

Case Interactions in Syntax

Jessica Coon and Clint Parker

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Summary and Keywords

The phenomenon of case has been studied widely at both the descriptive and theoretical levels. Typological work on morphological case systems has provided a picture of the variability of case cross-linguistically. In particular, languages may differ with respect to whether or not arguments are marked with overt morphological case, the inventory of cases with which they may be marked, and the alignment of case marking (e.g., nominative-accusative vs. ergative-absolutive). In the theoretical realm, not only has morphological case been argued to play a role in multiple syntactic phenomena, but current generative work also debates the role of abstract case (i.e., Case) in the grammar: abstract case features have been proposed to underlie morphological case, and to license nominals in the derivation.

The phenomenon of case has been argued to play a role in at least three areas of the syntax reviewed here: (a) agreement, (b) A-movement, and (c) A'-movement. Morphological case has been shown to determine a nominal argument's eligibility to participate in verbal agreement, and recent work has argued that languages vary as to whether movement to subject position is case-sensitive. As for case-sensitive A'-movement, recent literature on ergative extraction restrictions debates whether this phenomenon should be seen as another instance of "case discrimination" or whether the pattern arises from other properties of ergative languages. Finally, other works discussed here have examined agreement and A'-extraction patterns in languages with no visible case morphology. The presence of patterns and typological gaps—both in languages with overt morphological case and in those without it—lends support to the relevance of abstract case in the syntax.

Keywords: case, agreement, A-movement, A'-movement, syntactic ergativity

1. An Overview of Case

The study of *case* is the investigation into the form and distribution of nominal expressions in language. As a first descriptive approximation, morphological case marking on nominals can be seen as a device that tracks grammatical function—for example subject, object, indirect object, or possessor—as illustrated by the forms in example (1).¹

(1)

- a. Masha Misha-**qa** at-**y** bier-de.
Masha.NOM Misha-DAT horse-ACC give-PST.3SGSBJ
'Masha gave Misha a horse.' (Sakha; Baker and Vinokurova 2010, 595)
- b. Hwan-**pa** wasi-n-**ta** rika-a.
John-GEN house-3SG-ACC see-1SG
'I see John's house.' (Quechua; Blake 2011, 24)
- c. Ha-hácwal-**m** péé-kiwyek-se-ne ciq'áamqal-**na**.
PL-boy-ERG 3/3-feed-IPFV-REM.PST dog-ACC
'The boys fed the dog.' (Nez Perce; Deal 2016a, 8)
- d. Mirtanya-**lu** juntiya-rna pulara kamparra-**la** wangka.
old.man-ERG tell-PST 3SG.LOC little.one-LOC story-ACC
'The old man told the little child a story.' (Nyamal; Dench 2011, 758)

Examples (1a) and (1b) illustrate canonical case marking in nominative-accusative languages. In such systems, nominative case generally maps to subjects, accusative case to direct objects, dative case to indirect objects, and genitive case to possessors. In (1a), the subject *Masha* appears in the morphologically unmarked nominative form, while the indirect object *Misha* takes the dative suffix *-qa* and the direct object *at* takes the accusative suffix *-y*. The genitive suffix *-pa* in the Quechua example in (1b) indicates that John is the possessor of the house, which is marked with accusative case by virtue of being the direct object. Examples (1c) and (1d), on the other hand, have subjects marked in the ergative case, which is canonically reserved for subjects of transitive verbs in languages that have ergative-absolutive case-marking systems. Nez Perce in (1c) shows what is known as a "tripartite" pattern: transitive subjects are marked ergative, direct objects are marked accusative, and intransitive subjects appear in a distinct form.

Nonetheless, the correlation between morphological case marking and grammatical function is frequently imperfect. Case systems cross-linguistically vary along a number of dimensions, including inventories of cases, case syncretisms, the mapping between morphological case and grammatical function, and the *alignment* of arguments (e.g., nominative-accusative, ergative-absolutive); see for example Blake (1994) and works in Malchukov and Spencer (2011) for typological and descriptive work on morphological case marking.

Since the introduction of Case Theory (Chomsky, 1980, 1981; Vergnaud, 1976/2006), the term *case* has been used to refer not just to special morphological forms that nominals show in certain environments (*morphological case*), but also to the abstract mechanisms taken to be responsible for licensing nominal arguments in the derivation (*abstract case*, or *Case*) (see e.g., Baker, 2015; Bobaljik & Wurmbrand, 2008; Butt, 2006; Markman, 2010; Pesetsky & Torrego, 2011 for overviews and discussion). Current generative research debates whether abstract case is assigned to nominals by functional heads (e.g., Legate, 2008); configurationally based on the nominal's relationship to other arguments (e.g., Baker, 2015; Baker & Vinokurova, 2010); or whether morphological case should be disas-

sociated from licensing requirements altogether (Marantz, 1991; McFadden, 2004). Recent literature also focuses on how to account for differences in alignment within and across languages (Coon, Massam, & Travis, 2017; Deal, 2016A; Legate, 2008), as well as in which grammatical module case assignment occurs (Bobaljik, 2008; Marantz, 1991; Preminger, 2014).

This survey article examines interactions of *case* in several areas of the syntax. Section 2 begins with a look at the relationship between morphological agreement and case. Section 3 reviews the interaction of case and A-movement, and 4 turns to the interaction of case and A'-movement. While Sections 2–4 focus specifically on the effects of *morphological case*; Section 5 turns to analogous facts in languages without overt case morphology, investigating the relevance of abstract case to the agreement and movement restrictions in Sections 2–4.

2. Case-Sensitive Agreement

Case has been shown to play an important role in *morphological agreement* (Bobaljik, 2008; Moravcsik, 1974, 1978). This discussion follows Preminger (2014) in defining agreement as morphologically overt covariance in ϕ -features (i.e., person, number, and gender features) between a verb (or verb-like element, e.g., auxiliary) and one or more nominal arguments (see also Corbett, 2006; Wechsler, 2009). Examples from French, Chuj, and Mi'gmaq are shown in example (2); as these examples illustrate, the agreed-with argument may be unpronounced.

(2)

- a. Nous all-**ons** à l'école.
we go-1PL to school
'We go to school.' (French)
- b. Mu nem-**u'**ln-u-eg.
NEG see-2SG-NEG-1PL.EXCL
'We_{EXCL} don't see you.' (Mi'gmaq; Coon and Bale 2014)
- c. Ix-**ach-ko**-chel-a'.
PFV-2SG.ABS-1PL.ERG-hug-TR
'We hugged you.' (Chuj; Coon and Carolan 2017)

Section 2.1 examines implicational hierarchies governing the accessibility of nominal arguments to agreement operations like those that underlie (2). Section 2.2 reviews the empirical motivation for these hierarchies, and finally, a typological gap in case-agreement interactions is discussed in Section 2.3.

2.1 Implicational Hierarchies

In a typological study of agreement patterns across languages, Moravcsik (1974) (later revised in Moravcsik, 1978) presented an implicational hierarchy, shown in (3), connecting a nominal argument's eligibility to trigger agreement to its grammatical function in the sentence.

(3)

MORAVCSIK HIERARCHY (Moravcsik 1978)

subject > object > indirect object > adverb

The hierarchy is read as follows: only if a language exhibits subject agreement will it also exhibit agreement with some or all objects; only if a language exhibits subject *and* object agreement will it also exhibit agreement with some or all indirect objects, and so on.

French in (2a) is an example of the left-most restrictive type, showing only subject agreement, while Mi'gmaq in (2b) shows both subject and object agreement. According to the hierarchy, no language shows agreement only with objects; see also Gilligan (1987) for a survey corroborating Moravcsik's initial findings.

Building on and revising Moravcsik's generalizations, Bobaljik (2008) provides evidence that the accessibility of nominal arguments for agreement is best stated in terms of *morphological case*, rather than grammatical function (GF): "When case and GF diverge, it is m-case, not GF, that defines accessibility for agreement" (Bobaljik, 2008, p. 303). Bobaljik follows Marantz (1991) in neutralizing the differences between ergative and accusative case-marking patterns by grouping nominative and absolutive cases into one category, *unmarked case*, and ergative and accusative cases into another category, *dependent case*. Cases assigned by specific lexical items, such as verbs and prepositions, fall into the category of *lexical/oblique case*. The revised hierarchy is given in (4), with cases appearing from left to right in order of ascending markedness:

(4)

BOBALJIK HIERARCHY (Bobaljik 2008, 303)

unmarked case > dependent case > lexical/oblique case

According to (4), in a given language, if arguments marked in a certain case are eligible for verbal agreement, then arguments marked in each less-marked case must also be eligible for agreement.

2.2 Empirical Motivation

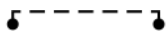
The original hierarchy formulated by Moravcsik is well supported both for the environments in which case and grammatical function coincide (i.e., nominative subjects, accusative objects, etc.), as well as for some environments in which they diverge (see Nepali in §2.3). To motivate the revised hierarchy in (4), Bobaljik (2008) examines two do-

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mains in which grammatical function and morphological case diverge: subjects marked with quirky case and subjects marked with ergative case. Each is examined in turn.

In a regular Icelandic nominative-accusative transitive sentence, like the one in (5a), the verb agrees in person and number with the nominative subject. However, certain verbs in Icelandic appear with non-nominative or “quirky” subjects (Andrews, 1976; Thráinsson, 1979); the verb ‘like’ in (5b), for example, always appears with a dative-case-marked subject, while the object appears in the unmarked nominative case. A range of work in Icelandic demonstrates that these quirky subjects pass language-internal subject-hood diagnostics, which the nominative objects consistently fail (Harley, 1995; Jónsson, 1996; Sigurðsson, 1989; Zaenen, Maling, & Thráinsson 1985). Nonetheless, the finite verb must agree with the nominative object.

