.'  
 b. Die Metallurgen sind unterstützt worden.  
 the metallurgists.NOM were.3PL supported become  
 'The metallurgists were supported.'

### 3 Two alternatives to standard Case theory

The standard view in GB and Minimalism has been that cases are **features**, assigned to (or checked on) DPs in the course of the **syntactic** derivation.

- These features can potentially influence the course of the derivation, thus case has been implicated in phenomena like A-movement, passivization and control.

The two alternative ideas about case we'll be considering here move in different directions from this, each modifying a different bit in boldface above:

**M-case** moves case from the syntax into the morphology, such that it interprets the structure output by the syntax rather than playing an active role in its derivation.

**KP** reifies cases more substantially in the syntax as (a series of) heads rather than just (a series of) features on other heads.

Let's begin with what led to the proposal of the two alternatives to standard Case theory.

#### 3.1 The motivation for M-case

The big idea of classic Case theory (going back to Vergnaud, 1977) is as follows:

- Every DP needs Case so that it is licensed to appear overtly. If it can't get Case in one position, it must either move to another where it can, or remain silent (as PRO).

However, subsequent work has turned up a series of problems with having the determination of Case play such a central syntactic role:

1. Systematic mismatches between actual cases and structural positions undermine the Vergnaud-style view of positional licensing (see e.g. Andrews, 1982, Zaenen et al., 1985, Marantz, 1991, and much subsequent work).
2. The assignment of some cases involves a dependency relationship with an additional DP, which is difficult to implement in terms of standard narrow syntactic operations like Agree (see below and especially Baker, 2015).
3. The determination of specific cases does not inform the semantics as we might expect it to if it occurs in the syntax and thus feeds into the LF branch (McFadden, 2004).

Moving case-assignment into the PF branch allows us to make sense of this cluster of facts and avoid making problematic predictions (McFadden, 2004).

### 3.2 The motivation for KP

Several kinds of arguments have been adduced for KP (see e.g. Lamontagne and Travis, 1987, Bittner and Hale, 1996, Neeleman and Weerman, 1999, Asbury, 2008, Levin, 2015).

- Perhaps the most interesting, however, are ones presented by Caha (2009), involving evidence reported by Blake (2001) for a hierarchy of cases, roughly as follows:

(13) **Simplified Blake/Caha hierarchy**

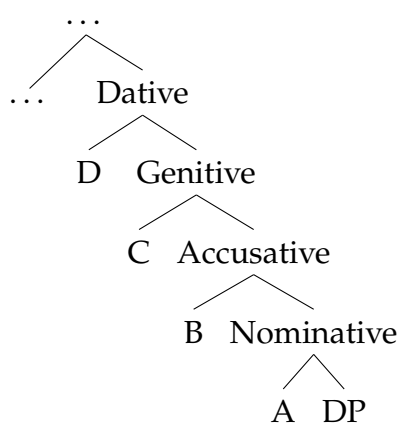
Nominative < Accusative < Genitive < Dative < Instrumental < Comitative

1. If a language has a given case, it will also have all of the cases to the left in (13).
2. Within a single language, syncretisms overwhelmingly involve contiguous regions of the hierarchy. Modern Greek with its 3 cases provides a simple example:

	'fighters'	'fighter'	'alpha'	[not attested]
<b>Nom</b>	maxités	maxitís	alfa	A
<b>Acc</b>	maxités	maxití	alfa	B
<b>Gen</b>	maxitón	maxití	alfa	A

Caha thus expands on KP, proposing that case categories constitute hierarchical structures, with each case corresponding to a distinct collection of functional heads, crucially containing the next one down on the hierarchy.

(14)



### 3.3 We want to have our case and eat it too

M-case and KP are each motivated by a set of facts that they can handle better than standard Case theory. However, the two ideas are incompatible with each other:

- ☞ It is incoherent to say that a DP simultaneously has no case in the syntax, and is embedded in an exploded KP which is the syntactic representation of its case.

On the other hand, we don't really want to adopt one of the two approaches to the exclusion of the other, since each one has non-trivial problems on its own:

**M-case** has a limited ability to deal with the syntactecism and inventory patterns (see McFadden, 2007, for a failed attempt). It also has little to offer in dealing with the details of inherent cases, especially the more semantically contentful ones.<sup>1</sup>

**KP** predicts that there should be some consistent semantic contribution from each case head, which is not supported, as least for the lower heads in the hierarchy. It also suffers from the same difficulties of other syntactic approaches in accounting for the distribution of nominative and accusative case on DPs.<sup>2</sup>

## 4 Proposing a synthesis

We're left with a bit of a puzzle. But there's a clear angle from which to approach it.

- ☞ Note that the areas where the two approaches do well and do poorly are (approximately) complementary, and follow the structural/inherent divide.

I thus propose to explore the following conjecture:

- (15) The distinction between structural and inherent cases reflects a distinction in the size of the nominal phrases:
  - i. Nominals bearing structural case are simply DPs in the narrow syntax, with distinctions among specific structural cases determined at or after Spellout.
  - ii. Nominals bearing inherent/oblique case are larger, articulated KPs, with distinct cases corresponding to distinct amounts of structure within KP.

This is not really a new idea:

- ☞ E.g. Emonds (1987), Nikanne (1993), Bittner and Hale (1996), Asbury (2008), Baker (2015), Levin (2015) all propose that some cases involve KP/PP while others don't.

The novel contribution I want to make here is to argue for the following points:

- Mapping M-case/KP onto the structural/inherent case divide, especially given recent advances in both approaches, lets us derive differences between the two that previously had to be stipulated.
- It crucially also gives us a way to talk about intermediate cases, shedding some light on the mechanics of dependent case assignment while we're at it.
- And it allows insightful approaches to certain comparative and diachronic issues.

