

SYNTACTIC ERGATIVITY

Maria Polinsky

Harvard University

Abstract

This chapter presents and analyzes the phenomenon of syntactic ergativity, defined as the grouping of the absolutive subject and absolutive object into a natural class, to the exclusion of the ergative argument, with respect to A'-movement. Presently, there is no consensus in the literature as to the cause of syntactic ergativity. Two families of approaches can be distinguished: those which place the explanatory burden on the derivation of the absolutive, and those which invoke the properties of the ergative expression itself to explain syntactic ergativity. For the first family of approaches, which include explanations based on locality and A'-movement for case, the exclusion of the ergative from A'-movement is simply a side effect of satisfying Case licensing needs of the absolutive. In the second type of approach, the restriction on A'-movement of the ergative follows either from criterial freezing or from the adpositional-phrase nature of the ergative expression. The approaches converge on the notion that ergative is an inherent case, assigned either directly by a verbal head or by an adposition selected by a *v* head.

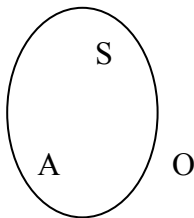
Keywords: A'-movement, absolutive, ergative, syntactic ergativity

1 Introduction

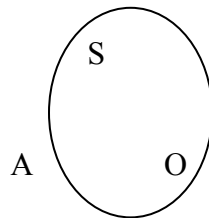
1.1 Morphological and syntactic ergativity

Linguists have long classified languages according to the ways in which their intransitive subjects, transitive subjects, and direct objects align with respect to case marking and/or agreement. The two main divisions are known as the (nominative-) **accusative** and **ergative**(-absolutive) alignments. Under an accusative alignment pattern, the intransitive subject (abbreviated here as S) and the transitive subject (A: for agent, or agent-like argument) are encoded the same way (nominative), while the transitive direct object (O) is encoded separately (accusative). Under an ergative alignment pattern, on the other hand, S and O have identical encoding (absolutive) while A has its own separate case (ergative); see Comrie (1978), Dixon (1979, 1994), Manning (1996), Aldridge (2008), McGregor (2009), a.o. These alignments can be expressed not only through case marking but also through agreement; S and A may determine the same agreement, in contrast to O, or S and O may license the same agreement, in contrast to A. The two alignment patterns are illustrated in (1):

(1) a. Accusative



b. Ergative



Examples (2) and (3) illustrate accusative and ergative alignment as expressed by case marking, otherwise known as dependent marking (see Nichols 1986 on the opposition between dependent-marking and head-marking languages).¹

- (2) a. Kodomo-tati-ga Tokyo-ni sun-de i-ta. *Japanese*
 child-PL-NOM.[S] Tokyo-LOC live-GER be-PST
 ‘The children lived in Tokyo.’
- b. Sensei-tati-ga nihongo-o hanasi-ta.
 teacher-PL-NOM.[A] Japanese-ACC.[O] speak-PST
 ‘The teachers spoke Japanese.’
- (3) a. Kua nofo e tau fānau i Niue. *Niuean*
 PFV live [ABS PL children].[S] in Niue
 ‘The children lived in Niue.’
- b. Kua fakaaoga he tau faiaoga e vagahau niue.
 PFV speak [ERG PL teacher].[A] [ABS language Niue].[O]
 ‘The teachers spoke the Niuean language.’

Examples (4) and (5) illustrate the expression of alignment through verbal agreement, i.e., head marking. Note that in these latter examples, the DPs appear without any overt case markers. In the Palauan examples, both S and A are indexed by the marker *ng* on the verb while agreement with the O argument is different (*-ii*); hence, the pattern is

¹ Unless indicated otherwise, the examples are from the author’s fieldnotes.

accusative. In the Abkhaz examples, the S and O arguments determine absolutive agreement on the verb, and the agreement with the A is different, which leads to the ergative pattern.

(4) a. Ng merael a chais er a beluu. *Palauan*

3SG.[S] go DET news PRP DET area

‘A rumor is going around.’ (Nuger 2010, 45)

b. Ng mo kol-ii a bobai *pro*.

3SG.[A] AUX.FUT eat.PF-3SG.[O] DET papaya

‘He is going to eat (up) the papaya.’ (Nuger 2010, 87)

(5) a. A-ts'g^wə ø-psə-ø-jt'. *Abkhaz*

DET-cat 3SG.ABS.[S]-die-PST-FIN

‘The cat died.’ (Hewitt 2005, 39)

b. A-ab'dəw a-χ^wə'tj'ə a-χ^jə

DET-grandfather DET-child DET-gold

ø-'jə-j-ta-ø-jt'.

3SG.ABS.[O]-3SG.IO-3SG.ERG.[A]-give-PST-FIN

‘Grandfather gave the child (the) gold.’ (Keenan 2013, 5)

The expression of ergative alignment through case marking and/or agreement is known as morphological ergativity, because of the visible morphological realization. However, the contrast between accusative and ergative alignment can also be found beyond morphology, in the differential behavior of S and O, on the one hand, and A, on the other,

with respect to various syntactic phenomena. This is the notion of syntactic ergativity, a preliminary definition for which is given below:

(6) SYNTACTIC ERGATIVITY: TAKE 1

The presence of syntactic rules that group S and O (the absolutive) together, to the exclusion of A (the ergative).

The basic pattern of syntactic ergativity is illustrated below for the Polynesian language Tongan. In Tongan, the absolutive DP can relativize leaving a gap at the extraction site, but relativization of the ergative DP requires that a resumptive pronoun *ne* appear in the relative clause. Without that resumptive pronoun, the relativization of the ergative DP is impossible. Consider the following examples:²

(7) a. Baseline intransitive sentence

Tongan

‘Oku malimali ‘a e ta’ahine.

PRS smile ABS DET girl

‘The girl is smiling.’

b. relativization of the absolutive subject with a gap

‘a e ta’ahine_i [‘oku malimali ____i]

² Here and below the gap at the extraction site is represented theoretically as ___ with a subscript.

ABS DET girl PRS smile

‘the girl who is smiling’

- (8) a. Baseline transitive sentence

Tongan

‘Oku ‘ene ‘e he tamasi’i ‘a e ta’ahine.

PRS tickle ERG DET boy ABS DET girl

‘The boy is tickling the girl.’

- b. relativization of the absolutive object with a gap

‘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. relativization of the ergative subject with a resumptive pronoun

*‘a e tamasi’i_i [‘oku ‘ene ‘a e ta’ahine]

ABS DET boy PRS tickle ABS DET girl

‘the boy who is tickling the girl’

‘a e tamasi’i_i [‘oku ne_i ‘ene ‘a e ta’ahine]

ABS DET boy PRS RP tickle ABS DET girl

‘the boy who is tickling the girl’

Contrast this pattern with the pattern of extraction observed in Basque, where both the ergative argument and the absolutive argument can leave a gap at the extraction site (Hualde and Ortiz de Urbina 2003, 774). Thus, all three core arguments undergo A'-movement in the same manner, leaving a gap at the extraction site:

- (9) a. baseline intransitive sentence

Basque

Haur guzti-a-k eskapa-tzen dira.

children all-DET-PL escape-IPFV AUX

‘All the children run away.’

- b. ABS subject extracts with a gap at the extraction site

[_i eskapa-tzen dir-en] haur guzti-a-k

escape-IPFV AUX-ADN children all-DET-PL

‘all the children that run away’

- (10) a. baseline transitive sentence

Mutiko-a-k pinguinu-a-Ø garbi-tzen du.

boy-DET-ERG penguin-DET-ABS wash-IPFV AUX

‘The boy is washing the penguin.’

- b. ABS object extracts with a gap at the extraction site

[mutiko-a-k _i garbi-tzen du-en] pinguinu-a_i

boy-DET-ERG wash-IPFV AUX-ADN penguin-DET

‘the penguin that the boy is washing’

- c. ERG subject extracts with a gap at the extraction site

[_i pinguinu-a-Ø garbi-tzen du-en] mutiko-a_i

penguin-DET-ABS wash-IPFV AUX-ADN boy-DET

‘the boy that is washing the penguin’ (Gutierrez-Mangado and Ezeizabarrena 2012)

1.2 *Setting the boundaries*

Several questions arise at this point, including a number that are beyond the scope of this chapter. The first question has to do with the relationship between morphological and syntactic ergativity: is the expression of syntactic ergativity limited to morphologically ergative languages? To anticipate the discussion below, the answer is yes. There are morphologically ergative languages that do not show any syntactic ergativity, but there seem to be no instances of syntactic ergativity beyond the realm of morphologically ergative languages.

A second question has to do with the extent to which a language embraces syntactic ergativity: can a language be completely syntactically ergative or completely syntactically accusative? Researchers have shown that the postulation of a global contrast between syntactically accusative and syntactically ergative languages is too simplistic (see especially Kazenin 1994 for criticism of such a contrast). However, there are certain syntactic phenomena that repeatedly group S and O together to the exclusion of A, and thus deserve consideration. Such phenomena and their explanations are the focus of this chapter. Explaining syntactic ergativity also requires us to seek an answer to a third question: can we predict whether a language will be syntactically ergative or syntactically accusative? At present, we are not in a position to make such predictions; however, existing accounts of syntactic ergativity have established some correlations that may bring us closer to a satisfying predictive account.

This chapter is structured as follows. Section 2 introduces the phenomenon of “narrow syntactic ergativity”, manifested in A'-movement restrictions, and compares this narrow conception to broader notions sometimes represented in the literature under the

same name. Sections 3 and 4 present and analyze the main explanatory approaches to syntactic ergativity. They differ in their understanding of the main obstacle preventing A'-movement of the ergative: some scholars attribute this limitation to properties of the ergative argument itself, while others see it as simply a side effect of certain properties of the absolutive argument. Approaches which derive syntactic ergativity from properties of the absolutive are presented in section 3; approaches deriving syntactic ergativity from properties of the ergative are reviewed in section 4. Section 5 asks whether syntactic ergativity can occur without morphological ergativity.. Section 6 summarizes the main points made in this chapter.

2 *Syntactic ergativity: The phenomenon*

2.1 Syntactic ergativity in the narrow sense

The notion of syntactic ergativity adopted in the bulk of this chapter refers specifically to the inability of an ergative argument to be extracted with a gap under A'-movement—i.e., under relativization, wh-movement, focus movement, and topicalization.³ There are several reasons to restrict the notion of syntactic ergativity in this way, rather than adopting the more inclusive approach to be discussed at the end of this section.

³ Tough movement also involves A'-movement (see Hicks 2009, and Chapter 119, for discussion and further references), but we are not aware of any ergative languages with tough movement (Massam and Smallwood 1996 and Seiter 1980, Ch. 4 suggest that tough movement may exist in Niuean, but the data are not entirely clear).

First, at least one form of A'-movement, relativization, is normally detectable without an in-depth syntactic analysis; it seems a reasonable assumption that relative clauses are either universal or at least very common. This does not mean that all relative clauses are built alike, but we have accumulated a set of clear diagnostics that allow us to test the analyses available (cf. Bianchi 2002, Hulsey and Sauerland 2006, and further references therein). In other words, relativization is easily visible, unlike some other operations.

Second, A'-phenomena rely on basic structure-building mechanisms, and further grammatical operations can use the result of extraction as their input. Different linguistic theories capture this intuition differently. In unification-based frameworks such as Manning (1996), it is common to distinguish between grammatical relations and thematic (argument) structure, with A'-phenomena (usually just relativization, wh-question formation, and topicalization) being representative of the former. In his discussion of ergative structures, Manning emphasizes that ergative languages are particularly useful for showing that grammatical relations and argument structure have to be dissociated.

In minimalist syntax (Chomsky 1995, 2001), extraction is accounted for under Move (strictly speaking, copying or internal re-Merge of a previously-merged syntactic object). Together with Agree and external Merge, Move is part of the narrow syntax (see Safir 2008 for further discussion). The output of narrow syntax is then sent to the two interfaces, phonological and semantic, in order to provide both sound and meaning. Processes such as anaphoric binding or coreference across clauses are part of those components of grammar that lie outside of narrow syntax and may be subject to different constraints (we will return to this issue at the end of this section).

We can thus modify the narrow definition of syntactic ergativity as follows:

(11) SYNTACTIC ERGATIVITY: TAKE 2

The grouping of S and O (absolute arguments) together, to the exclusion of A (ergative), with respect to accessibility to A'-movement

Although relativization, focusing, wh-question formation, and topicalization are all types of A'-movement, the ergative argument does not always behave identically in each of those constructions within a single ergative language. In particular, several strategies other than A'-movement exist for the formation of wh-questions and focus structures. The questioned or focused elements can remain in situ, in which case their syntax is different from the syntax of relative clauses and scrambled topics, or these structures may be formed using clefts or pseudo-clefts, as in (12):

(12) [Who] is it [_{CP} that you are talking about]?

