

# Intervention as gluttony

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## 1 Introduction

- In this talk we develop a generalized theory of intervention effects and apply it to the following three domains:

- Person Case Constraint*  
 (Perlmutter 1971, Bonet 1991, Anagnostopoulou 2003, 2005, Nevins 2007)
- focus-intervention effects*  
 (Beck 1996, 2006, Beck and Kim 1997, Pesetsky 2000, Kim 2006, Cable 2010, Kotek 2014, 2019)
- Mayan extraction asymmetries*  
 (Smith-Stark 1978, Stiebels 2006, Coon, Mateo Pedro, and Preminger 2014, Aissen 2017)

### • Feature gluttony:

Our account rests on what we call *feature gluttony*:

- ▷ A single probe agrees with more than one DP.
- ▷ This situation obtains if the lower DP is more specified than the higher DP relative to the specification of the probe.
- ▷ Gluttony is not itself banned, but it may cause problems for subsequent grammatical operations, explored in more detail in Coon and Keine 2018:
  - Conflicting feature specifications on the probe may cause a problem for the spell-out of morphological agreement.
  - In the cases we discuss here, gluttony creates **conflicting requirements on movement**.

- We draw on recent work on *Cyclic Agree* (Béjar 2003, Béjar and Rezac 2009) and *interaction in  $\phi$ -agreement* (Deal 2015), according to which probes can agree with a DP without being satisfied by this DP.

- ▷ In such a case, the probe continues probing.

- (1) *Agree*  
 Given a probe P with a hierarchy of unchecked feature segments  $[uF]$ ,
- P searches the closest accessible DP in its domain such that this DP contains feature set  $[G]$ , with  $[G] \cap [F] \neq \emptyset$ ;
  - P agrees with this DP
  - $[G]$  is checked on  $[uF]$ ;
  - iterate over steps a.–c. until  $[uF] = \emptyset$  or search fails.

### • In a nutshell:

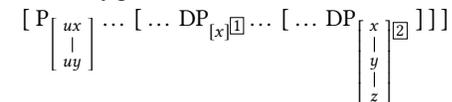
A probe will agree with the closest accessible DP which matches a subset of its features; if the most-specified features haven't been found, the probe is not *satisfied*, in Deal's (2015) terms, and probing continues.

### • A schematic example:

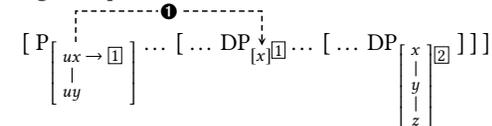
- ▷ In (2), a complex probe P first agrees with the closest DP that matches some of its specification (labeled  $\boxed{1}$ )  $\rightarrow \textcircled{1}$
- ▷ This DP matches  $[ux]$  on the probe, which we'll notate as " $[ux] \rightarrow \boxed{1}$ ".
- ▷  $[uy]$  on the probe remains. The closest DP matching  $[uy]$  is  $\boxed{2}$ , leading to a second Agree step (" $[uy] \rightarrow \boxed{2}$ ")  $\rightarrow \textcircled{2}$
- ▷ P has agreed with two DPs. It is **gluttonous**.

### (2) A schematic example of gluttony

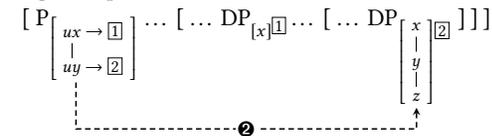
a. *Base configuration:*



b. *Agree step 1:*

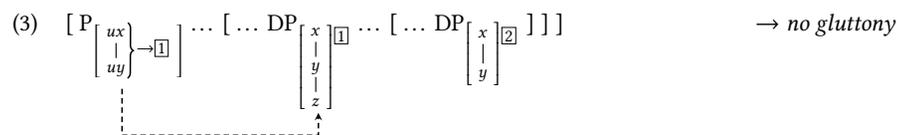


c. *Agree step 2:*

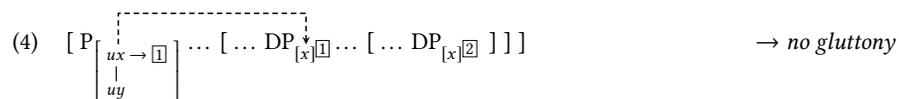


$\rightarrow$  *gluttony*

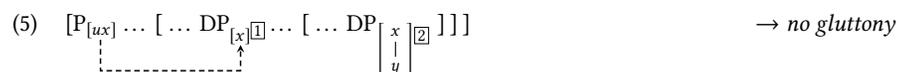
- Importantly, gluttony arises only if the lower DP is more specific than the higher DP relative to the content of the probe. If the lower DP is less specified, no gluttony obtains (3).



- If the two DPs are equally specified, no gluttony obtains either. In (4), while [uy] remains unmatched on the probe, the lower DP does not contain [y], so no second Agree step is possible.



- Finally, if the lower DP is more specified than the higher DP, but not relative to the content of the probe, no gluttony obtains either—the probe is fully satisfied after Agree with the higher DP.



## 2 PCC effects: Gluttony in the A-system

### 2.1 Background

- Person Case Constraint (PCC):**

prohibition against accusative or absolutive direct object clitics when they appear together in ditransitives with dative indirect object clitics

- ▷ Found in a range of genetically diverse languages: Greek, Spanish, Basque, Passamaquoddy, Walpiri, Slovenian, Kiowa, French, Sambia, Yimas, Georgian, Albanian... (Perlmutter 1971, Bonet 1991, Anagnostopoulou 2003, 2017, Adger and Harbour 2007, Riedel 2009, Doliana 2013, Nevins 2007, Pancheva and Zubizarreta 2018, Stegovec 2019).

- PCC variation** (Nevins 2007, Doliana 2013, Anagnostopoulou 2017, Pancheva and Zubizarreta 2018):

- **Strong PCC:** ban any clitic combinations in which DO is 1/2 person
- **Weak PCC:** ban 1/2 DOs in the presence of a 3rd person IO
- **Me-First PCC:** bans any combination with a 1st person DO
- **Ultra-Strong PCC:** Me-First + Weak PCC

(6) *Types of PCC*

	IO	>	DO	Examples
<i>Strong:</i>	*X	>	1/2	e.g., Basque (Laka 1993), Greek (Anagnostopoulou 2003), Kiowa (Adger and Harbour 2007)
<i>Weak:</i>	*3	>	1/2	e.g., varieties of Catalan (Bonet 1991) and Italian (Bianchi 2006)
<i>Me-First:</i>	*X	>	1	e.g., Romanian (Nevins 2007), Bulgarian (Pancheva and Zubizarreta 2018)
<i>Ultra-Strong:</i>	$\left\{ \begin{array}{l} *3 > 1/2 \\ *2 > 1 \end{array} \right\}$			e.g., Classical Arabic (Fassi Fehri 1988, Nevins 2007)

- ▷ Despite this variation, the problems always arise when the lower direct object is 1st or 2nd person.