(5)

- a. 
a. Við lásum bókina.
 we.NOM read.1PL the.book.ACC
 ‘We read the book.’

- b. 
b. Henni líkuðu ekki þessar athugasemdir.
 her.DAT liked.3PL not these comments.NOM
 ‘She did not like these comments.’ (Icelandic; Sigurðsson 1996)

In Icelandic, the generalization is that only *nominative* arguments may agree; in the absence of a nominative argument—as in the dative-accusative construction in (6)—the verb resorts to a default form.

(6)

- Okkur vantaði bókina.
us.DAT lacked.DFLT the.book.ACC
‘We lacked the book.’ (Icelandic; Sigurðsson 1996)

Data like these thus support Bobaljik’s generalization that when morphological case and grammatical function do not align, it is morphological case marking that determines agreement.

Case-agreement interactions in some ergative languages provide a similar result. Hindi shows an ergative-absolutive case pattern in the perfective aspect: transitive subjects appear with the ergative case marker *-ne*, while (setting aside differential object marking) transitive objects and intransitive subjects are in unmarked absolutive forms. The verb consistently agrees with the unmarked absolutive argument: the transitive object in (7a) and the intransitive subject in (7b).

(7)

- a. Raam-ne roTii khaayii.
Raam(M)-ERG bread(F) eat.PFV.F
'Raam ate bread.'

- b. Raam baazaar gayaa.
Raam market go.PST.M.SG
'Raam went to the market.'

(Hindi; Mahajan 1990)

Hindi shows an aspectual split: transitive subjects in the imperfective aspect, as in (8), do not show ergative case marking and appear instead as absolutive. In such examples, verb agreement is with the transitive subject.

(8)

- Raam roTii khaataa thaa.
Raam(M) bread(F) eat.IPFV.M be.PST.M
'Raam (habitually) ate bread.'

(Hindi; Mahajan 1990)

Just as in Icelandic, agreement in Hindi is then best described as targeting the highest morphologically unmarked argument, regardless of its grammatical function (Kachru, Kachru, & Bhatia, 1976; Mohanan, 1994).²

2.3 Accounting for a Typological Gap

In addition to accounting for apparent exceptions to Moravcsik's original hierarchy, Bobaljik (2008) proposes that framing the accessibility of nominal arguments to agreement in terms of morphological case, as in (4), provides an explanation for a particular typological gap; see also Woolford (2000) for a similar proposal.

As observed in early typological work on case-agreement interactions (Anderson, 1977; Comrie, 1978; Dixon, 1979; Moravcsik, 1978), and corroborated in WALS (Comrie, 2013; Siewierska, 2013), languages may show a split in case and agreement alignment, but only in a single direction, shown by the *unattested* cell in (9). Note that the term "nominative-accusative agreement" refers to an agreement system which follows a nominative-accusative pattern, for example, in which all subjects are agreed with, regardless of the case marking in that particular language.

(9)

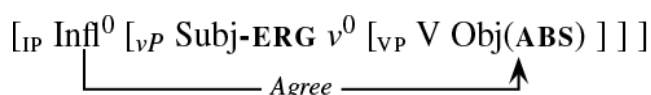
CASE \ AGREEMENT		
	NOM-ACC	ERG-ABS
NOM-ACC	✓	<i>unattested</i>
ERG-ABS	✓	✓

Many languages follow the same alignment in both case and agreement, as in the upper-left and lower-right cells. There are also many languages which have ergative-absolutive systems of morphological case but in which agreement nonetheless tracks all subjects (i.e., “nominative agreement”), as in the lower-left cell; examples include Nepali, Warlpiri, and Chukchi (Bobaljik, 2008). The reverse—a language with a nominative-accusative system of morphological case, but ergative-aligned agreement—is unattested (see also Markman & Grashchenkov, 2012; Woolford, 2000).

Under the assumption that morphological agreement targets the *highest accessible* nominal argument, the gap in (9) is predicted. Crucially, Bobaljik (2008) assumes, following Marantz (1991), that morphological case is determined *post-syntactically*, in the morphological component of the grammar. Bobaljik thus uses the dependence of agreement on case to argue that agreement must also be calculated post-syntactically. More recently, Preminger (2014) argues that agreement—and therefore, by Bobaljik’s reasoning also morphological case—must instead be located in the narrow syntax.³ Woolford (2000) accounts for the same typological gap under the assumption that ϕ -agreement is syntactic, and we represent this system here.

Specifically, we assume that ϕ -agreement is the result of an abstract *Agree* relationship between a probe and a nominal argument, the goal (Chomsky, 2000, 2001). We illustrate how this proposal works by examining two ergative-case-marking languages which show the two different possibilities for agreement. The Hindi examples from (7) illustrate a system in which both case and agreement follow an ergative pattern, as in the lower-right cell of (9). In (7a) the transitive subject is marked with ergative case; the verb agrees only with the (unmarked) absolutive argument. This can be modelled in a system in which certain case-marked arguments are inaccessible for agreement and the agreeing probe must continue searching the structure for an accessible argument—in this case, the absolutive object, as in (10).⁴

(10)



Nepali is an example of a language that shows the attested mismatch: it shows ergative case marking on transitive subjects, as in (11a), yet unlike Tsez and Hindi, ergative-marked subjects *are* accessible for agreement, as in the lower-left cell in (9).

(11)

on agreement, while in quirky-subject languages like Icelandic, he argues, it is not. We examine his proposal in this section.

In the following examples from French and Icelandic, an NP marked with dative case appears raised to subject position. Crucially, this movement has different outcomes in each language: in French in example (14), the dative nominal *à Marie* has moved over the verb *semble* to canonical subject position, and the result is degraded.⁶ The comparable construction in Icelandic in (15), in which the dative pronoun *mér* has raised to subject position, is grammatical.

(14)

?*À Marie_i semble _____i [Jean avoir du talent].
to Marie seem Jean have.INF of talent
Intended: 'To Marie Jean seems to have talent.' (French; McGinnis 1998)

(15)

Mér virðast hestarnir vera seinir.
me.DAT seem.PL horses.the.PL.NOM be slow
'It seems to me that the horses are slow.' (Icelandic; Holmberg and Hróarsdóttir 2003)

Note further that Icelandic is like English and French in that only nominative arguments may control morphological agreement on verbs; the dative nominal in (15) is unable to agree with the verb, despite being in subject position. Instead, the verb *virðast* agrees with the nominative argument *hestarnir* 'horses'. Hence, Preminger concludes that it cannot be the case that movement to subject position is parasitic on (overt) agreement in Icelandic.⁷

In (16), we find a grammatical variant of (14) in which the dative nominal—in this case *au général*—does not move to subject position but instead remains in situ. The verb still cannot agree with the dative argument, but here the dative argument also blocks agreement from happening with the lower nominative *deux soldats* 'two soldiers':

(16)

Il semble au général être arrivé deux soldats en ville.
EXPL seem.DFLT to.the general to.be arrived two soldiers in town
'There seem to the general to have arrived to soldiers in town.' (French; Bošković 2007)

For the sake of completeness, note such expletive constructions are possible in Icelandic, as shown in (17), in which the dative experiencer *einhverjum manni* remains in its base position. On par with (16), the verb in the Icelandic expletive construction agrees neither with the dative nominal nor with the lower nominative one:

(17)

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það virðist [einhverjum manni] hestarnir vera seínir.
 EXPL seem.DFLT some.DAT man.DAT horse.the.PL.NOM be slow
 ‘A man finds the horses slow.’

Crucially, what (16) and (17) show is that, in both French and Icelandic, *in the absence* of A-movement it is licit to have a dative nominal intervene between the probe and the lower nominative; in cases like this, neither argument agrees. With this in mind, the contrast between the ungrammaticality of French constructions like (14) and the grammaticality of Icelandic constructions like (15), leads Preminger (2014, p. 161) to conclude that ungrammaticality of the type in (14) “arises precisely at the juncture of ϕ -agreement and movement.”

According to Preminger, the crucial discrepancy is between the requirements for this type of A-movement in quirky and non-quirky-subject languages. In non-quirky subject languages, like French, MtoCSP is licit only for those arguments that have been *successfully* targeted by the agreement probe. Recall that French, like both English and Icelandic, makes the cutoff in the hierarchy in (4) at unmarked case, meaning only nominative arguments are allowed to agree with verbs. Therefore, it follows that in French, MtoCSP “is case-discriminating derivatively, because it can only see noun phrases through the prism of ϕ -agreement” (Preminger, 2014, p. 162). In quirky-subject languages like Icelandic, on the other hand, MtoCSP is permitted for *any* noun phrase, regardless of case marking and regardless of the outcome of ϕ -agreement.

Preminger (2014) further presents a typological gap at the intersection of case, agreement, and the operation MtoCSP. Recall that A-movement is sensitive to case in non-quirky-subject languages, but not in quirky-subject languages. Hence, in the former, the set of morphological cases that render arguments eligible for agreement is *equal to* the set of cases that render arguments eligible for MtoCSP. In quirky-subject languages, on the other hand, the set of morphological cases with which arguments can agree is a *proper subset* of those with which arguments can undergo MtoCSP.⁸

As Preminger points out, there seems to be no language in which the set of morphological cases with which arguments can agree is a *superset* of those with which they can undergo MtoCSP. That is, in any given language, the number of morphological cases compatible with verb agreement is always equal to or less than the number of cases compatible with MtoCSP. This pattern is summarized in the table in (18), from Preminger (2014, p. 164):

(18)

Languages	Eligible for MtoCSP	Relation	Eligible for ϕ -agreement
Icelandic, Nepali	NOM, ACC, DAT. . .	\supsetneq	NOM
English, French	NOM/ABS	=	NOM/ABS
(Unattested)	NOM/ABS	\subsetneq	NOM, ACC, DAT. . .