Clefts and pseudo-clefts are biclausal structures which include a relative clause (cf. the CP in (12)); therefore, we can in principle expect to find the same constraints that we find under relativization. However, relative clauses used in clefts are headless, and it is possible for a language to use movement for headed relatives and a non-movement strategy for headless relatives (see Caponigro 2003 for a cross-linguistic overview of headless relatives). In that case, wh-questions and focus expressions may still be free of syntactic ergativity.

Topicalization, too, need not necessarily involve movement. Instead, a base-generated topic may be co-indexed with a copy in the lower clause; this copy may be silent (a null pronominal), in which case the difference between a base-generated topic, shown in (13), and a scrambled topic, shown in (14), is difficult to detect without additional syntactic diagnostics.

(13) [_{TopP} Topic_i [_{TP} XP_i /*pro*_i ...]]

(14) [_{TopP} Topic_i [_{TP} *t*_i ...]]

Even in languages where both wh-questions and relativization involve movement, these phenomena may still not consistently diagnose syntactic ergativity. In the Paleo-Siberian language Chukchi, for example, the ergative expression can undergo wh-movement with a gap but cannot relativize with a gap. Compare the following contrast between the grammatical wh-question of the ergative subject in (16) and the ungrammatical relative clause in (17a) where the ergative is relativized with a gap:

(15) baseline sentence

Chukchi

ənpənačg-e milger kun-nin.

old man-ERG gun.ABS buy-AOR.3SG.SBJ.3SG.OBJ

‘The old man bought a gun.’

(16) a. Wh-question of the ergative

Mikəne milger kun-nin?

who.ERG gun.ABS buy-AOR.3SG.SBJ.3SG.OBJ

‘Who bought a/the gun?’

b. Wh-question of the absolutive

Req-ən əpənačg-e kun-nin?

what-ABS old man-ERG buy-AOR.3SG.SBJ.3SG.OBJ

‘What did the old man buy?’

(17) a. Relativization of the ergative

*[____i milger kənnə-lʔ-ən] əpənačg-ən_i

gun.ABS buy-PTCP-ABS old man-ABS

(‘the old man who bought the gun’)

b. Relativization of the absolutive

[____i əpənačg-e kənnə-lʔ-ən] milger i

old man-ERG buy-PTCP-ABS gun.ABS

‘the gun that a/the old man bought’

Given the contrast between (16a) and (17a), it is natural to wonder whether the question in (16a) actually involves movement, or whether it is a wh-in-situ in disguise. At least two arguments support the movement analysis. First, Chukchi has rather free word order in root clauses, and the ergative can appear following the scrambled object. However, the wh-word is not acceptable in that position (consider also the word order in (16b), where the wh-object is fronted):

- (18) a. Milger ənpənačg-e/*mikəne kun-nin. *Chukchi*
 gun.ABS old man-ERG /*who.ERG buy-AOR.3SG.SBJ.3SG.OBJ
- b. Milger kun-nin ənpənačg-e/*mikəne.
 gun.ABS buy-AOR.3SG.SBJ.3SG.OBJ old man-ERG /*who.ERG
- ‘The old man bought a/the gun.’ NOT: ‘Who bought a/the gun?’

Second, the wh-word is impossible in adjunct islands or inside a relative clause. Compare the well-formed relative clause with the absolutive object gap in (17b) and the ungrammatical sequence below. The ungrammaticality of (19) indicates that the licensing of a wh-word is sensitive to movement constraints:

- (19) *[____i mikəne kənnə-lʔ-ən] milger_i *Chukchi*
 who.ERG buy-PTCP-ABS gun.ABS
- (“the gun that who bought?”)

All things considered, relativization is the most reliable test of syntactic ergativity, since it allows for cross-linguistic comparison even when the behavior of ergative DPs in other A'-processes is not uniform.

2.2 How common is syntactic ergativity?

The answer to this question is inevitably tentative, since we know less about ergative languages than we do about nominative-accusative languages and our sample of ergative

languages is relatively small. In addition, syntactic ergativity is more difficult to identify than morphological ergativity. To quote Haig, “[e]stablishing the presence of syntactic ergativity ... is considerably more difficult...[and] is hampered by a number of practical and theoretical obstacles” (Haig 1998, 151).

Still, it is possible to offer some initial considerations. A cursory look at morphologically-ergative languages shows that the phenomenon of syntactic ergativity is widespread: in the WALS sample of thirty-two morphologically ergative languages, Comrie (2008) and Comrie and Kuteva (2008) list only *twelve languages* that have subject relativization with a gap (and hence may lack syntactic ergativity): Bawm, Burushaski, Chukchi, Lower Grand Valley Dani, West Greenlandic, Hunzib, Ingush, Lezgian, Tukang Besi, Ngiyambaa, Pitjantjatjara, and Wardaman. But even in the group of twelve, the actual number of languages where ergative relativizes with a gap is even smaller, for the following reason. For the purposes of WALS, subject extraction subsumes the extraction of both the absolutive (intransitive subject) and the ergative (transitive subject). The twelve morphologically ergative languages without apparent syntactic ergativity all allow the extraction of the absolutive subject with a gap, but only a subset have ergative extraction with a gap.⁴

We have already seen that Chukchi does not allow direct extraction of the ergative with a gap; instead, it requires that the clause be detransitivized (via antipassivization) before extraction of the subject can take place. (More discussion of antipassivization will

⁴ For some languages, the presence or absence of the relevant subject extraction feature may simply not be noted in WALS, or the information therein may be based on incomplete data.

be given in section 2.3.) After detransitivization, the extracted DP is not in the ergative case, but in the absolutive, and the absolutive can leave a gap at the extraction site. Lower Grand Valley Dani and West Greenlandic also require antipassivization as a way of mediating the restriction on A'-movement of the ergative.

External arguments in the Austronesian language *Tukang Besi* may in fact be topics rather than ergative subjects, in which case their ability to extract is irrelevant to the diagnosis of syntactic ergativity. *Tukang Basi* follows the *subject-only restriction* commonly found in the Austronesian family, regardless of alignment. Under the subject-only restriction, the only DP argument that can be extracted by A'-movement is the structurally highest one (sometimes referred to as the “external argument”); different light verbs (or voice projections) serve to promote a particular argument to the highest structural position. The subject-only restriction is widespread in Austronesian and is completely independent of ergativity; it occurs, for instance, in Malagasy, Philippine languages, Formosan languages, languages of Indonesia (where *Tukang Besi* is spoken), and some Oceanic languages (see Wechsler and Arka 1998; Aldridge 2004, 2008, and for overviews, Gärtner et al. 2006; Chung and Polinsky 2009). Depending on which DP serves as the external argument, the form of the verb has to change, assuming what some researchers call “voice” and others refer to as “argument-topic” (Agent-topic, Theme-topic, etc.) form. Compare the following minimal pair (with some glosses changed from the original presentation). In (20a), the DP ‘child’ appears as the external argument, marked with the nominative *na*, and is the only argument accessible to A'-movement operations. The verb appears in what seems to be the Agent-topic form, without special marking, and the non-nominative marker *te* cliticizes to it. In (20b), where the verb is in a

different form—presumably Theme-topic, and the external argument, ‘friend’, is the sole argument that can undergo A’-movement.

- (20) a. No-‘ita+te kene-no na ana. *Tukang Besi*
 3-see+AGENT.TOPIC.HON-NOM friend-3POSS NOM child
 ‘The child saw his friend.’
- b. No-‘ita-‘e te ana na kene-no.
 3-see-THEME.TOPIC NON-NOM child NOM friend-3POSS
 ‘The child saw his friend.’ (~ “The friend was seen by the child.”)
- (Donohue 1999, 467)

In addition to this restriction, the “subject” in *Tukang Besi* must be specific and/or definite; this is typically a property of topics rather than subjects. Furthermore, even if we set aside the fact that the external argument in *Tukang Besi* is subject to semantic constraints which more properly define topics than subjects, the status of morphological ergativity itself in *Tukang Besi* is controversial.

With this accounting done, we are left with only eight morphologically ergative languages listed in WALs that clearly lack syntactic ergativity: Bawm, Hunzib, Ingush, Lezgian, Burushaski, Ngiyambaa, Pitjantjatjara, and Wardaman. These languages are not distributed randomly across the globe. Five of them belong to one of two language

families: Nakh-Dagestanian (Hunzib, Ingush, Lezgian) and Pama-Nyungan (Ngiyambaa, Pitjantjatjara); Wardaman is a non-Pama-Nyungan Australian language.⁵

In sum, most morphologically ergative languages represented in the WALS sample behave like Tongan, not like Basque: they allow extraction of the absolutive with a gap, but their ergative argument is inaccessible to A'-movement. Such a contrast between the absolutive and the ergative constitutes the puzzle of syntactic ergativity: what prevents the ergative from being extracted with a gap, despite the fact that it shows subject properties with respect to other diagnostics? This is a particularly vexing question given the well-known accessibility hierarchy of relativization (Keenan and Comrie 1977, slightly modified below):

(21) *Accessibility Hierarchy*

Subject > Direct Object > Indirect Object > Oblique Object > Possessor > Standard of Comparison

Keenan and Comrie were aware of this problem at the time of writing their article. They make three main points with respect to the violations of (21) in ergative languages. First,

⁵ In building his sample for WALS, Comrie does not count Basque among ergative languages. He characterizes it as an active-inactive language, where some intransitive subjects (S) can appear in the ergative, and others in the absolutive. Comrie also excludes Hindi from the list of ergative languages because he characterizes its alignment as tripartite (separate marking for S, A, and O). Various other ergative languages have similarly been excluded by the design of WALS, but the overall pattern remains the same.

they seem to downplay the extent to which syntactic ergativity is widespread (“[t]he general claim, then, that in ergative languages absolutes are more relativizable than ergatives receives little support”, p. 83 of the paper). They cite such languages as Warlpiri or Hindi as allowing relativization of ergatives. Hindi, however, uses correlatives (see Dayal 1996: Chapter 5; Davison 2009) so its relativization facts are irrelevant for syntactic ergativity.

Second, Keenan and Comrie discuss Dyirbal’s syntactic ergativity and propose an analysis of Dyirbal clauses as passives. Under such an analysis, the ergative is essentially a *by*-phrase, and thus a low-ranking oblique object on (21).⁶ The authors’ approach to Tongan is similar to their approach to Dyirbal: they propose that the Tongan ergative expression is also a passive agent. Curiously, they establish the Tongan connection between ergative and passive in diachronic terms (Keenan and Comrie 1977, 87-88), yet this historical status is somehow projected into the synchronic behavior of the ergative with respect to relativization.

⁶ Dyirbal is often cited as the only example of a language where syntactic ergativity appears to apply globally, as the phenomenon is found in relativization, control, and coreference across coordinate clauses (Dixon 1972; 1979; 1994; Manning 1996, a.o.). The existence of a language type of which Dyirbal is the only representative is worrisome, and a number of researchers have argued that its apparent syntactic ergativity simply follows from a misanalysis of passive clauses as active and active clauses as antipassive (Jake 1978; Heath 1979, 1980; Polinskaja 1989). On closer scrutiny, there is no evidence for syntactic control or coordination based on the absolute (Legate 2008b).

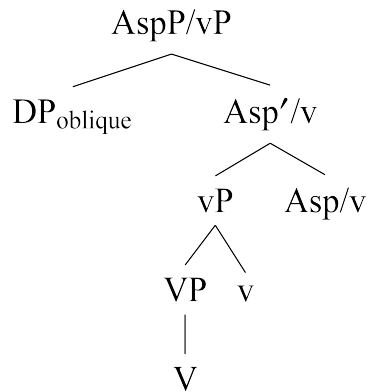
2.3 *Compensatory strategies under syntactic ergativity*

Relative clauses and wh-questions seem to be present in all languages, so syntactically ergative languages must adopt one of several possible strategies to work around the ban on ergative extraction under A'-movement. These strategies include (i) antipassivization, (ii) agent focus, (iii) resumption, (iv) anti-agreement, and (v) nominalization of the vP. Unfortunately, within our present understanding of syntactic ergativity, we have no way of predicting which of these strategies will be used in a particular language, and we are unable to exclude other possible compensatory strategies. Finding correlations between the use of (i)-(v) and other properties of syntactically ergative languages remains an important research task.