(7) *Example: Strong PCC in Basque*<sup>1</sup>

- Zu-k *harakina-ri liburua* saldu d-i-o-zu.  
you-ERG butcher-DAT book.ABS sold 3ABS-AUX-3DAT-2ERG  
'You have sold the book to the butcher.' (✓3DAT > 3ABS)
- Zu-k *ni-ri liburua* saldu d-i-da-zu.  
you-ERG me-DAT book.ABS sold 3ABS-AUX-1DAT-2ERG  
'You have sold the book to me.' (✓1DAT > 3ABS)
- \*Zu-k *harakina-ri ni* saldu n-(a)i-o-zu.  
you-ERG butcher-DAT me.ABS sold 1ABS-AUX-3DAT-2ERG  
intended: 'You have sold me to the butcher.' (\*3DAT > 1ABS)
- \*Haiek *ni-ri zu* saldu z-ai-da-te.  
they.ERG me-DAT you.ABS sold 2ABS-AUX-1DAT-3ERG  
intended: 'They have sold you to me.' (\*1DAT > 2ABS)

<sup>1</sup>The examples in (7a,d) are due to Jon Ander Mendia (p.c.); (7b,c) are from Laka (1993:27). Below, Basque examples not otherwise attributed are due to Jon Ander Mendia (p.c.).

- **PCC is syntactic:**

See Perlmutter (1971) and Rezac (2008) for arguments that the PCC is a *syntactic problem* not a semantic or morphological one.

## 2.2 Licensing approaches to the PCC

- Since Anagnostopoulou (2003) and Béjar and Rezac (2003, 2009), the standard approach to PCC effects is in terms of *nominal licensing*.

▷ There is *something special* about 1st and 2nd person “discourse participants”—[PART]—see also e.g. Nichols (2001).

(8) *Person Licensing Condition (PLC)* (Béjar and Rezac 2003:53)  
An interpretable 1st/2nd person feature must be licensed by entering into an *Agree* relation with a functional category.

- **Licensing and intervention:**

Broadly speaking, on a licensing account, PCC violations arise when the higher DP *intervenes* between the probe and the lower DP, preventing licensing of the lower DP’s [PART] features.

(9) *PCC violation*

\*[<sub>vP</sub> v [ ... DP<sub>[3SG]</sub> [ ... DP<sub>[1SG]</sub> ]]] → *licensing failure*

▷ A 1st/2nd person DO needs to be licensed through Agree with v, but the IO intervenes. The DO hence remains unlicensed.

► Ungrammaticality if DO is 1st/2nd person.

- **PCC-compliant configuration:**

If the DO is 3rd person, v still cannot agree with it—but this is okay because 3rd person DPs do not require (the same type of) licensing.

(10) [<sub>vP</sub> v [ ... DP<sub>[1SG]</sub> [ ... DP<sub>[3SG]</sub> ]]]

- This derives the Strong PCC in which the lower DP may only be 3rd person. Other types of PCC have been handled in an analogous fashion by complicating the operation Agree (Anagnostopoulou 2005, Nevins 2007).

## 2.3 Against a licensing account

- The core of a licensing account is the assumption that all 1st/2nd person DPs require special licensing. Ungrammaticality results if this licensing requirement is not met.
- But as Preminger (2019) shows, this is too strong. PCC effects disappear in clauses that don’t contain agreement or cliticization. We illustrate with Basque in (11) (see Laka 1993:27, Albizu 1997:5, Arregi and Nevins 2012:65–69).

(11) *Basque PCC effects disappear in nonfinite clauses*

a. *Finite clause: PCC*

\*Zu-k harakina-ri ni saldu n-(a)i-o-zu.  
you-ERG butcher-DAT me.ABS sold 1ABS-AUX-3DAT-2ERG  
‘You have sold me to the butcher.’ (\*3DAT > 1ABS)

b. *Case-marked infinitival clause: No PCC*

Gaizki iruditzen Ø-zai-t [zu-k harakina-ri ni  
wrong look.IPFV 3ABS-AUX-1DAT you-ERG butcher-DAT me.ABS  
sal-tze-a ].  
sell-NMLZ-ART.ABS  
‘It seems wrong to me for you to sell me to the butcher.’ (✓3DAT > 1ABS)

c. *Adpositional infinitival clause: No PCC*

Zu-k [harakina-ri ni sal-tze-n ] probatu d-u-zu.  
you-ERG butcher-DAT me.ABS sell-NMLZ-LOC attempted 3ABS-AUX-2ERG  
‘You have attempted to sell me to the butcher.’ (✓3DAT > 1ABS)

- **The puzzle:**

The nonfinite clauses in (11b,c) contain an otherwise illicit 3DAT > 1ABS configuration, yet no ungrammaticality arises.

- **Key factor:**

Nonfinite clauses in Basque do not contain clitics or agreement.

▷ No  $\phi$ -agreement takes place with the 1ABS DO *ni* in (11b,c).

- **The problem for a licensing account:**

Because the DO does not agree, it should remain unlicensed. But the structures are grammatical.

► This is the opposite of what a licensing approach predicts.

- **Beyond Basque:**

The disappearance of hierarchy effects in environments that lack  $\phi$ -agreement or cliticization has also been documented for

- ▷ nominalized clauses in Georgian (Bonet 1991:189–191, Béjar and Rezac 2003:50; Léa Nash, p.c.),
- ▷ Icelandic (Sigurðsson and Holmberg 2008), and
- ▷ German (Keine, Wagner, and Coon 2019).

- **Predicament for licensing accounts:**

If hierarchy effects arise because there aren't enough probes to license all DPs, removing probes should exacerbate the problem, not resolve it.

- Preminger (2019) proposes a weakened version of the PLC, paraphrased in (12):

(12) *Preminger's (2019) Person Licensing Condition*  
 A [PART(ICIPANT)] feature on a DP must be licensed by entering into an Agree relation with a functional category, **but only if this feature appears in a clause that also contains a  $\phi$ -probe.**

- (12) gets the facts in (11):
  - ▷ The nonfinite clause does not contain a  $\phi$ -probe and so the 1st person DO is exempted from the licensing requirement.
- But (12) is non-explanatory. Why should the licensing need of a person feature be sensitive to the presence or absence of a  $\phi$ -probe in the same clause? (12) merely restates the problem.

## 2.4 Proposal: PCC as probe gluttony

- **The role of the probe:**

What sets Basque nonfinite clauses apart from finite clauses is that they lack a  $\phi$ -probe.