To sum up, non-quirky-subject languages like French and English allow only nominative arguments to appear in subject position. In such languages, A-movement—more specifically, the operation MtoCSP—is sensitive to an argument’s case marking. According to

Preminger (2014), this is because in these languages, an argument must first be successfully targeted by an agreement probe to be eligible for MtoCSP. The agreement probe, for its part, is only successful when targeting nominative arguments. A-movement in quirky-subject languages does not show the same sensitivity to case marking. In these languages, arguments are eligible for MtoCSP regardless of their case marking and regardless of whether they are eligible for morphological agreement. What (18) illustrates is that case discrimination is a property of φ -agreement. Insofar as A-movement can be discriminating, it can only do so by virtue of utilizing the case discrimination capacities of φ -agreement. Nonetheless, given the small sample of languages for which movement-to-subject-position and quirky subjects have been extensively studied (see fn. 8), as well as the debate about the status of French examples like (14) (see fn. 6), this is an area which requires further work. Sections 4 and 5 turn to the question of whether case discrimination can be a property of A'-movement.

4. Case-Sensitive A'-Movement

This section turns to a phenomenon known as “syntactic ergativity”; see Deal (2016B) and Polinsky (2016) to appear for recent overviews. Taken in its broadest sense, the term covers any syntactic phenomenon that is sensitive to the distinction between ergative and absolutive arguments (see Dixon, 1972). The most prevalent use of the term, however, is used to describe an asymmetry in A'-movement. We confine ourselves to this phenomenon here, both because of the topic of this article, and because it is unclear whether there are true cases of syntactic ergativity outside of A'-movement (see Legate, 2012 on Dyirbal).

Specifically, the focus is on the fact that, in some morphologically ergative languages, ergative subjects are ineligible from undergoing some or all A'-movement operations. It is a matter of current debate whether this should be considered another instance of case discrimination—along the lines of agreement and A-movement asymmetries discussed in Section 3—or not. Moreover, it is not yet fully understood to what extent different types of A'-movement restrictions pattern together. The empirical facts are laid out in Section 4.1 and formal approaches are described in 4.2.

4.1 Syntactic Ergativity

In many—but not all—morphologically ergative languages, ergative subjects are restricted from undergoing A'-extraction; that is, extraction for focus, relativization, and *wh*-questions.⁹ This section focuses specifically on syntactic ergativity in languages with morphological case and returns briefly to agreement-only ergative languages in Section 5.

Tongan is an example of a morphologically ergative language that restricts the A'-extraction of ergative case-marked subjects (Otsuka, 2006; Polinsky, 2017). The examples in (19) illustrate the basic ergative alignment of the language:

(19)

-
- a. 'Oku malimali ['a e ta'ahine].
 PRS smile ABS DET girl
 'The girl is smiling.'
- b. 'Oku 'ene ['e he tamasi'i] ['a e ta'ahine].
 PRS tickle ERG DET boy ABS DET girl
 'The boy is tickling the girl.' (Tongan; Polinsky to appear)

The A'-extraction asymmetry is shown in (20), here illustrated with relativization. Intransitive subjects (20a) and transitive objects (20b) may be freely relativized; ergative subjects, as in (20c), may not relativize with a gap.

(20)

- a. 'a e ta'ahine_i ['oku malimali _____i]
 ABS DET girl PRS smile
 'the girl who is smiling.'
- b. 'a e ta'ahine_i ['oku 'ene 'e he tamasi'i _____i]
 ABS DET girl PRS tickle ERG DET boy
 'the girl whom the boy is tickling'
- c. *'a e tamasi'i_i ['oku 'ene _____i 'a e ta'ahine]
 ABS DET boy PRS tickle ABS DET girl
 intended: 'the boy who is tickling the girl' (Tongan; Polinsky to appear)

Languages that restrict the A'-extraction of morphologically-case-marked ergative arguments are found across the globe and in different language families. Such languages include West Greenlandic (Bittner & Hale, 1996), Chukchi (Comrie, 1979; Polinsky, 2017), Dyirbal (Dixon, 1972), and Katukina (Queixalós, 2010).¹⁰ On the other hand, many other morphologically ergative languages show no such restriction; these include Niuean (Seit-er, 1980), Basque (Hualde & Ortiz de Urbina, 2003), and Tsez (Polinsky, 2016). Crucially for the theories that seek to explain this phenomenon, described below, morphological ergativity appears to be a *necessary* condition for syntactic ergativity (no nominative-accusative languages have been described as restricting the A'-extraction of only transitive subjects (Deal, 2016; Polinsky, 2017), but not a sufficient one. To further complicate matters, it has been reported that not all A'-extractions pattern together in syntactically ergative languages; in Chukchi, for example, ergatives may A'-move for questions but not for relativization (Polinsky, 2017); see also Stiebels (2006) for variation across different A'-extraction processes in Mayan.

4.2 Approaches

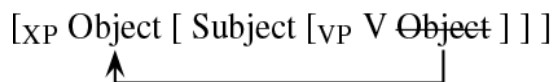
As discussed in more detail in Polinsky's (2017) survey, formal approaches to syntactic ergativity can be divided into two groups: (a) those which locate the restriction on ergative-subject extraction in the nature or configuration of the ergative subject itself, and (b) those that seek to explain the restriction on ergative-subject extraction in terms of more global properties of the clause, and in particular the location of the *absolutive* argument.

Section 4.2.1 begins with the latter approach, dubbed the *Standard Theory* (Deal, 2016); the ergative-subject-based approach is addressed in Section 4.2.2.

4.2.1 A'-Extraction and the Nature of Absolutive

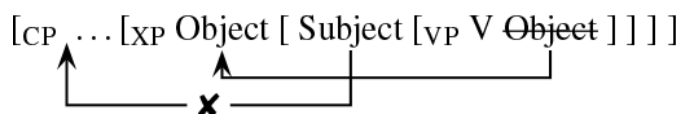
In her recent overview of syntactic ergativity, Deal (2016) surveyed a group of approaches to syntactic ergativity in which the problem with extracting the ergative subject is the result of movement and/or licensing needs of the (absolutive) object. The basic configuration is schematized in (21).

(21)



This account has been advanced in some form or other by Aldridge (2004, 2008, 2012), Assmann et al. (2015), Bittner and Hale (1996), Campana (1992), Coon, Mateo Pedro, and Preminger (2014), and Ordóñez (1995). Though details differ, these approaches locate the problem with ergative-subject extraction not in the ergative argument itself, but in the licensing needs and/or location of the transitive object. Specifically, in many variants of this account, the object moves to a position above the transitive subject, blocking the subject from undergoing A'-extraction.¹¹

(22)



Analyses differ in the motivation for object~subject inversion; some accounts (e.g., Bittner & Hale, 1996; Campana, 1992; Coon et al., 2014; Ordóñez, 1995) tie it to licensing needs of the absolutive object—specifically, the object raises over the subject in order to be licensed by Infl⁰. Aldridge (2004, 2008, 2012) proposes that the inversion is triggered by an [EPP] feature on v⁰, which may be present even in languages in which the object is licensed lower in the derivation. See Deal (2015, 2016) for further discussion.

Analyses of this sort assume that ergative is an *inherent case* (Aldridge, 2004, 2008; Legate, 2006, 2008; Nash, 1996; Woolford, 1997, 2006) assigned to the transitive subject in its base merged position (i.e., Spec,VoiceP). Movement of the object above the subject, as in (21), does not create a problem in non-A'-movement environments, as the ergative subject is licensed in its base position. These approaches thus successfully account for the fact that syntactic ergativity is found only in *morphologically ergative* languages, under the assumption that it is only these languages in which transitive subjects will receive inherent ergative case.

4.2.2 A'-Extraction and the Ergative Subject

Another group of approaches locates the problem with ergative A'-extraction in the nature of the ergative subject itself. Polinsky (2016) argues that ergative languages may be

divided into two types: (a) languages in which transitive subjects are DPs and ergative is a structural case, and (b) languages in which transitive subjects are actually PPs (see also Markman & Grashchenkov, 2012), and ergative case is assigned by an adposition (silent or overt).

According to this proposal, a subset of the latter (“PP-ergative”) group of languages shows ergative extraction restrictions, while in the former (“DP-ergative”) type of language, ergative subjects may freely extract. Support for an ergative-as-PP approach comes from diachronic evidence in certain language families in which ergative is proposed to be a reanalyzed passive *by*-phrase (see e.g., Hale, 1970; Comrie, 1978; and citations in Polinsky, 2016), as well as formal behavior of some ergative case markers. In languages for which the ergative subject is a PP, several factors conspire to render the PP subject unextractable:

1. The P^0 head cannot be stranded (as is true for many adpositions cross-linguistically), and
2. The PP cannot be pied-piped along with the thematic DP subject. The latter possibility includes PP-ergative languages, which Polinsky claims have null ergative-as-signing P^0 heads, citing evidence that pied-piping may be sensitive to the phonological content of the operator (e.g., den Dikken, 1995; Hornstein & Weinberg, 1981).