One common strategy for circumventing the constraint against A'-movement of the ergative consists of turning the ergative subject into an absolutive (retaining its subjecthood), and then extracting that absolutive. The conversion of a transitive subject to an intransitive subject can be achieved through *antipassivization*. The structure of the antipassive is subject to a significant debate, but several families of approaches can be identified: (i) base-generation, where antipassives are provided in the lexicon (Chung 1998); (ii) abstract noun incorporation, which saturates the internal argument position, with the logical object adjoined to vP (Baker 1988); (iii) use of an additional verbal projection in the vP licensing the non-absolutive/non-accusative object, with an intransitive VP below (Alexiadou 2001; Borer 2003, 2005; Basilico 2012). An example

of (iii) is presented in (22), where the projection responsible for the antipassive is identified as Asp(ectual)P:⁷

(22)



The antipassive construction often serves as a stop along the way prior to the extraction of the subject (Polinsky 2008). Let us revisit the Chukchi example in (17), repeated below as (23a). The ergative cannot relativize leaving a gap (17b), but the newly-created subject of the antipassive construction (23b), which appears in the absolutive, can be relativized (see also Polinsky 1994). Hence, (24) is a licit relative clause. Note that, in the antipassive clause (23b), the verb no longer agrees with both the subject and the object, but only shows agreement with the absolutive subject. The object appears in one of several oblique cases (Kozinsky et al. 1988).

⁷ Antipassives often, but not always, correlate with imperfective or progressive clauses, which explains the introduction of an aspectual projection.

(23) a. transitive sentence

Chukchi

ənpənačg-e milger kun-nin.
 old man-ERG gun.ABS buy-AOR.3SG.SBJ.3SG.OBJ

‘The old man bought a gun.’

b. antipassive sentence

ənpənačg-ən ine-kun-gʔe məlgr-epə.
 old man-ABS ANTIP- buy-AOR.3SG.SBJ gun-ABL

‘The old man bought a gun.’

(24) [məlgr-epə ine-kune-lʔ-ən] ənpənačg-ən

gun-ABL ANTIP-buy-PTCP-ABS old man-ABS

‘the old man that bought a gun’

Possibly related to the antipassive is the *agent focus* (AF) construction common in Mayan languages (see Stiebels 2006 for an overview). In AF, the morphology of the predicate has to change in order for the subject of a two-place verb to undergo A'-movement. The structure of AF and its differences from true antipassive have been subject to extensive discussion in the literature (Aissen 1999, 2011; Stiebels 2006; Norcliffe 2011, a.o.).

Three other strategies are frequently employed for circumventing the ban on A'-movement of the ergative. Some languages avoid the ban by introducing a *resumptive pronoun at the extraction site*.⁸ Note that, in ergative languages which employ this

⁸ Of course, resumption in a relative clause is not exclusive to morphologically ergative languages. It is widely attested in accusative languages as well (Alexopoulou 2006;

strategy, only ergative extraction requires a resumptive pronoun; extraction of the absolutive still occurs with a gap at the extraction site. This resumption strategy has already been illustrated above for Tongan—see (7c), where the ergative is resumed by the pronominal clitic *ne* in the relative clause.

Under *anti-agreement*, another ergative extraction-avoidance option, argument-verb agreement is suppressed or altered when the ergative is extracted. See Wiltschko (2006) for discussion of anti-agreement under ergative extraction in Halkomelem, and see Ouhalla 1993 for the initial discussion of anti-agreement which generated extensive research in the generative literature.

Finally, *nominalizations* may also be used to circumvent the ban on ergative extraction. Under this strategy, the relative clause corresponds to a nominalized vP, and its head noun, which corresponds to the agent, is not expressed in the new nominalized clause. In other words, the nominalization is rather small in size. Under this operation, then, the ergative ceases to be an argument of the verb and instead becomes a complement of the nominal derived from the main verb. Among ergative languages, nominalizations as a way of circumventing A'-movement constraints have been described for Inuit (Johns 1992; 2006), Halkomelem (Gerdtts 1988, 2010), and Roviana (Corston 1996, Corston-Oliver 2003). The sentences in (25) from Roviana show the contrast between absolutive and ergative relativization under nominalization. In (25a), the absolutive is directly extracted from a finite clause, which contains a trace of the extracted DP. Meanwhile, a similar interpretation for the ergative in (25b) is only

McCloskey, this edition), but for the purposes of this chapter, the only relevant phenomenon is the resumption of ergative DPs at their extraction site in a relative clause.

available through the use of a nominalization, meaning something like “the boy of the punching of John” (Corston 1996, Corston-Oliver 2003):

- (25) a. sa koreo_i sapu [CP tupa-i-a e zone t_i] *Roviana*
 DEF boy LNK punch-TR-3SG.OBJ PERS John
 ‘the boy that John punched’ (Corston-Oliver 2003, 275)
- b. sa koreo sapu [DP tupa-na e zone]
 DEF boy LNK punch-NMLZ PERS John
 ‘the boy who punched John’ (Corston-Oliver 2003, 275)

This strategy works because low nominalizations do not have an extraction site, and, depending on the size of the nominalization, may not even include a coindexed silent pronoun corresponding to the extracted argument.

Each option for circumventing the ban on ergative extraction deserves a serious analysis, but such an undertaking is beyond the scope of this chapter. For our present purposes, it is sufficient to note two points: (i) across the board in syntactically ergative languages, we find that something prevents the ergative (but never the absolutive) from undergoing A'-movement; however, (ii) these languages always find ways around the ban on ergative argument extraction.

2.4 *A broader notion of syntactic ergativity?*

The definition of syntactic ergativity introduced above is quite restricted. Some researchers, most notably Dixon (1972, 1979, 1994), Bok-Bennema (1991), Kazenin

(1994), and Manning (1996), use a broader notion of syntactic ergativity that incorporates the contrast between absolutive arguments (S and O) and the ergative argument with respect to A'-movement, coreference across clauses, and coreferential deletion, scope, binding, quantifier float, raising, control, and possibly other dependencies. Based on these criteria, a number of languages could be characterized either as comprehensively syntactically ergative or as “mixed pivot” languages (Manning 1996). Kazenin and Manning make a strong claim that conjunction reduction (that is, deletion under coreference), control (deletion in purposive constructions), and relativization should all pattern alike. In particular, Manning suggests that all three of these operations should follow either the ergative pattern or the neutral pattern (in which the absolutive and the ergative arguments are treated alike) under syntactic ergativity (Manning 1996: 34). Kazenin (1994) proposes the cline of syntactic ergativity shown in (26) below (with slight revisions of Kazenin’s terminology); if a language shows syntactic ergativity in purpose clause formation, then it is expected to be syntactically ergative with respect to conjunction reduction and relativization.

(26) *Cline of syntactic ergativity*

relativization > conjunction reduction > control

There are at least two reasons to restrict the notion of syntactic ergativity in the way advocated for above, rather than adopting the more inclusive approach.

The first reason has to do with *descriptive adequacy*. As mentioned earlier, the cross-linguistic consistency of relative clause behavior does not always carry over to wh-

questions and topicalization. In-depth analysis must be conducted on a language-by-language basis in order to determine whether these two operations instantiate A'-movement or not (consider the discussion of Chukchi wh-questions in section 2.1 above). It is still harder to ascertain if an instance of conjunction reduction in language A is directly comparable to an instance of conjunction reduction in language B; again, an in-depth syntactic analysis is required. Without such an analysis, it is hard to distinguish clausal coordination from VP coordination; the difference is not always clear, even for such a well-studied language as English, consider examples (27a, b).

(27) a. The criminal will be arrested and will confess to the crime. *English*

(Burton and Grimshaw 1992: 310)

b. The employees complained and were given more vacation time.

(McNally 1992: 336)

In the absence of a clear distinction between clausal coordination and VP-coordination, it may be necessary to posit various types of null categories in the second conjunct (Van Valin 1986; Goodall 1987; Burton and Grimshaw 1992; McNally 1992, a.o.). But if we cannot definitively determine what happens in English, how can we be sure whether a paratactic combination of two clauses in a lesser-known language, available from a grammatical description, stands for conjunction reduction?

Similarly, while researchers who adopt a more inclusive approach to syntactic ergativity distinguish in principle between conjunction reduction and reduction in purposive clauses (cf. Dixon 1994, Kazenin 1994, Manning 1996), in practice such a

distinction is more difficult to maintain. Imagine a language—let’s call it English-1—which has morphological ergativity, pro-drop and the functional element *lest*. Furthermore, imagine that we only have a couple of examples of sentences with that functional element, such as the one below:

(28) John_i was afraid to speak out [lest *pro*_i be punished for his words]. *English-1*

Is the bracketed clause coordinate or subordinate? Is *lest* a conjunction like *and* or a complementizer like *for*? Is the entire sentence an instance of conjunction reduction or reduction in a purpose clause? Without clear answers to such questions, the comparison of English-1 with Tongan or Basque would be meaningless.⁹

If we start adding other phenomena beyond coordination and purpose clauses to the domain of syntactic ergativity, the picture becomes even muddier. Just to give an example, in some languages, only subjects are potential binders; in others, both subjects and objects can bind; sometimes, binding potential varies intralinguistically depending on the particular verb group (see Manning 1996: Ch. 2 and Bittner 1994, for a discussion of binding complexities in Inuit).

The second reason to maintain a narrow definition of syntactic ergativity has to do with the general architecture of grammar, at least the way it is viewed in generative approaches to syntax. Such approaches assume that at the core of the syntactic

⁹ Manning (1996, 34, 60-74) writes that, for certain languages, the conjunction reduction analysis or purposive clause analysis would have to be abandoned if the relevant constructions were analyzed “properly.”

computational system we find narrow syntax, which is assumed to be invariant across languages and which builds syntactic representations (Chomsky 1995, 2000, 2001). The structure-building mechanisms involved in narrow syntax include Agree, Merge, and Move, and relations formed in the narrow syntax include movement (Safir 2008) and co-argument reflexives (Reuland 2011). The restricted notion of syntactic ergativity used throughout this chapter is intended to reflect the relations formed in narrow syntax.

The output of narrow syntax is augmented with vocabulary required for the structure to be read by the semantic inference system forms. The resulting augmented syntactic level, known as the Conceptual-Intentional (C-I) interface, includes semantic dependencies which presumably do not factor into the computation of syntactic ergativity. Finally, the discourse component of the grammar situates the logical syntax into a larger context that includes world knowledge, speaker intent, and the full linguistic context. Discourse is where reference relations are established; thus, it determines relations that are not part of the grammar, such as coreference across clauses. The three components are arranged in a hierarchical manner:

(29) Narrow Syntax < C-I interface < discourse

The hierarchical relationship between structure-building mechanisms (including extraction), on the one hand, and logical-syntactic and discourse relationships, on the other, gives us a natural way of dividing the dependencies discussed here; the boundary between extraction (movement) and sundry syntactic dependencies related to binding or coreference is therefore not random. By limiting syntactic ergativity to A'-phenomena we

are able to concentrate on the syntactic differences between ergatives and absolutes. If further correlates of A'-movement restrictions are found outside narrow syntax we have the flexibility to predict that they will apply less stringently across languages. Accordingly, I will maintain the stricter definition of syntactic ergativity introduced in sections 2.1-2.3 throughout the remainder of this chapter.

3 Syntactic ergativity follows from the properties of the absolutive DP

The first group of approaches to syntactic ergativity reviewed here place the explanatory burden on the status of the absolutive DP. In these approaches, the ergative is an inherent case licensed in spec, *v* (cf. Legate 2008a, Aldridge 2004, 2008, Woolford 2006, a.o.) and its inability to A'-move has nothing to do with its own status. Instead, the ban on ergative extraction is understood to follow from the structure of the absolutive: the absolutive has to get to some external position first, for reasons that vary from account to account. This early movement of the absolutive blocks later movement of the ergative. Section 3.1 presents a version of this approach where the main restriction comes from the need for O to A'-move for case. Section 3.2 presents a number of approaches which account for syntactic ergativity by appealing to locality. See also Deal (2013) for an overview of these approaches.

3.1 Object A'-movement blocking the movement of the ergative DP

A number of accounts of ergative syntax require that absolutive objects must undergo A'-movement in the derivation of a transitive clause (Campana 1992, 1993; Murasugi 1992; Bittner and Hale 1996a). The approach described in this section reflects the analysis put

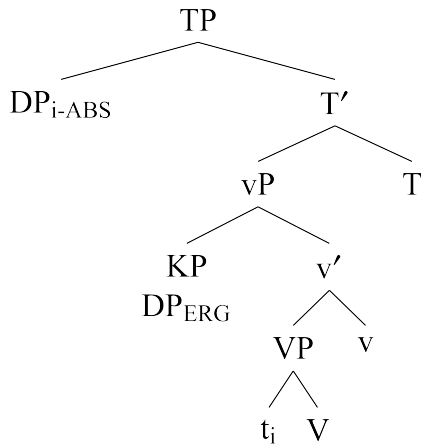
forth in Bittner and Hale. The overall system adopted by these authors is as follows. The case of primary arguments is determined by two heads, K1 (= [erg]=I) and K2 (= [acc]=v). KP (Case Phrase), headed by K(ase), is the highest functional head of the noun phrase bearing the selectional features of the syntactic category immediately above it. The exponent of K is overt case morphology (Guasti 1993; Bayer et al. 2001). Case assignment happens by case binding. If a K cannot case-bind an argument, then the derivation does not crash, but the argument is assigned the default case (=nom). There are two conditions on case binding: K must c-command the argument, and there must be a case competitor (caseless co-argument) in the local m-command domain of K. In ergative languages, K1=I case-binds the external argument, and K2=v does not determine a structural case. Thus, the internal argument does not receive structural case, but it is a case competitor for the external argument. The case competitor can become visible to I in two ways: by remerging in spec,I, or by V-to-I movement.