<sup>1</sup>With these it's very hard to argue that nothing syntactic is involved, so McFadden (2004), Baker (2015) and other essentially M-case approaches thus posit (null) P heads to deal with (at least some) inherent cases.

<sup>2</sup>E.g. Caha (2009)'s 'peeling' theory, while a significant departure from traditional assignment theories, still incorporates the problematic idea that the structural cases are associated with distinct, dedicated syntactic positions.

For the inherent cases, we can simply adopt Caha (2009)'s proposals as a starting point. For the structural cases, a bit more needs to be said:<sup>3</sup>

- ☞ I propose that this primarily (perhaps exclusively) involves instances of what have been called **dependent** case and **default** or **unmarked** case.

The basic idea of dependent case, which goes back to Marantz (1991) and ultimately to intuitions in Yip et al. (1987), is given in (16), from Baker (2015, ch. 5):

(16) If a category XP bears c-command relationship R to another category ZP in domain W, then assign Case C to XP.

- Baker argues that this template characterizes the assignment of (many instances, in many languages, of) accusative, ergative, dative and other cases, if we fill in different values for the precise categories, c-command relationship and locality domain.
- So typical accusative is assigned to a DP c-commanded by another DP in the CP phase, (one type of) dative to a DP c-commanding another DP in the *v*P phase, and (one type of) ergative to a DP c-commanding a DP in the CP phase.
- DPs that don't meet the criteria for any inherent or dependent case receive default case (Schütze, 2001), which may be better understood as the complete lack of case (McFadden and Sundaresan, 2010, Kornfilt and Preminger, 2015, McFadden, 2018).

## 5 Applying the synthesis

I'll now go through the set of differences between structural and inherent case from the beginning of the talk and flesh out the proposed synthesis by showing how it can account for each of them in at least as insightful a way as other theories.

1. **Inherent case is thematically and lexically restricted, while structural case is assigned purely on the basis of structural configuration.**

The account here gives a straightforward characterization of what the difference between structural and inherent case is, reducing it to something that we have need for elsewhere:

- Structural case-marked nominal phrases are just DPs, whereas inherent case-marked ones involve additional syntactic heads above the DP.

---

<sup>3</sup>Two brief points on relevant controversies: 1) There is disagreement about when dependent and default case are assigned (Marantz, 1991, McFadden, 2004, Baker and Vinokurova, 2010, Baker, 2015, Kornfilt and Preminger, 2015, Levin, 2015). For present purposes what matters is that they have to happen in such a way that they have no subsequent effect on syntax and semantics. Putting them somewhere on the PF branch after Spellout seems like the most foolproof way to do so, but I'm open to other possibilities. 2) There is also ongoing debate of whether DPs require licensing along the lines of abstract Case, but even recent work claiming that they do has specifically stressed that it should be separated from morphological case (Levin, 2015, Sheehan and van der Wal, 2018). My concerns here are with the determination and broader relevance of actual case morphology, so I won't say anything further about licensing.

- We already need larger nominal extended projections to deal with traditional prepositional phrases, so we're making use of existing tools to deal with the distinction, rather than positing structural or inherent case as theoretical primitives.

Modelling the distinction in this way automatically accommodates the relevant semantic/thematic differences between the two types of case. The presence of extra heads above the DP in inherent case-marked nominals has consequences:

- ☞ These heads can be expected make some consistent, if not entirely straightforward, contribution to the semantics.
- ☞ This yields their basic thematic restrictions, but also their ability to sometimes appear in contexts (e.g. adjuncts) more characteristic of traditional PPs than NPs.

Note that under this view, inherent case is never really 'assigned', i.e. it isn't determined in the course of the derivation, but really is inherent to the phrase on which it appears.

- Since each distinct inherent case corresponds to a different syntactic category, with a different head at the top, the determination of inherent cases on argument nominals can just boil down to c-selection.
- If Y is the head that defines Datives, and X the head that defines Genitives, a verb or preposition that takes inherent Dative objects selects for YPs, and one that takes inherent Genitive objects selects for XPs.

Exemplified with some German verbs, we get the following:

Verb	Gloss	'Assigns'	Selects
<i>tragen</i>	'carry'	Acc	DP
<i>helfen</i>	'help'	Dat	YP
<i>gedenken</i>	'commemorate'	Gen	XP

- ☞ I contend that this is a welcome result, since inherent case assignment by verbs seems to have the level of moderate predictability punctuated by exceptions and surprises that is characteristic of other instances of c-selection.

Structural case-marked nominals, lacking such heads, will be different:

- They have no consistent semantics beyond what all DPs have in common, hence the lack of generalizations about the meaning of the nominative or the accusative.
- They also have the distribution of DPs and not of PPs or any other category.
- Their specific cases will not be visible to selection, because they are all DPs. Hence there are e.g. no verbs that select for nominative objects.

## 2. When both could be assigned, inherent case takes precedence over structural.

- ☞ Again, inherent case is not assigned, but characterizes how certain nominal structures are built up **before** merging into a larger context, and in those contexts these (larger) structures are selected over the (smaller) structures of structural case.



- ☞ Since inherent case in a sense belongs to an earlier stage of the derivation, it gets first crack before structural case.
- ☞ In some languages, dependent case can be assigned on top of inherent in such contexts (see e.g. Richards, 2007, Pesetsky, 2013, on case stacking), but in most, structural case does not apply to DPs that already bear case. We'll come back to this below.

### **3. Structural cases alternate under A-movement and in argument structure alternations, while inherent ones do not.**

The standard take on this since the 80s is essentially definitional:

- ☞ Inherent case is assigned to a nominal in its first-merge position. Subsequent steps of the derivation obviously cannot undo this first Merge, and are thus irrelevant.
- ☞ Structural case, on the other hand, can be assigned whenever a nominal gets into the right structural relationship with a case assigner.
- ☞ This difference must simply be stipulated, since there is otherwise no inherent formal distinction in the nature of the two types of case.

