Left branch extraction and object shift in Tumbalá Ch’ol*

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1 INTRODUCTION

* Wh-possessors in Ch’ol (Mayan) may extract from absolutive subjects (1a) but not objects (1b)

(1) a. Majki ta’ yajl-i [ i-wakax t₁ ]?
   who PFV fall-IV A3-cow
   ‘Whose cow fell?’!

b. * Majki ta’ a-k’el-e [ i-chich t₁ ]?
   who PFV A2-see-TV A3-sister
   Intended: ‘Whose sister did you see?’

• Numerals, on the other hand can extract from absolutive subjects (2a) and objects (2b)

(2) a. Cha’kojty ta’ yajl-i [ t₁ wakax ].
   two-CL PFV fall-IV cow
   ‘Two cows fell.’

b. Cha’k’ej ta’ i-k’ux-u [ t₁ waj ] aj-Rosa.
   two-CL PFV A1-eat-TV tortilla NC-Rosa
   ‘Rosa ate two tortillas.’

Overview: Ch’ol (Mayan) exhibits asymmetries in what is available for left branch extraction (LBE). I argue wh-possessors in object position always trigger object shift in Ch’ol and therefore are frozen for extraction, explaining these asymmetries.

2 CH’OL BACKGROUND

2.1 Background

• Ergative-absolutive, head-marking Mayan language spoken in Southern Mexico with three main mutually intelligible dialects: Tila, Sabanilla and Tumbalá

(3) Set A: Ergative and genitive
   a. Ta’ i-juch’-u sa’ aj-Maria.
      PFV A3-grind-TV masa NC-Maria
      ‘Maria ground masa.’
   b. i-waj aj-Maria
      A3-tortilla NC-Maria
      ‘Maria’s tortilla’

(4) Set B: Absolutive
   a. Ta’ maji-i-yoña.
      PFV go-TV-B1
      ‘I left.’
   b. Ta’ i-k’el-e-yoña aj-Maria.
      PFV A3-see-TV-B1 NC-Maria
      ‘Maria saw me.’

2.2 Word order

• VOS is the neutral word order with bare NP objects (5)

(5) a. Ta’ i-k’ux-u [ o waj ] [ s aj-Rosa ].
   PFV A3-eat-TV tortilla NC-Rosa
   ‘Rosa ate a tortilla.’

b. * Ta’ i-k’ux-u [ s aj-Rosa ] [ o waj ].
   PFV A3-eat-TV NC-Rosa tortilla
   Intended: ‘Rosa ate a tortilla.’

• VSO with full DP objects (6)

(6) a. Ta’ i-k’ux-u [ s aj-Rosa ] [ o jiñi waj ].
   PFV A3-eat-TV NC-Rosa DET tortilla
   ‘Rosa ate the tortilla.’

b. * Ta’ i-k’ux-u [ o jiñi waj ] [ s aj-Rosa ].
   PFV A3-eat-TV DET tortilla NC-Rosa
   Intended: ‘Rosa ate the tortilla.’

Table 1: Ch’ol object restrictions based on Coon (2010: 363)

<table>
<thead>
<tr>
<th>VOS</th>
<th>VSO</th>
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<tbody>
<tr>
<td>NP ✓</td>
<td>*</td>
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<tr>
<td>DP *</td>
<td>✓</td>
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• Ch’ol is an obligatory wh-fronting language (7a), and focused constituents also can appear preverbally (7b)

(7) a. Majki, ta’ i-k’ux-u waj t₂?
   who PFV A3-eat-TV tortilla
   ‘Who ate a tortilla?’

b. Sa’, ta’ i-juch’-u t₂ aj-Maria.
   masa PFV A3-grind-TV NC-Maria
   ‘Maria ground masa.’

*While it is morphologically ergative, Ch’ol is not syntactically ergative — there are no extraction restrictions.

1 I thank the Ch’ol speakers I have had the opportunity to work with: the Arcos López family in San Miguel (Tumbalá dialect) and Morelia Vázquez Martínez (Tila dialect). I also thank Miloje Despić, Molly Diesing, Jessica Coon, Sarah Murray, Justin Royer, and audiences at NELS 50, WSCLA 24, Concordia University, and Cornell University for comments and discussion. Unless otherwise marked, all data come from my fieldwork in Chiapas, Mexico. Any errors are my own. This material is based upon work supported by the National Science Foundation under grant no. BCS-1852744 and an Engaged Cornell graduate student research grant. Contact for author: crl223@cornell.edu

2 Glosses: 1: first person; 2: second person; 3: third person; A: ergative/possessive; B: absolutive; CL: classifier; DET: determiner; IV: intransitive verb; NC: noun classifier; PREP: preposition; PFV: perfective; TV: transitive verb
3 Deriving Ch’ol Word Order

- I adopt Coon (2010)’s analysis for the restriction in (8) though other analyses that posit object shift for VSO word order work with the present proposal (i.e., Aissen (1992)).

