The Role of Case in A-Bar Extraction Asymmetries: Evidence from Mayan
Jessica Coon — jcoon@fas.harvard.edu
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First...
This presentation represents collaborative work being carried out with Pedro Mateo Pedro (mateo@fas.harvard.edu) and Omer Preminger (omerp@mit.edu). Parts of this work will appear in Coon and Mateo Pedro to appear.

1 Introduction

• In Q’anjob’al, a Mayan language of Guatemala, the suffix -(o)n is found in two disparate-seeming environments:
  (1) AFFILIATIVE
  Maktxel max-ach il-on-i.
  who ASP-ABS2 see-SUF-ITV
  ‘Who saw you?’
  • The use of -on (or a cognate form) in Agent Focus environments like (1) (discussed below) is widespread throughout the family
  • The extension of this morpheme to embedded transitives like (2) is unique to the Q’anjob’alan branch (see e.g. Pascual 2007; Quesada 1997)
  (2) “CRAZY ANTIPASSIVE”
  chi uj [ hach y-il-on-i ].
  ASP be.able.to ABS2 ERG3-see-SUF-ITV
  ‘S/he can see you.’
  • The use of -on (or a cognate form) in Agent Focus environments like (1) (discussed below) is widespread throughout the family
  • The extension of this morpheme to embedded transitives like (2) is unique to the Q’anjob’alan branch (see e.g. Pascual 2007; Quesada 1997)
  ➽ Our first clue that these constructions should receive a unified analysis comes from the fact that both unexpectedly appear with the intransitive status suffix (-i ‘-ITV’)—despite the appearance of two full arguments

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1Unless otherwise noted, all Q’anjob’al data are from Pedro Mateo Pedro and all Chol data are from Jessica Coon’s fieldnotes. Abbreviations in glosses are as follows: ABS – absolutive; AF – agent focus; AP – antipassive; ASP – aspect marker; CAUS – causative; CL – noun class marker; DET – determiner; DTV – derived transitive suffix; EXT – existential; ITV – intransitive verb; NML – nominal; PL – plural; PREP – preposition; PROG – progressive; RN – relational noun; TV – transitive verb.
In this talk we argue—building on the intuition in Pascual 2007 and extending the analysis in Ordóñez 1995—for a unified treatment of the morpheme -on:

- Specifically, we argue that the morpheme -on is responsible for assigning Case to internal arguments in environments where (absolutive) Case is otherwise unavailable.
- We show how the appearance of intransitive verbal morphology—often discussed for the Agent Focus constructions—is connected to the change in Case-assignment properties of these clauses.
- We begin with an analysis of the Crazy Antipassive, and use this construction to account for the role of AF in agent extraction contexts.

Though the analysis focusses on Q’anjob’al, we suggest that it has important consequences for other languages as well:

- We reduce the appearance of syntactic ergativity—the ban on extracting ergative subjects—to properties of how arguments are licensed in the clause.
- We produce a typology of Mayan languages which predicts which languages will and which will not show these extraction asymmetries.

Roadmap:

- §2 – Ergativity in Mayan
- §3 – The Crazy Antipassive (is not so crazy)
- §4 – The other use of -on: Agent Focus
- §5 – Further support
- §6 – Summary and conclusions

2 Ergative and absolutive in Mayan

2.1 Q’anjob’al basics

- Q’anjob’al’s basic ergative pattern is shown in (3): As in other Mayan languages, participants are head-marked on the predicate with two sets of morphemes:

(3) Q’ANJOB’AL’S ERGATIVE SYSTEM
   a. Max-ach y-il-a’.  
      ASP-ABS2 ERG3-see-TV  
      ‘S/he saw you.’  
      ➔ Third person absolutive is null
      ➔ Ergative and genitive are identical across the family
   b. Max-ach way-i.  
      ASP-ABS2 sleep-ITV  
      ‘You slept.’

- As in other Mayan languages, finite eventive predicates are headed by an aspectual marker.
- Nominals are not morphologically marked for case and can be freely omitted.
- The verb stem consists of a root, possibly followed by derivational morphology, and often a final “status suffix”. Status suffixes vary with transitivity:
  - Transitive status suffix (TV): -V’
  - Intransitive status suffix (ITV): -i
In Q’anjob’al, status suffixes only surface phrase-finally (see also Henderson to appear on K’iche’); we’ll represent non-final suffixes in square brackets to show how they would surface.

(4) a. Max-Ø way-i.
   ASP-3ABS sleep-ITV
   ‘He slept.’

b. Max-Ø way-[i] naq winaq.
   ASP-3ABS sleep-ITV DET man
   ‘The man slept.’

2.2 A Mayan Absolutive Parameter

• The Mayan language family consists of about thirty languages, usually grouped into five or six subgroups (Campbell and Kaufman 1985), spoken altogether by over six million people in Mexico, Guatemala, and Belize.

• Though most languages share the properties discussed for Q’anjob’al above, we find an interesting point of variation in the location of the absolutive morphemes:
  ○ “HIGH-ABS”: the absolutive morpheme immediately follows the aspect marker
  ○ “LOW-ABS”: the absolutive morpheme appears at the end of the verb stem

(5)

| HIGH-ABS | ASPECT | ABS | ERG | ROOT | (VOICE) | SUFFIX |
| LOW-ABS  | ASPECT | ERG | ROOT | (VOICE) | SUFFIX | ABS    |

• Q’anjob’al and Chol (Cholan branch, Chiapas, Mexico) show this contrast:

(6) a. Q’ANJOB’AL (=HIGH-ABS)
   Max-acch hin-[way-tzene-j].
   ASP-ABS2 ERG1-sleep-CAUS-DTV
   ‘I made you sleep.’