We can do better now, though, because the difference between structural and inherent case has to do with the presence of syntactic structure on the relevant nominal.

- Actual syntactic heads can't be created or destroyed by movement, or affected by the presence or absence of DPs elsewhere in the structure (causatives, passives).
- We also don't expect that a DP would be able to move into a KP, since this would require internal Merge to a complement position.
- Movement out of a KP may be possible, but should be rare, since it would amount to something like preposition stranding.

The situation with structural case, is of course quite different:

- Movement absolutely can affect c-command relationships between DPs, and move them into or out of particular locality domains.
- Since structural case **is** established in the course of the derivation on the basis of such factors, it will indeed be sensitive to A-movement, passivization, etc.

### **4. In some languages, inherent case blocks certain movement processes and relations associated with subjecthood. When it doesn't, we call it quirky case.**

The synthesis proposed here doesn't explain the quirky/inherent distinction, but it does provide a plausible framework for understanding it.

- ☞ Structural and inherent nominals belong to distinct syntactic categories, but the same extended projection, so we can expect them to have similar but distinct treatments by movement and other phenomena.

☞ And there is a good bit of room for variation and parametrization here.

Take movement to a derived subject position like Spec-TP:

- If this is driven specifically by a D feature, then we only expect it to apply to structural case-marked nominals, not inherent ones.
- But it could also apply to the latter if the inherent case heads don't create locality boundaries, so that the DP contained within could be targeted, pied-piping the KP.
- Alternatively, in some languages the movement could be triggered not by a D feature per se, but by something that characterizes nominal extended projections, so the KPs of inherent case-marked nominals would be equally good candidates.
- In the end, this is analogous to saying that languages can differ in the extent to which they will tolerate PPs in subject position, which we already know is correct.

**5. Whether a nominal has inherent or structural case can be relevant for the structural case assigned to another nominal below it.**

- Typically, when two DPs are in the same minimal domain in a nominative-accusative language, the lower one gets accusative, but only when neither bears inherent case.
- All non-inherent DPs which don't get accusative in this way, end up nominative. Thus we get the following patterns:

- (17)
- |    |   |   |   |
|----|---|---|---|
| a. | [ DP ]                                  | → | [ DP <sub>NOM</sub> ]                   |
| b. | [ DP DP ]                               | → | [ DP <sub>NOM</sub> DP <sub>ACC</sub> ] |
| c. | [ DP <sub>INH</sub> DP ]                | → | [ DP <sub>INH</sub> DP <sub>NOM</sub> ] |
| d. | [ DP DP <sub>INH</sub> ]                | → | [ DP <sub>NOM</sub> DP <sub>INH</sub> ] |
| e. | [ DP <sub>INH</sub> DP <sub>INH</sub> ] | → | [ DP <sub>INH</sub> DP <sub>INH</sub> ] |

? Why don't DPs with inherent case trigger dependent case on a lower DP?

Note that our explanation of this pattern in German and Icelandic had better not be too good, since languages like Faroese famously go the other way:

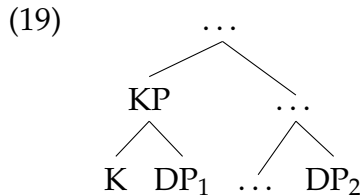
- (18) Siggu dámar bókina/\*bøkur  
 Sigga.DAT likes.3s book-the.ACC/\*NOM  
 'Sigga likes the book.'

Again, the assumption of heads above DP in inherent case-marked nominals provides a framework for dealing with this (largely following Richards, 2010, Baker, 2015):

- The most obvious instantiation of the template in (16) for dependent accusative would fix the two relevant categories as DPs, i.e. accusative is assigned to a DP c-commanded by another DP within a local domain.
- This will apply straightforwardly when we have two DPs, neither of which has inherent case, assigning accusative to the lower.

But it will plausibly **not** apply when the higher nominal bears inherent case:

- ☞ The entire nominal will be a KP, not a DP, hence won't satisfy the conditions itself.
- ☞ Of course that KP will contain a DP, but this won't actually c-command out of the containing structure. E.g. DP<sub>1</sub> contained within KP doesn't c-command DP<sub>2</sub> in (19):



We can deal with Faroese with a different parametric instantiation of the template in (16):

- Assume e.g. that the bit specifying the properties of the c-commanding phrase does not restrict it to DPs, but to extended nominal projections more generally.
- 6. Inherent case-marked nominals are often blocked from triggering agreement, while structural case-marked ones are not.**
- The standard story about this is that agreement and case-assignment are parasitic – two sides of a single Agree relationship.
  - Assignment of inherent case to a DP in its first merge position renders it inactive for later Agree with the functional heads where verbal agreement is realized.

However, this co-dependency of case and agreement has come under serious attack:

- For several languages, evidence has accumulated that e.g. nominative case (probably the most relevant one) is **not** tied to agreement in the way that it should be (McFadden and Sundaresan, 2010, Baker, 2015, and citations there).

Fortunately, our analysis allows us to adopt an alternative explanation:

- ☞ Řezáč (2008) argues that the additional structure above the DP in inherent case-marked nominals (he assumes they're PPs) creates a phase boundary. Thus the  $\phi$ -features on the DP within are inaccessible to functional heads at the clause level.
- ☞ Structural case-marked DPs, on the other hand, will lack this structure and thus be accessible to Agree relations from outside.

## 6 Challenges from intermediate cases

What (15) proposes is a clear cut-off between structural and inherent cases, in terms of the presence of syntactic heads, with no room for ambiguity or intermediate categories.