The following assumptions are relevant for the analysis (see also Bittner and Hale 1996b for more technical details):

- (30)
- a. the absolutive is assigned in an A'-position
 - b. the ergative is an inherent case assigned in a KP inside the vP
 - c. spec,TP and spec,DP are A'-positions
 - d. when the number of A'-positions is limited, movement to an A'-position for case takes precedence over other types of movement

The derivation of a regular transitive clause in an ergative language proceeds as shown in (31); the absolutive DP can then raise to a higher A'-position, in spec,C.¹⁰

(31)



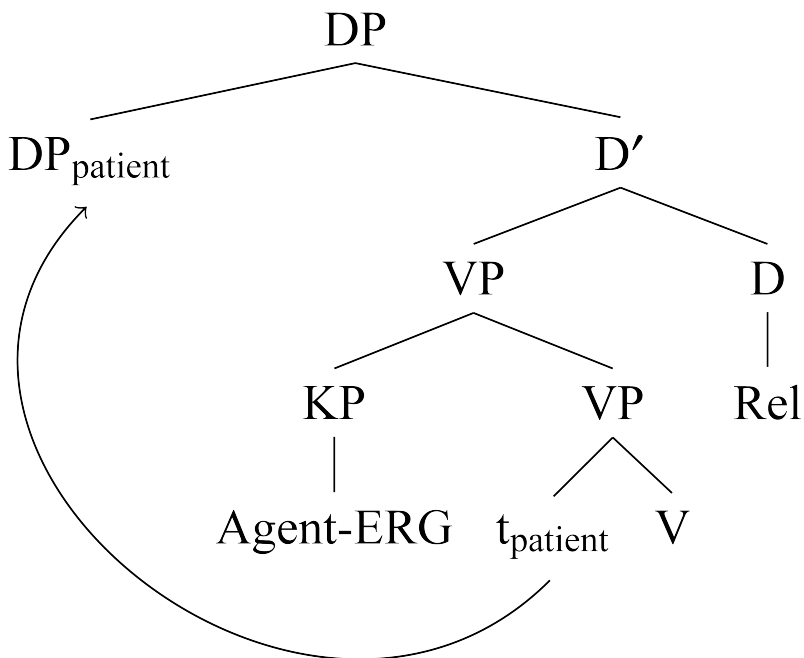
Bittner (1994) and Bittner and Hale (1996a) specifically consider syntactic ergativity in Inuit, where relative clauses are formed on the basis of nominalized VPs. The relativization of the absolutive argument proceeds normally (32a,b), but relativization of the ergative is impossible (32c); in order to relativize the subject of a two-place verb, an antipassive construction is needed (see Bittner 1994: 58 for details).

¹⁰ The researchers whose work is surveyed in this section stipulate that the absolutive is assigned in an A'-position. The same approach is found in more recent work outside ergative languages (e.g., in Baker and Vinokurova 2010 accusative is assigned when the relevant DP raises to spec,C). It is also possible to imagine an analysis in terms of A-movement where the absolutive moves across the ergative. Since the ergative is an inherent case, this movement would not be problematic. Such an account would make the derivation more similar to object shift in familiar languages (for object shift, see Thráinsson 2003; Vikner 2007, and further references therein).

- (32) a. miiqqa-t_i [____i sila-mi pinnguar-tu-t] *Inuit*
 child-PL outdoors-LOC play-REL.[-TR]-PL
 ‘the children who are playing outdoors’ (Bittner 1994: 55)
- b. miiqqa-t_i [Juuna-p ____i paari-sa-i]
 child-PL Juna-ERG look after-REL.[+TR]-3SG:PL
 ‘the children that Juna is looking after’ (Bittner 1994: 55)
- c. *angut_i [____i aallaat tigu-sima-sa-a]
 man gun.ABS take-PFV-REL.[+TR]-3SG:SG
 (‘the man who took the gun’)

In (32a,b), the absolutive moves to an A'-position in spec,D—the only A'-position in this structure—to receive Case, per (30a). The ergative in (32b) receives its case in situ, in KP (per (30b)). The following is the structure of (32b):

(33)



Recall that there is only one A'-position in the relative nominalization; if this position is occupied by some argument other than the absolutive, the latter cannot receive Case. It has no source of Case in the VP, and the derivation crashes due to violation of the Case Filter (Chomsky and Lasnik 1977, Vergnaud 1977/2008). Following (30d), the need for the absolutive to obtain Case takes precedence over the need to A'-move the ergative. Thus, movement of the ergative is blocked.

This account of syntactic ergativity gets the Inuit data right, and is theoretically consistent, but it relies on a number of assumptions which may be hard to motivate. In particular, the requirement that absolutive (and nominative) case be assigned in an A'-position is stipulative. Furthermore, this assumption faces a particular challenge from non-finite clauses. In such clauses, in the absence of T and D, absolutive (or nominative) case should not be assigned. Nevertheless, many ergative languages, including Inuit, have the absolutive freely available in non-finite clauses (Manning 1996: 113; Sadock 2012). The so-called contemporative form of the verb¹¹ in Inuit/Inuktitut is characterized by agreement with the absolutive but not the ergative. This is unexpected given the proposal that the ergative is assigned low and the absolutive receives its case from a higher A'-projection.

Another challenge for this account comes from languages where relative clauses are not formed through nominalizations—consider, for instance, Mayan, where the relative clause is a full-fledged CP. Mayan relative clauses can have more than one A'-

¹¹ The form is called contemporative because it does not have its own temporal component and depends on the matrix verb for time anchoring. It is probably closer to a gerundive than an infinitive (Crago and Allen 2001, 77; Bok-Bennema 1991, 206-209).

position. This is illustrated by the following examples from Q'anjob'al, a syntactically ergative language (see section 3.2.2). Examples in (34) illustrate the left periphery in root clauses,¹² and (35) shows the left periphery in relative clauses (see also Butler 2012 for the CP-structure of Yucatecan relative clauses; her analysis also indicates that relative clauses in Yucatec have an articulated left periphery with room for topic and focus).

- (34) a. B'ay txomb'al max- \emptyset s-man ix Malin ixim patej. *Q'anjob'al*
 at market ASP-3ABS 3ERG-buy CLF Maria CLF tortilla
 'At the market, Maria bought tortillas.'
- b. (Ixim) patej_k max- \emptyset s-man ix Malin *t_k* b'ay txomb'al.
 CLF tortilla ASP-3ABS 3ERG-buy CLF Maria at market
 '(The) tortillas, Maria bought at the market.'
- (35) ix q'opoj_i [ix, ixim patej_k, max- \emptyset s-man *t_i* *t_k* b'ay txomb'al]
 CLF girl REL CLF tortilla ASP-3ABS 3ERG-buy at market
 'the girl who, tortillas, bought at the market'

Assuming that such languages have an articulated left periphery in the relative clause, it is unclear what prevents the movement of the ergative DP to an A'-position after the Case licensing of the absolutive is taken care of.

¹² For an analysis of topics in root clauses, see Aissen (1992), Avelino (2009), Svartman (2008).

3.2 *Syntactic ergativity as a consequence of locality violations*

Another family of accounts of syntactic ergativity likewise analyzes the ergative as an inherent case licensed in spec,ν , but relies on locality conditions to prevent the ergative DP from A'-movement.

3.2.1 Ergative A'-movement as a violation of the Attract Closest Principle

The approach presented in this section, like the one above, crucially relies on the idea that the explanation for syntactic ergativity should reside with the status of the absolutive (again, the ergative itself is understood as an inherent case licensed in spec,ν). Proponents of this notion argue that the restriction against A'-movement of the ergative is just a side effect of the way the absolutive case is assigned. The main idea is that at least some ergative languages use different ν heads for different levels of transitivity: transitive ν assigns absolutive case, while intransitive ν does not (hence the obligatory movement of the intransitive subject to T for case). This approach has been developed in work by Legate (2006; 2008a) and Aldridge (2004, 2008). Aldridge's (2008: 983-984) remarks on the role of the absolutive provide a succinct overview of the main idea:

“ The crux of Aldridge's proposal is that transitive, but not intransitive, ν can carry an EPP feature in syntactically ergative languages. The effect of this constraint in recent minimalist theory of Chomsky (2001) is to force absolutive objects to move to the outer edge of the νP , from where they will be able to undergo further movement, specifically to the specifier of CP, as in *wh*-movement or relativization. They will also be interpreted in a position external to VP,

thereby receiving wide-scope, presuppositional interpretations.

... Aldridge ...proposes that absolutive case is assigned directly by T or ν . T assigns case in intransitive clauses; ν does so in transitive clauses. In a transitive clause, ν carries an absolutive case feature that it assigns to the direct object. ... Transitive ν also carries an EPP feature, which draws the absolutive NP to its outer specifier, where it is visible to a probe in the next phase, for example, a [wh] feature on C, as in the case of *wh*-movement. This will allow the absolutive NP to be extracted in cases of A'-movement.

... Since the source of absolutive case is ν in transitive clauses, absolutive case is still available in non-finite clauses in this type of language. Indeed, in Tagalog and Inuit languages, controlled PRO can appear in the ergative subject position, while absolutive case appears on the object. Absolutive case is still available in a non-finite clause, because it is assigned by ν and therefore is not affected by the finiteness of T.”

Thus, the licensing of the absolutive depends on transitivity (Aldridge 2004, 2008; Legate 2006; 2008a):

(36) ABS case checking:

- a. in a transitive clause, the object remains in its base position inside the VP and checks its case with ν ;
- b. in an intransitive clause, the absolutive DP has its case checked by T, not ν .

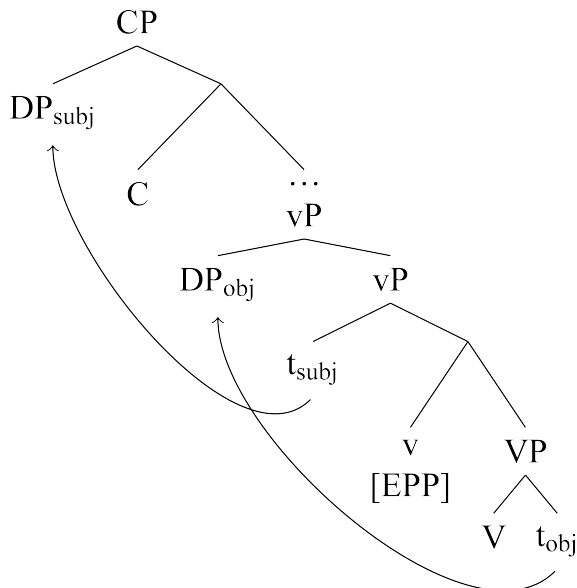
In a transitive clause, the inability of the ergative DP to undergo A'-movement follows from a violation of the Attract Closest Principle:

(37) *Attract Closest Principle (ACP)*

A head which attracts a given kind of constituent attracts the closest constituent of the relevant kind (Radford 2004: 162)

Under syntactic ergativity, a transitive *v* has an [EPP] feature which triggers raising of the object to *v*P's outer specifier (per (36)). A'-movement to spec,C is also triggered by an [EPP] feature. As the absolutive object receives its case in the *v*P, it is the highest DP in the phrase and can therefore proceed to C. The ergative, however, is lower than the object, and its movement presumably violates the ACP (37), as shown in the structure in (38).

(38) A'-movement of the ergative as an ACP violation



In contrast to the Bittner and Hale (1996a)-style account, Aldridge's account separates case marking from the assignment of case to the absolutive, which makes it more versatile. However, her analysis crucially relies on the presence of an EPP on the transitive v and on the distinction between transitive and intransitive v heads in terms of case licensing. The reliance of this account on the ACP constitutes both its strength and its weakness. On the one hand, this account predicts that a *wh*-probe (as opposed to other probes) could look for any element in its c-command domain that has a matching [wh]-feature. So if the [wh]-feature were assigned to the ergative rather than the absolutive, then the ergative would be attracted to SpecCP, even though the absolutive is a closer *potential* goal. This would allow us to account for the difference between syntactic ergativity under relativization and under *wh*-questions, as in Chukchi above (see the contrast between examples (16a) and (17a)). But such an analysis would also overgeneralize the distinction between relativization and *wh*-question formation to languages which treat these two processes in the same way (for example, Mayan languages with syntactic ergativity). Furthermore, the ACP alone may not be sufficient to rule out movement of the ergative: the raised absolutive and the in-situ ergative are both in spec,v; therefore, they ought to be equally close for the purposes of attraction towards a higher probe. Under this account, then, the ACP would need to be amended to include a stipulation that the raised absolutive is somehow privileged.

