

## 1. Introduction

- English reflexive nominals are composed of **two distinct nominals** (pronominal possessor +  $\sqrt{\text{SELF}}$ ; Postal 1966), with the form of each thought to be **determined by the antecedent**:

(1) **We** will not embarrass **our selves** / **\*one self**

## (2) GENERALIZATION ON $\varphi$ -MATCHING

In English reflexives, pronouns  $\varphi$ -match the local antecedent of binding

- (2) is found in analyses across the spectrum (cf. Sundaresan 2018)
- One idea: (2) holds because bound pronouns are  **$\varphi$ -deficient** (e.g., Heinat 2006, Reuland 2006, Kratzer 2009, Rooryck and Vanden Wyngaerd 2011)

♦ **Question 1:** How valid is the generalization in (2)?

♦ **Question 2:** How should we model this generalization (to the extent it is valid)?

## 2. Referential Construal

- ♦  **$\varphi$ -mismatches exist** in English, violating (2)
- ♦ Imposters (Collins and Postal 2012)
  - (3) a. **Your majesty** must protect **yourself/himself**.
  - b. **Mommy and Daddy** need some time to **ourselves/themselves**.
- ♦ ‘Singular they’ (*judgments provided for those who readily accept ‘singular they’*)
  - (4) a. [Spoken about a mixed-gender group] **Everyone** loves %**themselves**/%**themselves**/%**himself**.
  - b. [Spoken about an individual of unknown gender] **Whoever that is** ought to control %**themselves**/%**themselves**/%**himself**.
  - c. [Spoken about an individual with non-binary gender identity] **Kim** wrote a book by %**themselves**/%**themselves**/%**himself**.
- ♦ Quantified expressions / group nouns (+ context)
  - (5) a. [Spoken by a single woman in a group of women] **Each of us** is behaving **ourselves/herself/\*himself**.
  - b. [Spoken about a group of individuals] **The football team** got **itself/themselves** a new coach.
  - c. [Spoken to a group of women] **At least one of you** believes in **yourself/herself/\*himself**.

## (6) CONSTRUED REFERENCE CONDITION IN ENGLISH

The bound pronoun in an English reflexive must be able to be construed as referring to its antecedent

- Basic Idea: The felicity of a pronoun in a reflexive anaphor is constrained in the same way as other (discourse-anaphoric) pronouns

- ♦ **BUT (6) is not enough:** Compare (7a,b) with (5a,b)

(7) a. **We** are each behaving **\*himself/\*herself/ourselves**.

b. **The football players** got **\*itself/themselves** a new coach.

- When the pronoun in an anaphor is 3.SG, **the constraints are different**

## 3. Counter-Indexical Contexts

- ♦ In **Counter-indexical (CID) contexts**, what pronoun can be used to refer to an antecedent changes

(8) a. If I were you, I'd do **myself/yourself** a favor & bring food!

b. If I were you guys, I'd do **myself/yourselves** a favor & bring food!

c. If I were them, I'd do **myself/themselves** a favor & bring food!

- ♦  $\varphi$ -mismatch in CID contexts is constrained
  - i. **The pronoun cannot be 3.SG** – same constraint found in (7)
    - (9) a. If I were them, I'd do **myself/themselves** a favor...
    - b. If I were her, I'd do **myself/\*herself** a favor...