b. CHOL (=LOW-ABS)
   Tyi k-[way-is-ä]-yety.
   ASP ERG1-sleep-CAUS-DTV-ABS2
   ‘I made you sleep.’
• We assume the following structure for both Q’anjob’al and Chol clauses:

\[ (7) \]

\[ \text{InflP} \]

\[ \text{Infl}^0 \]

\[ \text{ASPECT} \]

\[ \text{vP} \]

\[ \text{DP} \]

\[ \text{VoiceP} \]

\[ \text{STATUS SUFFIX} \]

\[ \text{subject} \]

\[ \text{Voice}^0 \]

\[ \text{VP} \]

\[ \text{ACTIVE} \]

\[ \text{PASSIVE} \]

\[ \ldots \]

\[ \text{ROOT} \]

\[ \text{object} \]

○ Infl\(^0\) is instantiated by aspect (see Aissen 1992); aspect is obligatory in all eventive finite clauses\(^2\)

○ The status suffixes are overt instantiations of little-v\(^0\) heads

○ The verb root undergoes head-movement through Voice\(^0\) and v\(^0\), giving the order of stem suffixes in accordance with the Mirror Principle (Baker 1985): \[[\text{ROOT-VOICE-SUF}]\]

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2.3 Person marking

• Working assumptions:
  ○ “Case Filter” – All DPs require abstract Case in order to be licensed in the clause (see e.g. Chomsky, 1980; Rouveret and Vergnaud, 1980; Vergnaud, 1976/2006)
  ○ Case is assigned through a “Probe–Goal” relation between a functional head with uninterpretable \(\phi\) features (e.g. Infl\(^0\) or v\(^0\)) and a DP (Chomsky 2000)
• We assume that ergative Case is licensed low in the derivation by transitive v\(^0\)
• The person features of the ergative subject are spelled out as a prefix on the verb stem

\[ (8) \text{TRANSITIVE} \]

\[ \text{InflP} \]

\[ \text{Infl} \]

\[ \text{vP} \]

\[ \text{DP} \]

\[ \text{VoiceP} \]

\[ \text{subject} \]

\[ \text{Voice}^0 \]

\[ \text{VP} \]

\[ \text{ERG} \]

\[ (9) \text{INTRANSITIVE (UNACCUSATIVE)} \]

\[ \text{InflP} \]

\[ \text{Infl} \]

\[ \text{vP} \]

\[ \text{DP} \]

\[ \text{VoiceP} \]

\[ \text{subject} \]

\[ \text{Voice} \]

\[ \text{VP} \]

\[ \text{V} \]

\[ \text{DP} \]

\[ \text{object} \]

\[ \text{subject} \]

\[ \text{V} \]

\[ \text{DP} \]

\[ \text{object} \]

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\[ \text{object} \]

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\(^2\)Here we concentrate only on eventive predicates. Stative or “non-verbal” predicates in Mayan languages systematically lack aspect morphology.
What accounts for the different positions of the absolutive morphemes?

- Transitive objects and intransitive subjects both receive absolutive marking

(10) Q’ANJOB’AL

a. Max-ach y-il-a’.
   COM-ABS2 ERG3-see-TV
   ‘S/he saw you.’

b. Max-ach way-i.
   COM-ABS2 sleep-ITV
   ‘You slept.’

(11) CHOL

a. Tyi y-il-ä-yety.
   PRFV ERG3-see-DTV-ABS2
   ‘S/he saw you.’

b. Tyi wäy-i-yety.
   PRFV sleep-ITV-ABS2
   ‘You slept.’

- Here we assume that the absolutive morphemes are pronominal clitics; see Woolford 2000 on Jakaltek and Coon 2010 on Chol

- We adopt recent proposals which suggest that languages vary as to how absolutive arguments are licensed (Aldridge 2004, 2008; Legate 2002, 2008)

Specifically, we propose that in Mayan, the surface position of absolutive correlates with the head responsible for licensing absolutive arguments

- In Q’anjob’al the head of a finite clause, Infl\(^0\), is responsible licensing absolutive arguments
- In Chol the head of the verbal projection, \(v^0\), is responsible for licensing absolutive arguments

(12) MAYAN ABSOLUTIVE PARAMETER

| HIGH-ABS (ABS realized on the aspect marker) | ABS assigned by Infl\(^0\) |
| LOW-ABS (ABS realized on the verb stem)     | ABS assigned within \(vP\) |

- Prediction: As discussed in work by both Aldridge and Legate on unrelated languages, the different possibilities for assigning absolutive Case make different predictions about its availability in non-finite (aspectless) embedded clauses

- In Q’anjob’al, if absolutive is assigned by the head of a finite clause, Infl/Aspect, we predict absolutive to be unavailable in aspectless embedded clauses—analagous to nominative in nominative-accusative languages:

(13) Q’ANJOB’AL

a. * chi uj [ hin y-il ix Malin ].
   ASP be.able.to ABS1 ERG3-see CL Maria
   intended: ‘Maria can see me.’

b. * Lanan [ hach in-laq’-a’ ].
   PROG ABS2 ERG1-hug-ITV
   intended: ‘I am hugging you.’
○ If \( v^0 \)—and not Inf\( l^0 \)—is responsible for assigning absolutive in Chol, we correctly expect absolutive Case to be available in aspectless non-finite embedded clauses like those in (14)

(14) CHOL
   a. Mej\( i [\text{i-k’el-oñ aj-Maria }] \).
      be.able.to ERG3-see-ABS1 DET-Maria
      ‘Maria can see me.’
   b. Choñkol [ k-mek’-ety ].
      PROG ERG1-hug-ABS2
      ‘I am hugging you.’