Another corollary to syntactic ergativity follows from Aldridge's account of a high-assigned absolutive: the absolutive expression is expected to take wide scope. Critical evidence for this prediction comes from Inuit, where the absolutive object receives a wide-scope interpretation (Bittner 1994; Bittner and Hale 1996a,b), and the

instrumental object in the antipassive receives an obligatory narrow-scope reading (Aldridge 2008: 975). However, at least Chukchi does not conform to the scope generalization proposed by Aldridge. In Chukchi, only surface scope is allowed:

- (39) a. Gamga-ŋawəskət-e ŋərnə-ŋinqey winren-nen. *Chukchi*
 every-woman-ERG three-boy.ABS help-AOR.3SG.3SG
 b. Gamga-ŋawəskət-e winren-nen ŋərnə-ŋinqey.
 every-woman-ERG help-AOR.3SG.3SG three-boy.ABS
 ‘Every woman was helping three boys.’ (*every > three; *three > every*)
- (40) a. ŋərnə-ŋinqey gamga-ŋawəskət-e winren-nen.
 three-boy.ABS every-woman-ERG help-AOR.3SG.3SG
 b. ŋərnə-ŋinqey winren-nen gamga-ŋawəskət-e.
 three-boy.ABS help-AOR.3SG.3SG every-woman-ERG
 ‘Every woman was helping three boys.’ (*three > every; *every > three*)

Thus, the wide scope reading expected for the absolutive in syntactically ergative languages is not supported by the facts, however limited. A better understanding of scope relations in individual ergative languages will have to build upon the understanding of quantifiers in such languages as well as differences between determiners, demonstratives, and other types of modifiers.

3.2.2 Phase boundaries and high/low absolutive languages

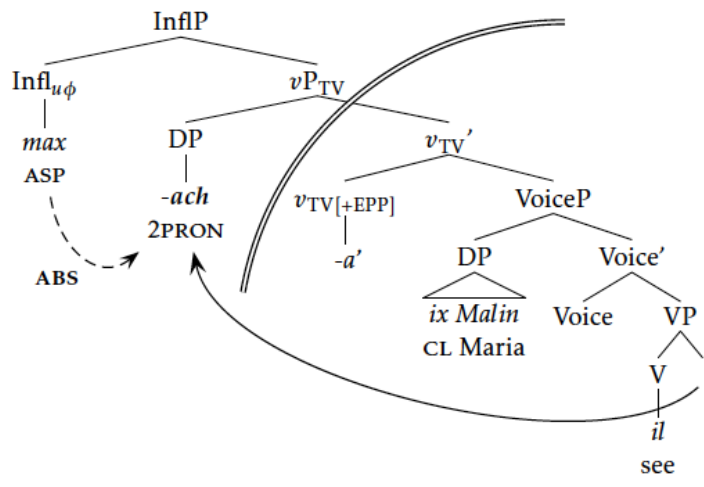
Another account of syntactic ergativity has recently been proposed by Coon et al. (2012).¹³ The proposal treats all ergative cases in the same way: namely, as arguments with inherent case merged in spec, VoiceP. Because the ergative is an inherent case under this analysis, it has its own Case features, which are valued immediately after merging (cf. Woolford 2006). This makes the ergative invisible to the EPP on higher probes (since only DPs with unvalued Case features are available to such probes), so it cannot leave its position for EPP reasons. However, there is nothing about the nature of the ergative in this account that prevents it from moving to a higher A'-position. As in the two accounts discussed above, on Coon et al.'s analysis, the main blocking effect of syntactic ergativity comes from the manner in which the absolutive DP is licensed, rather than from any characteristics of the ergative.

The authors base their arguments on Mayan languages, which they divide into two types: high-absolutive and low-absolutive. In high-absolutive languages, such as Q'anjob'al, the absolutive object must move up to TP in order to receive Case. In low-absolutive languages, there is no requirement for such movement; movement to spec, TP may occur for other reasons, but not for Case. The rest of the account follows straightforwardly, with just one additional assumption: the transitive *v*P in high-absolutive languages is a phase (a locality domain, according to the Phase Theory developed by Chomsky 1995, 2001, 2008). It is thus subject to the Phase Impenetrability Condition (Chomsky 2001). On the assumption that a *v*P has only one escape hatch (this

¹³ Their proposal is similar in some ways to the one developed in Merchant (2009); however Merchant is mostly concerned with case licensing and does not discuss extraction asymmetries relevant for the current discussion.

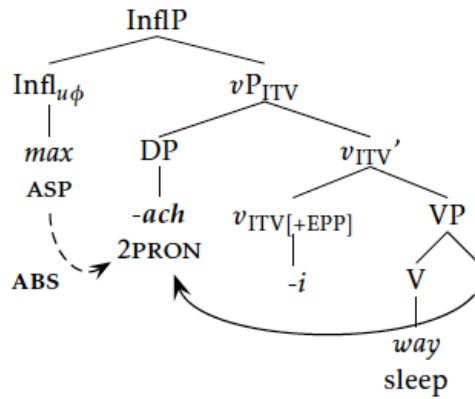
can be implemented as a requirement that only one edge feature be present, or as a general restriction on multiple specifiers), only one argument can escape that phase. This argument must be the object, since it requires Case. The result is that the ergative DP is “trapped” within the vP phrase. This is represented in (41) where the double arc indicates a phase boundary.

(41)



An intransitive vP is not a phase, so no constituents are trapped by it:

(42)



On this approach, for the ergative to be prevented from extraction, it is crucial that it be generated very low and not raise out of vP.

Morphological support for this proposal comes from the surface linearization of agreement markers: in high-absolutive languages, the absolutive agreement marker is a prefix, while in low-absolutive languages, it is a suffix (see Tada 1993, Coon et al. 2012 for an extensive discussion). Compare the high-absolutive Q’anjob’al with the low-absolutive Chol in the examples below. In Q’anjob’al, the absolutive marker *ach* is adjoined to the highest element of the clause, the aspectual marker *max* (see also examples (34) and (35) above featuring the null 3rd person absolutive morpheme):

- (43) Max-**ach** y-il-’a ix Malin. *Q’anjob’al*
 ASP-ABS.2SG ERG.3SG-see-TR CLF Maria
 ‘Maria saw you.’

In contrast, the absolutive exponent in Chol appears low:

- (44) Tyi-k-wāy-is-ä-yety. *Chol*
 ASP-1SG.ERG-sleep-CAUS-DERIVED.TR-2SG.ABS
 ‘I made you sleep.’ (Coon et al. 2012, ex. (10b))

Further support for this approach comes from the fact that certain objects in Mayan, such as regular reflexives and extended reflexives, allow the Agent to be extracted from a transitive *v*P. These objects are taken to be caseless, and therefore need not move for Case reasons. Thus, in Q’anjob’al:

- (45) Maktxel max-∅ y-il/*il-on[-i] s-b’a? *Q’anjob’al*
 who ASP-ABS3 ERG3-see/*see-AF-TR GEN3-self
 ‘Who saw herself/himself?’ (Coon et al. 2012, ex. (66a))

This proposal allows the authors to account for a number of correlations, including the correlation between the presence of syntactic ergativity and the requirement that embedded clauses be intransitive (in other words, the requirement that the ergative not occur in the subject position of complement clauses), something that is quite common across ergative languages (see Aldridge 2008). It also seems consistent with the division of absolutive case forms into true absolutives, on the one hand and nominatives appearing in the guise of absolutives, on the other hand—a distinction proposed by Legate (2008a) and Aldridge (2004, 2007, 2008). The absolutive can be assigned either by the little *v* head inside the *v*P, or by a higher projection in the inflectional domain (in Mayan, this is

the aspectual head). High-absolutive languages have nominatives in the guise of absolutes, whereas low-absolutive languages have “true” absolutes, assigned by a lower verbal head. This is a pleasing result, and one that any account of ergativity should be able to capture.

An important consequence of the division of Mayan languages into high-absolutive and low-absolutive types is the prediction this division makes concerning the appearance of the absolute in non-finite embedded clauses. The logic is as follows: in those languages where the absolute (either subject or object) is assigned by the high clausal head (T or Infl), absolute DPs cannot be licensed in embedded phrases which lack that licensing head—i.e., in non-finite embedded clauses. In contrast, in low-absolutive languages, the absolute can appear in non-finite embedded clauses, because it does not rely on a higher head for licensing. This prediction is confirmed. In Q’anjob’al, a high-absolutive language, there is no way to generate the absolute in embedded clauses, which is why (46) is ungrammatical. Instead, the language uses a special nominalization, the so-called “Crazy Antipassive” (Kaufman 1990), illustrated in (47). According to Coon et al. (2012), the agent focus (AF) marker *-on-* in Q’anjob’al serves as a licenser for object case in the absence of the high aspectual head that would otherwise license the absolute.

(46) *Chi uj [hin y-il ix Malin] *Q’anjob’al*

ASP be_able_to ABS1 GEN3-see CLF Maria

(‘Maria can see me.’)

- (47) Chi uj [hin y-il-on[-i] ix Malin] *Q'anjob'al*
 ASP be_able_to ABS1 GEN3-see-AF-ITR CLF Maria
 'Maria can see me.'

The proposal thus makes correct predictions about the syntax of non-finite complements in high-absolutive Mayan languages.

The properties of the Coon et al. (2012) proposal outlined in this section are intriguing, but there are also some reservations. Syntactic phases provide one of the major building blocks of Coon et al.'s proposal; this is related to their desideratum that the transitive subject be generated below the vP phase. As mentioned above, the authors assume that intransitive vP is not a phase, but transitive vP is. Transitive vP therefore provides an escape hatch that can be utilized by an argument that needs to move out of vP : in high-absolutive languages, this will crucially be the object (which needs to move to receive Case), rather than the subject. In Chomsky's original proposal (1995), which was built mainly upon Spanish data, unaccusative vPs were not considered phases (in the terminology employed by Chomsky 2001, they are "weak phases"), but all vPs that assigned an external theta role were (strong) phases. Thus, the distinction between phase and non-phase (or, equivalently, strong and weak phase) relied on the presence/absence of an external argument, not an internal argument. Chomsky's proposal and Coon et al.'s analysis are compatible as long as all intransitive verbs are unaccusative (as they seem to be in Chol); however, in a language with a different distribution of intransitive verbs, this

analysis would not stand up.¹⁴ Of course decisions about the phasehood of particular *v*Ps have always been rather arbitrary in the literature, so this reservation is not limited to the proposal discussed here.

Setting aside issues surrounding the notion of phasehood, two major predictions follow from Coon et al.'s approach to ergativity. The first follows from the single-occupancy restriction on the phase escape hatch: since the absolutive has to go through the phase edge and raise to TP, all other constituents inside the *v*P, not just the ergative, should be “trapped.” We already know that if the absolutive does not get case outside the *v*P, special morphology (AF) is needed to extract the ergative. By extension, we expect that when *v*P-internal constituents move out of their home *v*P, AF should be required. However, the *wh*-movement of low adjuncts in Q'anjob'al does not require AF marking on the verb, contrary to expectation. See Polinsky (to-appear) for more discussion on this point.

A second prediction that follows from the phase-based approach to ergativity concerns variable binding. Analyses of object shift (see Larson 1988, Holmberg and Platzack 1995, Zwart 2001, Bošković 2004, Woolford 2007, a.o.) lead to the prediction that a Mayan absolutive raised out of its base position should be able to bind a variable in a lower constituent. Unfortunately, this prediction is practically impossible to test, since Mayan languages lack both double object constructions and the sorts of adjunct clauses that would provide an appropriate test case. Thus it remains to be seen whether the Mayan-style analysis can be extended to other syntactically ergative languages.

¹⁴ The analysis would become more problematic if we were to assume that all *v*Ps, even passives/unaccusatives, are phases (as proposed, for example, by Legate 2003).

4 *Syntactic ergativity follows from the properties of the ergative*

The second group of syntactic accounts discussed here places the explanatory burden for the restriction on A'-movement of the ergative on the ergative itself rather than on the absolutive. Note, however, that these accounts are still compatible with the idea that absolutive licensing can vary by transitivity (see (36) above).

4.1 *Syntactic ergativity as a consequence of criterial freezing*

The first explanation for syntactic ergativity that we will consider here is stated in terms of *criterial freezing*. The basic idea behind criterial freezing, initially formulated by Wexler and Culicover (1980), is that an element displaced from its base position is unable to take part in any further syntactic operations. This idea has been fruitfully applied in accounts of subextraction (see Lohndal 2011 and references therein; also Chapter 110) and subject/object asymmetries with respect to A'-movement (Rizzi 2006, 2010; Rizzi and Shlonsky 2007,). A more explicit formulation, due to Rizzi's work, is as follows:

(48) CRITERIAL FREEZING: if an XP is moved to satisfy a particular criterion, it becomes an island for further movement.