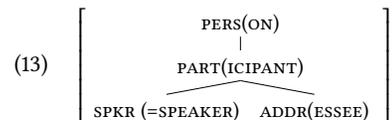
- ▷ If the  $\phi$ -probes are absent, the PCC is absent as well.
- ▷ This strongly suggests that the problem with PCC configurations *lies in the  $\phi$ -probe*, not in the failures of nominal licensing.

- **Analytical intuition:**

The problem with PCC is that a probe agrees with more DPs than it can handle.

## 2.4.1 Assumptions

- ① Person features are arranged in feature geometries (Harley and Ritter 2002).



- These geometries encode entailment relations among features, such that features on lower nodes entail the features on higher nodes

- (14) *Examples*

- 1st person – [PERS[PART[SPKR]]]
- 3rd person – [PERS]

- ②  $\phi$ -probes may vary as to the degree to which they are specified—i.e. to what kinds of features they are *satisfied by* (Béjar and Rezac 2009, Preminger 2014, Deal 2015, Oxford 2018).

- (15) a. 
$$\left[ \begin{array}{c} u\text{PERS} \\ | \\ u\text{PART} \\ | \\ u\text{SPKR} \end{array} \right] \text{ – fully satisfied by 1st person DPs}$$
- b. 
$$\left[ \begin{array}{c} u\text{PERS} \\ | \\ u\text{PART} \end{array} \right] \text{ – fully satisfied by 1st and 2nd person DPs}$$
- c. [uPERS] – fully satisfied by any  $\phi$ -bearing DP

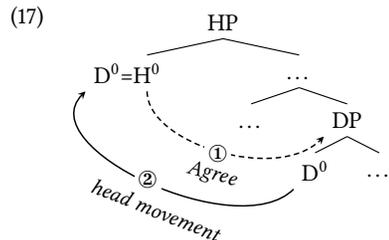
- ③ Agree operates as laid out in section 1.

- (16) *Agree (repeated)*

Given a probe P with a hierarchy of unchecked feature segments [uF],

- P searches the closest accessible DP in its domain such that this DP contains feature set [G], with  $[G] \cap [F] \neq \emptyset$ ;
- P agrees with this DP
- [G] is checked on [uF];
- iterate over steps a.–c. until  $[uF] = \emptyset$  or search fails.

- ④ Cliticization is an instance of long head-movement of a D<sup>0</sup> element, triggered by a φ-Agree dependency between the probe (clitic host) and goal DP (e.g., Anagnostopoulou 2003, Preminger 2019).



- ⑤ The probe must try to agree, but failure to find a goal is okay (Preminger 2014).

### 2.4.2 Application

- We will illustrate how this system works for the Weak PCC, which (dis)allows the IO>DO combinations in (18).

(18) *Weak PCC:*

- \*3 > 1/2
- 1/2/3 > 3
- 1/2 > 1/2

(19) *Example: Weak PCC in Catalan* (Bonet 1991:179)

- \*A en Josep, **te** **li** va recomanar la Mireia.  
to the Josep, 2ACC.CL 3DAT.CL recommended the Mireia  
intended: ‘Mireia recommended you to him (Josep).’ (\*3 > 2)
- En Josep, **te** **’l** va recomenar la Mireia.  
the Josep, 2CL 3CL recommended the Mireia  
‘Mireia recommended him (Josep) to you.’ (✓2 > 3)
- Te**<sup>’m</sup> van recomanar per a la feina.  
2CL.1CL recommended for the job  
‘They recommended me to you for the job.’ (✓2 > 1)  
‘They recommended you to me for the job.’ (✓1 > 2)

### • Probe specification:

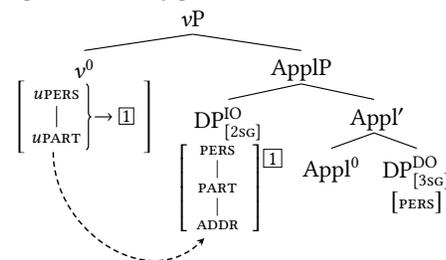
We propose the probe specification in (20).

$$(20) \quad v^0 \left[ \begin{array}{c} u\text{PERS} \\ | \\ u\text{PART} \end{array} \right]$$

### • PCC-compliant 2>3 configurations:

In PCC-compliant 2>3 configurations, the probe is fully satisfied after Agree with IO. No second Agree with the DO takes place.

(21) *Agree in 2>3 configurations*

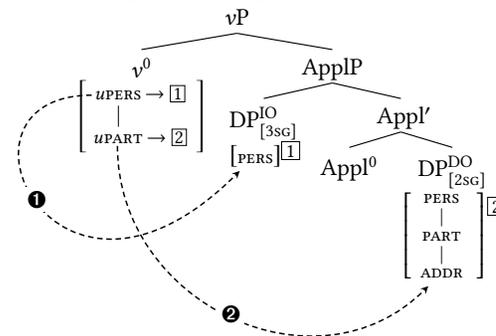


- As a result of this Agree, the IO is clitic-doubled. The DO is clitic-doubled through Agree with a second probe (which we’ll ignore here).

### • PCC-violating configurations:

In PCC-violating configuration, such as 3>2, v first agrees with the IO (①). [PART] remains unchecked and is matched by the DO (②). v hence agrees with both DPs.

(22) *π-Agree in 3>2 configurations → gluttony*



- **Here, the probe is in trouble:** It has successfully entered into *Agree* relationships with two DPs. Clitic-doubling requires (head) movement of one DP. But there are two conflicting constraints:

(23) **Attract Closest** (aka. *Minimal Link Condition, Closest*)

Move the structurally closest DP.

(Chomsky 1995, Kitahara 1997, Müller 1998, Fitzpatrick 2002, Rackowski and Richards 2005)

(24) **Best Match**

Move the DP whose features most closely match those of the probe.

(Coon and Bale 2014, van Urk 2015, Oxford 2018; see also van Urk and Richards' (2015) *Multi-tasking*, and Lahne's (2012) *Maximize Matching*)

▷ *Attract Closest* requires moving the IO.

▷ *Best Match* requires moving the DO.

- The two constraints are **unranked** and **inviolable**.

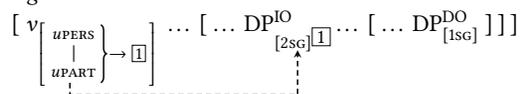
▷ Clitic-doubling as a result of *Agree* is obligatory, yet neither DP can be clitic-doubled without violating one of the two constraints.

► There is no wellformed continuation of the derivation → **ineffability**

- **PCC-compliant [PART]>[PART] configuration:**

In [PART]>[PART] configurations, the probe is fully satisfied after *Agree* with IO. Consequently, no second *Agree* step takes place, and no gluttony results.