## ii. The local subject must be 1.SG

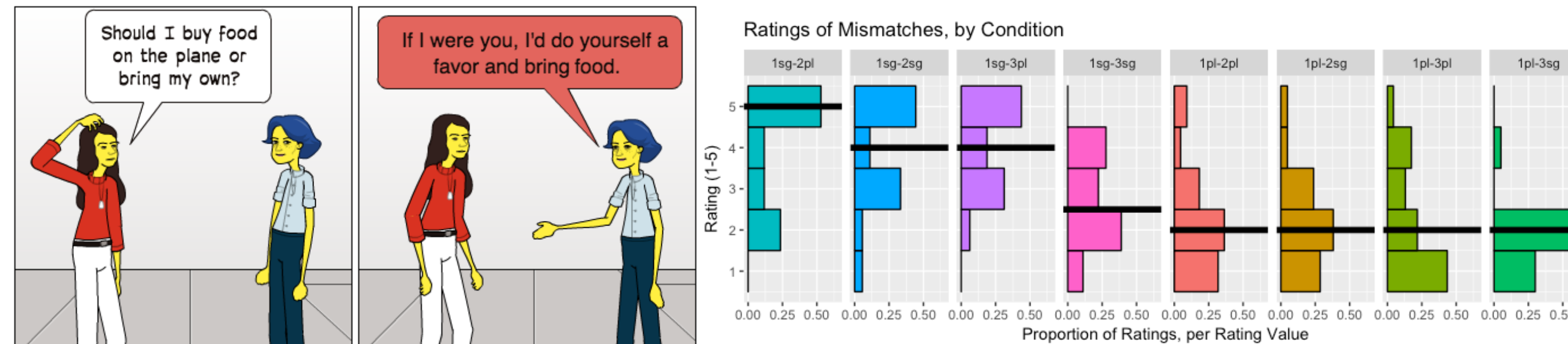
(10) a. If we were you, **we'd** do **ourselves/yourselves** a favor...

b. If you were me, **you'd** do **yourself/\*myself** a favor...

## iii. Irrealis Mood Required

(11) When I dreamt I was you, **I** did **myself/\*yourself** a favor...

- ♦ The former two have been supported through an AMT experiment ( $n=78$ )



## 4. A Dual Approach to $\varphi$ -Features

- ♦ **Reflexive anaphors do not uniformly get their  $\varphi$ -features valued in the derivation**
  - Premise: Reflexive anaphors structurally contain a (bound) pronoun
  - Premise: Not all (bound) pronouns are  $\varphi$ -deficient
  - Premise: Whenever a pronoun's  $\varphi$ -features are derivationally valued, those  $\varphi$ -features must match the antecedent's
  - Observation: English pronouns in reflexive anaphors do **not** always  $\varphi$ -match the local antecedent of binding

∴ **Pronouns in reflexives do not always get  $\varphi$ -values via binding**

- ♦ **3.SG pronouns in reflexives never mismatch the local antecedent of binding**
  - (*Note: this is about  $\pi$  and #, and not about person alone; recall 3.PL 'them'*)
  - $\varphi$ -features for 3.SG pronouns may be derivationally entangled with the binder's

∴ **3.SG pronouns in reflexives require a unique derivation**

- ♦ English 3.SG is different from other pronouns in gender ( $\gamma$ ) features:

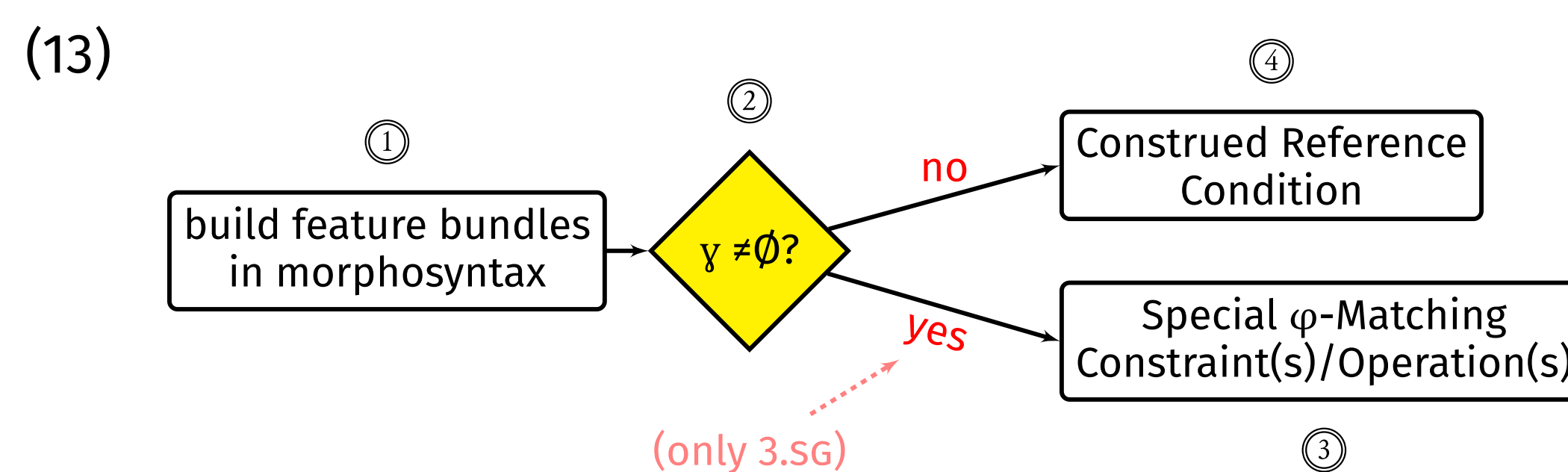
	SG	PL
1	$\emptyset$	$\emptyset$
2	$\emptyset$	$\emptyset$
3	[ $\pm F, \pm M, \pm ANIM$ ]	$\emptyset$