Criterial freezing blocks the A'-extraction of subjects in the following way: the subject starts out in the specifier of a ν P and has to move to the specifier of the highest inflectional head (T) to satisfy Case and agreement requirements and to satisfy the EPP.

Thus:

- (49) [_{TP} DP [_{VP} t [_{VP} ...]]]
 [EPP, uCase] [Case]

Once moved, the subject is frozen, preventing further extraction, such as A'-movement over a complementizer, or subextraction, as in the following French example:

- (50) *Combien veux-tu que [[____ d'étudiants]_{SBJ} signent la lettre]]? *French*
 how many want-2SG COMP of students sign the letter
 ('How many of (the) students do you want to sign the letter?') (cf. Shlonsky 2012)

Since ergative DPs are subjects, they are natural candidates for criterial freezing. Once A-moved into the vicinity of C, they become inert for further movement operations, just like subjects in nominative-accusative languages. Polinsky (to-appear) considers in detail the possibility of applying the notion of criterial freezing to an account of syntactic ergativity. She concludes that such an analysis faces two main challenges. First, assuming that the ergative DP is considered an inherent case (cf. Aldridge 2004, 2008; Legate 2008a; Woolford 2006), it does not need to move for Case assignment. It is base-generated in spec,_v and can—indeed, must—stay there. Therefore, it cannot be frozen due to Case-driven movement. Furthermore, EPP-driven movement can only motivate criterial freezing in a subset of ergative languages, since verb-initial languages do not satisfy the EPP via DP movement (Alexiadou and Anagnostopoulou 1998; Chung 2005,

2006; Gartner et al. 2006).¹⁵ All things considered, the ban on A'-movement of the ergative has to follow from something *other* than criterial freezing.

The second argument against a criterial freezing account of syntactic ergativity comes from the syntax of the absolutive. Recall the proposed derivation of the absolutive presented in (36), and repeated below:

(36) ABS case checking:

- a. in a transitive clause, the object remains in its base position inside the VP and checks its case with *v*;
- b. in an intransitive clause, the absolutive DP has its case checked by T, not *v*.

Assuming (36), the absolutive subject *must* raise to receive case (and possibly to satisfy the EPP). Under criterial freezing, such movement should render it ineligible for further movement. Nevertheless, we have ample evidence from ergative languages of all stripes that the absolutive is free to undergo further A'-movement.

These considerations suggest that criterial freezing is untenable for ergative languages: the absolutive DP raises to a criterial position (to satisfy either EPP or Case) but, contrary to expectations, is not frozen for further movement, while the ergative cannot A'-move even from its base position.

¹⁵ Verb-peripheral orders, and particularly verb-initial orders, are extremely common among ergative languages (Trask 1979; Mahajan 1994), although the generalization that ergative languages tend to be verb-peripheral is only a trend, as there are a number of verb-medial ergative languages as well (Drehu, Kashmiri, Pari, Nez Perce, Paumare; Diyari, Gugada, Gumbaynggir, Ritharngu, Thargari, Wangkumara, Yukulta, Yulbaridja).

4.2 *Ergative expression as a PP*

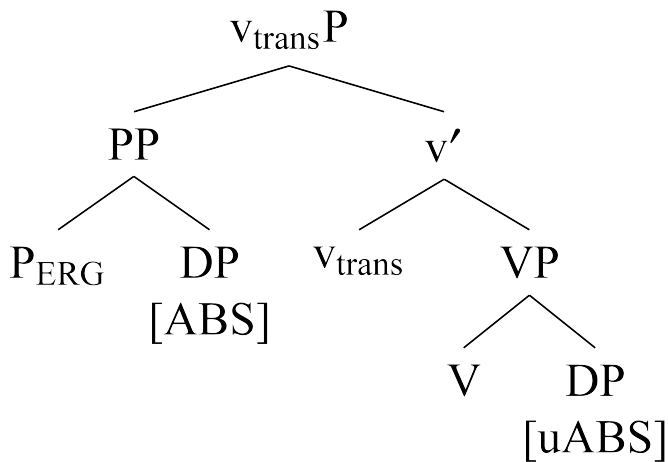
The next family of accounts explains syntactic ergativity by arguing that the ergative expression in syntactically ergative languages is not a DP, but a PP base-generated in spec, *v* (Stepanov 2004; Markman and Grascchenkov 2012; Polinsky to-appear). This type of analysis builds on the close parallels between passives and ergatives (in a number of languages, ergative constructions develop from passives, see Comrie 1978, Dixon 1994 for representative examples) and between nominalizations and ergatives (in accusative languages, deverbal nominalizations treat S and O alike, to the exclusion of A—see Alexiadou 2001 for a detailed discussion). It also takes into account the idea that non-nominative subjects are often PPs (cf. Landau 2010 for a similar proposal for dative/experiencer subjects). For parallels between ergative expressions and PPs, see Stepanov (2004) and Polinsky (to-appear). All these proposals converge on the following licensing rule, which is sensitive to the transitivity of the predicate (as in the other families of accounts surveyed earlier):

(51) *Ergative as a PP*

The ergative XP is a prepositional phrase base-generated in the specifier of a transitive *v* head.

The derivation is as follows (depending on the headedness of a given language, the adposition could be a pre- or a postposition):

(52)



In a transitive clause, the lexical verb combines with its complement and the resulting VP merges with the little *v*. This functional head has the absolutive case feature as its only Case feature. Case features are expected to be checked as soon as they can be (Chomsky 1995), so the *v* head licenses the absolutive on the complement of the verb. Likewise, this head may also include agreement feature(s) valued by the feature(s) on the internal argument although those phi-features may also be located higher, on the inflectional head (not shown in the derivation above). The ergative expression is merged at the next stage of the derivation. It receives its case from the P head.

On the semantic plane, the contribution of the P head is not visible. One could hypothesize that the original meaning of the ergative P is either a source ('from') or a cause ('by,' 'because of').

Ergative as a PP, which is proposed for syntactically ergative languages, contrasts with the ergative as a DP, predicted to occur in languages without syntactic ergativity.¹⁶

¹⁶ The accounts surveyed here do not commit to analyzing the DP-ergative as either inherent or structural case, and it is possible that there may be different subtypes of that

Assuming the contrast between ergative as a DP and ergative as a PP, different researchers derive syntactic ergativity, for languages with PP-ergative expressions, differently. Stepanov (2004) proposes that ergative subjects, which are PPs, are adjoined late in the derivation. Because of their late-adjoined status, ergative PPs cannot undergo cyclic syntactic rules, including A'-movement in particular. Stepanov (2004) predicts that no ergative languages should have agreement with the ergative, because the ergative appears in the derivation after the agreement between T and the object has taken place. However, there are ergative languages, including some with syntactic ergativity, which do have genuine agreement with the ergative—Halkomelem (Gerdtz 1988; Wiltschko 2006), Abkhaz (see example (5b) above), and Chukchi (see examples (15), (16), (18), (39), (40) above) are among these.

Markman and Grascenkov (2012) avoid the agreement problem by proposing that a PP can enter into a relationship with a verbal head (the head N of the ergative nominal incorporates into P, and the relevant functional head agrees with the N-P complex).

Polinsky (to-appear) follows the agreement approach proposed by Markman and Grascenkov (2012); she likewise derives syntactic ergativity from the PP status of the ergative but limits syntactic ergativity to languages that do not have P-stranding or pied-piping. She cites some Northern Russian dialects as having clear PP-expressions in the transitive subject position but allowing pied-piping; as a result, A'-movement of ergative

case. For example, Režac' et al. (to-appear) analyze the ergative in Basque, a language without syntactic ergativity, as a structural case. It remains to be seen if such an analysis can be extended to other ergative DPs.

expressions is in principle possible on Polinsky's approach. Further empirical work is needed to see if more such languages are attested.

In languages where the ergative expression is a PP and where P-stranding or pied-piping is not available, Polinsky argues, one should expect syntactic ergativity because the PP is a syntactic island. However, syntactic ergativity is predicted to have different realization depending on the type of A'-phenomena. It is known that A'-movement is contingent on the phonetic content of the moved operator, in that only operators that bear phonetic content are permitted to A'-move (den Dikken 1995). This is why A'-movement is possible in *wh*-questions but not in relative clauses (where the moved element is a null operator). We have seen that in Chukchi relativization of the ergative is impossible (17a) but *wh*-questions of the ergative are allowed (16a). A similar situation involving a (silent) P head is found in English, where the relativization of a dative object is marginally acceptable at best, while the *wh*-questioning of that same object is more widely accepted (although subject to dialect variation beyond the scope of this chapter).

- (53) a. **/?the person_i [Op_i they sent t_i a threatening email]* *English*
 b. *%Who_i did they send t_i a threatening email?*

If an ergative expression is indeed a PP, we can formulate some predictions concerning its properties which go beyond the inability to A'-move. For accounts claiming that ergatives in syntactically ergative languages are PPs, testing such predictions is an important move without which the account becomes circular. In particular, PPs are expected to have the following characteristics:

- (54) a. PPs do not participate in raising and control
b. PPs cannot participate in binding (with principled exceptions)
c. PPs should be islands for subextraction

Polinsky (to-appear) compares languages with and without syntactic ergativity and confirms (54a). Syntactically ergative languages lack raising and control structures (instances of apparent raising and control can be reduced to copying and the relevant operations are not limited to subjects). In contrast, morphologically ergative languages without syntactic ergativity (i.e., languages with a DP-ergative on the account presented here) have bona fide control and raising (cf. Režac et al. to-appear on Basque raising, or Polinsky and Potsdam 2002 on control in Nakh-Dagestanian).

In confirmation of (54b), PP-ergative languages systematically lack anaphors and instead use general pronouns or other expressions which are exempt from Binding Principle A. Furthermore, in syntactically ergative languages, the ergative cannot bind depictives or license quantifier float. Meanwhile, languages without syntactic ergativity have genuine reflexive and reciprocal anaphors; in such languages, the ergative can also license depictives and host floated quantifiers. Finally, all other factors being equal, subextraction out of the ergative is impossible in syntactically ergative languages whereas subextraction out of an absolutive subject is possible. No such restriction is observed in the absence of syntactic ergativity.

The advantage of linking syntactic ergativity to the presence of a PP (rather than a DP) in the specifier of a transitive *v* head lies in establishing the correlations between the PP status of the ergative and independent properties of syntactically ergative languages.

However, all the correlations listed here need to be further tested empirically and need to be expanded based on our knowledge of the syntax of PPs.

5 *Syntactic ergativity without morphological ergativity?*

So far all the examples of syntactic ergativity we have seen have come from morphologically ergative languages. This section addresses the question of whether syntactic ergativity is available outside the realm of morphological ergativity. Does the grouping of S and O to the exclusion of A with respect to A'-movement appear in accusative languages as well?

Existing accounts of ergative phenomena converge on the prediction that syntactic ergativity cannot exist without morphological ergativity. Accounts of syntactic ergativity which rely on properties of the accusative and those which appeal to properties of the ergative arrive at this prediction in different ways. Recall that absolutive-based accounts of syntactic ergativity rely on the fact that, in ergative languages, the absolutive is assigned differentially by T or v , depending on transitivity. In a nominative-accusative language, the nominative is assigned by T, and the accusative by v , so no blocking effects from the movement of the absolutive are expected; thus, syntactic ergativity is not predicted in this domain. Similarly, accounts which attribute the presence of syntactic

ergativity to the PP status of the ergative simply do not apply to languages which lack ergative subjects—i.e., nominative-accusative languages.¹⁷

To test the prediction that syntactically ergative languages are a subset of morphologically ergative ones, let us examine some instances of ergative alignment in accusative languages. Two well-known cases come to mind: French *faire* causatives, and nominalizations in nominative-accusative languages.

In French V-incorporating causatives where the downstairs infinitive raises into the matrix clause (den Dikken 1995; Guasti 1993), the causer of an intransitive verb and the direct object of a transitive verb both appear in the accusative case, while the causer of a transitive verb is in the dative case (55b). Thus we observe the familiar ergative alignment illustrated in the beginning of this chapter (1); S and O are marked the same, and A is expressed differently.

- (55) a. On fera travailler nos élèves. *French*
 one make.FUT work.INF our students
 ‘We will have our students work.’
- b. On fera faire deux exercices à nos élèves.
 one make.FUT do.INF two exercises DAT our students
 ‘We will have our students do two exercises.’

¹⁷ A similar analysis might be applied to by-phrases in passives, but this would not lead to syntactic ergativity.