   (For Chol, there is language-internal evidence that a \( vP \)-internal head is responsible for the assignment of absolutive Case, see Coon 2010 and Coon and Preminger to appear)

- **Prediction**: absolutive should be unavailable in non-finite embedded clauses HIGH-ABS languages like Q’anjob’al—without special morphology
  ○ This prediction is borne out at least in HIGH-ABS K’iche’e’, where transitives must first be detransitivized (e.g. via passive) in order to embed (Robert Henderson, p.c.)

2.4 The position of ABS
- Recall that \( v^0 \) is instantiated by the status suffixes: -ITV (intransitive verb); -TV (transitive verb); and -DTV (derived transitive verb)
- Crucially, we follow analyses under which transitive \( v^0 \) heads are *phasal*; intransitive \( v^0 \) is not (Chomsky 1995)

- **The phase-hood of \( v^0 \) is directly correlated with the assignment of ergative Case:**
  ○ \( v^0 \) heads which assign ergative are phasal
  ○ \( v^0 \) heads which do not assign ergative are not phasal

<table>
<thead>
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<th></th>
<th>assigns ergative?</th>
<th>phasal?</th>
<th>Q’anjob’al</th>
<th>Chol</th>
</tr>
</thead>
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<tr>
<td>ITV</td>
<td>no</td>
<td>no</td>
<td>-( i )</td>
<td>-( i )</td>
</tr>
<tr>
<td>TV</td>
<td>yes</td>
<td>yes</td>
<td>-( V’ )</td>
<td>-( V’ )</td>
</tr>
<tr>
<td>DTV</td>
<td>yes</td>
<td>yes</td>
<td>-( j )</td>
<td>-( V )</td>
</tr>
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</table>

(16) **TRANSITIVE**

(17) **INTRANSITIVE (UNACCUSATIVE)**
• In HIGH-ABS Q’anjob’al, there is no vP-internal mechanism to license the transitive object
  ➤ Because transitive vP is phasal, the transitive object must raise to the phase edge in order to receive absolutive Case from Infl$^0$

(18) Q’ANJOB’AL
  a. Max-ach y-il[-’a’] ix Malin.
     ASP-ABS2 ERG3-see-TV CL Maria
     ‘Maria saw you.’

  
  b. 

  ![Diagram: vP structure with absolutive raising to Spec, vP]

• Q’anjob’al v$^0$ (both transitive and intransitive variants) always has an EPP feature which attracts the absolutive pronoun to its specifier

(19) Q’ANJOB’AL
  a. Max-ach way-i.
     ASP-ABS2 sleep-ITV
     ‘You slept.’

  
  b. 

  ![Diagram: vP structure with absolutive raising to Spec, vP]

  ○ The internal argument raises to Spec, vP even though nothing would go wrong in intransitives if it did not:
    – Since there is no phase Infl$^0$ could assign Case to the internal argument in situ
    ➤ The stipulation that v$^0$ always has an EPP feature derives the consistently “high” position of the absolutive morpheme, and will turn out to provide us a welcome result later on
(20) CHOL

a. Tyi i-mek’-e-**yety** aj-Maria.
   ASP ERG3-hug-TV-ABS2 DET-Maria
   ‘Maria hugged you.’

b. 

o In LOW-ABS Chol, the subject and object are both licensed internal to the vP
o The internal argument does not raise for Case, accounting for LOW-ABS order

- **Key points:** Mayan languages show variation in where the absolutive morpheme appears
  - Our proposal: this variation corresponds to the element responsible for **licensing** absolutive arguments
    - In languages where absolutive is low (e.g. Chol), the verb assigns absolutive
    - In languages where absolutive is high (e.g. Q’anjob’al), the aspect marker (i.e. Infl⁰) assigns absolutive
      ➡ The absolutive argument raises to a higher position so it can be seen by the aspect marker

**Roadmap:**

✔ §2 – Ergativity in Mayan
  ✔ Q’anjob’al basics
  ✔ A Mayan Absolutive Parameter
  ✔ Person marking
  ✔ The position of ABS

o §3 – The Crazy Antipassive is not so crazy

o §4 – The other use of -on: Agent Focus
o §5 – Further support
o §6 – Summary and conclusions
3 The Crazy Antipassive (is not so crazy)

- Recall that in Q’anjob’al, we predict a problem with absolutive in non-finite embedded environments:
  - $\text{Infl}^0$, instantiated by aspect, assigns absolutive in Q’anjob’al (absolutive = nominative)
  - We predict that **transitive objects** and **intransitive subjects** (=absolutive arguments) should require special licensing mechanisms in non-finite clauses, since there is no finite $\text{Infl}^0$

3.1 Embedded intransitives

- While subjects of finite intransitive clauses are marked absolutive (21a), non-finite intransitive subjects appear with **ergative/genitive** marking (21b):

  (21) a. Ch-ach b’ey-i.
      _ASP-2ABS walk-ITV_  
      ‘You walk.’

  b. Chi uj [ ha-b’ey-i ].
      _ASP be.able.to 2GEN-walk-ITV_  
      ‘You can walk.’

  - Mateo Pedro (2009) argues that non-finite embedded clauses like the bracketed form in (21b) are **nominalizations**—the subject is marked as the **possessor** of a nominalized clause
  - Recall **ergative = genitive**; (21b) would be more literally translated as *Your walking is allowed/possible*
    - see also Larsen and Norman 1979; Bricker 1981 on Yukatek; Coon 2010 on Chol
  - We assume that genitive is licensed in the possessive phrase (perhaps analogous to ergative within the vP)
  - The subject of the nominalized vP is either absent, or does not require Case
  - Whatever the correct analysis, we do not find absolutive marking on non-finite intransitives

3.2 Embedded transitives

- We saw above that absolutive is impossible in embedded transitives which follow the regular morphological pattern of the language, repeated in (22):

  (22) a. * chi uj [ hin y-il ix Malin ].
      _ASP be.able.to  ABS1 GEN3-see CL Maria_  
      intended: ‘Maria can see me.’

  b. * Lanan [ hach in-laq’-a’ ].
      _PROG ABS2 GEN1-hug-ITV_  
      intended: ‘I am hugging you.’