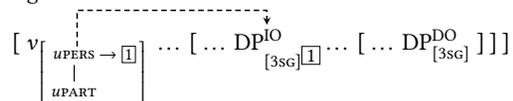
(25) *Agree in 2SG>1SG:*



- **PCC-compliant 3>3 configuration:**

Finally, in 3>3 configurations, the probe is not fully satisfied after *Agree* with IO, but the DO does not provide new, unmatched features. Again, no gluttony results.

(26) *Agree in 3SG>3SG:*



- **Summary: Weak PCC**

Gluttony arises in a well-defined set of configurations:

- (27) a.  $1/2 > 2/1$  } → *no gluttony*  
 b.  $1/2/3 > 3$  }  
 c.  $*3 > 1/2$  → *gluttony* → PCC

## 2.5 Some consequences of a gluttony account

- **Gluttony vs. licensing:**

In several respects, gluttony is the opposite of a licensing account:

▷ The problem is with the probe, not the DP.

▷ The hierarchy effect is due to *too much* *Agree*, rather than *too little*.

- **PCC obviation in nonfinite clauses:**

Since the problem arises only when a *probe* agrees with more than one DP, we predict the absence of PCC effects in nonfinite (probeless) environments (28).

(28) *Licit hierarchy configuration with no probe* → *no gluttony*

✓ [ ... DP<sub>[3SG]</sub> ... [ ... DP<sub>[1/2SG]</sub> ... ] ]

- **PCC variation:**

The specification of the probe modulates where gluttony arises. A good chunk of the attested variation in PCC effects can be derived through parametrization in probe structure.

(29) *Probe variation*

a.  $\left[ \begin{array}{c} \text{uPERS} \\ | \\ \text{uPART} \end{array} \right] \Rightarrow \text{Weak PCC}$

b.  $\left[ \begin{array}{c} \text{uPERS} \\ | \\ \text{uPART} \\ | \\ \text{uSPKR} \end{array} \right] \Rightarrow \text{Ultra-Strong PCC}$

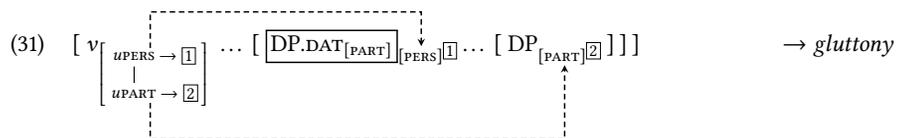
c.  $\left[ \begin{array}{c} \text{uPERS} \\ | \\ \text{uSPKR} \end{array} \right] \Rightarrow \text{Me-First PCC}$

- **Strong PCC:**

Finally, the Strong PCC (which prohibits [PART]>[PART] configurations alongside 3>[PART]) follows if the dative IO is enclosed in a dummy 3rd person specification, regardless of its internal person features (see Boeckx 2000, Richards 2008, Sigurðsson and Holmberg 2008).

(30) *Strong PCC in Basque*

\*Haiek ni-ri zu saldu z-ai-da-te.  
they.ERG me-DAT you.ABS sold 2ABS-AUX-1DAT-3ERG  
intended: 'They have sold you to me.' (\*1DAT > 2ABS)



### 2.6 Summary: Intervention effects as gluttony

- PCC effects result as a consequence of probe gluttony.
  - ▷ Gluttony arises only in configurations where two DPs are found in the domain of a single articulated probe, and the lower DP has *more* features sought by the probe than the higher DP.
  - ▷ These configurations give rise to multiple Agree, which leads to conflicting requirements for subsequent operations (movement/clitic doubling).
- It follows immediately that PCC effects disappear in the absence of a  $\phi$ -probe.
- Nominal licensing plays no role in the account, and no ad hoc caveats to it are required.
- Variation is restricted by the hierarchy of person features involved.



### 3 Focus-intervention effects: Gluttony in the A'-system

- **Preview:**  
We propose that gluttony effects are not confined to the A-system. We develop an analysis of focus-intervention effects in terms of gluttony.

#### 3.1 Focus-intervention effects

- *Focus-intervention effect* (a.k.a. *Beck effects*) prohibit a focused DP from intervening between a *wh*-phrase and its licensing C (e.g., Hoji 1985, Beck 1996, 2006, Beck and Kim 1997, Cable 2010, Miyagawa 2010, Kotek 2014, 2019).

(32) *Focus intervention* (Beck 2006:5)

A quantificational or focusing element may not intervene between a *wh*-phrase and its licensing complementizer.

(33) \* $[C_1 [ \dots [ \text{intervener} [ \dots \text{wh-phrase}_1 \dots ] ] ] ] ]$

(34) *Focus intervention in German*

- \*Wer hat **niemandem** wen vorgestellt?  
who.NOM has no one.DAT who.ACC introduced  
'Who introduced who to no one?'
- Wer hat *wen*<sub>1</sub> **niemandem** *t*<sub>1</sub> vorgestellt?  
who.NOM has who.ACC no one.DAT introduced  
'Who introduced who to no one?'
- Wen*<sub>1</sub> hat Maria **niemandem** *t*<sub>1</sub> vorgestellt?  
who.ACC has Maria.NOM no one.DAT introduced  
'Who did Maria introduce to no one?'

- Movement of the *wh*-phrase over the intervener obviates the intervention effect, (34b).
- **Analytical approaches:**  
Focus-intervention effects have been insightfully approached from a variety of perspectives, including:
  1. Constraint on LF *wh*-movement (e.g., Beck 1996)
  2. Semantics of *wh*-phrases → projection of focus alternatives (e.g., Beck 2006, Cable 2010, Kotek 2014, 2019)
  3. Intervention for Agree(ment) (e.g., Kim 2006, Miyagawa 2010)
- We will analyze focus intervention as a gluttony effect, hence intervention for Agree.

#### 3.2 A gluttony account

- **Assumptions:**
  - ① Long-distance *wh*-dependencies involve (covert) syntactic movement, triggered by Agree with C.
  - ② Focused phrases are specified as in (35).

(35) Focus DP: [*i*Foc]

③ *Wh*-phrases are specified as in (36). [*iwh*] is a subpart of [*iFoc*].

$$(36) \text{ } wh\text{-DP: } \begin{bmatrix} iFoc \\ | \\ iwh \end{bmatrix}$$

▷ **Note:**

We take this feature arrangement to reflect a semantic relationship: *Wh*-expressions involve focus and as such are a subtype of ‘Foc’.