- ☞ This runs into some trouble with accusatives in most familiar languages, as well as at least some datives, genitives and ergatives, which show some hybrid behavior.
- ☞ Figuring out what to do with these non-nominative structural cases is quite tricky, and at first looks like a big problem for (15). But I will try to convince you that what we end up with is an unexpected argument in favor of this approach.

## 6.1 The radical emptiness of the nominative

There is evidence from a completely different quarter about the presence or absence of syntactic heads corresponding to different cases. It's in partial agreement with what we've seen so far, but frustratingly at odds with it on some points.

- The argument comes from irregular morphological stem alternations sensitive to case, as in the following examples (McFadden, 2018):

	<i>Tamil</i>	<i>Latin</i>	<i>Icelandic</i>	<i>Gothic</i>	<i>Sanskrit</i>
	'tree'	'man'	'man'	'tongue'	'father'
<b>Nom</b>	mar- <b>am</b>	hom- <b>ō</b>	ma- <b>ð</b> -ur	tuggō	pitá
<b>Acc</b>	mar- <b>att</b> -ai	hom- <b>in</b> -em	ma- <b>nn</b>	tuggō- <b>n</b>	pitá- <b>r</b> -am
<b>Gen</b>	mar- <b>att</b> -(u)	hom- <b>in</b> -is	ma- <b>nn</b> -s	tuggō- <b>n</b> -s	pitú- <b>r</b>
<b>Dat</b>	mar- <b>att</b> -ukku	hom- <b>in</b> -ī	ma- <b>nn</b> -i	tuggō- <b>n</b>	pit- <b>r</b> -é

The empirical thrust is that once you weed out alternations that might be implemented phonologically, you get the cross-linguistically consistent pattern in (20):

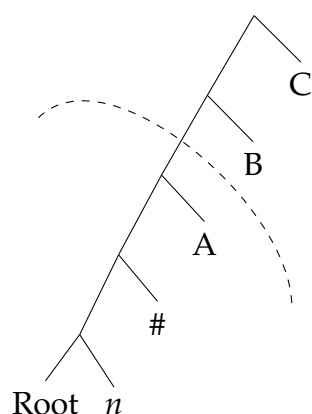
(20) **Nominative stem-allomorphy generalization (NSAG)**

When there is stem allomorphy based on case, it distinguishes the nominative from all other cases.

The theoretical takeaway is more complicated, but here's the basic idea:

- The relevant kind of stem alternation can be profitably analyzed in terms of allomorphy of a stem-forming suffix, for concreteness little *n*.
- The nominative is literally empty, corresponding to the lack of case structure above the DP, while the other cases involve KP structures above DP a là Caha (2009).
- The stem alternations are sensitive to the presence of the first case head above the DP, which distinguishes all other cases from the nominative. This head – labeled A in Tree (21) below – triggers the non-nominative forms of little *n*.
- A also demarcates a locality boundary. The heads above it are not sufficiently local to be visible for purposes of determining the shape of little *n* (see e.g. Embick, 2010, Moskal, 2015, on locality restrictions on allomorphy), hence distinctions among the non-nominative cases can have no relevance for stem alternations.

(21)



This is just part of a wider constellation of considerations that single out the nominative in particular as being empty, the complete lack of case, distinct from all others.

- Again, the nominative is clearly the default, showing up in such a way that it is plausible to think it is never actually **assigned** (McFadden and Sundaresan, 2010, Kornfilt and Preminger, 2015, Levin, 2015).
- And cross-linguistically, it also tends to be morphologically unmarked, lacking any overt suffix or adposition.

This brings us to the following situation:

- ☞ Both the structural/inherent considerations and the stem-allomorphy ones support a distinction between cases that involve heads above DP and ones that don't.
- ☞ Both agree that the nominative is in the structureless group, and that prototypically oblique cases like the instrumental or locative are in the structure-having group.
- ☞ But they disagree on the status of other 'structural' cases like the accusative, and arguably structural uses of the genitive, dative, ergative etc.

## 6.2 The double life of the accusative

Cases like accusative present further problems, even for the structural/inherent divide:

- In nominative-accusative languages, the accusative is the second central structural case alternating with the nominative and the prototypical dependent case.
- However, in many such languages, it also has at least some uses that are arguably or even quite clearly inherent/oblique.

Here's some evidence for inherent accusative in German:

- There are a few verbs that assign a lexical accusative to their sole argument:

(22) Mich friert. Mich dürstet. Mich hungert. Mich schaudert.  
 me.ACC freezes. me.ACC thirsts. me.ACC hungers. me.ACC shudders.  
 'I'm cold. I'm thirsty. I'm hungry. I'm shuddering.'

- There is also a productive adverbial use of the accusative on nominals denoting durations, e.g. *den ganzen Tag* in (23a) which gives the duration of the cricket playing. Note that it doesn't become nominative in the impersonal passive in (23b).

(23) a. Der Metallurge spielte den ganzen Tag Cricket.  
 the M. played the whole day.ACC cricket  
 'The metallurgist played cricket the whole day.'  
 b. Den ganzen Tag wurde gespielt.  
 the whole day.ACC was played  
 roughly 'They/one played the whole day.'

We could try to claim that there are two different cases here, one structural and one inherent, and we're just mistaken in calling them both 'accusative'. But that would require ignoring the very strong morphological evidence for the reality of a single category:

- We're not dealing with a simple uniform suffix that attaches to all elements that can be marked for case, so we can't posit accidental homophony.
  - Instead, we have a whole series of distinct forms of nouns, pronouns, determiners, demonstratives and adjectives, each systematically used **both** for the structural instances **and** for the inherent ones.
- ⇒ I.e. we have clear evidence for a unified morphological category accusative, which maps onto two functions that are syntactically and semantically quite distinct.