- Perhaps a non- $\emptyset$   $\gamma$ -feature requires additional derivational steps that ensures  $\varphi$ -match with the local binder

## (12) GENERALIZATION ON ENGLISH GENDER-CONDITIONED $\varphi$ -MATCH

If a bound pronoun has a  $\gamma$ -feature that is not  $\emptyset$ , then the bound pronoun cannot have  $\varphi$ -features that conflict with those specified on the binder and in the context

- ♦ Algorithm for a theoretician to determine whether a bound pronoun & antecedent are predicted compatible (*Not a derivation!*)



- One route for  $\varphi$ -mismatch (*for non-3.SG pronouns*)
- The other route disallows this (*for 3.SG pronouns*)

Different English bound pronouns are subject to different derivations, **depending on  $\varphi$ -features in the morphosyntax**

- ♦ Some examples of (6) and (12) in action:

(14) **The team** / **\*This person** / **\*They** / **\*He** got **itself** a new coach

- $\gamma$  is specified for *it* ( $\gamma \neq \emptyset$ )
  - ◊  $\varphi$ -features of *the team* don't conflict
  - ◊  $\varphi$ -features of *this person* don't conflict, but interpretation of the nominals can't adhere to (6)
  - ◊  $\varphi$ -features of *they* and *he* do conflict with those of *it*: violates (12)

(15) **The team** / **This person** / **They** / **\*He** got **themselves** a new coach

- $\gamma$  is not specified for *them* ( $\gamma = \emptyset$ )
  - ◊  $\varphi$ -features of the antecedent never matter
  - ◊ Any ill-formedness is a violation of (6)

## 5. Conclusions

- ♦ English exhibits  $\varphi$ -mismatches between pronouns in reflexives and the antecedent of binding
  - **A nominal can bind a  $\varphi$ -mismatched reflexive pronoun**
- ♦ English reflexive anaphors are derived, this investigation has provided a window into how the derivation(s) must be formulated

## ① The generalization in (2) should be replaced with (6) and (12) in English

- There are *two distinct types of reflexive pronouns* in English
- Most can  $\varphi$ -conflict with their antecedent
  - What's required of them is construability
- But a 3.SG one *never*  $\varphi$ -conflicts with its antecedent
  - Requiring separate grammatical machinery

## ② Morphosyntax builds reflexive anaphors

- Bound pronouns'  $\varphi$ -feature values influence the derivation and where mismatch is possible

## ③ $\varphi$ -features appear to be active at LF to check (6) and (12)

- 'construal', context-defined gender, CID contexts
- Felicity of  $\varphi$ -features depends on context

(See also Heim 2008, Safir 2014; *pace* e.g. Drummond et al. 2011:399. Though see Kayne 2002, Collins and Postal 2012 for a syntactic approach.)

- ♦ Considering only 3.SG reflexive pronouns, English has no violations of (2)
  - 3.SG is different because how its  $\varphi$ -features (particularly  $\gamma$ ) are valued
  - These  $\varphi$ -feature differences lead to different derivations
- ♦ Properties of binding are **not solely the product of syntax**
  - English reflexive anaphors are defined partially syntactically
    - Building the  $\varphi$ -bundles for the pronoun
  - Partially postsynactically (based on syntactic input; see Ahn and Kalin *forthcoming*)
    - The case form of the reflexive pronoun
  - Partially semantically/pragmatically (based on syntactic input)
    - Determining whether a bound pronoun can be construed as referring to an antecedent or not, on the basis of  $\varphi$ -features