④ Interrogative C is specified as in (37).

$$(37) \text{ } C_{int}: \begin{bmatrix} uFoc \\ | \\ iQ, \quad uwh \end{bmatrix}$$

• **Application:**

Focus-intervention configurations result in gluttony:

(38) \*Wer hat **niemandem** wen vorgestellt?  
 who.NOM has no one.DAT who.ACC introduced  
 ‘Who introduced who to no one?’

$$(39) \text{ } * [CP \text{ } C \begin{bmatrix} uFoc \rightarrow [1] \\ | \\ iQ, \quad uwh \rightarrow [2] \end{bmatrix} [ \dots \text{no one}_{[iFoc][1]} \dots [ \dots \text{who.ACC}_{[iFoc][2]} \dots ] ] ] \rightarrow \text{gluttony}$$

• **Ineffability:**

Assuming that  $C_{int}$  triggers (covert) movement, the configuration in (39) results in an irresolvable conflict:

- ▷ *Best Match* requires movement of *wh*-DP,
- ▷ *Attract Closest* mandates movement of the Foc-DP.
- ☹ ineffability

• **Obviation by movement:**

Independent movement of the *wh*-phrase around the intervener obviates the intervention effect. This is repeated for scrambling in (40):

(40) Wer hat  $wen_1$  **niemandem**  $t_1$  vorgestellt?  
 who.NOM has who.ACC no one.DAT introduced  
 ‘Who introduced who to no one?’

• **Account:**

- ▷ For the sake of concreteness, we assume that scrambling is feature-driven: A  $\Sigma$  head contains a [*uscr*] feature that attracts a DP with a matching [*scr*] feature.
- ▷ Scrambling of the object over the subject then inverts the structural configuration, obviating gluttony.

(41) a. *Probing by [uscr]:*

$$[CP \text{ } C \begin{bmatrix} uFoc \\ | \\ iQ, \quad uwh \end{bmatrix} \dots [ \Sigma \Sigma_{[uscr]} \dots \text{no one}_{[iFoc]} \dots \text{who.ACC}_{[iFoc,scr]} \dots ] ]$$

b. *Scrambling → DP reversal:*

$$[CP \text{ } C \begin{bmatrix} uFoc \\ | \\ iQ, \quad uwh \end{bmatrix} \dots [ \Sigma \text{who.ACC}_{[iFoc,scr]} \Sigma_{[uscr]} \dots \text{no one}_{[iFoc]} \dots t \dots ] ]$$

c. *Probing by C:*

$$[CP \text{ } C \begin{bmatrix} uFoc \\ | \\ iQ, \quad uwh \end{bmatrix} \rightarrow [1] \dots [ \Sigma \text{who.ACC}_{[iFoc,scr]} [1] \Sigma_{[uscr]} \dots \text{no one}_{[iFoc]} \dots t \dots ] ]$$

• Because  $\Sigma$  only probes for [*scr*], intervention by the focus DP is irrelevant and does not lead to gluttony.

• **Asymmetric intervention:**

Because gluttony arises only if the lower DP has more relevant features than the higher DP, the intervention effect is asymmetric:

(42) a. *Foc > Wh → gluttony*

$$* [CP \text{ } C \begin{bmatrix} uFoc \\ | \\ iQ, \quad uwh \end{bmatrix} \dots \text{DP}_{[iFoc]} \dots \text{DP}_{[iFoc]} \dots ]$$

b. *Wh > Foc → no gluttony*

$$✓ [CP \text{ } C \begin{bmatrix} uFoc \\ | \\ iQ, \quad uwh \end{bmatrix} \dots \text{DP}_{[iFoc]} \dots \text{DP}_{[iFoc]} \dots ]$$

### 3.3 Focus intervention is syntactic

- **Hallmarks of the account:**

This line of explanation diverges from other current approaches in several respects.

1. The intervention effect is purely syntactic in nature and not caused by the semantics of *wh* and focus.
2. It results from the need for (covert) movement of the *wh*-phrase.

- **An alternative: Projection of focus alternatives:**

In these respects, the account differs from analyses of focus intervention in terms of projection of focus alternatives (Beck 2006, Cable 2010, Kotek 2014, 2019). On this family of accounts, the effect is semantic:

- ▷ In-situ *wh*-phrases do not undergo covert movement, but are interpreted via projection of focus alternatives (Hamblin 1973, Rooth 1985, Kratzer and Shimoyama 2002).

(43) [ C<sub>1</sub> [ ... [ ... *wh*-phrase<sub>1</sub> ... ] ] ]  


- ▷ A focused DP along the way interferes with this projection, leading to semantic illformedness.

(44) \* [ C<sub>1</sub> [ ... [ intervener [ ... *wh*-phrase<sub>1</sub> ... ] ] ] ]  


- **The role of syntax:**

We develop an argument for a syntactic treatment, based on movement types that obligatorily reconstruct for quantifier scope.

- ▷ These movements nonetheless obviate focus-intervention effects.

- **Obligatory reconstruction**

Long (= crossclausal) topicalization in German obligatorily reconstructs for quantifier scope (also see Smeets and Wagner 2018 for Dutch).

(45) *German long topicalization*

*Alle Zeitschriften*<sub>1</sub> hat **ein Mann** gesagt [CP dass Maria *t*<sub>1</sub> gelesen  
 all journals.ACC has a man.NOM said that Maria.NOM read  
 hätte ]  
 has.SBJV

‘All journals, a man said that Maria had read.’ (∃ >> ∀; \*∀ >> ∃)

(46) *German long topicalization*

*Wieviele Bilder*<sub>1</sub> hat Maria **beschlossen** [CP dass sie auf der Party *t*<sub>1</sub> zeigen  
 how many pictures has Maria decided that she at the party show  
 wird ]?  
 will

‘How many pictures did Maria decide that she will show at the party?’

a. ✓ *decide* >> *many*:

‘For what number *n*: In all of Maria’s bouletic alternatives, there exist *n*-many pictures *x* such that she will show *x* at the party.’

b. \* *many* >> *decide*:

‘For what number *n*: There are *n*-many (particular) pictures *x* such that in all Maris’s bouletic alternatives, she will show *x* at the party.’

- **Assumption:**

Reconstruction amounts to LF-interpreting a lower copy (Chomsky 1995, Romero 1998, Fox 1999, Poole 2017), ignoring the higher copy.<sup>2</sup>

- **LF representation:**

Obligatory reconstruction then amounts to the claim in (47).

(47) At LF, only the lower copy of a topicalization chain is visible.

- Consequently, in (45) and (46), the long-topicalized DP is in the embedded clause at LF.