The recognition that the accusative has some inherent/oblique uses is not new. But I think that an approach like the one here sharpens the issues considerably:<sup>4</sup>

- ☞ For me, the structural/inherent divide reflects how the cases themselves are represented, such that inherent cases involve heads not present in structural ones.
- ☞ This would imply that structural uses of the accusative have to involve a distinct syntactic structure from inherent uses, which is a very bad result, making a straightforward account of their morphological identity difficult or even impossible.

And the accusative is just the case for which it is easiest to make this point. Most non-nominative structural cases seem to show the same kind of split.

### 6.3 Phenomena that straddle the divide

A third problem comes from a closer look at certain details of the phenomena that motivated Caha (2009)'s proposal of containment structures for the various cases.

- There doesn't seem to be any interruption in the hierarchy of case categories that could correspond to the structural/inherent divide. E.g. in Russian we find syncretisms for every adjacent pair of cases:

	window	teachers	two (m., n.)	book	100
<b>Nom</b>	okn-o	učitel-ja	dv-a	knig-a	st-o
<b>Acc</b>	okn-o	učitel-ej	dv-a	knig-u	st-o
<b>Gen</b>	okn-a	učitel-ej	dv-ux	knig-y	st-a
<b>Prep</b>	okn-e	učitel-jax	dv-ux	knig-e	st-a
<b>Dat</b>	okn-u	učitel-am	dv-um	knig-e	st-a
<b>Ins</b>	okn-om	učitel-ami	dv-umja	knig-oj	st-a

<sup>4</sup>Another way to put it might be that it is considerably more worrisome for an approach like mine than for a traditional one, but this is just because (15) makes a strong claim about the difference between structural and inherent cases that has actual consequences.

Again, this is difficult to square with the idea that the structural/inherent divide corresponds with a big difference in how the cases are represented.

- ☞ According to my conjecture in (15), the structural cases lack the kinds of syntactic heads required to make Caha's story about syncretism work.
- ☞ This means we have no way to account for syncretisms involving just one structural and one inherent case, say the Acc and Gen, because what distinguishes the Acc from the Nom has nothing to do with what defines the Gen.
- ☞ So we predict a break in syncretism **somewhere** in the inventory of cases, coinciding with the structural/inherent divide, which the table above and similar data from other languages show does not exist.

## 7 What is dependent case assignment?

What I'd like to suggest now is that these three challenges for my account of the structural/inherent divide are intimately related in that they all involve the treatment of the non-nominative structural cases. Here's how I would like to characterize the issue:

- ☞ We need not just a two-way distinction between structural and inherent, but a three-way one between nominative, other structural, and inherent.
- ☞ Everything points to absence of heads in the nominative and presence of heads in the inherent cases, but the non-nominative structural cases are unclear.
- ☞ Traditional structural/inherent considerations suggest a bare DP, but morphological stem alternations, inherent uses of sometimes structural cases, and phenomena that cross the structural/inherent divide go the other way.

An additional question provides a hint of where to find a solution:

? What actually happens formally when a dependent case is assigned to a DP?

A simple assumption would be that it involves the assignment or valuation of special case features on the D head, as in standard Case theory (Chomsky, 2001, etc.). But that actually doesn't make so much sense given our other assumptions.

- ☞ It would be counterintuitive (perhaps downright impossible) to implement dependent case in terms of Agree, the normal operation for feature valuation, because dependent case creates a **distinction** between two local DPs, not a copying or sharing of values.
- ☞ Also, the featural idea runs into problems alluded to above — the kind of unordered feature bundles within a single head standardly assumed fail to deal gracefully with structured patterns of syncretism etc.

So what is the alternative to implementing dependent case in terms of features?

- Essentially, our way of thinking about syntax boils down to features, the bundles of features which we call heads, hierarchical structures constructed out of those heads, and operations on all of them.
- So if we want to model something, and we can't model it in terms of a feature on some head or in terms of syntactic operations, we're forced to model it in terms of an additional head or heads added on top of the relevant constituent.
- We are led to suppose that the dependent accusative, e.g., involves some amount of structure added on top of the bare DP of the nominative.

The obvious question is how we maintain our account of the basic structural/inherent facts under this scenario. I.e. if structural accusative involves a head above DP, how is it different from an inherent case? Again, we need a three-way distinction:

1. The nominative
2. Other structural cases beyond the nominative
3. Inherent cases

And this is where the synthesis of KP with M-case comes in:

- ☞ Let's say that the assignment of a dependent case literally amounts to the addition of KP structure, on top of what was a simple DP, but late in the derivation.

Here's how that gets us our three-way distinction:

	<b>Nom</b>	<b>DepAcc</b>	<b>InhAcc</b>
<b>1st Merge</b>	DP	DP	[A DP]
<b>Post-Spellout</b>	DP	[A DP]	[A DP]

1. The nominative is what you get when a nominal enters the derivation as a DP and remains that way all the way to the end.
2. The other structural cases are what you get when a nominal enters the derivation as a DP but gets additional structure added on top due to the application of dependent case rules at Spellout.
3. Inherent case, including inherent accusative, is what you get when a nominal enters the derivation with structure on top of the DP.

Let's walk through how this gets us what we want. First the easy ones:

- The inherent cases work just as we've always wanted them to. They involve structure throughout the syntactic derivation that can be selected for by specific verbs, carry non-trivial semantics and derive structured syncretism etc.
- The nominative also works just as we've always wanted it, lacking all such structure hence being unselectable and having no semantics.



Now the more interesting other structural cases:

- ☞ They start out as DPs just like the nominative, hence cannot be selected for, and they reach Spellout and hence LF as DPs still, so they can't have any interesting semantics.
- ☞ But on the way to the PF branch they get additional structure added, so morphophonologically they can behave more like the inherent cases, and indeed sometimes be morphologically identical to them.