- In **HIGH-ABS K’ichee’**, you simply cannot embed a non-finite transitive; instead you must detransitivize
Q’anjob’al does have a way to express embedded transitives, namely, the Crazy Antipassive in (23):

(23) Q’ANJOB’AL “CRAZY ANTIPASSIVE”
   a. chi uj [ hin y-il-on[-i] ix Malin ].
      ASP be.able.to ABS1 GEN3-see-AF-ITV CL Maria
      ‘Maria can see me.’
   b. Lanan [ hach hin-laq’-on-i ].
      PROG ABS2 GEN1-hug-AF-ITV
      ‘I am hugging you.’

   ◦ Again the bracketed stem forms in (23) are analyzed as nominalizations—what we thought were ergative markers are grammatical possessors

We assume that genitive is licensed internal to the possessive phrase

   ◦ Since transitive and intransitive subjects of embedded clauses receive genitive Case, it is only transitive objects which must still be licensed:

(24) EMBEDDED CLAUSES
    transitive: SUBJ GEN–nominalized stem–OBJ
    intransitive: SUBJ GEN–nominalized stem

It is exactly with non-finite transitives where we find the suffix -on—the “Crazy Antipassive”

(25) a. EMBEDDED TRANSITIVE = “CRAZY ANTIPASSIVE”
    Lanan [dp hach hin-laq’-on-i ].
    PROG ABS2 GEN1-hug-AF-ITV
    ‘I am hugging you.’ (~ ‘My hugging you is happening.’)

   b. EMBEDDED INTRANSITIVE
    Lanan [dp hin-way-i ].
    PROG GEN1-sleep-ITV
    ‘I am sleeping.’ (~ ‘My sleeping is happening.’)

   ◦ The morpheme -on is not present in the Q’anjob’al intransitive forms because no absolutive is assigned

Generalization: In Q’anjob’al absolutive arguments are possible in non-finite contexts only in the presence of the morpheme -on

We propose that -on assigns absolutive Case to the internal argument in environments where it is otherwise unavailable

1. Assigns Case to the transitive object (building on Ordóñez 1995 on Jakalte)
2. Introduces the transitive subject
    ◦ In this respect, AF is like English transitive \( v^0 \)
(26) Q’anjob’al Embedded Transitive

\[
\begin{array}{c}
  \ldots \\
  n \\
  \text{VP_{TV}} \\
  \text{VoiceP}_{AF} \\
  \text{Voice'} \\
  \text{PRO} \\
  \text{VP} \\
  \text{Voice}_{AF} \\
  \text{-on} \\
  \text{-AF} \\
  \text{DP} \\
  \text{hach} \\
  \text{2PRON}
\end{array}
\]

- -on assigns Case to the internal argument, which then raises to Spec, VP
- The VP undergoes nominalization in order to be embedded
- The subject is realized as a higher possessor; **ergative Case is not assigned**

- Recall that Crazy Antipassive forms like those in (27a) are also unlike regular finite transitives (27b) in that they appear with the **intransitive** status suffix, -i

(27) a. Crazy Antipassive
   Chi uj [ hin y-il-on-i ].
   ASP be.able.to ABS1 GEN3-see-AF-ITV
   ‘She can see me.’

b. Matrix Transitive
   Ch-in y-il-a’.
   ASP-ABS1 ERG3-see-TV
   ‘She sees me.’

- The relevant difference between intransitive and transitive \( v^0 \) is in the assignment of ergative Case (see (15))—**since no ergative is assigned, we get the -ITV suffix**

Roadmap:
- ✔ §2 – Ergativity in Mayan
- ✔ §3 – The Crazy Antipassive (is not so crazy)
  - ✔ Embedded intransitives
  - ✔ Embedded transitives
- ✔ §4 – The other use of -on: Agent Focus
- ✔ §5 – Further support
- ✔ §6 – Summary and conclusions
4 The other use of -on: AF

4.1 Extraction asymmetries in Q’anjob’al

• Many morphologically ergative languages show asymmetries in the extraction of core arguments (see e.g. Aldridge 2008; Dixon 1994; Manning 1996):
  ○ Absolutive arguments (transitive objects and intransitive subjects) extract freely
  ○ Ergative arguments (transitive subjects) do not

• In Q’anjob’al, there is no problem extracting an intransitive subject…

(28) **SUBJECT EXTRACTION**
    Maktxel max way-i?
    who ASP sleep-ITV
    ‘Who slept?’

• Or a transitive object (29a). But transitive subjects cannot extract (29b):

(29) **TRANSITIVE**
    a. **PATIENT EXTRACTION**
       Maktxel max y-il-a’.
       Who ASP ERG3-see-TV
       ‘Who did she see?’
    b. **AGENT EXTRACTION**
       * Maktxel max-ach y-il-a’?
       who ASP-ABS2 ERG3-see-TV
       intended: Who saw you?

This is the other place we find the morpheme -on in Q’anjob’al: sentences from which transitive subjects have been A-bar extracted, known as Agent Focus:

(30) **AGENT FOCUS**
    a. **WH-QUESTION**
       [ Maktxel ] max-ach il-on-i.
       who ASP-ABS2 see-AF-ITV
       ‘Who saw you?’
    b. **FOCUS**
       [ A ix Malin ] max-ach il-on-i.
       FOC CL Maria ASP-ABS2 see-AF-ITV
       ‘It was Maria who saw you.’
    c. **RELATIVIZATION**
       [ ix ix ] max-ach il-on-i
       CL woman ASP-ABS2 see-AF-ITV
       ‘the woman who saw you’

---

3 Agent Focus has also been called “agent voice” (Smith-Stark 1978) and “focus antipassive” (Dayley 1981).
AF sentences have been described as syntactically and semantically *transitive*, but morphologically *intransitive* (Aissen 1999; Stiebels 2006)

(31) [Maktxel] max-ach il-on-i.
   who ASP-ABS2 see-AF-ITV
   ‘Who saw you?’