(48) *LF of (45):*

[CP \_\_\_\_\_ ... **a man** ... [CP ... *all journals* ... ] ∃ >> ∀

(49) *LF of (46):*

[CP \_\_\_\_\_ ... **decide** [CP ... *how many pictures* ... ] *decide* >> *many*

- **Topicalization obviates focus intervention:**

Crucially, a focus intervener in the matrix clause does **not** incur an intervention effect (also see Beck 1996:5):

<sup>2</sup>Alternative treatments of reconstruction involve what is sometimes called “semantic reconstruction” (Cresti 1995, Rullmann 1995, Lechner 1998, 2013, Ruys 2015). On these approaches, the moved element is interpreted in its landing site at LF, but the launching site is interpreted as an  $\langle et, t \rangle$ -type variable. Whether the argument here can be circumvented by adopting semantic reconstruction depends on the interplay between semantic reconstruction and projection of focus alternatives.

(50) *Obviation of focus intervention*

Welche Zeitschriften<sub>i</sub> hat **niemand** gesagt [CP dass Maria t<sub>1</sub> gelesen  
 which journals.ACC has no one.NOM said that Maria.NOM read  
 hätte ]?  
 has.SBJV

‘Which journals did no one say that Maria had read?’

- Given (47), (50) has the LF in (51).

(51) *LF of (50):*

[CP \_\_\_\_\_ ... **no one** ... [CP ... *which journals* ... ]]

• **The challenge for a semantic account:**

In (51), reconstruction places the *wh*-DP below the focus intervener at LF. A semantic or LF account of focus intervention would then predict a focus-intervention effect because *no one* intervenes between the *wh*-DP and the licensing C.

(52) \* [ C<sub>i</sub> [ ... [ **no one** [ ... *which journals*<sub>i</sub> ... ] ] ] ]

- But this prediction is incorrect. (50) is wellformed.

• **A gluttony account:**

On a gluttony account, the intervention effect is purely syntactic. Topicalization of the *wh*-phrase across the intervener is therefore sufficient to obviate it, regardless of whether this movement subsequently reconstructs at LF.

(53) *Derivation of (50)*

a. *Probing by [utop]:*

[CP C [ iQ, | uFoc ] ... [XP X<sub>[utop]</sub> ... **no one**<sub>[uFoc]</sub> ... [CP ... *wh* [ top, | iFoc ] ] ... ]

b. *Topicalization → DP reversal:*

[CP C [ iQ, | uFoc ] ... [XP *wh* [ top, | iFoc ] ] X<sub>[utop]</sub> ... **no one**<sub>[uFoc]</sub> ... [CP ... *t* ... ]

c. *Probing by C:*

[CP C [ iQ, | uFoc ] → [ ] ] ... [XP *wh* [ top, | iFoc ] ] [ ] X<sub>[utop]</sub> ... **no one**<sub>[uFoc]</sub> ... [CP ... *t* ... ]

d. *Reconstruction at LF:*

[CP C [ iQ, | uFoc ] → [ ] ] ... [XP \_\_\_\_\_ X<sub>[utop]</sub> ... **no one**<sub>[uFoc]</sub> ... [CP ... *wh* [ top, | iFoc ] ] [ ] ]

• **In a nutshell:**

For a syntactic account, all that matters is that the *wh*-phrase undergoes syntactic movement over the focus intervener (reflected in the word order). It is irrelevant whether or not this movement subsequently reconstructs at LF.

• **Conclusion:**

If reconstruction is represented as interpretation of a lower copy at LF, then these facts potentially favor a syntactic treatment of focus-intervention effects over a semantic or LF one.

• **Converging evidence: Hindi<sup>3</sup>**

Hindi shows focus-intervention effects (Beck and Kim 1997, Beck 2006, Keine 2016).

(54) *Focus intervention in Hindi*

a. ??**kisii-ne-bhii** *kis-ko* nahī dekhaa?  
 someone-ERG-NPI who-ACC not saw  
 ‘Who didn’t anyone see?’

b. *kis-ko*<sub>1</sub> **kisii-ne-bhii** t<sub>1</sub> nahī dekhaa?  
 who-ACC someone-ERG-NPI not saw  
 ‘Who didn’t anyone see?’

• **Obligatory reconstruction:**

Long scrambling obligatorily reconstructs for quantifier scope (Keine and Poole 2018, Keine 2019).

(55) *Hindi long scrambling*

*har kitaab*<sub>1</sub> **kisii-ko** lagta [CP ki t<sub>1</sub> Sita-ko pasand aegee ]  
 every book someone-DAT seems that Sita-DAT like come.FUT  
 ‘Every book, it seems to someone that Sita will like.’ (∃ >> ∀; \*∀ >> ∃)

(56) *kitnii tasviirē*<sub>1</sub> Sita-ne **ta** kar liyaa hai [CP ki vo t<sub>1</sub> dikhaaegee ]?

how many pictures Sita-ERG decide do take AUX that she will show  
 ‘How many pictures did Sita decide that she will show?’  
 (*decide* >> *many*; ?\**many* >> *decide*)

<sup>3</sup>Hindi judgments due to Rajesh Bhatt (p.c)

• **Focus-intervention obviation:**

Nonetheless, long scrambling obviates focus intervention effects.

(57) *Obviation of focus intervention*

in kitaabō-mē-se, kaunsii kitaab<sub>1</sub>, kisii-ko-bhii nahīi lagtaa [<sub>CP</sub> ki t<sub>1</sub>  
 these books-LOC-ABL which book someone-DAT-NPI not seems that

Sita-ko pasand aegii ]?

Sita-DAT like come.FUT

‘Out of these books, which book didn’t it seem to anyone that Sita will like?’

• **Conclusion:**

The situation in Hindi is hence analogous to that in German. A syntactic account thus extends to Hindi as well.



#### 4 Mayan extraction asymmetries: A+A’ gluttony

(This section presents collaborative work with Nico Baier and Theodore Levin; see Coon, Baier, and Levin 2019.)

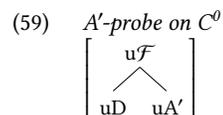
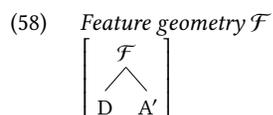
• **Blurring the lines between A- and A’-effects:**

A range of recent work has shown that the division between traditional A-movement and A’-movement (and their corresponding features and positions) not as clearcut as once thought.

▷ See e.g. Martinović 2015, van Urk 2015, van Urk and Richards 2015, Erlewine 2018, Aldridge to appear.

▷ In order to capture *anti-agreement effects*, Baier (2018) proposes that the features [D] and the [A’] are part of *the same* feature geometry, (58)

▷ Coon et al. (2019): the probe on C<sup>0</sup> mirrors this structure in Mayan, (59)



► **Proposal:**

The interaction of A- and A’-features within the system of feature gluttony causes the extraction restriction.