Polinsky’s account focuses in detail on two languages taken to be paradigmatic examples of DP- and PP-ergative languages: Tsez (Nakh-Dagestanian) and Tongan (Polynesian), respectively. Further work is needed to understand whether the proposal that subjects are PPs can be maintained in a wider array of syntactically ergative languages. Concerns include how PP subjects can bind lower arguments (discussed briefly in Polinsky, 2016, ch. 7); independent evidence for the PP status of ergatives, especially in languages in which the P^0 head is claimed to be null; as well as languages in which agreement targets only ergatives, discussed further in Section 5.

A different recent approach, which also locates the locus of ergative extraction asymmetries in properties of the ergative subject, is found in Deal (2016). Deal raises concerns with the reliance of the object~subject inversion approaches described in Section 4.2.1 on ergative as an inherent case. Deal’s alternative proposal, building on Otsuka’s (2006, 2010) work on Tongan, draws on the notion of *case discrimination*, with a focus on surface morphological case, discussed at length in Sections 2–3.

Deal’s reasoning is straightforward: there is empirical evidence both from morphological agreement (Bobaljik, 2008, §2) and from A-movement (Preminger, 2014, §3) that *Agree* for ϕ -features may, in some languages, be sensitive to the case of the goal DP. Under the assumption that A'-extraction also requires an *Agree* relationship to be established between the goal XP and the C^0 head (Chomsky, 1995, 2001; van Urk, 2015)—this time for operator features [WH], [FOC], or [REL]—we might then expect that this A'-movement-triggering “*Agree-F*” relationship may also be case-discriminating.

On this account, there is no necessary relationship between case discrimination in *Agree-φ* and in *Agree-F*: a given language might, for example, prohibit the A'-extraction of ergative subjects, but allow them to be targeted for morphological agreement (as in West Greenlandic), and vice versa (as in Tsez). Similarly, Deal's approach allows for flexibility in the absoluteness of syntactic ergativity: as foreshadowed in Section 4.1, in Chukchi (Chukoto-Kamchatkan), ergatives may extract for *wh*-questions (23a), but not for relativization (23b). Under Deal's account, *Agree*-[REL] is case-discriminating, while *Agree*-[WH] is not.

(23)

- a. Mikəne _____{ERG} milger kun-nin?
who.ERG gun.ABS buy-AOR.3SG>3SG
'Who bought a/the gun?'
- b. *[_____{ERG} milger kənnə-lʔ-ən] ənpənačg-ən
gun.ABS buy-PTCP-ABS old.man-ABS
intended: 'the old man who bought the gun' (Chukchi; Polinsky to appear)

Deal (2016) bases her case-discrimination account on the assumption that case discrimination discriminates the target DP's *overt case morphology*.¹² An important consequence of this account, as formulated by Deal, is that ergative languages with no morphological case—that is, languages in which ergativity is expressed via head-marking on the predicate—should *never* exhibit syntactic ergativity. Section 5 examines these languages, along with their implications for case.

5. Case Sensitivity in Caseless Languages

The focus to this point has been on the interaction of case in three syntactic domains: verbal agreement (§2), A-movement (§3), and A'-movement (§4). The discussion thus far has concentrated on languages in which (at least some) case marking is morphologically overt. This section further examines possible interactions between the syntax and case in pure head-marking languages (i.e., languages in which grammatical relations are indicated by marking on the head, rather than its dependents), with a special focus on two of the typological gaps identified in the preceding sections. Section 5.1 examines ergative agreement systems in head-marking languages, and section 5.2 turns to head-marking languages that exhibit syntactic ergativity. The existence of these systems provides evidence for (a) the existence of abstract case features, even in languages in which case marking is never expressed overtly, and (b) that case discrimination must target case features, rather than case morphology.

5.1 Caseless Languages and Ergative Agreement

A range of current generative literature debates the nature of the syntactic mechanism responsible for the assignment of abstract case features (see Baker, 2015; Bobaljik & Wurmbrand, 2008; Butt, 2006; Legate, 2008; Markman, 2010; and Pesetsky & Torrego, 2011 for recent overviews and discussion). With respect to the ergative-absolutive sys-

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tems examined in this section, current works debate whether ergative case is best represented as an *inherent case* assigned by transitive v^0 /Voice⁰ to the ergative subject in its specifier position, or a *dependent case* assigned configurationally to the higher of two arguments in a certain syntactic domain (see, e.g., Baker & Bobaljik, 2017; Legate, 2017 for recent discussion). Coon (2017B) argues that ergative agreement systems provide evidence that ergative is an inherent case in head-marking ergative languages.

Recall from Section 2 that, for languages with both morphological case and agreement, case~agreement mismatches are found only in a single direction: there are no attested languages with a nominative-accusative case system and ergative-absolutive agreement. Woolford’s (2000) account of this gap relied on the assumption that agreement originated in a high probe (e.g., Infl⁰); Bobaljik (2008) proposed that verbal agreement always targets the *highest* accessible nominal in a certain domain (recall that for Bobaljik, case and agreement are post-syntactic). An ergative-absolutive agreement system can then only arise when a structurally high ergative-case-marked subject is inaccessible for agreement, resulting in agreement with absolutive arguments (as in Hindi). Note, however, that ergative agreement systems are attested even in the absence of overt morphological case, discussed in Woolford (2000) and shown in the added row in table (24).

(24)

CASE \ AGREEMENT		
	NOM-ACC	ERG-ABS
NOM-ACC	✓	<i>unattested</i>
ERG-ABS	✓	✓
unmarked	✓	✓

In particular, the languages in the lower-right cell show an ergative-absolutive alignment but no visible case marking. Such languages are found, for example, in the Mayan, Tsimshianic, and Salishan language families, as well as in Abkhaz and Abaza (Northwest Caucasian). Examples from Ch’ol (Mayan) are shown in (25).

(25)

- agree

a.

Tyi

i-chuk-u

ñeñe’

x’ixik.

PFV

3ERG-carry-TR

baby

woman

‘The woman carried the baby.’

b.

Tyi

jul-i

x’ixik.

PFV

arrive-INTR

woman

‘The woman arrived.’

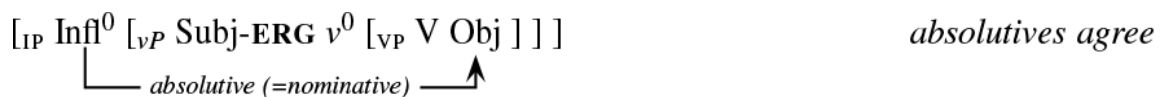
(Ch’ol)

As in many other Mayan languages, transitive subjects trigger a special agreement prefix on the verb. Third person absolutes—the object in (25a) and the intransitive subject in (25b)—trigger no marking, while first and second person absolutes are pronominal clitics (Coon, 2017A; Grinevald & Peake, 2012). A similar ergative agreement pattern is

found in Halkomelem (Salish), in which third person ergative subjects trigger agreement on the verb (Wiltschko, 2006). These patterns directly contradict the claim by Bobaljik (2008, p. 306), that ergative agreement entails the existence of absolutive agreement (since ergative is the more marked case, and agreement tracks case). While this appears to hold true in languages with overt case marking, it does not hold of head-marking ergative languages (see also fn. 2). Wiltschko (2006) and Coon (2017A) propose that ergative agreement in Halkomelem and Ch'ol, respectively, does not originate from a high probe (Infl^0 ; contra the generalized discussion in Bobaljik, 2008; Woolford, 2000), but rather represents agreement between the external argument and the head which introduces it: transitive v^0 or Voice⁰.

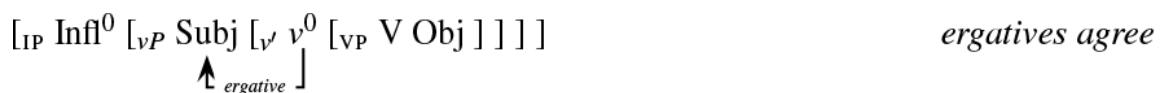
Note that a pattern in which only ergatives agree raises questions for how to account for the typological gap in (9)/(24). Coon (2017B) argues that, in order to correctly rule out the unattested languages in (24), ergative agreement of the sort found in Ch'ol and Halkomelem, must be parasitic on *inherent ergative case assignment*. There are two types of “ergative agreement” systems. One is the Hindi-type system represented in (26), in which a high agreement probe skips over an inaccessible ergative subject, resulting in a system in which only absolutives agree. For this system, all that is needed is that the transitive subject have ergative case, which the language deems inaccessible.

(26)



The second type of system is the Ch'ol/Halkomelem-type system, schematized in (27), in which agreement occurs low in the structure. Coon (2017B) proposes that this type of agreement is only possible as the result of the feature-sharing relationship, which occurs between v^0 and the external argument for inherent ergative case assignment.

(27)



Crucial to ruling out the gap in (24), both types of ergative agreement rely on a system of underlying ergative case assignment (contra Woolford, 2000, discussed in Coon, 2017B). However, the two systems “rely on case” in different ways. In (26), ergative case is assigned by some mechanism, and the marked-ergative subject is inaccessible to agreement, which targets the highest accessible nominal. In the second system in (27), agreement goes hand-in-hand with the feature-sharing relationship needed for inherent ergative case assignment; in other words, there is no *probe*.¹³

Crucially, this latter Ch'ol/Halkomelem-type of system is incompatible with a configurational approach to ergative case assignment, since agreement should otherwise not preferentially target a marked ergative subject (see Bobaljik, 2008, §2).¹⁴ Furthermore, if these languages were claimed to rely on a covert system of configurational case assign-

ment, additional stipulations would be required to rule out a scenario in which the ergative agrees but dependent *accusative* case is assigned (contra the gap in (24). See Coon (2017B) for further discussion.