- ♦ A multi-module approach to binding, whose name makes this obvious:

**“Distributed Binding Theory”**



# Reflexive Binding Without Phi-Feature Matching\*

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## 1 Introduction

- ♦ English reflexive nominals are composed of two nominals: (possessive) pronominal + self nominal

(1) We will not embarrass our selves

### (2) GENERALIZATION ON $\varphi$ -MATCHING

In English reflexives, pronouns  $\varphi$ -match the local antecedent of binding

- ▶ This is introduced in textbooks and presupposed by researchers across a spectrum of analyses (cf. discussion in Sundaresan 2018)
  - Kratzer (2009), on her derivational analysis of matching  $\varphi$ -features:  
“We don’t build [nonagreeing reflexives] to begin with.” (p.196)
  - Hicks (2009), who does not adopt a derivational analysis of matching  $\varphi$ -features:  
“[...]anaphors and their antecedents do share the same values for [ $\varphi$ ].” (pp.107-108)

### TWO QUESTIONS

- ♦ **Empirical Question:** How valid is this generalization?
- ♦ **Theoretical Question:** How do we derive this generalization (to the extent it is valid)?

- ♦ Some findings, to be motivated:

- ▶  $\varphi$ -features in a self-phrase can **mismatch** its antecedent, **undercutting accounts of binding that directly invoke  $\varphi$ -AGREE** (or similar syntactic operations) as a core component of binding
  - i.e., reflexivity is interpreted separately from the  $\varphi$ -features – not surprising given that many languages lack any manifestation of  $\varphi$ -features in reflexives
- ▶ **English 3.SG reflexive pronouns behave distinctly**
  - Unlike other bound pronouns, they seem to require a derivational analysis of  $\varphi$ -features
  - i.e., There are two derivational routes to  $\varphi$ -features
- ▶ “Binding” operations/constraints are **distributed across the Grammar**

\*This work has largely been influenced by collaboration with Laura Kalin, who I owe a great debt of gratitude. Additional thanks are owed to the audience and participants of the ANA-LOG Workshop, NELS49, and NYU Syntax Brown Bag, where some of this work was also presented.

## 2 Internal Structure of Reflexive Self-Phrases

- ◆ English reflexives are morphologically complex (see also Postal 1966:182)
  - ▶ Possessive pronoun (*myself*) + a head noun (*myself*)
  - ▶ (This is typologically common: the reflexive anaphor is composed of a possessor and a inalienably possessed nominal)
- ❶ There is a **self** component, which is a nominal:
  - ▶ Consider the object-incorporation-like compounding process:
    - (3) a. They are completely **self**-reliant.
    - b. They rely on **themselves** completely.
    - (4) a. He is a **self**-described polyglot.
    - b. He describes **himself** as a polyglot.
    - (5) a. We chose the **self**-install option.
    - b. We chose the option to install it **ourselves**.
    - (6) a. This is a **self**-driving car.
    - b. This is a car that drives **itself**.
  - ▶ What is adjacent to the V is a bare N, as with other Ns:
    - (7) a. She is an **Eagles**-supporting Philadelphian.
    - b. She is a Philadelphian who supports the **Eagles**.

### HISTORICAL CHANGE

- ◆ In older forms of English (and still in other Germanic languages), the *self* morpheme is an adnominal intensifier<sup>1</sup>
  - ▶ It lacked nominal distribution, didn't inflect like a nominal, etc. (cf. Keenan 2002)
- ◆ Now *self* is **certainly nominal**
  - ▶ Given evidence like compounding, pluralization, etc.

- ❷ What precedes *self* is a **possessive pronoun**:
  - ▶ Consider the form of the pronoun:
    - (8) a. I will defend **myself**.
    - b. You can do it **yourselves**.
  - ▶ Headlines allow for null bound pronoun possessors
    - (9) a. ...Bill O'Reilly embarrasses self, colleagues, country... (<http://wapo.st/1TYFgoH>)
    - b. Bill O'Reilly embarrassed **himself**, **his** colleagues, and **his** country.

<sup>1</sup>In fact, this difference is almost certainly related to the other differences between English reflexive anaphors and reflexive anaphors in other Germanic languages (e.g., absence/presence of possessive pronouns within the anaphor, and possibly even (un)availability of long distance binding).