#### 4.1 Mayan Agent Focus and the Ergative Extraction Constraint

• **Mayan extraction asymmetries:**

All Mayan languages are morphologically ergative (60–61):

(60) *Chuj (Q’anjob’alan) morphological ergativity*

a. Ix-**ach**-s-chel ix ix.  
 PFV-ABS2S-ERG3-hug the woman  
 ‘The woman hugged you.’

b. Ix-**ach**-way-i.  
 PFV-ABS2-sleep-ITV  
 ‘You slept.’

(61) *Ch’ol (Tseltalan) morphological ergativity*

a. Tyi i-mek’-e-**yety** jiñi x’ixik.  
 PFV ERG3-hug-TV-ABS2 the woman  
 ‘The woman hugged you.’

b. Tyi way-i-**yety**.  
 PFV sleep-ITV-ABS2  
 ‘You slept.’

• **Ergative Extraction Constraint:**

A subset of these languages restrict the A’-extraction of ergative subjects, as in (62)—we follow Aissen 2017 in labelling this restriction shown the ERGATIVE EXTRACTION CONSTRAINT, or EEC.

(62) *Chuj: ergative extraction restriction*

\*Mach ix-**ach**-s-chel-a’?  
 who PFV-ABS2S-ERG3S-hug-TV  
 intended: ‘Who hugged you?’

(63) *Ch’ol: no ergative extraction restriction*

Maxki tyi i-mek’-e-**yety**?  
 who PFV ERG3S-hug-TV-ABS2  
 ‘Who hugged you?’

- **Mayan on a need-to-know basis:**

- ▷ Mayan languages are verb initial in discourse-neutral contexts (England 1991).
- ▷ Arguments appear obligatorily in preverbal positions for topic, focus, wh-questions, and relativization.
- ▷ Core arguments may generally be pro-dropped, and are cross-referenced on the verb stem by two series of morphemes:

(64) TAM–{ABS}–ERG–Root–(Voice)–(Stat. suffix)–{ABS}

- **HIGH-ABS and LOW-ABS:**

The surface position of the absolutive clitic correlates with the presence or absence of the EEC (Tada 1993, Coon et al. 2014):

- ▷ HIGH-ABS languages: ABS generated by finite Infl<sup>0</sup> → EEC
  - \* ABS attaches to the clause-initial TAM marker
  - \* ABS is unavailable in nonfinite embedded clauses
- ▷ LOW-ABS languages: ABS generated by transitive v<sup>0</sup> → no EEC
  - \* ABS attaches verb stem-finally
  - \* ABS is available in nonfinite embedded clauses

- Following Coon et al. (2014) and Assmann, Georgi, Heck, Müller, and Weisser (2015) we take the above facts to be connected:

- ▷ In HIGH-ABS languages, the transitive object must move to a position *above* the ergative subject—we take this to be driven by an [EPP] feature on v<sub>TV</sub>.
- ▷ This movement makes the object accessible to the ABS-generating probe on Infl<sup>0</sup>, (65) (see also e.g. Campana 1992, Bittner and Hale 1996, Aldridge 2004):

(65) [InflP Infl<sup>0</sup> ... [vP OBJECT [ SUBJECT [vP V OBJECT ]]]]

- *But*, in so doing, it also creates a locality problem for extraction of the transitive subject:

(66) [CP ... [vP OBJECT [ SUBJECT [vP V OBJECT ]]]]

## 4.2 The problem is DP intervention

- **Deriving the EEC:**

The generalization in (67) captures the extraction restriction:

(67) MAYAN EEC GENERALIZATION

When an interpreted DP object structurally intervenes between the subject and the A'-probe on C<sup>0</sup>, the subject is restricted from undergoing A'-extraction.

- **Predictions for DP-intervention:**

The generalization in (67) predicts that if a DP object does not intervene, ergative extraction will be licit.

- ▷ This holds generally in LOW-ABS languages, which freely permit ergative extraction.
- ▷ Coon et al. (2019) discuss several environments in which it can be tested language-internally in HIGH-ABS languages. Specifically, the EEC is lifted when...
  1. The object is a bare NP (Aissen 2011 on K'iche')
  2. The subject binds into the object (e.g. Craig 1977, Coon and Henderson 2011 on Popti' and K'iche')

- **NP objects:**

Bare NP objects permit the agent to extract from a regular transitive verb form in K'iche':

(68) *K'iche'* bare NPs

- Jachiin x-u-loq' (\*rii) uuq?  
WH PFV-ERG3S-buy DET cloth  
'Who bought cloth?'
- Maj-juun k-u-loq' (\*lee) ojeer siik'.  
NEG-INDF IPFV-ERG3S-buy DET old cigarette  
'No one is going to buy old cigarettes.' (K'iche'; Aissen 2011:12)

- These bare NP objects *are* structurally high, as in (65). Recall that movement of the object is required for Set B marking from Infl<sup>0</sup>; bare NP objects can trigger plural Set B:

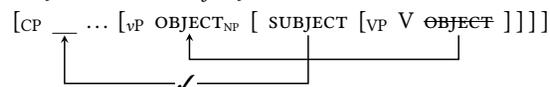
- (69) Ma jun achi taj k-e'-u-b'oq alaj taq chee'.  
NEG INDF man IRR IPFV-ABS3P-ERG3S-uproot DIM PL tree  
'It's not a man that is uprooting little trees.'  
(K'iche'; Aissen 2011:12, citing López Ixcoy 1997)

• **Proposal:**

The NP object is accessible to the  $\phi$ -probe on  $\text{Infl}^0$ , permitting the appearance of a Set B morpheme.

▷ But due to its lack of [D], it does not intervene for the higher [D]-relativized A'-probe:

(70) *Subject can extract if object is NP*



• **Binding:**

If the subject binds into the object, as in the *extended reflexives* in (71), the ergative subject may extract freely:

(71) a. *Extended reflexives*

Maktxel max s-bon s-na?  
 who PFV ERG3S-paint POSS3S-house  
 'Who<sub>i</sub> painted his<sub>i/\*j</sub> (own) house?' (Q'anjob'al; Coon et al. 2014:226)

b. Aree lee a Xwaan x-u-k'at r-aqan.  
 FOC DET CLF Juan PFV-ERG3S-burn POSS3S-foot  
 'Juan<sub>i</sub> burned his<sub>i/\*j</sub> (own) foot.' (K'iche'; Mondloch 1981:237)

▷ Two things to note, illustrated in (72):

- \* First, the availability of 3rd person plural Set B agreement provides evidence that the extended reflexive objects above the subject;
- \* Second, observe that extended reflexive objects in Kaqchikel may be full DPs—not structurally reduced NPs.