- **Transitive because**…
  - There are two non-oblique DPs (e.g. ‘who’ and ‘you’ in (31))

- **Intransitive because**…
  - There is no ergative marking (i.e. the subject does not trigger agreement)
  - The verb appears with the intransitive status suffix -i, cf. (32)

(32) a. Q’anjob’al transitive
   Max-ach v-il-a’.
   ASP-ABS2 ERG3-see-TV
   ‘She saw you.’

b. Q’anjob’al intransitive
   Max-ach way-i.
   ASP-ABS2 sleep-ITV
   ‘You slept.’

- AF constructions have been the focus of much recent work: Aissen 1999, to appear; Ajsivinac and Henderson 2010; Coon and Mateo Pedro to appear; Davies and Sam-Colop 1990; Norcliffe 2009; Ordóñez 1995; Preminger in prep; Pye 1989; Stiebels 2006

### 4.2 Are there really two full DPs?

▶ Though it was originally analyzed as such, Mayanists have more recently argued that AF is *not* an antipassive. Q’anjob’al does have an antipassive—the suffix -waj—shown in (33)

(33) **Antipassive**

a. Max maq’-waj-[i] naq winaq [OBL y-in no tx’i’].
   ASP hit-AP-ITV CL man ERG3-RN CL dog
   ‘The man hit the dog.’

b. Maktxel max maq’-waj-[i] [OBL y-in no tx’i’]?
   who ASP hit-AP-ITV ERG3-RN CL dog
   ‘Who hit the dog?’

- Here the agent becomes an *intransitive* subject through demotion of the object
  - The object appears as an oblique, here under a relational noun; it cannot control person-marking on the predicate
  - The verb takes the intransitive status suffix (when phrase final)
  - The subject is expressed via absolutive morphology
  - There is no ergative marking (because there is no transitive subject)

- Since these are intransitive subjects, we correctly predict that they can extract (33b)…
Note: Antipassives appear in the language regardless of whether the agent has extracted, and often have the discursive effect of drawing attention to the agent; the object is frequently indefinite/non-referential

AF, in contrast, is only possible when the A argument appears dislocated

Compare again:

(34) a. AGENT FOCUS
    Maktxel max-ach il-on-i?
    who ASP-ABS2 see-AF-ITV
    ‘Who saw you?’
    ➔ Absolute co-indexes object

b. ANTIPASSIVE
    Maktxel max-Ø il-waj[-i] [obl h-en ]?
    who COM-ABS3 see-AP-ITV ERG2-RN
    ‘Who saw you?’
    ➔ Absolute co-indexes subject

Further evidence that both subject and object are core arguments comes from AF in languages of the K’ichean branch, shown in (35)

Here either the subject or the object can control the absolutive morpheme, depending on a person hierarchy: 1/2 ≫ 3pl ≫ 3sg

(35) T’UTUJIL (K’ichean) SALIENCE-BASED PERSON-MARKING

a. inin  x-in-ch’ey-ow-i  jar aachi
    1PRON ASP-ABS1-hit-AF-ITV the man
    ‘I was the one who hit the man.’

b. jar  aachi  x-in-ch’ey-ow-i
    the man ASP-ABS1-hit-AF-ITV
    ‘The man was the one who hit me.’ (Dayley 1985, 349)

To summarize: Both AF and antipassive constructions allow the agent to extract

In an antipassive, this is unsurprising (and also a widely attested mechanism to circumvent extraction asymmetries cross-linguistically, see e.g. Polinsky 1994 on Chukchi)

– the object is demoted and the agent becomes an intransitive subject
– extracting intransitive subjects is predictably fine

What allows the agent to extract in an Agent Focus construction?

4.3 The Mayan Absolutive Parameter and AF

Not all Mayan languages have AF constructions: in Chol (Cholan) transitive subjects and objects and intransitive subjects can all extract without any special morphological marking:

(36) CHOL

a. Maxki_{ik} tyi  y-il-ää  \{t_i\}  aj-Maria \{t_k\}?
    who ASP ERG3-see-TV DET-Maria
    ‘Who saw Maria?’ / ‘Who did Maria see?’
b. Maxki tyi y-il-ä-yeyty?
    who ASP ERG3-see-TV-ABS
    ‘Who saw you?’

- What determines whether a language will show extraction asymmetries?

  ➡️ Tada 1993 notes the following trend within the Mayan family:

  o HIGH-ABS Mayan languages like Q’anjob’al generally have AF constructions (show extraction asymmetries)
  o LOW-ABS languages like Chol generally lack them (all core arguments freely extract)

  (37) **RELATIONSHIP BETWEEN LOCATION OF ABSOLUTIVE AND AF**

<table>
<thead>
<tr>
<th></th>
<th>+AF</th>
<th>-AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH-ABS</td>
<td>Mam, Awakatek, K’iche’, Kaqchikel, Tz’utujil, Poqomam, Poqomchi’, Qeqchi’, Uspantek, Jakaltek, Akatek, Q’anjob’al, Chuj, Tzotzil†</td>
<td>Wastek**</td>
</tr>
<tr>
<td>LOW-ABS</td>
<td>Ixil, Yukatek*</td>
<td>Tojolabal, Chol, Chontal, Tseltal, Lacandon, Mopan, Itza’</td>
</tr>
</tbody>
</table>

* AF in Yukatek is notably different than in other members of the family: there is no AF morpheme (the verb shows reduced agreement), and it is frequently optional in the contexts where it appears (see e.g. Gutiérrez Bravo and Monforte 2009; Norcliffe 2009)