This idea raises an important constellation of issues:

- ☞ It adds structure at a weird time in a weird place and in a weird way.

More specifically:

- Adding material after Spellout violates Inclusiveness in a big way.
- Specifically adding new syntactic heads onto phrases that have already been Merged into the larger structure violates the Extension Condition and notions of cyclicity.
- And again, given the way that dependent case is triggered, it can't straightforwardly be implemented in terms of Agree, Move or any other familiar operations.

I don't have complete answers for these concerns, but I do have some suggestions that I think are promising:

- ☞ Inclusiveness isn't really a concern if dependent case is a matter for the morphology:
  - Common theories of the syntax-morphology interface like DM massively violate Inclusiveness, or rather they take it as not being operable on the post Spellout PF branch of the derivation.
- ☞ Similar logic can plausibly be applied to the Extension Condition:
  - One could of course imagine a restriction whereby post-syntactic operations can only add features to existing structure rather than adding structure itself.
  - But theories sufficiently worked out to deal with morphological details typically don't adopt such a restriction, e.g. adding structural positions for things like thematic vowels and concord affixes.
  - Indeed, Levin (2015) specifically proposes that KPs can be inserted above DPs in the post-syntactic component for independent reasons and similarly argues that this obviates problems with the Extension Condition and cyclicity.<sup>5</sup>
- ☞ Finally, if the case structures involved are KP sequences along the lines of Caha (2009) as proposed here, then there's a plausible, suitably restrictive way to implement the relevant addition of structure with an independently needed mechanism.

---

<sup>5</sup>I can also point here to the long tradition of analyses making use of P-insertion operations.

- The paradigm instance of dependent case assignment — making an accusative out of an unmarked nominative — amounts to adding the next head in the nominal functional sequence or extended projection.
- We can propose then that the addition of structure that underlies structural case is handled by the more general mechanism that implements extended projection.
- Whether this amounts to restrictions placed on external Merge or something rather different like Self Merge, something beyond simply Merge and Agree is clearly required here (see Adger, 2013, for discussion and references).
- Using this for structural case heavily restricts what kind of structure can be added post-syntactically. You cannot add anything you want anywhere you want, but can only *extend* projections already present in the structure.

## 8 Some comparative and diachronic issues

The approach developed here offers a productive basis to address a number of classic comparative and diachronic questions about case.

### 8.1 Inherent case, PPs and morphological variation

Syntactically speaking, the KP structures attributed to the inherent cases are essentially analogous to PPs.

- Thus, essentially following McFadden (2004), Asbury (2008), Caha (2009) and others, the difference between prepositions and case markers is a (language-specific) matter of how syntactic structures are mapped onto morphophonology.
- Much of the syntax underlying inherent case can thus be universal, not just among languages with rich case-marking systems, but also in those with no case at all.
- Since the structural cases exist only on the PF branch, however, they will be subject to greater variation, and languages may lack them entirely.

This also accords with common observations about the loss of morphological case:

- ☞ Oblique and inherent case marking are often replaced by PPs, while structural case marking is reduced or disappears entirely (Blake, 2001).
- If inherent case corresponds to actual syntactic content, there will be syntactic and semantic evidence in the PLD for its presence, which will remain even if, say, sound changes obscure its morphological realization.
- So we can expect new generations of speakers to continue to acquire the structure even as ‘case morphology’ is lost, and potentially to find new means to expone it.
- But since structural case is purely morphological, if its morphological realization is lost, then all evidence for it in the PLD will disappear.
- So we can expect new generations of speakers to simply fail to acquire it, and it will be lost from the language with no dire effects.

## 8.2 Intermediate inherent cases (Anagnostopoulou and Sevdali, 2015)

The approach laid out in Section 7 for cases that are intermediate between the structural and inherent ideals may also be able to accommodate patterns like those analyzed by Anagnostopoulou and Sevdali (2015) in Ancient Greek (AG).

- AG dative and genitive on verbal arguments look in some ways like typical inherent/quirky cases, e.g. in their clear sensitivity to thematic and lexical factors.
- However, many of them can become nominative under passivization, a classic hallmark of structural cases.

Anagnostopoulou and Sevdali (2015) analyze this by distinguishing different types of datives and genitives:

- One type involves interpretable Case features, which makes them inactive for Agree, yielding standard inherent case behavior.
- Another type involves uninterpretable Case features, which are transparent for Agree, yielding something more like limited structural case behavior.

There is diachronic support for something along these lines:

- ☞ In earlier stages of Greek, the individual cases were associated with more consistent meanings. Not coincidentally, genitives and datives did not alternate with nominatives in the passive.
- ☞ Over time, oblique objects came to alternate with nominatives in a way that paralleled the loss of their particular semantics.
- ☞ This fits in with a development of the relevant Case features from being interpretable to uninterpretable, in line with a common diachronic pattern described by van Gelderen (2011) and others.

A crucial idea then is that the actual case morphology of DPs with uninterpretable Case is determined by dependent case rules operating on top of and after syntactic Agree:

- Dative and genitive, like accusative, are dependent cases, in that they depend on another c-commanding DP with structural Case.
  - ⇒ This is why they alternate with the nominative in the passive, where that c-commanding DP is suppressed.
- But they are crucially more specific than the accusative, in that they additionally have contextual specifications for specific lexical verbs or applicative heads.
  - ⇒ This is why they take precedence over the accusative when the conditions for both are met.