Given the strong evidence in favor of configurational case assignment in certain languages with *overt* ergative case morphology (e.g., Shipibo, discussed in Baker, 2014, to appear, and Nez Perce, in Deal, FORTHCOMING), this suggests that both configurational and inherent options for case assignment must be possible (see also Baker & Vinokurova, 2010).

5.2 Caseless Languages and Syntactic Ergativity

Finally, returning to the ergative A'-extraction asymmetries introduced in Section 4, the focus this time is on head-marking ergative languages. As in Section 5.1, the concern is how to derive a particular case-related gap. Recall that while some languages with ergative case marking also restrict A'-extraction of ergative arguments, no language with a nominative-accusative case system restricts extraction of transitive subjects ("ergatives"), as shown in (28). Deal's (2016A) case-discrimination approach to syntactic ergativity accounts for this gap because in her system, an ergative extraction restriction relies on the presence of what she assumes must be morphologically overt ergative case marking. However, note that syntactic ergativity is also found in languages in which ergativity is expressed not by morphological case, but by agreement, as in the bottom-right cell of (28).

(28)

CASE \ A'-MOVEMENT		
	ERGs A'-extract	ERGs do not A'-extract
NOM-ACC	✓	<i>unattested</i>
ERG-ABS	✓	✓
unmarked	✓	✓

Transitive examples from Q'anjob'al (Mayan) and Gitskan (Tsimshianic) are shown in (29) and (30). In both languages, transitive subjects trigger special agreement marking on the predicate, and nominal arguments are unmarked for case. In (29a) and (30a), the (absolute) transitive objects are A'-extracted for a *wh*-question and focus, respectively. Extracting the transitive subject—the argument responsible for triggering ergative agreement on the predicate—is ungrammatical, as shown in (29b) and (30b).¹⁵

(29)

-
- a. Maktxel max y-il naq winaq ___(ABS)?
 Who PFV 3ERG-see CLF man
 ‘Who did the man see?’
- b. *Maktxel max y-il ___(ERG) ix ix?
 who PFV 3ERG-see CLF woman
 intended: ‘Who saw the woman?’
 (grammatical as: ‘Who did the woman see?’) (Q’anjob’al; Coon et al. 2014)

(30)

- a. Smax=hl jakwd-i-s Lisa ___(ABS)
 bear=CN kill-TR-3ERG.CN Lisa
 ‘Lisa killed *a bear*.’
- b. *Smax=hl jakwd-i-s ___(ERG) Lisa
 bear=CN kill-TR-3ERG.CN Lisa
 intended: ‘A *bear* killed Lisa.’ (Gitskan; Brown 2016)

Deal (2016A, p. 178) states that a case-discrimination approach to syntactic ergativity “predicts that bans on ergative A’-extraction should be found only in languages with ergative case marking” (we will return shortly to discrimination based on abstract case features). Deal aims to reconcile the existence of these patterns with her account by appealing to *wh*-agreement (see Baier, 2018 for an overview discussion). In languages with *wh*-agreement, like Abaza (Northwest Caucasian), the regular agreement pattern is replaced by special agreement markers for arguments which are A’-extracted. In Abaza, the ergative third person singular feminine agreement morpheme is *l-*, as in (31a); however, for all A’-extracted ergative subjects, the agreement marker becomes *zə-* (31b).

(31)

- a. ʃ^wə-l-bat’
 ABS.2PL-ERG.3SG.FEM-see
 ‘She saw you.’
- b. dəzda s-axčⁱa zə-xəčⁱ
 who 1SG-money ERG.WH-steal
 ‘Who stole my money?’ (Abaza; O’Herin 2002)

Deal proposes that Q’anjob’al and Gitskan do not exhibit true syntactic ergativity, and that instead, the forms in (29b) and (30b) are ungrammatical because they lack the appropriate agreement morpheme.

How do transitive subjects A’-extract in Q’anjob’al and Gitskan? Both languages have special strategies available to convey the intended meanings in forms like (29b) and (30b). Mayan languages with ergative extraction restrictions have a special construction known as Agent Focus (Aissen, 2017; Coon et al., 2014; Stiebels, 2006). Compare the transitive in (32a) with the Agent Focus example in (32b).

(32)

- a. Max=ach y-il ix ix.
PFV=2ABS 3ERG-see CLF woman
'The woman saw you.'

- b. Maktxel max=ach il-on-i?
who PFV=2ABS see-AF-INTR
'Who saw you?'

(Q'anjob'al; Coon et al. 2014)

Gitksan also has a special construction used for extracting transitive subjects.¹⁶ In (33b), an additional morpheme *an* appears, marked with invariable 3rd person "series I" (dependent clause ergative) agreement. The verb appears in the dependent order, typical of non-finite embedded clauses, and lacks the transitive suffix found in regular matrix transitives.

(33)

- a. Gya'a=s Lisa=hl 'ul.
see.TV=3ERG.CN Lisa=CN bear
'Lisa saw the bear.'

- b. Naa an=t gya'a=hl 'ul?
who AN=3.I see=CN bear
'Who saw the bear?'

(Gitksan; Brown 2016)

The Q'anjob'al and Gitksan examples in (32b) and (33b) raise two serious questions for a *wh*-agreement analysis of ergative extraction. First, note that unlike in the Abaza pair in (31), the change between regular transitive and ergative-extraction clauses in (32) and (33) involve more than simply a change in agreement. In Mayan Agent Focus, the ergative agreement marker goes missing entirely, and a special suffix—here *-on*—is added to the verb; the verb appears with an intransitive, rather than transitive, "status suffix". The suffix *-on* does not occupy a typical agreement slot, but rather appears in a position normally occupied by voice and other derivational morphology (Coon, 2016). As discussed in detail in Davis and Brown (2011) and Brown (2016), the Gitksan construction in (33b) also involves more than simple agreement changes.

Second, and more concerning for a *wh*-agreement approach to these constructions, is the fact that both constructions are found in other, non-ergative-extraction environments in their respective languages. As discussed in Coon et al. (2014), the Q'anjob'al Agent Focus form is also found in all dependent (non-finite) embedded transitives in the language. Coon et al. (2014), building on Ordóñez (1995), argue that the suffix *-on* is inserted to assign abstract case to the absolutive object. The suffix is thus needed in non-finite embedded clauses that lack the normal absolutive licenser, finite Infl⁰, as well as in ergative-extraction environments. The use of *-on* in matrix clauses obviates the object's need to invert to a position above the ergative subject for case, as in (21) (cf. the "standard theory" in §4.2 above), permitting subject extraction. For Gitksan, Brown (2016) argues that *an* is a nominalizer, and that the construction in (33b) presents a solution to syntactic ergative-

ty by avoiding extraction altogether. As expected under this account, Brown shows that *an* is also found as a repair strategy in other environments in which A'-extraction is impossible, such as extraction out of adjuncts.

These facts suggest that true syntactic ergativity—not simply *wh*-agreement—is attested in languages that lack overt morphological case entirely, as in the lower-right cell in (28) above. As with the ergative agreement patterns discussed in Section 5.1, the theory must therefore be constrained enough to limit syntactic ergativity to those languages with a morphologically ergative alignment, but also permissive enough to allow syntactic ergativity in languages which express ergativity through visible case marking, as well as in agreement-only ergative languages.

In principle, both of the approaches to syntactic ergativity discussed in section 4.2—object inversion in section 4.2.1 and nature-of-ergative in section 4.2.2—could achieve this. For the latter nature-of-ergative-subject approach, one could modify Deal's *Agree-F* to discriminate based on *abstract*, rather than morphological, case.¹⁷ And as Polinsky (2016) notes, the ergative P^0 heads which block extraction in her system could be null; she proposes that this is the case in Q'anjob'al. If this family of approaches to syntactic ergativity is correct, one would expect to find not just ergative, but also quirky-subject languages in which quirky subjects are banned from A'-extracting. The authors are not aware of such cases at this time. Similarly, in languages in which certain unergative subjects pattern as ergative ("Split-S"), these subjects should be unable to extract; at this time, we have not found an example of a Split-S language with A'-extraction restrictions. The absence of such languages is noted as a generalization in Deal (2015, p. 665).

Turning to the object-inversion approach discussed in Section 4.2.1, recall that this type of account locates the problem not with the ergative subject, but with the position and/or case needs of the absolutive object. Under this approach, ergative subjects should be *permitted* to extract, so long as no object inversion takes place. Evidence in favor of this analysis comes from Mayan forms with (a) bare incorporated objects, (b) reflexive and bound objects, and (c) intransitive subjects in split-ergative environments that appear with ergative agreement in the absence of any object (Aissen, 2011; Coon et al., 2014).

In all three of these environments, ergative-agreeing subjects extract without the need for Agent Focus morphology. It is a question for future work whether syntactic ergativity should receive the same analysis in all languages, or whether—as discussed for ergative agreement—it may stem from different sources.

5.2.1 Summary

This final section highlights the importance of abstract case features in describing and accounting for interactions between case and other syntactic phenomena. As detailed in Sections 2–4, the effects of case in the syntax are clearly seen in a variety of languages in the domains of verbal agreement, A-movement, and A'-movement. In this final section, it was observed that typological gaps regarding interactions of case and agreement (§5.1), and case and A'-movement (§5.2), are also present in languages without morphological

case marking. To prevent overgeneration, the theories that explain these gaps must make reference not to surface morphological forms, but to the underlying case features that produce these forms; in turn, these case abstract features must be present in languages even with no morphological case.