** Wastek, belonging to its own sub-group, is the most divergent from other Mayan languages (see Edmonson 1988)

† Tzotzil has both high and low absolutive markers (e.g. Aissen 1987); Woolford (to appear) argues for a phonological account of this distinction. In Tzotzil AF is restricted to inverse environments (Aissen 1999). At this point, we do not have an account for how this fits in to our analysis. (languages absent from Tada’s original typology are italicized)

- **Proposal:** The problem with extracting ergative arguments lies not in properties of the ergative arguments themselves, but rather in how the absolutive arguments are licensed.
4.3.1 The problem

- We propose that extraction asymmetries in Q’anjob’al result from the following problem:
  - Recall that absolutive arguments in HIGH-ABS languages receive Case from a high head, Infl\textsuperscript{0} (absolutive = nominative)
  - In order to do this (i.e. to have their Case features checked by Infl\textsuperscript{0}), they must raise to the edge of the vP phase–Infl\textsuperscript{0} can’t probe into the vP phase

(38) **STEP 1:**

- EPP features of \( v^0 \) attract the absolutive object to the specifier of vP

(39) **STEP 2:**

- Infl\textsuperscript{0} merges with unvalued \( \phi \)-features
- It probes and enters into Agree with the absolutive object
• The raised absolutive argument blocks the subject from extracting out of the phase:\(^4\)

\[(40)\]

This problem will only surface in a language where the object is licensed by a high clausal element, above the subject
- There is no problem in a nominative-accusative language, since \(v^0\) assigns Case (i.e. accusative) to the object internal to the phase; the object doesn’t need to raise
- Likewise, there won’t be any problems in ergative languages in which \(v^0\) assigns Case to transitive objects (no extraction asymmetries in LOW-ABS languages like Chol)

### 4.3.2 The solution

- To be explained:
  - What allows the transitive subject to extract in AF?
  - Why do we find the intransitive status suffix -i despite two full DP arguments?
  - Why is there no ergative marking?

The AF morpheme alters the Case-assignment properties of the clause:
- Just as for the Crazy Antipassive above, we propose that the AF morpheme -on...
  1. Assigns Case to the transitive object
  2. Introduces the transitive subject

---

\(^4\)Third person absolutive is null in Mayan languages, yet agent extraction is still unavailable with third person objects.
One possibility is that a null pro raises to Spec,\(vP\), the same way that the overt first and second person absolutive markers do.
Alternatively, the full DP object forms a chain headed in Spec,\(vP\), but only the lower copy is pronounced.
(41) **AGENT FOCUS**

- Since the object has already been licensed, Infl is free to assign Case to the subject.
- Just as in the Crazy Antipassives above, no ergative Case is assigned, so intransitive vP is merged.
  - this explains the -ITV suffix, as well as the absence of ergative morphology.
- Just as in other constructions, the internal argument is attracted to Spec,vP by v0's EPP features.
  - **However, the subject is still free to extract because intransitive vP is not phasal.**

(42) **AGENT FOCUS**

---

Ordóñez 1995 analyzes the AF morpheme as an incorporated preposition, merged between the root and the object, which he likens to “of-insertion” in English. He takes it as a given that ergative subjects are unable to extract, and argues that by rendering the complement of the verb a PP, the result is an intransitive verb from which the subject can extract. Here we aim to independently derive these extraction asymmetries.
• **Recap:** We are familiar with languages in which Infl$^0$ licenses *subjects*

• Conceivably, Infl$^0$ can also license objects, in a language where the transitive subject has its own means for getting Case (\(=\) ergative)

▶ However, in order for this to happen the object must move to a more local relation with Infl$^0$

---

**Key points:**

- Subjects can’t extract out of regular transitive clauses because the *object* has raised to Spec,vP in order to get Case and transitive (ergative-assigning) vP is phasal
- The AF morpheme assigns Case to the object within the vP
  - Now Infl$^0$ can license the subject, so no ergative Case is required
  - Intransitive v$^0$ merges, and extraction of the subject is possible

---

### 4.4 Crazy Antipassive and AF compared

- Returning to the two examples we started with:

  \[\text{(43) “CRAZY ANTIPASSIVE”} \]
  
  \[
  \begin{array}{l}
  \text{chi uj [ hach v-il-on-i].} \\
  \text{ASP be.able.to ABS2 GEN3-see-AF-ITV} \\
  \text{‘S/he can see you.’}
  \end{array}
  \]

  - In the Crazy Antipassive, **there is no finite Infl$^0$ in the embedded clause**—aspect marking is impossible here
  - -on assigns Case to transitive objects

 ▶ **No ergative Case is assigned**
  - The intransitive v$^0$ (-i) is merged
  - The subject is marked as a *possessor* (\(=\) genitive)

---

(44) **AGENT FOCUS**

\[
\begin{array}{l}
\text{Maktxel max-ach il-on-i.} \\
\text{who ASP-ABS2 see-AF-ITV} \\
\text{‘Who saw you?’}
\end{array}
\]

- In Agent Focus there *is* a finite Infl$^0$—but in order for it to license the object, the object must raise above the subject, blocking the subject from extracting out of the vP phase
- -on assigns Case to the object; Infl$^0$ assigns Case to the subject

▶ **No ergative Case is assigned**
  - The intransitive v$^0$ (-i) is merged
  - There is no ergative agreement marking on the verb stem
  - There is no vP phase, so the subject is allowed to extract
• A difference between Agent Focus and Crazy Antipassive: Agent Focus only occurs in Q’anjob’al when third person agents extract. Compare:

\[(45)\]  

a. 3RD PERSON AGENT – AF  
\[\text{A-Juan} \quad \text{max} \quad \text{maq’-on-[i]} \quad \text{no} \quad \text{tx’i’}.\]  
FOC-Juan ASP hit-AF-TV CL dog  
‘It was Juan who hit the dog.’

b. 1ST PERSON AGENT – NO AF  
\[\text{Ay-in} \quad \text{max} \quad \text{hin-maq’[-a’]} \quad \text{no} \quad \text{tx’i’}.\]  
FOC-ABS1 ASP ERG1-hit-TV CL dog  
‘It was me who hit the dog.’