A rather nice version of this analysis can be implemented in the synthesis pursued here. It amounts to recognizing a series of distinct types of oblique case, with distinct but related structural analyses, connected by plausible diachronic development paths:

1. Properly semantic case, which involves an unselected nominal phrase (typically some kind of adjunct) in an elaborated KP structure
  - The KP layer will have to provide the semantic connection to the surrounding context since there is no selecting element to do so.
  - The KP will also ensure that rules of structural case assignment do not apply, hence these will not alternate with nominatives in the passive.
2. Traditional inherent case, which has essentially the same KP structure, but is c-selected in the syntax by a lexical predicate, applicative or similar
  - Still being syntactic KPs, they will not alternate with nominatives in the passive, and they will have some semi-regular semantics.
  - But they will also be subject to semantic irregularities due to the vagaries of selection. Another way to think about it is that the KP won't bear all of the responsibility for the semantics due to the contribution of the selecting predicate.
  - They can quite plausibly develop out of semantic cases in contexts where a particular type of adjunct is especially common with particular (types of) predicates in the PLD and is reinterpreted as an argument.
3. The structural genitives/datives of Anagnostopoulou and Sevdali (2015), which we can analyze as DPs in the syntax that are made into KPs in the morphology
  - This can plausibly develop out of traditional inherent case, if the original thematic patterns become increasingly obscured and their dependence on specific predicates increasingly arbitrary.
  - Learners would basically reanalyze the case marking as a morphological quirk required by the lexical predicate rather than a syntactic structure — with concomitant semantics — that fits with the syntax and semantics of the predicate.
  - They are thus syntactic DPs, subject to structural case assignment in the morphology, and predictably alternate with the nominative in passives.
  - Directly translating Anagnostopoulou and Sevdali (2015)'s proposal, a language with such cases will simply have multiple distinct versions of dependent case, all of which involve projection of the accusative layer, but some of which further project genitive and/or dative layers due to lexical specifications.

### 8.3 Case-impooverished languages and the emptiness of the nominative

Finally, the details of dependent case theory assumed here — in particular the radical emptiness of the nominative — make predictions about the kinds of innovative grammars that can arise in languages undergoing the loss of case.

- In colloquial English and Danish, e.g., the old nominative and accusative forms of pronouns now have a distribution that is radically different from what is found in typical nominative-accusative languages.

- The old nominative forms are essentially restricted to unmodified, non-conjoined subjects of finite clauses, while the old accusatives are found everywhere else (Schütze, 2001, Quinn, 2005, Sigurðsson, 2006, Parrott, 2007).
- It seems that the spread of old accusative forms to certain predicative positions, against the background of the loss of clear case distinctions outside the pronouns, somehow led new generations to conclude that the accusatives were the elsewhere.

Under more traditional approaches where the nominative is a substantive, actively assigned case, those generations should have been able to acquire something closer to the PLD:

- ☞ For example, such a state of affairs could have been analyzable in terms of finite T assigning nominative, with the accusative as the elsewhere, with something in the predicative constructions (e.g. a silent P) disrupting nominative assignment.
- ☞ Then left-dislocated and fragment nominals, e.g., would come out accusative, with nominative restricted to subjects of finite clauses, but it would be consistent on these.
- ☞ That is, even when modified or conjoined, finite subjects would always come out nominative, because they are local to finite T, and these structures are generally transparent to case assignment in languages with real case systems.

But this is not what happened.

- Instead, modified and conjoined nominals also became (predominantly) accusative.
- In fact, the behavior of the old case forms under conjunction becomes extremely complex, with sensitivity to linear order, the specific identity of the pronoun and complex sociolinguistic factors.

(24) For many speakers, independent of syntactic context:  
 me and him, \*me and he, \*I and him, \*I and he; him and me, him and I, ?\*he and me, he and I

- Parrott (2007) thus argues convincingly that the distribution of forms like *I* and *me* no longer looks like case at all, but is best accounted for in terms of allomorphy.

Why would new generations reanalyze old case distinctions in terms of allomorphy in a way that led to a clear mismatch with the PLD?

- ☞ This suggests that the more traditional analysis with the nominative as a case assigned by finite T and the accusative as the elsewhere case is simply not a system that UG makes available.

This makes sense within a system of dependent and unmarked case like Baker (2015)'s:

- The only way to have an explicitly assigned nominative alongside an elsewhere accusative is a 'marked nominative' like Baker posits for languages like Choctaw, assigned to any DP within TP **not** c-commanded by another DP.

- But such a system requires strong evidence — e.g. from double nominative constructions and consistent marking on non-pronominal DPs — unavailable in the PLD, which looked quite different.<sup>6</sup>
- Instead, the only way to get the rather particular distribution of the old nominative forms and allow the old accusatives to be the elsewhere was for acquirers settle on an analysis that has nothing to do with case.
- This shift from a dependent-case based to an allomorphy-based analysis of the pronominal forms then brought with it the change in the distribution of the forms that has made English and Danish so different from e.g. Old English, German and Swedish.