### ③ In addition, there is some **invisible reflexive morphosyntactic glue**

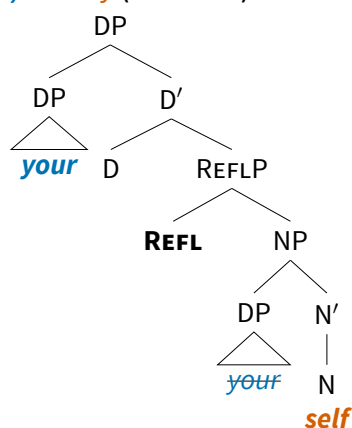
- It is detectable through **allomorphy** in 3rd person contexts (for certain varieties of English)

(10) a. They did it **them**/**\*their** selves.

b. After spending two years in meditation, **their**/**\*them** selves were fully realized.

- A reflexive morpheme,  $\text{REFL}^0$ , triggers 3rd person pronouns to surface as ‘accusative’ in certain structure-based contexts
- What disturbs the locality shows that the REFL morpheme is distinct from the  $\sqrt{\text{SELF}}$  morpheme and the D morpheme
- It is also detectable through **allosemy**:  $\sqrt{\text{SELF}}$  lacks clear content in reflexive contexts
  - It gets a reified substantive reading (cf. Safir 1996) in the absence of  $\text{REFL}^0$
  - But  $\text{REFL}^0$  triggers a lack of semantic contribution by the root  $\sqrt{\text{SELF}}$  (cf. camouflage constructions; Collins et al. 2008, Collins and Postal 2012)
- Ahn and Kalin (*forthcoming*): A reflexive morpheme that sits between D and  $\text{N}^2$

(11) **yourself** (reflexive)



## 3 Features in the Self-Phrase

- ◆ In this structure of reflexive self-phrases that we have motivated, there are two nominals (pronominal possessor +  $\sqrt{\text{SELF}}$ ) inside of the anaphor<sup>3</sup>
  - What gives rise to the nominal features (“ $\varphi$ -features”) that manifest on these two nominals?<sup>4</sup>
    - The pronoun (person, number, gender, animacy, genericity)
    - The  $\sqrt{\text{SELF}}$  nominal (number)
  - How do we derive the  $\varphi$ -Matching generalization in (2), to the extent that it is correct?

<sup>2</sup>One idea might be that *own* manifests this REFL head; this cannot be the case, as *own* does not entail reflexivity: ‘*For my friends, their true selves were being revealed to them, but my own self never revealed itself to me.*’ In a case like this, where *own* occurs between *my* and *self*, you are not guaranteed a reflexive interpretation.

<sup>3</sup>This raises interesting issues with a Reinhart and Reuland 1993 style typology of anaphors as  $\pm R$  and  $\pm \text{SELF}$ . Under this analysis of English, English anaphors might be seen as  $+R$  and  $+\text{SELF}$ , in the way that Anagnostopoulou and Everaert (1999) describe for Greek. There are issues to work out if this is how English anaphors are to be analyzed (in the same way that issues arise for Greek). (*Thanks to Nikos Angelopoulos for pointing this out to me.*)

<sup>4</sup>I set aside the case features on the pronoun, which some may want to include alongside these other nominal features. For a discussion of that, see Ahn and Kalin (*forthcoming*). The case features of the whole self-phrase are set aside as an open question.

### 3.1 Two Analytical Approaches to $\varphi$ -Features

- ◆ Some approaches treat bound pronouns as  $\varphi$ -deficient “minimal pronouns” that get their  $\varphi$ -features value during the derivation – **“Derivational Approaches”**
  - ▶ Kratzer: a functional head<sup>5</sup> values reflexive anaphors’  $\varphi$ -features via Feature Transmission
  - ▶ Others: AGREE with the nominal antecedent values reflexive anaphors’  $\varphi$ -features
    - (e.g., Heinat 2006, Reuland 2006, Rooryck and Vanden Wyngaerd 2011)
- ◆ Others treat bound pronouns as having their  $\varphi$ -features specified as soon as  $\varphi$ -bundles are merged/built
  - ▶ This sort of idea is compatible with other works that do not for syntactic feature matching, but rather rely on interpretive compatibility (e.g., Heim 2008, Hicks 2009, Safir 2014)
  - ▶ Heim argues that  $\varphi$ -features correspond to presuppositions in the semantics, effectively (though not directly) causing  $\varphi$ -features of a bound pronoun to match those of the antecedent

## THEORETICAL QUESTIONS

- ◆ What is/are the mechanism(s) that yield feature matching?
- ◆ Are the pronouns in reflexive self-phrases uniform, regarding whether their  $\varphi$ -features are derivationally checked/valued?