For a discussion of the way the accusative and the dative are assigned in these causatives, see Kayne (1975), Rouveret and Vergnaud (1980), Bobaljik and Branigan (2006) and further references therein. For our current purposes, it is only important that both arguments in the causative construction, the (accusative) intransitive causer/transitive object and the (dative) transitive causer, can undergo A'-movement indiscriminately. Consider the following wh-questions, based on (55b), as an illustration:

- (56) a. Que fera-t-on faire à nos élèves? *French*
 what make.FUT-T-one do.INF DAT our students
 'What will we have our students do?'
 b. A qui fera-t-on faire deux exercices?
 DAT who make.FUT-T-one do.INF two exercises
 'Who will we have do two exercises?'

(56) shows that, despite the ergative alignment in the case-marking of French causatives, there is no difference between the accusative causee and the dative causer in terms of A'-extraction. Thus, no syntactic ergativity occurs.

The second empirical testing ground for syntactic ergativity in accusative languages can be found in verb phrase nominalizations. Such nominalizations widely have the ergative alignment (Alexiadou 2001): the subject of an intransitive and the object of a transitive both appear in the genitive, while the subject of a transitive nominalization appears in the instrumental case. This is illustrated below with Russian examples; S and O are in the genitive, and A is in the instrumental case (57b):

- (57) a. *otkaz mèt-a otvečat' na voprosy* *Russian*
 refusal mayor-GEN.[S] answer.INF on questions
 ‘the mayor’s refusal to answer questions’ (from *otkazat'sja* ‘refuse’)
- b. *priem delegacy-ii mèt-om*
 reception delegation-GEN.[O] mayor-INS.[A]
 ‘the delegation’s reception by the mayor’ (from *prinjat* ‘receive’)

All the core arguments in these nominalizations can be relativized.¹⁸

- (58) a. *mèt_i [čej_i otkaz otvečat' na voprosy]...* *Russian*
 mayor whose refusal answer.INF on questions
 ‘the mayor whose refusal to answer questions...’ (cf. (57a))
- b. *mèt_i [čej_i priem delegacy-ii]...*
 mayor whose reception delegation-GEN
 ‘the mayor whose reception of the delegation...’ (cf. (57b))
- c. *delegacija [čej_i priem mèt-om]...*
 delegation whose reception mayor-INS
 ‘the delegation whose reception by the mayor...’ (cf. (57b))

¹⁸ This relativization is subject to subtle semantic and pragmatic constraints, which generally make the extraction of inanimates less acceptable. This is an issue beyond syntax, and we will not explore it here.

Again, no syntactic ergativity occurs. Thus, empirical data support the conclusion that syntactic ergativity is limited to languages that are morphologically ergative at root clause level.

This result in turn leads to a more general question: assuming that all languages have abstract case, it is unclear why there cannot be syntactic ergativity without morphological ergativity at the root level. None of the theories surveyed in sections 3 and 4 have an answer to this question, and its exploration is needed if we want to understand the difference between abstract and morphological case on a deeper level.¹⁹

6 Conclusions

This chapter introduced the phenomenon of syntactic ergativity, defined as the grouping of the absolutive subject and object into a natural class, to the exclusion of the ergative argument, with respect to A'-movement. We also considered a broader definition of syntactic ergativity adopted by some researchers and rejected it as overly general and pertaining to disparate components of grammar. Presently, there is no consensus in the literature as to the cause of syntactic ergativity. Two families of approaches can be distinguished: those which place the explanatory burden on the derivation of the absolutive, and those which invoke the properties of the ergative expression itself to explain syntactic ergativity. For the first family of approaches, which include

¹⁹ Criterial freezing is the only account discussed in this chapter that may potentially permit syntactic ergativity outside the domain of morphological ergativity, since it is the only account that does not incorporate variations in transitivity into the analysis of the ergative.

explanations based on locality and A'-movement for case, the exclusion of the ergative from A'-movement is simply a side effect of satisfying the needs of the absolutive. In the second type of approach, the ergative expression cannot A'-move either as a result of criterial freezing or as a consequence of being inside a PP. The approaches surveyed here converge on the notion that ergative is an inherent case, assigned either directly by a verbal head or by an adposition selected by a *v* head.

SEE ALSO: Case: Oblique, Inherent, Semantic, Quirky; Freezing Effects; Object Shift; Subextraction; Tough Movement; VOS Languages: Some of Their Properties

Acknowledgments

The work on this project was supported in part by grants from the Davis Center for Russian and Eurasian Studies at Harvard, Max-Planck Institute for Evolutionary Anthropology, NSF (SBR-9220219, BCS-0131946, BCS-1144223, BCS-1342688, BCS-1348181), and CASL at the University of Maryland. Any opinion, findings, and conclusions or recommendations expressed in this material are mine and do not necessarily reflect the views of the National Science Foundation, the United States Government, or the other agencies.

I am grateful to my language consultants for sharing their data with me: Kepa Erdozia and Itziar Laka (Basque), Peter Inenlikey and Vladimir Raxtilin (Chukchi); Isabelle Charnavel and Virginie Greene (French); Tom Etuata, Granby Siakimotu, and Kara-Ann Tukuitonga (Niuean); Pedro Mateo Pedro and B'alam Mateo Toledo (Q'anjob'al), and Sisilia Lutui, Sofia Tolu, and Melenaite Taumoefolau (Tongan). For helpful discussion of this work I am indebted to Bernard Comrie, Jessica Coon, Amy Rose Deal, Marcel den Dikken, Caitlin Keenan, Itziar Laka, Beth Levin, Terje Lohndal, Nick Longenbaugh, Eric Potsdam, Omer Preminger, Peter Sells, two anonymous reviewers, and SynCom editors, Henk van Riemsdijk and Martin Everaert. I am alone responsible for all the errors in this work.

References

- Aissen, Judith. 1992. Topic and focus in Mayan. *Language* 68, 43-80.
- Aissen, Judith. 1999. Agent focus and inverse in Tzotzil. *Language* 75, 451-485.
- Aissen, Judith. 2011. On the syntax of agent focus in K'ichee'. In *Proceedings of Formal Approaches to Mayan Linguistics I*, edited by Kirill Shklovsky, Pedro Mateo Pedro, and Jessica Coon (MIT Working Papers in Linguistics Vol. 63), 1-16. Cambridge: MITWPL.
- Aldridge, Edith. 2004. Ergativity and word order in Austronesian languages. Ph.D. Dissertation, Cornell University.
- Aldridge, Edith. 2007. Minimalist analysis of ergativity. *Sophia Linguistica* 55, 123-142.
- Aldridge, Edith. 2008. Generative approaches to syntactic ergativity. *Language and Linguistics Compass: Syntax and Morphology* 2.5, 966-995.
- Alexiadou, Artemis. 2001. *Functional structure in nominals. Nominalization and ergativity*. Amsterdam: John Benjamins.
- Alexiadou, Artemis, and Elena Anagnostopoulou. 1998. Parametrizing AGR: Word order, V-movement and EPP-checking. *Natural Language and Linguistic Theory* 16, 491-539.
- Alexopoulou, Theodora. 2006. Resumption in relative clauses. *Natural Language and Linguistic Theory* 24, 57-111.
- Avelino, Heriberto. 2009. Intonational Patterns of Topic and Focus Constructions in Yucatec Maya. *MIT Working Papers in Linguistics* 59, 1-21.
- Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.

- Baker, Mark C., and Nadya Vinokurova. 2010. Two modalities of case assignment: Case in Sakha. *Natural Language and Linguistic Theory* 28, 593-642.
- Basilico, David. 2012. The antipassive and its relation to scalar structure. In *The end of argument structure? (Syntax and Semantics, Volume 38.)*, edited by Maria Cristina Cuervo, and Yves Roberge, 75-103. New York: Emerald Group.
- Bayer, Josef, Markus Bader, and Michael Meng. 2001. Morphological underspecification meets oblique case: syntactic and processing effects in German. *Lingua* 111, 465-514.
- Bianchi, Valentina. 2002. Headed relative clauses in generative syntax. Parts I and II. *Glott International*, vol. 6, No. 7, 197–204, No. 8, 1-13.
- Bittner, Maria. 1994. *Case, scope, and binding*. Dordrecht: Kluwer.
- Bittner, Maria, and Kenneth Hale. 1996a. Ergativity: Toward a theory of a heterogeneous class. *Linguistic Inquiry* 27, 531-604.
- Bittner, Maria, and Kenneth Hale. 1996b. The structural determination of case and agreement. *Linguistic Inquiry* 27, 1-68.
- Bobaljik, Jonathan, and Phil Branigan. 2006. Eccentric agreement and multiple case-checking. In *Ergativity: Emerging issues*, edited by Alana Johns, Diane Massam, and Juvenal Ndayiragije, 47-77. Dordrecht: Springer.
- Bok-Bennema, Reineke. 1991. *Case and agreement in Inuit*. Berlin—New York: Foris.
- Borer, Hagit. 2003. Exo-skeletal vs. endo-skeletal explanations: Syntactic projections and the lexicon. In *The nature of explanation in linguistic theory*, edited by John Moore and Maria Polinsky, 31-67. Chicago: CSLI and University of Chicago Press.

- Borer, Hagit. 2005. *The normal course of events. Structuring sense*, Volume II. Oxford: Oxford University Press.
- Bošković, Željko. 2004. Object shift and the clause/PP parallelism hypothesis. In *Proceedings of the 23rd West Coast Conference on Formal Linguistics*, edited by Vineeta Chand, Ann Kelleher, Angelo J. Rodríguez, and Benjamin Schmeiser, 101-114. Somerville, MA: Cascadilla Press.
- Burton, Strang, and Jane Grimshaw. 1992. Coordination and VP-internal subjects. *Linguistic Inquiry* 23, 305-313.
- Butler, Lindsay K. 2012. The morphosyntax and processing of number marking in Yucatec Maya. Ph.D. Dissertation, The University of Arizona.
- Campana, Mark. 1992. A movement theory of ergativity. Ph.D. Dissertation, McGill University.
- Campana, Mark. 1993. Agreement morpheme order: Window on the syntax of LF. *Toronto Working Papers in Linguistics* 12, 27-47.
- Caponigro, Ivano. 2003. Free not to ask: On the semantics of free relatives and wh-words cross-linguistically. Ph.D. Dissertation, UCLA.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, edited by Michael Kenstowicz, 1-52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, edited by Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133-166. Cambridge, MA: MIT Press.

- Chomsky, Noam and Howard Lasnik. 1977. Filters and control. *Linguistic Inquiry* 8, 425-504.
- Chung, Sandra. 1998. *The design of agreement*. Chicago: Chicago University Press.
- Chung, Sandra. 2005. What fronts? On the VP-raising account of verb-initial order. In *Verb first: On the syntax of verb-initial languages*, edited by Andrew Carnie, Heidi Harley, and Sheila Ann Dooley, 9-30. Amsterdam: John Benjamins.
- Chung, Sandra. 2006. Properties of VOS Languages. In *The Blackwell companion to syntax*, edited by Martin Everaert and Henk van Riemsdijk, 685-720. Malden, Ma.: Blackwell.
- Chung, Sandra, and Maria Polinsky. 2009. Introduction. Special issue on Austronesian comparative syntax. *Natural Language and Linguistic Theory* 27, 659-673.
- Comrie, Bernard. 1978. Ergativity. In *Syntactic typology: Studies in the phenomenology of language*, edited by Winifred Lehman, 329–394. Austin: University of Texas Press.
- Comrie, Bernard. 2008. Alignment of case marking. In *The World Atlas of Language Structures Online*, edited by Matthew S. Dryer and Martin Haspelmath, Ch. 98-99. Munich: Max Planck Digital Library.
- Comrie, Bernard, and Tania Kuteva. 2008. Relativization on subjects. *The World Atlas of Language Structures Online*, edited by Matthew S. Dryer and Martin Haspelmath, Ch. 122. Munich: Max Planck Digital Library.
- Coon, Jessica. 2013. *Aspects of split ergativity*. New York: Oxford University Press.