This provides evidence against approaches which locate morphological case purely in the post-syntactic morphological component (Bobaljik, 2008; Marantz, 1991; McFadden, 2004), but many questions remain open. For example, we know that surface morphology may imperfectly realize underlying case features; in addition to accidental gaps, see for example Legate (2008) on languages that are underlyingly tripartite, but that systematically neutralize the distinction between nominative in intransitives and accusative in transitives as absolutive (often null), resulting in a surface ergative-absolutive system (her “ABS=DEF” languages). However, if abstract features are responsible for syntactic ergativity, something must be in place to ensure that there is *some* connection between underlying case assignment and surface form, if the gaps described in the preceding sections are to be maintained. One possibility is that learnability is at play here—that is, a language learner is unlikely to posit abstract case features that *conflict* with surface forms. This and other details are topics for future work.

Links to Digital Materials

Coon, J., & Adar, M. (2013). *Ergativity*. Oxford Bibliographies.

Preminger, O. (2013). *Agreement*. Oxford bibliography.

Further Reading

Aldridge, E. (2008). Generative approaches to ergativity. *Language and Linguistic Compass: Syntax and Morphology*, 2(5), 966–995.

Baker, M. C. (2015). *Case: Its principles and its parameters*. Cambridge Studies in Linguistics. Cambridge, U.K.: Cambridge University Press.

Blake, B. J. (1994). *Case*. Cambridge, U.K.: Cambridge University Press.

Bobaljik, J. D. (2008). Where’s Phi? Agreement as a post-syntactic operation. In D. Harbour, D. Adger, & S. Béjar (Eds.), *Phi theory: Phi-features across interfaces and modules* (pp. 295–328). Oxford, U.K.: Oxford University Press.

Coon, J., Massam, D., & Travis, L. (2017). *The Oxford handbook of ergativity*. New York, NY: Oxford University Press.

Corbett, G. G. (2006). *Agreement*. Cambridge, U.K.: Cambridge University Press.

Deal, A. R. (2015). Ergativity. In T. Kiss & A. Alexiadou (Eds.), *International handbook on syntactic contemporary research*, vol. *Syntax: Theory and analysis: An international handbook* (pp. 654–707). Berlin: Mouton de Gruyter.

Deal, A. R. (2016). Syntactic ergativity: Analysis and identification. *Annual Review of Linguistics*, 2, 165–185.

Dixon, R. M. W. (1994). *Ergativity*. Cambridge, U.K.: Cambridge University Press.

Johns, A. (2000). Ergativity: A perspective on recent work. In L. L.-S. Cheng & R. Sybesma (Eds.), *The first glot international state-of-the-article book* (pp. 47–73). New York, NY: Mouton de Gruyter.

Johns, A., Massam, D., & Ndayiragije, J. (2006). *Ergativity: Emerging issues*. Dordrecht, The Netherlands: Springer.

Malchukov, A., & Spencer, S. (2011). *The Oxford handbook of case*. Oxford, U.K.: Oxford University Press.

Markman, V. (2010). Case theory: A historical overview. *Language and Linguistics Compass*, 4(9), 846–862.

Pesetsky, D., & Torrego, E. (2011). Case theory: A historical overview. In C. Boeckx (Ed.), *The Oxford handbook of linguistic minimalism* (pp. 52–72). Oxford, U.K.: Oxford University Press.

Polinsky, M. (2017). Syntactic ergativity. In M. Everaert & H. van Riemsdijk (Eds.), *Blackwell companion to syntax* (2nd ed.). Hoboken, NJ: Blackwell.

Preminger, O. (2014). *Agreement and its failures*. Cambridge, MA: MIT Press.

Ura, H. (2001). Case. In M. Baltin & C. Collins (Eds.), *The handbook of contemporary syntactic theory* (pp. 334–373). Oxford, U.K.: Blackwell.

Wechsler, S. (2009). Agreement features. *Language and Linguistics Compass*, 3(1), 384–405.

References

Aissen, J. (2011). On the syntax of agent focus in K'ichee'. In K. Shklovsky, P. M. Pedro, & J. Coon (Eds.), *Proceedings of Formal Approaches to Mayan Linguistics I (FAMLi)* (Vol. 63, pp. 1–6). MIT Working Papers in Linguistics 63. Cambridge, MA: MIT Press.

Aissen, J. (2017). Correlates of ergativity in Mayan. In J. Coon, D. Massam, & L. Travis (Eds.), *Oxford handbook of ergativity* (pp. 737–758). New York, NY: Oxford University Press.

Aldridge, E. (2004). *Ergativity and word order in Austronesian languages* (Doctoral dissertation). Cornell University, Ithaca, NY.

Aldridge, E. (2008). Generative approaches to ergativity. *Language and Linguistic Compass: Syntax and Morphology*, 2(5), 966–995.

- Aldridge, E. (2012). Antipassive and ergativity in Tagalog [Special issue]. *Lingua*, 122(3), 192–203.
- Anagnostopoulou, E. (2003). *The syntax of ditransitives: Evidence from clitics*. Berlin, Germany: Mouton de Gruyter.
- Anderson, S. (1977). On the mechanisms by which languages become ergative. In C. Li (Ed.), *Mechanisms of syntactic change*. Austin: University of Texas Press.
- Andrews, A. (1976). The VP complement analysis in Modern Icelandic. In R. Singh, A. Ford, & J. Reighard (Eds.), *Proceedings of NELS 6* (pp. 1–21). Amherst, MA: GLSA.
- Assmann, A., Georgi, D., Heck, F., Müller, G., & Weisser, P. (2015). Ergatives move too early: On an instance of opacity in syntax. *Syntax*, 18, 343–387.
- Baier, N. (2018). *Anti-agreement* (Doctoral dissertation). University of California Berkeley, Berkeley, CA.
- Baker, M. C. (2014). On dependent ergative case (in Shipibo) and its derivation by phase. *Linguistic Inquiry*, 45, 341–379.
- Baker, M. C. (2015). *Case: Its principles and its parameters*. Cambridge Studies in Linguistics. Cambridge, U.K.: Cambridge University Press.
- Baker, M. C. (2017). Ergative case in Burushaski: A dependent case analysis. In *The Oxford handbook of ergativity* (pp. 759–781). Oxford, U.K.: Oxford University Press.
- Baker, M. C., & Bobaljik, J. D. (2017). On inherent and dependent theories of ergative case. In J. Coon, D. Massam, & L. Travis (Eds.), *The Oxford handbook of ergativity*, (pp. 111–134). Oxford, U.K.: Oxford University Press.
- Baker, M. C., & Vinokurova, N. (2010). Two modalities of case assignment: Case in Sakha. *Natural Language and Linguistic Theory*, 28(3), 593–642.
- Béjar, S., & Rezac, M. (2009). Cyclic agree. *Linguistic Inquiry*, 40, 35–73.
- Bhatt, R. (2005). Long-distance agreement in Hindi-Urdu. *Natural Language and Linguistic Theory*, 23, 757–807.
- Bickel, B., & Yādava, Y. P. (2000). A fresh look at grammatical relations in Indo-Aryan. *Lingua*, 110, 343–373.
- Bittner, M., & Hale, K. (1996). Ergativity: Toward a theory of a heterogeneous class. *Linguistic Inquiry*, 27, 531–604.
- Blake, B. (2011). History of the research on case. In A. Malchukov & A. Spencer (Eds.), *Oxford Handbook of Case* (pp. 13–26). Oxford, U.K.: Oxford University Press.
- Blake, B. J. (1994). *Case*. Cambridge, U.K.: Cambridge University Press.

- Bobaljik, J. D. (2008). Where's Phi? Agreement as a post-syntactic operation. In D. Harbour, D. Adger, & S. Béjar (Eds.), *Phi Theory: Phi-features across interfaces and modules* (pp. 295–328). Oxford, U.K.: Oxford University Press.
- Bobaljik, J. D., & Wurmbrand, S. (2008). Case in GB/minimalism. In A. Malchukov & A. Spencer (Eds.), *Oxford handbook of case* (pp. 44–58). Oxford, U.K.: Oxford University Press.
- Bošković, Z. (2007). On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry*, 38, 589–644.
- Bresnan, J. (1994). Locative inversion and the architecture of universal grammar. *Language*, 70, 72–131.
- Brown, C. (2016). *Extraction restrictions in Gitksan*. (Master's thesis). McGill University, Montreal.
- Bruening, B. (2010). Language-particular syntactic rules and constraints: English locative inversion and do-support. *Language*, 86, 43–84.
- Bruening, B. (2014). Defects of defective intervention. *Linguistic Inquiry*, 45, 707–719.
- Butt, M. (2006). *Theories of case*. Cambridge, U.K.: Cambridge University Press.
- Campana, M. (1992). *A movement theory of ergativity* (Doctoral dissertation). McGill University, Montreal.
- Chomsky, N. (1980). On binding. *Linguistic Inquiry*, 11(1), 1–46.
- Chomsky, N. (1981). *Lectures on government and binding*. Dordrecht, The Netherlands: Foris.
- Chomsky, N. (1995). *The minimalist program*. Cambridge, MA: MIT Press.
- Chomsky, N. (2000). Minimalist inquiries: The framework. In R. Martin, D. Michaels, & J. Uriagereka (Eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik* (pp. 89–155). Cambridge, MA: MIT Press.
- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A life in language* (pp. 1–52). Cambridge, MA: MIT Press.
- Comrie, B. (1978). Ergativity. In W. P. Lehmann (Ed.), *Syntactic typology: Studies in the phenomenology of language* (pp. 329–394). Austin: University of Texas Press.
- Comrie, B. (1979). Definite and animate direct objects: A natural class. *Linguistica silesiana*, 3, 13–21.