### 3.2 English Mismatches

- ◆ Let us continue by denying<sup>6</sup> the universality of the generalization that the  $\varphi$ -features in a reflexive must match the  $\varphi$ -features of the antecedent
  - ▶ The pronominal possessor and the antecedent of binding need not match in  $\varphi$ -features:<sup>7</sup>

- (12) a. I wouldn't blame **your** self!  
 [#:sg,  $\pi$ :1] [ $\pi$ :2]
- b. **Everyone** loves **them** selves  
 [#:sg,  $\pi$ :3] [#:pl,  $\pi$ :3]
- c. **Each of us** is defending **our** selves  
 [#:sg,  $\pi$ :3] [#:pl,  $\pi$ :1]
- d. **At least one of you** believes in **your** self  
 [#:sg,  $\pi$ :3] [ $\pi$ :2]
- e. **Your majesty** needs to protect **your** self  
 [#:sg,  $\pi$ :3] [ $\pi$ :2]
- (Collins and Postal 2012)

<sup>5</sup>This head, in turn, will have gotten its features under a relationship with a separate nominal; e.g., the subject.

<sup>6</sup>The generalization can be made universal if (i) the feature-matching syntactic operation is more nuanced in how/when it applies, and/or (ii) the syntactic  $\varphi$ -features that value the features of the pronoun need not be the overtly manifested  $\varphi$ -features on the antecedent.

<sup>7</sup>Data like (12c) show that Kratzer's (2009) analysis of German bound pronouns does not obviously extend to the pronouns in English reflexives; the form of *be* ('is') suggests that  $v^0$  has 3sg  $\varphi$ -features, which should be incompatible with building *our* from a minimal pronoun under Feature Transmission.

- There can be mismatch between the  $\sqrt{\text{SELF}}$  and the antecedent:

- (13) a. **You guys** pushed your **self**, drove your **self**, sacrificed, trained and competed  
 [#:pl]                      [#:sg]                      [#:sg]                      (*M. Romney 2002*)
- b. **The team** credits them **selves**  
 [#:sg,  $\pi:3$ ]                      [#:pl]

- Previous work has been established that features of the maximal DP (whose head N would be  $\sqrt{\text{SELF}}$  in English) can differ from the features of the pronoun (cf. Greek clitic doubling; Iatridou 1988, Anagnostopoulou and Everaert 1999)

- There can be mismatch between the  $\sqrt{\text{SELF}}$  and the pronoun:

- (14) a. %Everyone loves **them** **self**  
 [#:pl,  $\pi:3$ ]                      [#:sg]
- b. %We each did it **our** **self**  
 [#:pl,  $\pi:1$ ]                      [#:sg]
- c. %We all need to ask **our** **self** [a very serious question]  
 [#:pl,  $\pi:1$ ]                      [#:sg]                      (*ABC Nightline*)

⇒ **These are serious problems for analyses that treat the generalization in (2) as a premise/explanandum**

- At the same time, not just anything goes

- (15) a. \***The book** fell over by it**selves**.  
 b. \***He**<sub>4</sub> behaved **your**<sub>4</sub>**self**.

⇒ Whatever rules out these forms must **not** make any appeal to a mechanism that requires a matching of  $\varphi$ -features

### 3.3 Referential Construal

- ♦ Intuitively, **the constraint seems to be interpretive** – the pronoun and anaphor must be interpretively compatible
  - (similar views in, e.g., Heim 2008, Hicks 2009, Safir 2014)
- ♦ Interpretive compatibility for bound pronouns appears to be something like ‘referential construability’
  - *each of us* and *ourselves* are **interpretively identical enough**
  - Similar to proxy readings: statues and a person are identical enough<sup>8</sup>

(16) **Ringo** admired **himself** (=the statue of Ringo)

    - ‘him’ is identical enough to ‘Ringo’
  - It is **not** identity between syntactic features that is necessary in English
    - ‘each of us’ (3SG) can be construed as identical to ‘us’ (1PL)
  - This construability is enough to rule out data like (15)
    - ‘he’ cannot be construed as identical to ‘you’

<sup>8</sup>See Reuland and Winter 2009 for a formal analysis that derives this ‘identical enough’ quality for proxies.