- Coon, Jessica, Pedro Mateo Pedro, and Omer Preminger. 2012. The role of case in A-bar extraction asymmetries: Evidence from Mayan. Ms., McGill—Harvard University.
- Corston, Simon H. 1996. *Ergativity in Roviana, Solomon Islands*. (Pacific Linguistics, B-113.) Canberra: Australian National University.
- Corston-Oliver, Simon H. 2003. Core arguments and the inversion of the nominal hierarchy in Roviana. In *Preferred argument structure: Grammar as architecture for function*, edited by John DuBois, Lorraine Kumpf, and William J. Ashby, 273-300. Amsterdam: John Benjamins.
- Crago, Martha, and Shanley Allen. 2001. Early finiteness in Inuktitut: The role of language structure and input. *Language Acquisition* 9, 59-111.
- Davison, Alice. 2009. Adjunction, features and locality in Sanskrit and Hindi/Urdu correlatives. In *Correlatives cross-linguistically*, edited by Anikó Lipták, 223-262. Amsterdam: John Benjamins.
- Dayal, Veneeta. 1996. *Locality in WH quantification*. Dordrecht: Kluwer.
- Deal, Amy Rose. 2013. Ergativity. Ms., University of California Santa Cruz.
- Dixon, R.M.W. 1972. *The Dyirbal language of North Queensland*. Cambridge: Cambridge University Press.
- Dixon, R.M.W. 1979. Ergativity. *Language* 55, 59-138.
- Dixon, R.M.W. 1994. *Ergativity*. Cambridge: Cambridge University Press.
- Donohue, Mark. 1999. *A grammar of Tukang Besi*. Berlin: Mouton de Gruyter.
- Gärtner, Hans-Martin, Paul Law, and Joachim Sabel. 2006. Clause structure and adjuncts in Austronesian Languages: A critical introductory survey. In *Clause structure*

- and adjuncts in Austronesian languages*, edited by Hans-Martin Gärtner, Paul Law, and Joachim Sabel, 1–42. Berlin: Mouton de Gruyter.
- Gerdts, Donna. 1988. *Object and absolutive in Halkomelem Salish*. New York: Garland.
- Gerdts, Donna. 2010. Ditransitive constructions in Halkomelem Salish: A direct object/oblique object language. In *Studies in ditransitive constructions: A comparative handbook*, edited by Andrej Malchukov, Martin Haspelmath, and Bernard Comrie, 563-610. Berlin: Mouton De Gruyter.
- Goodall, Grant. 1987. *Parallel structures in syntax*. Cambridge: Cambridge University Press.
- Guasti, María Teresa. 1993. *Causatives and perception verbs*. Torino: Rosenberg & Sellier.
- Gutierrez-Mangado, M. Juncal, and Maria-José Ezeizabarrena. 2012. Asymmetry in child comprehension and production of Basque subject and object relative clauses. Paper presented at BUCLD-36.
- Haig, Geoffrey. 1998. On the interaction of morphological and syntactic ergativity: Lessons from Kurdish. *Lingua* 105, 149-173.
- Heath, Jeffrey. 1979. Is Dyrbal ergative? *Linguistics* 17, 401-463.
- Heath, Jeffrey. 1980. Dyrbal ergativity: Counter-rejoinder to Dixon. *Linguistics* 18, 505-521.
- Hewitt, George. 2005. North West Caucasian. *Lingua* 115, 91–145.
- Hicks, Glyn, 2009. Tough-constructions and their derivation. *Linguistic Inquiry* 40: 535–566.

- Holmberg, Anders, and Christer Platzack. 1995. *The role of inflection in Scandinavian syntax*. Oxford: Oxford University Press.
- Hualde, Jose Ignacio, and Jon Ortiz de Urbina. 2003. *A grammar of Basque*. Berlin: Mouton de Gruyter.
- Hulsey, Sarah, and Uli Sauerland. 2006. Sorting out relative clauses. *Natural Language Semantics* 14, 111-137.
- Jake, Janice. 1978. Why Dyirbal isn't ergative at all. *Studies in the Linguistic Sciences* 8, 97-110.
- Johns, Alana. 1992. Deriving ergativity. *Linguistic Inquiry* 23, 57-87.
- Johns, Alana. 2006. Ergativity and change in Inuktitut. In *Ergativity: Emerging issues*, edited by Alana Johns, Diane Massam, and Juvenal Ndayiragije, 293-314. Dordrecht: Springer.
- Kaufman, Terrence. 1990. Algunos rasgos estructurales de los idiomas mayances con referencia especial al K'iche'. In *Lecturas sobre la lingustica maya*, edited by Nora England and Stephen R. Elliot, 59–114. Antigua: CIRMA.
- Kayne, Richard. 1975. *French syntax*. Cambridge: MIT Press.
- Kazenin, Konstantin. 1994. Split syntactic ergativity: Toward an implicational hierarchy. *Sprachtypologie und Universalienforschung* 47, 78-98.
- Keenan, Caitlin. 2013. Peculiarities of the Abkhaz DP. Ms, Harvard University.
- Keenan, Edward L., and Bernard Comrie. 1977. Noun phrase accessibility and Universal Grammar. *Linguistic Inquiry* 8, 63-99.

- Kozinsky, Isaac, Vladimir Nedjalkov, and Maria Polinskaja. 1988. Antipassive in Chukchee. In *Passive and voice*, edited by Masayoshi Shibatani, 651-706. Amsterdam: John Benjamins.
- Landau, Idan. 2010. *The locative syntax of experiencers*. Cambridge, MA: MIT Press.
- Larson, Richard. 1988. On the double object construction. *Linguistic Inquiry* 19, 335-391.
- Legate, Julie Anne. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34, 506-516.
- Legate, Julie Anne. 2006. Split absolutive. In *Ergativity: Emerging issues*, edited by Alana Johns, Diane Massam, and Juvenal Ndayiragije, 143-172. Dordrecht: Springer.
- Legate, Julie Anne. 2008a. Morphological and abstract case. *Linguistic Inquiry* 39, 55-101.
- Legate, Julie Ann. 2008b. Dyirbal ergativity. Paper presented at the 82nd LSA Annual Meeting, Chicago, January 2008.
- <http://www.ling.upenn.edu/~jlegate/lisa08h2.pdf>
- Lohndal, Terje. 2011. Freezing effects and objects. *Journal of Linguistics* 47, 163-199.
- Mahajan, Anoop. 1994. The ergativity parameter: Have/be alternation, word order and split ergativity. *Proceedings of the North East Linguistic Society* 24, edited by Mercè González, 317-331. Amherst: University of Massachusetts.
- Manning, Chris D. 1996. *Ergativity: Argument structure and grammatical relations*. Stanford: CSLI Publications.

- Markman, Vita, and Pavel Grashchenkov. 2012. On the adpositional nature of ergative subjects. *Lingua* 122, 257-266.
- Massam, Diane, and Carolyn Smallwood. 1996. Essential features of predication in English and Niuean. In *Proceedings of the North East Linguistic Society 27*, edited by Kiyomi Kusumoto, 236-272. Amherst: University of Massachusetts.
- McGregor, William. 2009. Typology of ergativity. *Language and Linguistics Compass* 3, 480-508.
- McNally, Louise. 1992. VP-coordination and the VP-internal subject hypothesis. *Linguistic Inquiry* 23, 336-341.
- Merchant, Jason. 2009. Polyvalent case, geometric hierarchies, and split ergativity. In *Proceedings of the 42nd annual meeting of the Chicago Linguistic Society*, edited by J. Bunting, S. Desai, R. Peachey, C. Straughn, & Z. Tomkova, vol. 2, 57-76. Chicago: Chicago Linguistics Society.
- Murasugi, Kumiko. 1992. Crossing and nested paths: NP movement in accusative and ergative languages. Ph.D. Dissertation, MIT.
- Nichols, Johanna. 1986. Head-marking and dependent-marking grammar. *Language* 62, 56-119.
- Norcliffe, Elisabeth. 2009. Head marking in usage and grammar: A study of variation and change in Yucatec Maya. Ph.D. Dissertation, Stanford University.
- Nuger, Justin. 2010. Architecture of the Palauan verb complex. Ph.D. Dissertation, UC Santa Cruz.
- Otsuka, Yuko. 2005. Two derivations of VSO: A comparative study of Niuean and Tongan. In *Verb first: On the syntax of verb-initial languages*, edited by Andrew

- Carnie, Sheila Ann Dooley, and Heidi Harley, 65-90. Amsterdam: John Benjamins.
- Otsuka, Yuko. 2006. Scrambling and information focus: VSO-VOS alternation in Tongan. In *The free word order phenomenon: Its syntactic sources and diversity*, edited by Joachim Sabel and Mamoru Saito, 243-279. Berlin: Mouton de Gruyter.
- Ouhalla, Jamal. 1993. Subject extraction, negation and the anti-agreement effect. *Natural Language and Linguistic Theory* 11, 477-518.
- Polinskaja, Maria 1989. Object initiality: OSV. *Linguistics* 27, 257-303.
- Polinsky, Maria. 1994. Relativization in Chukchi. In *Papers from the 7th Conference on the Non-Slavic Languages of the USSR*, edited by Howard Aronson, 241-262. Chicago..
- Polinsky, Maria. 2008. Antipassive constructions. In *The World Atlas of Language Structures Online*, edited by Matthew S. Dryer and Martin Haspelmath, ch. 108. Munich: Max Planck Digital Library.
- Polinsky, Maria. To-appear. A tale of two ergatives.
- Polinsky, Maria, and Eric Potsdam. 2002. Backward control. *Linguistic Inquiry* 33, 245-282.
- Radford, Andrew. 2004. *English syntax: An introduction*. Cambridge: Cambridge University Press.
- Reuland, Eric. 2011. *Anaphora and language design*. Cambridge, MA: MIT Press.
- Režac, Milan, Pablo Albizu, and Ricardo Etxepare. To-appear. The structural ergative of Basque and the theory of Case. *Natural Language and Linguistic Theory*.

- Rizzi, Luigi. 2006. On the form of chains: Criterial positions and ECP effects. In *Wh-movement: Moving on*, edited by Lisa Cheng and Norbert Corver, 97-133. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 2010. On some properties of criterial freezing. In *The complementizer phase: Subjects and operators*, edited by Phoevos Panagiotidis, 17-32. Oxford: Oxford University Press.
- Rizzi, Luigi, and Ur Shlonsky. 2007. Strategies of subject extraction. In *Interfaces + Recursion = Language? Chomsky's minimalism and the view from syntax-semantics*, edited by Hans-Martin Gärtner and Uli Sauerland, 115-160. Berlin: Mouton de Gruyter.
- Rouveret, Alain, and Jean-Roger Vergnaud,. 1980. Specifying reference to the subject: French causatives and conditions on representations. *Linguistic Inquiry* 11, 97-202.
- Safir, Ken. 2008. Coconstrual and narrow syntax. *Syntax* 11, 330-355.
- Seiter, William. 1980. *Studies in Niuean syntax*. New York: Garland.
- Shlonsky, Ur. 2012. Notes on wh in situ in French. In *Functional heads: The cartography of syntactic structures*, edited by Laura Bruge, Anna Cardinaletti, Giuliana Giusti, Nicola Munaro and Cecilia Poletto, vol. 7, 242-252. Oxford: Oxford University Press.
- Stepanov, Arthur. 2004. Ergativity, case and the Minimal Link Condition. In *Minimality effects in syntax*, edited by Arthur Stepanov, Gisbert Fanselow, and Ralf Vogel, 367-400. Berlin: Mouton de Gruyter.

- Stiebels, Barbara. 2006. Agent focus in Mayan languages. *Natural Language and Linguistic Theory* 24, 501-570.
- Svartman, Flaviane. 2008. The Focus and topic distinction in Tzotzil, Jakalteq, Tembe, Xavante, Brazilian and European Portuguese. *Revista de Estudos da Linguagem* 16: 55-87.
- Tada, Hiroaki. 1993. A/A-bar partition in derivation. Ph.D. Dissertation, MIT.
- Thráinsson, Höskuldur. 2003. Object shift and scrambling. In *The handbook of contemporary syntactic theory*, edited by Mark Baltin and Chris Collins, 148-202. Oxford: Blackwell.
- Trask, Larry. 1979. On the origins of ergativity. In *Syntactic typology: Studies in the phenomenology of language*, edited by Winifred Lehman, 395–404. Austin: University of Texas Press.
- Van Valin, Robert Jr. 1986. An empty category as the subject of a tensed S in English, *Linguistic Inquiry* 17, 581-586.
- Vergnaud, Jean-Roger. 1977. Letter to Noam Chomsky and Howard Lasnik on “Filters and control”. Reprinted in: Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta (eds.). 2008. *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, 3-15. Cambridge, MA: MIT Press.
- Vikner, Sten. 2007. Object shift. In *The Blackwell companion to syntax*, edited by Martin Everaert and Henk van Riemsdijk. Ch. 46. Blackwell Reference Online doi: 10.1002/9780470996591.ch46

- Wechsler, Stephen, and I Wayan Arka. 1998. Syntactic ergativity in Balinese: An argument structure based theory. *Natural Language and Linguistic Theory* 16, 387-441.
- Wexler, Kenneth and Peter W. Culicover. 1980. *Formal principles of language acquisition*. Cambridge, MA.: MIT Press.
- Wiltschko, Martina. 2006. On 'ergativity' in Halkomelem Salish. In *Ergativity: Emerging issues*, edited by Alana Johns, Diane Massam, and Juvenal Ndayiragije, 197-228. Dordrecht: Springer.
- Woolford, Ellen. 2006. Lexical case, inherent case, and argument structure. *Linguistic Inquiry* 37, 111-130.
- Woolford, Ellen. 2007. Case locality: Pure domains and object shift. *Lingua* 117, 1591-1616.
- Zwart, C. Jan-Wouter. 2001. Object shift with raising verbs. *Linguistic Inquiry* 32, 547-554.