- Comrie, B. (2013). Alignment of case marking of full noun phrases. In M. S. Dryer & M. Haspelmath (Eds.), *The world atlas of language structures online* (pp. 398–405). Leipzig: Max Planck Institute for Evolutionary Anthropology.
- Coon, J. (2016). Mayan morphosyntax. *Language and Linguistics Compass*, 10(20), 515–550.
- Coon, J. (2017a). Little-v agreement and templatic morphology in Ch'ol. *Syntax*, 20, 101–137.
- Coon, J. (2017b). Two types of ergative agreement: Implications for case. In C. Halpert, H. Kotek, & C. van Urk (Eds.), *MIT Working Papers in Linguistics* (pp. 361–370). Cambridge, MA: MITWPL.
- Coon, J. (2018). **Building verbs in Chuj: Consequences for the nature of roots.** *Journal of Linguistics*, 55(1), 35–81. doi:10.1017/S0022226718000087
- Coon, J., & Adar, M. (2013). Ergativity. In M. Aronoff (Ed.), *Oxford bibliographies in linguistics*. Oxford, U.K.: Oxford University Press.
- Coon, J., & Bale, A. (2014). The interaction of person and number in Mi'gmaq. *Nordlyd*, 41, 85–101.
- Coon, J., & Carolan, E. (2017). Nominalization and the structure of progressives in Chuj Mayan. *Glossa*, 2(1), 1–35.
- Coon, J., Massam, D., & Travis, L. (Eds.). (2017). *The Oxford handbook of ergativity*. New York, NY: Oxford University Press.
- Coon, J., Pedro, P. M., & Preminger, O. (2014). The role of case in A-bar extraction asymmetries: Evidence from Mayan. *Linguistic Variation*, 14, 179–242.
- Corbett, G. G. (2006). *Agreement*. Cambridge, U.K.: Cambridge University Press.
- Davis, H. (2016). *Only connect! A unified analysis of the Tsimshianic connective system*. Ms. University of British Columbia.
- Davis, H., & Brown, J. (2011). **On A'-dependencies in Gitksan**. International Conference on Salish and Neighbouring Languages.
- Deal, A. R. (2015). Ergativity. In T. Kiss & A. Alexiadou (Eds.), *International handbook on syntactic contemporary research*. Vol. *Syntax: Theory and analysis: An international handbook* (pp. 654–707). Berlin, Germany: Mouton de Gruyter.
- Deal, A. R. (2016a). Person-based split ergativity in Nez Perce is syntactic. *Journal of Linguistics*, 52(3), 533–564.
- Deal, A. R. (2016b). Syntactic ergativity: Analysis and identification. *Annual Review of Linguistics*, 2, 165–185.

Deal, A. R. (forthcoming). *Raising to ergative: Remarks on the applicatives of unaccusatives*. *Linguistic Inquiry*.

Dench, A. (2011). Case in an Australian language: Distribution of case and multiple case marking in Nyamal. In A. Malchukov & A. Spencer (Eds.), *The Oxford handbook of case* (pp. 756–769). Oxford, U.K.: Oxford University Press.

den Dikken, M. (1995). *Particles*. Oxford, U.K.: Oxford University Press.

Dixon, R. M. W. (1972). *The Dyirbal language of North Queensland*. Cambridge, U.K.: Cambridge University Press.

Dixon, R. M. W. (1979). Ergativity. *Language*, 55, 59–138.

Dixon, R. M. W. (1994). *Ergativity*. Cambridge, U.K.: Cambridge University Press.

Gilligan, G. (1987). *A cross-linguistic approach to the pro-drop parameter* (Doctoral Dissertation). University of Southern California, Los Angeles, CA.

Grinevald, C., & Peake, M. (2012). Ergativity and voice in Mayan: A functional- typological approach. In G. Authier & K. Haude (Eds.), *Ergativity, valency, and voice* (pp. 15–49). Berlin, Germany: Mouton de Gruyter.

Haig, G. (1998). On the interaction of morphological and syntactic ergativity: Lessons from Kurdish. *Lingua*, 105, 149–173.

Hale, K. (1970). The passive and ergative in language change: The Australian case. In S. A. Wurm & D. C. Laycock (Eds.), *Pacific linguistic studies in honor of Arthur Capell* (pp. 751–781). Canberra: Australian National University.

Harley, H. (1995). *Subjects, events and licensing* (Doctoral dissertation). MIT, Cambridge, MA.

Henderson, R., & Coon, J. (2016). *Adverbs and variability in Kaqchikel Agent Focus: A reply to Erlewine (2015)*. Ms. University of Arizona and McGill University.

Holmberg, A., & Hróarsdóttir, T. (2003). Agreement and movement in Icelandic raising constructions. *Lingua*, 113, 997–1019.

Hornstein, N., & Weinberg, A. (1981). Case theory and preposition stranding. *Linguistic Inquiry*, 12, 55–91.

Hualde, J. I., & Ortiz de Urbina, J. (2003). *A Grammar of Basque*. Berlin, Germany: Walter de Gruyter.

Hunt, K. (1993). *Clause structure, agreement, and case in Gitksan* (Doctoral Dissertation). University of British Columbia, Vancouver.

- Johns, A. (2000). Ergativity: A perspective on recent work. In L. L.-S. Cheng & R. Sybesma (Eds.), *The first glot international state-of-the-article book* (pp. 47–73). New York, NY: Mouton de Gruyter.
- Johns, A., Massam, D., & Ndayiragije, J. (Eds.). (2006). *Ergativity: Emerging issues*. Dordrecht, The Netherlands: Springer.
- Jónsson, J. G. (1996). *Clausal architecture and case in Icelandic* (Doctoral dissertation). University of Massachusetts, Amherst, MA.
- Kachru, Y., Kachru, B., & Bhatia, T. (1976). The notion of “subject”: A note on Hindi-Urdu, Kashmiri, and Punjabi. In M. Verma (Ed.), *The notion of subject in South Asian languages* (pp. 79–108). Madison: University of Wisconsin.
- Legate, J. A. (2006). Split absolutive. In A. Johns, D. Massam, & J. Ndayiragije (Eds.), *Ergativity: Emerging issues* (pp. 143–172). Dordrecht, The Netherlands: Springer.
- Legate, J. A. (2008). Morphological and abstract case. *Linguistic Inquiry*, 39, 55–101.
- Legate, J. A. (2012). Types of ergativity. *Lingua*, 122, 181–191.
- Legate, J. A. (2017). The locus of ergative case. In J. Coon, D. Massam, & L. Travis (Eds.), *The Oxford handbook of ergativity* (pp. 135–158). New York, NY: Oxford University Press.
- Mahajan, A. (1990). *The A/A-bar distinction and movement theory* (Doctoral dissertation). MIT, Cambridge, MA.
- Malchukov, A., & Spencer, S. (2011). *The Oxford handbook of case*. Oxford University Press.
- Marantz, A. (1991). Case and licensing. In G. Westphal, B. Ao, & H.-R. Chae (Eds.), *Proceedings of the 8th Eastern States Conference on Linguistics (ESCOL 8)* (pp. 234–253). Ithaca, NY: CLC Publications.
- Markman, V. (2010). Case theory: A historical overview. *Language and Linguistics Compass*, 4, 846–862.
- Markman, V. G., & Grashchenkov, P. (2012). On the adpositional nature of ergative subjects. *Lingua*, 122(3), 257–266.
- McFadden, T. (2004). *The position of morphological case in the derivation: A study on the syntax-morphology interface* (Doctoral Dissertation). University of Pennsylvania, PA.
- McGinnis, M. (1998). *Locality in A-movement* (Doctoral dissertation). MIT, Cambridge, MA.
- Mohanan, T. (1994). *Argument structure in Hindi*. Stanford, CA: CSLI Dissertations in Linguistics.

- Moravcsik, E. (1974). Object-verb agreement. *Working Papers on Language Universals*, 15, 25–140.
- Moravcsik, E. (1978). Agreement. In J. H. Greenberg (Ed.), *Universals of human language* (Vol. 4, pp. 331–374). Stanford, CA: Stanford University Press.
- Nash, L. (1996). The internal ergative subject hypothesis. In K. Kusumoto (Ed.), *Proceedings of the 26th Northeast Linguistics Society (NELS 26)* (pp. 195–210). Amherst, MA: GLSA.
- O’Herin, B. (2002). *Case and agreement in Abaza*. Dallas, TX: SIL International.
- Ordóñez, F. (1995). The antipassive in Jacaltec: A last resort strategy. *Catalan Working Papers in Linguistics*, 4(2), 329–343.
- Otsuka, Y. (2006). Syntactic ergativity in Tongan: Resumptive pronouns revisited. In A. Johns, D. Massam, & J. Ndayiragije (Eds.), *Ergativity: Emerging issues* (pp. 79–107). Berlin, Germany: Springer.
- Otsuka, Y. (2010). DP ellipsis in Tongan: In syntactic ergativity real? *Natural Language and Linguistic Theory*, 28, 315–342.
- Pesetsky, D., & Torrego, E. (2011). Case theory: A historical overview. In C. Boeckx (Ed.), *The Oxford handbook of linguistic minimalism* (pp. 52–72). Oxford, U.K.: Oxford University Press.
- Polinsky, M. (2016). *Deconstructing ergativity: Two types of ergative languages and their features*. Oxford, U.K.: Oxford University Press.
- Polinsky, M. (2017). **Syntactic ergativity**. In M. Everaert and H.v. Riemsdijk (Eds.), *Blackwell companion to syntax* (2nd ed.). Malden, MA: Blackwell. doi: 10.1002/9781118358733.wbsyncom051
- Preminger, O. (2013). Agreement. In M. Aronoff (Eds.), *Oxford bibliographies in linguistics* Oxford, U.K.: Oxford University Press.
- Preminger, O. (2014). *Agreement and its failures*. Cambridge, MA: MIT Press.
- Preminger, O. (2019). **What the PCC tells us about “abstract” agreement, head movement, and locality**. *Glossa*, 4(1), 13.
- Queixalós, F. (2010). Grammatical relations in Katukina-Kanamari. In S. Gildea & F. Queixalós (Eds.), *Ergativity in Amazonia* (pp. 235–283). Amsterdam, The Netherlands: Benjamins.
- Rizzi, L. (1986). On chain formation. In H. Borer (Ed.), *The syntax of pronominal clitics* (pp. 65–95). New York, NY: Academic Press.
- Seiter, W. J. (1980). *Studies in Niuean syntax*. New York, NY: Garland.