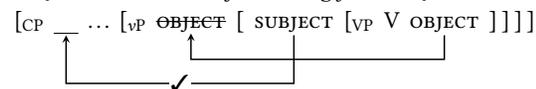
(72) Ja ri a Juan x-e-b'e-ru-kano-j ri r-ak'wal-a.  
 FOC DET CLF Juan PFV-ABS3P-DIR-ERG3S-look.for-DTV DET POSS3S-child-PL  
 'Juan<sub>i</sub> went to look for his<sub>i/\*j</sub> (own) children.'  
 (Kaqchikel; Filiberto Patal Majzul p.c.)

▷ If extended reflexive objects are DPs which move above the subject, why don't they trigger EEC effects?

► **Proposal:**

In order to be bound by the subject, the object must reconstruct to its base position—reconstruction renders the object a non-intervener.

(73) *Object reconstruction for binding feeds subject extraction*



• **What these data show us...**

1. **Mayan extraction asymmetries are not due to the nature of ergative subjects:**  
 Ergative subjects *can* extract, so long as the *object* DP does not intervene; cf. Deal 2016, Polinsky 2016

2. **Mayan extraction asymmetries are not the result of licensing failures:**

▷ Coon et al. (2014) and Assmann et al. (2015) propose that the EEC is a failure of nominal licensing:

\* Coon et al. (2014): The object must raise above the subject in order to be licensed by  $\text{Infl}^0$ , but this traps the ergative subject in the vP phase.

\* Assmann et al. (2015): The subject must raise through Spec,InflP on its way to Spec,CP, robbing  $\text{Infl}^0$  of its ability to license the object.

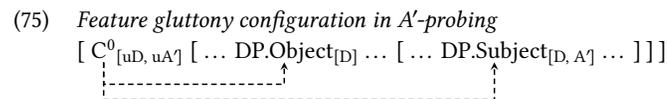
► The ergative subject can extract *even when it is clear that  $\text{Infl}^0$  has entered into Agree with the absolutive DP*—it can't be the case that ergative extraction is incompatible with absolutive licensing.

4.3 *Gluttony for A'-extraction asymmetries*

• **DPs intervene because of the nature of the probe:** we draw on the core intuition of the proposal in Levin 2018, in (74):

(74) RELATIVIZED PROBING IN MAYAN A'-MOVEMENT  
 A'-probes are relativized to the feature [D].

•  $C^0$  is searching for both [D] and [A'] simultaneously:



• A'-probes relativized to a feature like [D] elsewhere in the literature:

▷ van Urk (2015) argues that in Dinka,  $C^0$  probes for [ $\phi$ ] and [A'] simultaneously;

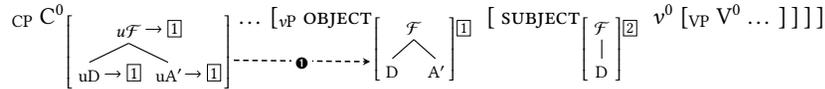
▷ Aldridge (to appear) proposes that Austronesian movement to Spec,CP is driven by [ $\phi$ ];

- ▷ Erlewine (2018) argues that in the Austronesian language Toba Batak,  $C^0$  and  $T^0$  can be bundled into a single head and probe together.

**How this works on a gluttony account:**

- **A'-objects do not cause gluttony:**

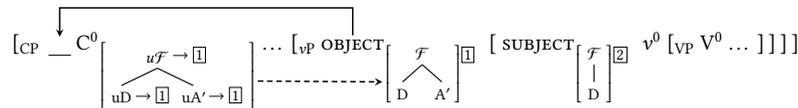
(76)  $C^0$  agrees with the object



- ▷ The probe on  $C^0$  first enters into Agree with the object DP.
- ▷ The complete  $[F]$  feature geometry is copied to the probe (1), deleting the matching segments  $[uF]$ ,  $[uD]$ , and  $[uA']$ .
- ▷ Because  $C^0$  has no remaining segments, it stops probing, and does not enter into a second Agree relation with the subject.

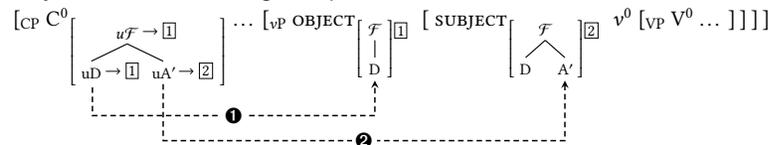
- Across Mayan,  $C^0$  triggers A'-movement to Spec,CP of a constituent that it agrees with:

(77) A'-movement of the object



- **A'-subjects do cause gluttony:**

(78) A'-feature on subject → gluttony



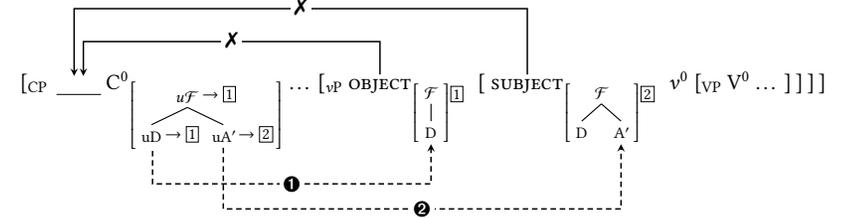
- ▷ The probe on  $C^0$  first searches and enters in an Agree relation with the object DP (step 1), deleting  $[uF]$  and  $[uD]$  on the probe.
- ▶ Because the object lacks  $[uA']$ , that segment remains on the probe, and another round of search is initiated (step 2).
- ▷ The probe finds matching a matching  $[A']$  feature on the subject, and the feature geometry of the subject is copied over (2).

- The ungrammaticality of ergative extraction in (78) results from the **conflicting requirements on movement** discussed above: *Attract Closest* and *Best Match*

- ▷ The subject qualifies as the Best Match for  $C^0$ .
- ▷ The object DP is closer to Spec,CP.

- Again, assuming that these two constraints are *unranked* and *inviolable*, an irresolvable conflict arises:

(79) A'-feature located on subject → gluttony



- In Mayan languages, A'-movement is obligatory (no *wh*-in-situ), and only a single element may occupy Spec,CP.
- ▶ The special Agent Focus construction used to circumvent the EEC in a number of Mayan languages does so by permitting the object to remain below the subject—see Coon, Baier, and Levin 2019 for details.



## 5 Summary

- Feature gluttony allows us to capture intervention effects across different domains:
  - ▷ A-gluttony: PCC and other hierarchy effects involving  $\phi$ -features
  - ▷ A'-gluttony: focus intervention effects
  - ▷ A+A'-gluttony: A'-extraction asymmetries in which non-A' DPs intervene for A' probing.

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