○ This is a point of variation among Mayan language with AF (see e.g. Stiebels 2006)—we don’t want to derive this from deep properties of AF

○ Rather, we assume that in Q’anjob’al, first and second person agents are allowed to be base-generated in a high position (perhaps due to higher discourse prominence), while third person agents are not

⇒ No AF is required in (45) because nothing has extracted

Returning to the Crazy Antipassive, we find that -on occurs in all non-finite transitives regardless of the person features of the subject

○ This is exactly what we would predict, since here there simply is no (finite Case-assigning) Infl⁰—the AF marking is not tied to extraction

Roadmap:

✓ §2 – Ergativity in Mayan  
✓ §3 – The Crazy Antipassive is not so crazy  
✓ §4 – The other use of -on: Agent Focus  
  ✓ Extraction asymmetries in Q’anjob’al  
  ✓ Are there really two full DPs?  
  ✓ The Mayan Absolutive Parameter and AF  
  ✓ Crazy Antipassive and AF compared

○ §5 – Further support

○ §6 – Summary and conclusions

5 Further support

5.1 Caseless objects and AF

• One piece of support for the analysis that AF is directly linked to object Case assignment comes from reflexive and “extended reflexive” objects (the former also noted in Ordóñez 1995)

• As in other Mayan languages (e.g. Tzotzil (Aissen 1999) and K’ichee’ (Aissen to appear)), AF is not possible in Q’anjob’al in clauses in which the object is a reflexive (Pascual 2007). Compare:
\[(46)\]

a. **REFLEXIVE**

\[
\text{Maktxel max y-il s-ba?}
\]

who ASP ERG3-see GEN3-SELF

‘Who saw herself?’

b. **TRANSITIVE**

\[
\text{Maktxel max il-on[-i] naq winaq?}
\]

who ASP see-AF-ITV CL man

‘Who saw the man?’

- AF is also not possible in sentence in which the possessor of the object is coreferential with the subject (‘extended reflexive’). Compare:

\[(47)\]

a. **EXTENDED REFLEXIVE**

\[
\text{Maktxel max s-b’on s-na?}
\]

who ASP ERG3-paint GEN3-house

‘Who painted his\textsuperscript{own} house?’

b. **AGENT FOCUS = DISJOINT REFERENCE**

\[
\text{Maktxel max b’on-on[-i] s-na?}
\]

who ASP paint-AF-ITV GEN3-house

‘Who painted his\textsuperscript{ij} house?’

- Independent evidence from word order and the availability of determiners suggests that the **bold-faced objects in the Q’anjob’al examples in (46a) and (47a) are not full DPs**
  - Word order in the language is normally VSO, but must be VOS with reflexives
  - Noun classifiers are impossible on reflexive and extended reflexive objects—but possible on objects like the one in (47b)

- We assume that these objects are licensed by being incorporated or *pseudo-incorporated* into the verb stem (see e.g. Massam 2001)

- In Mithun’s (1984) classification of incorporation, this is an instance of *composition by juxtaposition*, in which

  “the V and the N are simply juxtaposed to form an especially tight bond. . . The V and N remain separate words phonologically; but as in all compounding, the N loses its syntactic status as an argument of the sentence”

  (Mithun 1984, 849)

- Regardless of the specific analysis adopted, we conclude that the bare object is **Caseless**

- Since they are incorporated these objects do not require Case, and we correctly predict the absence of AF in these constructions—**since AF is precisely about assigning Case to objects\textsuperscript{6}**

\textsuperscript{6}As pointed out to us by Judith Aissen (p.c.), the AF morpheme does appear in non-finite embedded clauses with reflexive and extended reflexive objects, a fact which the analysis here does not currently explain.
• In a similar vein, Aissen to appear notes that AF in K’ichee’ is *systematically absent* when the object is a bare (determinerless) NP

\[(48)\] K’ICHEE’

a. NO AF
\[
\text{Jachiin } x_u\text{-loq’ uuq?} \\
\text{who ASP-ERG3-buy cloth} \\
\text{‘Who bought cloth?’}
\]

b. AF REQUIRED
\[
* \text{Jachiin } x_u\text{-loq’ rii uuq?} \\
\text{who ASP-ERG3-buy DET cloth} \\
\text{intended: ‘Who bought the cloth?’} \quad \text{(Aissen to appear, 15)}
\]

• We assume that these reflexive, extended reflexive, and bare objects are all bare NPs which do not require Case and are unable to satisfy the EPP feature of \(v^0\)
• Instead, the objects remains in situ. Transitive \(vP\) is merged and assigns ergative Case to the subject; here the subject can raise through the phase edge because the object is not there

\[(49)\]

\[\text{5.2 Hierarchy effects and AF}\]

• As we saw above in (35), repeated in (50), in K’ichean languages the absolutive morpheme in an AF construction may index either the subject or the object, depending on which is highest in animacy/definiteness (see e.g. Davies and Sam-Colop 1990)

\[(50)\] TZ’UTUJIL (K’ICHEAN) SALIENCE-BASED PERSON-MARKING

a. inin \(x\text{-in-ch’ey-ow-i}\) jar aachi
\[
\text{1PRON ASP-ABS1-hit-AF-ITV the man} \\
\text{‘I was the one who hit the man.’}
\]

b. jar aachi \(x\text{-in-ch’ey-ow-i}\)
\[
\text{the man ASP-ABS1-hit-AF-ITV} \\
\text{‘The man was the one who hit me.’} \quad \text{(Dayley 1985, 349)}
\]
The present proposal offers a possible account of the emergence of hierarchy-based effects in precisely the AF environment, as follows:

- In a regular transitive, the EPP features of transitive \( \nu^0 \) must target the object to raise it to the edge of the phase, to a position from which it may receive Case from Infl\(^0\)

\[ (51) \]

\[ Q’ANJOB’AL \]

\[ a. \] Max-ach \( \overline{v} \)-ill-[\( \cdot \)’]\) ix Malin.
\[ ASP-ABS2 \ ERG3-see-TV \ CL \ Maria \]

‘Maria saw you.’

\[ b. \]

\[ \text{In principle, then, the EPP features on } \nu^0 \text{ could target either the subject or the object, without depriving either of the ability to receive Case} \]

\[ (52) \]

\[ AGENT \ FOCUS \]

To orient: Preminger (in prep) analyzes effects found in environments where a single head has two potential targets for Agreement; this is an explanation for how this environment arises exactly in AF environments in K’ichean languages
5.3 Extraction out of vP

- Our proposal is that subjects can’t extract out of a transitive vP in Q’anjob’al because the object is in the way
  - ➡️ We predict not only that subjects should be unable to extract out of vP, but that nothing besides the object should escape from a transitive vP
- Possibilities:
  1. **Double object constructions**: Q’anjob’al doesn’t have them. While e.g. Chol has an applicative, Q’anjob’al benefactees are introduced with relational nouns, analyzed as adjuncts (Mateo-Toledo 2008)
    - Do HIGH-ABS Mayan languages systematically lack applicatives? This at least appears to be the case in Q’anjob’alan and K’ichean branch languages
  2. **Low adverbs**: As described in Mateo Pedro to appear; Mateo-Toledo 2003, the appearance of certain pre-verbal adverbs—typically manner adverbs—triggers the same verb forms we saw in the non-finite embedded clauses in §3:
    - This is optional with intransitives—in (53a) the adverb has raised from inside the intransitive vP, in (53b) the adverb serves as the predicate, embedding the non-finite verb form

(53) INTRANSITIVE
  a. **Amank’wan** max-in b’ey-i.
     quickly ASP-ABS1 walk-ITV
     ‘I walked quickly.’
  b. **Amank’wan** [ hin-b’ey-i ].
     quickly ERG1-walk-ITV
     ‘I walked quickly.’ (~ My walking is/was quick.)

  - In the transitives the adverb cannot appear pre-verbally if the verb appears in its regular, finite, inflected form
  - Instead, the special non-finite construction involving the AF marker (“Crazy Antipassive”) is forced

(54) TRANSITIVES
  a. * **Amank’wan** max hin-b’on te’ na.
     quickly ASP ERG1-paint CL house
     intended: ‘I painted the house quickly.’
  b. **Amank’wan** [ hin-b’on-on te’ na ].
     quickly ERG1-paint-AF CL house
     ‘I painted the house quickly.’ (~ ‘My painting the house is/was quick.’)

  ➡️ This kind of contrast is exactly what we predict, assuming that amank’wan, and other manner adverbs, start inside the vP (Cinque 1999)
    - It can raise out of the intransitive (non-phasal) vP
    - Not out of the transitive (phasal) vP
• What about adverbs that can be variably interpreted as either high or low?

(55) Max ha-b’on te’ na junelxa.
    ASP ERG2-paint CL house again
    ‘You painted the house again.’
    i. again [ You painted the house ]
       (e.g. You painted the house, and then you did it again.)
    ii. again [ painted the house ]
       (e.g. John painted the house, and you didn’t like it, so you painted it again.)

• We assume two possible base-generation sites for again (see e.g. von Stechow 1996; von Stechow 1995):
  ◦ in (55i) again is right-adjoined high in the structure, above the subject
  ◦ in (55ii) again is right-adjoined above VP, below the subject

► In (56) the adverb appears clause-initially and only the high interpretation of again is possible—this sentence means that the same person painted the house twice

(56) Junelxa max ha-b’on te’ na.
    again ASP ERG2-paint CL house
    ‘You painted the house again.’
    i. again [ You painted the house ]
    ii. again [ painted the house ]

• Assuming this adverb has arrived at its clause-initial position by movement, we expect that it should only be able to move from the high position

• The low reading could only arise if the adverb moved from inside of the vP—impossible under this analysis

6 Conclusion

• Here we argued for an account in which the appearance of extraction asymmetries reduces to independently observable differences in how absolutive arguments are licensed in the clause (Aldridge 2004, 2008; Legate 2002, 2008)

• Specifically, we presented an analysis of the morpheme -on in Q’anjob’al Mayan

• Through a comparison between Q’anjob’al and Chol, a Mayan language with no extraction asymmetries, we argued that the relevant difference is as follows:
  ◦ In languages in which absolutive is assigned internal to the vP phase, either argument may extract through Spec,vP
  ◦ In contrast, if absolutive is assigned by a head external to the vP (Infl^0), the object must raise to Spec,vP, leaving the subject trapped

► This state of affairs will not arise in a nominative-accusative language in which, by definition, the object receives Case within the vP

► It will also not arise in morphologically ergative languages in which a low head assigns absolutive Case
To do

1. A closer look at AF in other Mayan languages is necessary in order to confirm that the correlation between HIGH-ABS and AF is not just a historical accident.

2. Look at morphologically ergative languages outside of the Mayan family to determine whether a correlation can be found between the locus of absolutive Case assignment, and the presence or absence of extraction asymmetries.

References


Contact:
Jessica Coon – jcoon@fas.harvard.edu
Pedro Mateo Pedro – mateo@fas.harvard.edu
Omer Preminger – omerp@mit.edu