- Siewierska, A. (2013). Verbal person marking. In M. S. Dryer & M. Haspelmath (Eds.), *The world atlas of language structures online* (pp. 414–417). Leipzig, Germany: Max Planck Institute for Evolutionary Anthropology.
- Sigurðsson, H. A. (1996). Icelandic finite verb agreement. *Working Papers in Scandinavian Syntax*, 57, 1–46.
- Sigurðsson, H. A. (1989). *Verbal syntax and case in Icelandic in a comparative GB approach* (Doctoral dissertation). University of Lund, Lund, Sweden.
- Stiebels, B. (2006). Agent focus in Mayan languages. *Natural Language and Linguistic Theory*, 24, 501–570.
- Thráinsson, H. (1979). *On complementation in Icelandic*. New York, NY: Garland.
- Torrego, E. (1996). Experiencers and raising verbs. In R. Freidin (Ed.), *Current issues in comparative grammar* (pp. 101–120). Dordrecht, The Netherlands: Kluwer Academic.
- Ura, H. (2001). Case. In M. Baltin & C. Collins (Eds.), *The handbook of contemporary syntactic theory* (pp. 334–373). Oxford, U.K.: Blackwell.
- van Urk, C. (2015). A uniform syntax for phrasal movement: A case study of Dinka Bor (Doctoral Dissertation). Massachusetts Institute of Technology, Cambridge, MA.
- Vergnaud, J.-R. (1976/2006). Letter to Noam Chomsky and Howard Lasnik. In R. Freidin & H. Lasnik (Eds.), *Syntax: Critical concepts in linguistics* (Vol. 5, pp. 21–34). London, U.K.: Routledge.
- Wechsler, S. (2009). Agreement features. *Language and Linguistics Compass*, 3, 384–405.
- Wiltschko, M. (2006). On “ergativity” in Halkomelem Salish. In A. Johns, D. Massam, & J. Ndayiragije (Eds.), *Ergativity: Emerging issues* (pp. 197–227). Dordrecht, The Netherlands: Springer.
- Woolford, E. (1997). Four-way case systems: Ergative, nominative, objective, and accusative. *Natural Language and Linguistic Theory*, 15, 181–227.
- Woolford, E. (2000). Ergative agreement systems. *University of Maryland Working Papers in Linguistics*, 10, 157–191.
- Woolford, E. (2006). Lexical case, inherent case, and argument structure. *Linguistic Inquiry*, 37, 111–130.
- Zaenen, A., Maling, J., & Thráinsson, H. (1985). Case and grammatical functions: The Icelandic passive. *Natural Language and Linguistic Theory*, 3, 441–483.

Notes:

- (1.) Abbreviations in glosses that are not listed in the Leipzig glossing conventions are as follows: AF – Agent Focus; AOR – aorist; CN – connective; DFLT – default; EVID – evidential; GF – grammatical function; REM – remote. In some cases, gloss abbreviations have been modified from those of the original authors for consistency.
- (2.) It should be noted that Bobaljik’s case-based hierarchy is not undisputed. One apparent counterexample comes from Gujarati, in which a verb agrees with a lower accusative object in the presence of a higher ergative argument (Bhatt, 2005, p. 774). According to the hierarchy, both ergative and accusative fall into the dependent case slot and are the same for the purposes of agreement. Hence, we would expect the verb to agree with the higher ergative argument. See also Baker (2017) to appear for other possible counterexamples in Coast Tsimshian and Semelai, as well as discussion in Section 5.1.
- (3.) Preminger’s argument is based on the fact that ϕ -agreement feeds movement to subject position, discussed in Section 3. Given independent evidence that movement to subject position must happen in the narrow syntax, ϕ -agreement, and therefore morphological case, must be computed in the syntax as well.
- (4.) See, e.g., Markman and Grashchenkov (2012), Preminger (2014), Woolford (2000) for discussion of how to account for the fact that agreement “skips” the marked subject.
- (5.) As discussed in Coon (2017b), a critical assumption of the Bobaljik/Woolford account presented here is that agreement is calculated “from above.” We return to this in our brief discussion of morphologically caseless languages, which nonetheless show ergative agreement, in Section 5.
- (6.) It is important to note that there is disagreement about the judgements and how they relate to the apparent intervention pattern, both for the French data discussed here and for other languages for which similar facts have been reported (e.g., Spanish: Torrego, 1996; Greek: Anagnostopoulou, 2003; and Italian: Rizzi, 1986). See Bruening (2014) and works cited there for further discussion. There is similar disagreement about the sentence in example (16) (Preminger, personal communication).
- (7.) And see Preminger to appear for arguments that there can be no abstract agreement in the absence of some overt morphological agreement; i.e., that there is no agreement which is systematically null.
- (8.) An anonymous reviewer notes that movement to subject position is a complex topic for which we lack information in many of the world’s languages. This reviewer points to English locative inversion (e.g., Bresnan, 1994) as a potential counterexample to the generalization in example (18), though note that there exist many analyses of these constructions in which the true subject position is occupied by a null expletive (see Bruening, 2010 and references there).

- (9.) We are unable to give a reliable estimation as to what percentage of morphologically ergative languages display syntactic ergativity. See, for instance, Polinsky (2017), who claims that upon first glance, it appears that a majority of morphologically ergative languages are also syntactically ergative, though Haig (1998) notes that, in comparison with morphological ergativity, it is rather more difficult to establish the presence syntactic ergativity.
- (10.) Languages that exhibit syntactic ergativity have different strategies for circumventing this restriction, discussed in more detail in Polinsky (2017). These include the use of antipassivization (in which the argument corresponding to the ergative subject is realized as absolutive); the use of resumptive pronouns; nominalization, and language-specific constructions such as Agent Focus in Mayan languages (§5).
- (11.) An exception is Assmann, Georgi, Heck, Müller, and Weisser (2015) who argue that A'-movement of the ergative subject through Spec, TP *maraudes* the case features normally assigned by T⁰ to the absolutive object, resulting in ungrammaticality. This account does not involve inversion of the sort illustrated in example (21), but nonetheless falls into this group of approaches in which syntactic ergativity is not about the ergative subject itself.
- (12.) Deal assumes further that case-discrimination is necessarily based on a configurational account of case assignment: “where the standard theory requires a treatment of ergative as an inherent case, the case-discrimination theory requires treatment as a dependent case” (Deal, 2016b, p. 177). An alternative would be to relativize *Agree* to abstract case features, regardless of how they are assigned.
- (13.) An anonymous reviewer asks about unergatives and inherent case assignment. For recent discussion, see Baker and Bobaljik (2017) and Legate (2017). For overt morphological evidence in Mayan that ergative-assigning transitive v/Voice⁰ must be distinguished from non-ergative-assigning unergative v/Voice⁰, see Coon (2018).
- (14.) An anonymous reviewer asks about the relevance of Béjar and Rezac’s (2009) model of Cyclic Agree, in which a probe first searches its c-command domain and then, if its features have not been satisfied, it may agree with the argument in its specifier position. Crucially, the inherent ergative agreement approach outlined above cannot be the result of Cyclic Agree, as the internal argument (i.e., absolutive object) does not agree. Furthermore, it is only by restricting low Ch’ol/Halkomelem-type agreement with the ergative subject to environments in which inherent ergative case is assigned that this agreement is constrained from occurring in languages with nominative-accusative case systems, per example (24).
- (15.) The suffix -s glossed ‘3ERG.CN’ in the forms in example (30) is a phonological reduction of two morphemes: the third person ergative (“series II”) agreement marker -t and the connective for proper names, t (Davis, 2016).

(16.) As noted in Deal (2016a), Gitksan seems to present a *tri-partite* pattern of A'-extraction (Davis & Brown, 2011; Hunt, 1993). While transitive objects extract with no special morphology, the A'-extraction of intransitive subjects involves the addition of special suffix *-it*. This morpheme *does* appear in a canonical agreement slot, and Brown (2016) suggests this suffix may indeed be an instance of *wh*- or default agreement.

(17.) This is independently needed under approaches in which case and agreement are part of the narrow syntax (§3), and thus presumably do not discriminate based on the *phonological content* of case morphology. Further empirical evidence that case discrimination should target abstract case features comes from accidental case homophony. In Icelandic, for example, certain nominative forms are homophonous with dative forms but are nonetheless eligible for agreement (Jim Wood, personal communication). Similarly, in Inuktitut, certain absolutive arguments are homophonous with ergative case forms, but only the latter are banned from A'-extraction (Richard Compton, personal communication).

Jessica Coon

Department of Linguistics, McGill University

Clint Parker

Department of Linguistics, McGill University