## References

- Adger, David. 2013. *A syntax of substance*. Cambridge, MA: MIT Press.
- Anagnostopoulou, Elena, and Christina Sevdali. 2015. Case alternations in Ancient Greek passives and the typology of Case. *Language* 91:442–481.
- Andrews, Avery. 1982. The representation of case in modern Icelandic. In *The mental representation of grammatical relations*, ed. Joan Bresnan, 427–503. Cambridge, Mass.: MIT Press.
- Asbury, Anna. 2008. The morphosyntax of case and adpositions. Doctoral Dissertation, Utrecht University.
- Baker, Mark. 2015. *Case: Its principles and its parameters*. Cambridge: CUP.
- Baker, Mark, and Nadya Vinokurova. 2010. Two modalities of Case assignment: Case in Sakha. *Natural Language and Linguistic Theory* 28:593–642.
- Bayer, Josef, Markus Bader, and Michael Meng. 2001. Morphological underspecification meets oblique case: syntactic and processing effects in German. *Lingua* 111:465–514.
- Bittner, Maria, and Ken Hale. 1996. The structural determination of case and agreement. *Linguistic Inquiry* 27:1–68.
- Blake, Barry. 2001. *Case*. Cambridge University Press, second edition.
- Caha, Pavel. 2009. The nanosyntax of case. Doctoral Dissertation, University of Tromsø.
- Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz. Cambridge, Mass.: MIT Press.
- Embick, David. 2010. *Localism versus globalism in morphology and phonology*. Cambridge, Mass.: MIT Press.
- Emonds, Joseph. 1987. The invisible category principle. *Linguistic Inquiry* 18:613–632.
- Freidin, Robert, and Rex Sprouse. 1991. Lexical case phenomena. In *Principles and parameters in comparative grammar*, ed. Robert Freidin. Cambridge, Mass.: MIT Press.
- van Gelderen, Elly. 2011. *The linguistic cycle: language change and the language faculty*. Oxford: Oxford University Press.
- Haider, Hubert. 1985. The case of German. In *Studies in German grammar*, ed. Jindřich Toman, 65–101. Dordrecht: Foris.
- Harley, Heidi. 1995. Subjects, events and licensing. Doctoral Dissertation, MIT.

<sup>6</sup>Reanalyzing the old nominative forms as ergatives would have also allowed the old accusatives to become elsewhere ‘absolutives’, but that would have done even worse violence to the PLD.

- Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, Mass.: MIT Press.
- Kornfilt, Jaklin, and Omer Preminger. 2015. Nominative as *no case at all*: an argument from raising-to-accusative in Sakha. In *Proceedings of the 9th Workshop on Altaic Formal Linguistics*. Cambridge, MA: MITWPL.
- Lamontagne, Greg, and Lisa Travis. 1987. The syntax of adjacency. In *Proceedings of WCCFL*, 6, 173–186.
- Landau, Idan. 2006. Severing the distribution of PRO from Case. *Syntax* 9:32–66.
- Levin, Theodore. 2015. Licensing without Case. Doctoral Dissertation, MIT.
- Marantz, Alec. 1991. Case and licensing. In *ESCOL '91: Proceedings of the Eighth Eastern States Conference on Linguistics*, 234–253.
- McFadden, Thomas. 2004. The position of morphological case in the derivation: a study on the syntax-morphology interface. Doctoral Dissertation, UPenn.
- McFadden, Thomas. 2007. Default case and the status of compound categories in Distributed Morphology. In *Proceedings of the 30th Penn Linguistics Colloquium*, 225–238.
- McFadden, Thomas. 2018. \*ABA in stem-allomorphy and the emptiness of the nominative. *Glossa: a journal of general linguistics* 3:8.
- McFadden, Thomas, and Sandhya Sundaresan. 2010. Nominative case is independent of finiteness and agreement. Presented at BCGL 5: Case at the interfaces.
- Moskal, Beata. 2015. Domains on the border: Between morphology and phonology. Doctoral Dissertation, UConn.
- Neeleman, Ad, and Fred Weerman. 1999. *Flexible syntax: A theory of case and arguments*. Dordrecht: Kluwer.
- Nikanne, Urpo. 1993. On assigning semantic cases in Finnish. In *Case and other functional categories in Finnish syntax*, ed. A. Holmberg and U. Nikanne. New York: Mouton.
- Parrott, Jeffrey. 2007. Distributed Morphological mechanisms of Labovian variation in morphosyntax. Doctoral Dissertation, Georgetown University.
- Pesetsky, David. 2013. *Russian case morphology and the syntactic categories*. Cambridge, Mass.: MIT Press.
- Preminger, Omer. 2014. *Agreement and its failures*. Cambridge, MA: MIT Press.
- Quinn, Heidi. 2005. *The distribution of pronoun case forms in English*. Amsterdam: John Benjamins.
- Richards, Norvin. 2007. Lardil "case stacking" and the structural/inherent case distinction. Ms., MIT.
- Richards, Norvin. 2010. *Uttering trees*. Cambridge, Mass.: MIT Press.
- Schütze, Carson. 2001. On the nature of default case. *Syntax* 4:205–238.
- Sheehan, Michelle, and Jenneke van der Wal. 2018. Nominal licensing in caseless languages. *Journal of Linguistics* 54:527–589.
- Sigurðsson, Halldór Ármann. 1989. Verbal syntax and case in Icelandic. Doctoral Dissertation, Lund.
- Sigurðsson, Halldór Ármann. 2006. The nom/acc alternation in Germanic. In *Comparative Studies in Germanic Syntax*, ed. Jutta Hartmann and László Molnárfi, 13–50. Amsterdam: Benjamins.
- Sigurðsson, Halldór Ármann. 2009. The No Case generalization. In *Advances in comparative Germanic syntax*, ed. Artemis Alexiadou et al. Amsterdam: John Benjamins.
- Vergnaud, Jean-Roger. 1977. Letter to Noam Chomsky and Howard Lasnik on "Filters and Control". Published in Freidin, R. et al., eds. 2008. *Foundational Issues in Linguistic Theory*:

*Essays in Honor of Jean-Roger Vergnaud*. Cambridge, Mass.: MIT Press.

Řezáč, Milan. 2008. Phi-agree and theta-related case. In *Phi theory: Phi-features across modules and interfaces*, ed. Daniel Harbour et al., 83–129. Oxford: Oxford University Press.

Yip, Moira, Joan Maling, and Ray Jackendoff. 1987. Case in tiers. *Language* 63:217–250.

Zaenen, Annie, Joan Maling, and Höskuldur Thráinsson. 1985. Case and grammatical functions: The Icelandic passive. *Natural Language and Linguistic Theory* 3:441–83.