(8) Restriction: Nominals with material in or above DP are banned from VOS object position in Ch’ol. (Coon 2010: 361)

9 Deriving VOS

- Temporal adverbs and prepositional phrases can intervene between DP objects, generating V-XP(S)-O word order in (11a) but may not intervene with NP objects (11b).

- According to Coon (2010)’s analysis, these adverbs and PPs attach as adjoints to VoiceP

(a) Tu’ j-k’ux-u ak’bi jiini waj. b. *Tu’ j-k’ux-u ak’bi waj.

‘I ate the tortilla yesterday.’

(c) Tu’ j-k’ux-u waj ak’bi.
PFF A1-eat-TV tortilla yesterday

‘I ate a tortilla yesterday.’

(b) The restriction in (8) holds for VOS objects with overt possessors in (12)

(12) Tu’ i-k’ux-u (*[lo i-waj x-Waant] [s aj-Rosa] [lo i-waj x-Waant]).
PFF A3-eat-TV A3-tortilla NC-Juan NC-Rosa A3-tortilla NC-Juan

‘Rosa ate Juan’s tortilla.’

(c) Numerals may appear in VOS or VSO object position (VSO being indicative of object shift).

(13) Tu’ i-k’ux-u ([lo cha’-k’ej waj] [s aj-Rosa] [lo cha’-k’ej waj]).
PFF A3-eat-TV two-CL tortilla NC-Rosa two-CL tortilla

‘Rosa ate two tortillas.’

<table>
<thead>
<tr>
<th>Table 2: Ch’ol object restrictions updated</th>
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<tr>
<td>-----------------</td>
</tr>
<tr>
<td>NP</td>
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<tr>
<td>DP</td>
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<td>With possessor</td>
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<td>With numeral</td>
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</table>

- VSO objects indicative of object shift, important for capturing the LBE asymmetries

4 Accounting for LBE asymmetries

- Wh-possessors may extract from absolute subjects (14a) but not objects (14b)

(14) a. Majki, ta’ yajl-i [i-wakax t]?
who PFF fell-IV A3-cow

‘Whose cow fell?’

b. *Majki, ta’ a-k’el-e [i-chich t]?
who PFF A2-see-TV A3-sister

Intended: ‘Whose sister did you see?’

- Numerals, on the other hand can extract from absolute subjects (15a) and objects (15b)

(15) a. Cha’-k’ejy ta’ yajl-i [t, wakax].
two-CL PFF fall-IV cow

‘Two cows fell.’

b. Cha’-k’ej ta’ i-k’ux-u [t, waj] aj-Rosa.
two-CL PFF A1-eat-TV tortilla NC-Rosa

‘Rosa ate two tortillas.’

4.1 Object shift bleeds left branch extraction

- While object shift has been known to block extraction (Diesing (1992: German); Chomsky (2008: English); Mykhaylyk (2010: Ukrainian)), new data from Ch’ol also shows the blocking effects of object shift

(16) Freezing Principle: Moved constituents are islands to extraction
(Ross 1974; Waxler and Culicover 1977; Diesing 1992)

(16) accounts for why wh-possessors extraction from object position is banned as overt possessors always trigger object shift—moved object creates an island for extraction.

- Further evidence: Numerals cannot extract from shifted objects, indicated by the VSO word order in (17), cf. (2b)

(17) * Cha’-k’ej, ta’ i-k’ux-u [s aj-Rosa] [lo t, waj] .
two-CL PFF A3-eat-TV NC-Rosa tortilla

Intended: ‘Rosa ate two tortillas.’

4.2 More evidence from adjectives

- Under the current proposal we would expect that extraction from the object in a VSO construction would be ungrammatical

- Adjectival extraction is only possible from VOS objects (18a), not VSO (18b)

The passessoe may pied pipe with the possessor (1a) or an external possessive construction is used (1b).

(18) a. [Majki i-chich] ta’ a-k’el-e tu? [s aj-Rosa] [lo tu, waj] .
who A3-sister PFF A2-see-TV who PFF A2-see-APPL A3-sister

‘Whose sister did you see?’

(18) is too strong and a weaker version may better capture freezing effects (e.g., the Revised Extraction Constraint (Diesing 1992: 128)). Nevertheless, object shift is a type of movement that does induce freezing in Ch’ol.

Adjectival extraction is not possible from the subject (ergative and absolute). When they do appear discontinuous from the subject, the interpretation is that of a depictive or secondary predicate. See Vazquez Alvarez (2002) and Martínez Cruz (2007) for further discussion on secondary predication, depictives and adjectives in Ch’ol. At the moment I do not know why adjectives may only extract from object position.

3 The object in VSO position in (13) has a specific interpretation, compatible with Diesing’s Mapping Hypothesis.
5 IMPLICATIONS FOR AGREE-BASED THEORIES OF EXTRACTION

• Drawing on data from Tagalog, Rackowski and Richards (2005) argue that extraction is licensed from a given domain once that domain has been targeted for Agree in the sense of Chomsky (2000, 2001)

• However, for agreement to take place in Tagalog, the nominal moves to Spec,vP (movement which they call object shift)

  – Object shift feeds extraction in Tagalog, while here object shift bleeds left branch extraction
  – On the surface, Rackowski and Richards (2005)’s analysis seems at odds with the present proposal, but if the ordering of Agree with respect to object shift is taken into account this type of crosslinguistic variation is expected

• To illustrate with an example from Tagalog, take (21) where the possessor ‘buffalo’ has extracted out. For Rackowski and Richards (2005), ‘the buffalo’s horn’ moves to Spec,vP so that an Agree-relationship can be established with v

  – The verb Agree with the whole nominal ‘the buffalo’s horn’ indicated by the agreement affix in (the object voice marker) on the verb
  – Agree consequently unlocks the DP and the possessor may then extract out
  – In (21), Agree takes place with shifted nominals to license extraction

(21) Ang=kalabaw, p<in>utul ng=maagsaka ang=sangay.
NOM=buffalo PERF-cut-OV GEN=farmer NOM=horn.
‘The buffalo, the farmer cut off the (i.e., its) horn.’ Tagalog (Kroeger 1991: 31) (my bolding added)

• For Ch’ol, v licenses and agrees with the object (Coon 2017)

  – Though this work does not explicitly discuss object shift and its relation to Agree, in the context of this paper, this means that Agree takes place before object shift

• I propose that object shift takes place after Agree in Ch’ol, bleeding left branch extraction

  – Object shift after Agree in Ch’ol is what causes the freezing effects
  – Can also explain why vP fronting does not bleed extraction: the object is still within the domain of its licensor, v, and therefore left branch extraction is still possible

• While for Rackowski and Richards (2005) movement must take place first in order for a proper Agree relation to be established with the object and v, in Ch’ol the object establishes an Agree relation with v before object shift

→ Given this proposal that the ordering of Agree and object shift can vary in Tagalog and Ch’ol, it is to be expected to find more patterns with respect to extraction and Agree crosslinguistically

7See Kaufman (2017) for alternative proposals for the Austronesian voice system.
8This is reminiscent of Diesing (1992)’s account of freezing effects under a Government and Binding approach where when the object moves from its theta-marked position (L-marked), creates an island for extraction.
9v licenses intransitive subjects (Coon 2017) and I propose that, unlike v, can license full DP subjects so extraction of wh-possessors is not blocked from intransitive subjects.
6 SUMMARY AND CONCLUSIONS

- I argued that restrictions on VOS objects can capture asymmetries exhibited in left branch extraction
  - While numerals can extract from object position, wh-possessors may not
- I adopted Coon (2010)’s proposal for word order where VSO word order is derived from VOS word order, in part, via object shift
  - Overt possessors always trigger object shift, which is why they may never extract from object position
  - Numerals, on the other hand, do not obligatorily trigger object shift and may extract from unshifted objects, but not from shifted ones
- This follows from the Freezing Principle (Ross 1974; Wexler and Culicover 1977), or a ban on extracting from a moved constituent
- I ended with some of the current proposal’s implications for theories of extraction
  - Finally, while this talk focused on the Tumbalá dialect of Ch’ol, Tila Ch’ol (mutually intelligible) is less permissive with respect to left branch extraction, as in (22)

(22) ??/% Cha’-kojty tyi yajl-i [ t_i wakax ]
  two-CL PFV fall-1V cow 
  ‘Two cows fell.’
  Tila Ch’ol

- Tila Ch’ol has been reported to have an additional definite determiner li, which Tumbalá speakers do not use (Vázquez Álvarez 2011)
- This is connected to the left branch extraction implication in (23)

(23) Left Branch Extraction Implication:
  If a language permits left branch extraction, it lacks articles. (Uriagereka 1988; Corver 1992; Bošković 2005)

- Dialectal microvariation: I suggest that Tila Ch’ol speakers are less likely to find (22) acceptable because the determiner li is becoming a grammaticalized definite article, as also suggested on Friday in Vázquez Martínez and Little (2020)
  - Further support for the implicational relationship in (23)

REFERENCES
Vázquez Álvarez, J. J. (2002). Los descriptivos análicos y sintéticos en la lengua chol de Tila, Chiapas.

A EXTRACTION FROM ERGATIVE SUBJECTS AND INDIRECT OBJECTS

Extraction of numerals from ergative subjects and indirect objects is degraded as shown in (24).

(24) a. % Cha’-kojty ta’ i-k’ux-u-yon [ t_i mis ]
   two-CL PFV A3-eat-TV-B1 cat
   ‘Two cats bit me.’
   Ergative subject

b. % Cha’-tyikil-ob, ta’ k-choi-be karu [ t_i x’-txik-ob ]
   two-CL-PL PFV A1-sell-APPL car NC-woman-PL
   ‘I sold cars to two women.’
   Indirect object

The numeral in (24b) uses the classifier kojty that can modify both chili peppers and cats, but the extracted numeral unambiguously refers to the direct object—evidence that extraction from specifier position is ungrammatical or more difficult.

    two-CL PFV A1-give-APPL chili cat.
   ‘I gave two chili peppers to the cat.’
   NOT: ‘I gave chili peppers to two cats.’