- ♦ What matters is how the pronoun/antecedent is construed – implicating the role of the interpretation of (not the formal features of) the antecedent
  - ▶ Discussed by Collins and Postal (2012) in their investigation of imposters
    - (17) *[Spoken to a king]*  
**Your majesty** must protect **yourself/himself**.
    - (18) *[Spoken by a parent to a child]*  
**Mommy and Daddy** need some time to **ourselves/themselves**.
  - They note the generalization that the features of the anaphor can match the features of the “ultimate antecedent” (in the case of addressing ‘*your majesty*’, the ultimate antecedent can be construed as 2nd person or 3rd person masculine) – Collins and Postal 2012:Ch.14
  - ▶ ‘*Each of us*’ can be construed as ‘the group including the speaker’, allowing felicitous binding of ‘*ourselves*’ – note that **context may drive the gender choice in** the matching condition
    - (19) *[Spoken by a single woman in a group of women]*  
**Each of us** is doing it **ourselves/%ourself/herself**.
    - (20) *[Spoken by a single man in a group of men]*  
**Each of us** is behaving **ourselves/%ourself/himself**.
  - ▶ ‘*They*’ can be construed as an indefinite<sup>9</sup> individual of unknown/irrelevant gender, allowing felicitous binding by QPs
    - (21) *[Spoken about a group of mixed-gender artists]*  
**Every artist** ought to express **%themselves/%themself/%himself**.
  - ▶ For some speakers, ‘*they*’ can even occur where the gender identities of the members of the QP are the same and known to the speaker<sup>10</sup>
    - (22) *[Spoken about an individual of unknown gender]*  
**Whoever that is** ought to control **themselves/%himself**.
    - (23) *[Spoken about an individual with non-binary gender identity]*  
**Kim** wrote a book by **%themselves/%themself/#himself**.
      - (*lots of inter-speaker variation is observed in contexts like these*)
  - ▶ Groups of individuals can be construed as a collection of individuals or a single inanimate entity
    - (24) **The local football team** organizes the weekly tailgate **itself/themselves**.
- ♦  $\varphi$ -features of the relevant type may not even be syntactically represented on the antecedent
  - ▶ Common nouns in English (even ones that appear gendered, according to social norms) don’t have gender  $\varphi$ -features (examples from Ackerman 2018)
    - (25) a. **#**At the farmhouse, **the cowgirl<sub>1</sub>** left **his<sub>1</sub>** lasso in the kitchen.
    - b. At the Halloween party, **the cowgirl<sub>1</sub>** left **his<sub>1</sub>** lasso in the kitchen.
  - “The feminine definition associated with cowgirl is thus defeasible, since gender agree-

<sup>9</sup>There are large groups of people (including me) for whom ‘*they*’ can also be used in contexts with definite individuals, where the speaker knows the referent to have male/female gender identity (and has possibly already committed to it in conversation), but does not invoke it (again). e.g., ‘*I know {the secret winner of the contest}<sub>6</sub> has told {his}<sub>6</sub> friends that {he}<sub>6</sub> won. [...] {Their}<sub>6</sub> opponents have not yet been informed.*’ (See also Conrod 2017.)

<sup>10</sup>This also does not address non-binary gender uses of *they/them*. See Ackerman 2018 for discussion and references.

ment between *cowgirl* and *his* should be impossible if the property being checked is a  $\varphi$ -feature" (Ackerman:p.4)

- Antecedent nominals like *the cowgirl* cannot serve to provide a  $\varphi$ -value of [ $\gamma$ : +F] to any reflexive pronoun with an unvalued gender feature
- Names might have gender features (Bjorkman 2017), but their gender features must be flexible enough to account for gender identity ("social gender", Ackerman 2018)
  - Thus expressions like '*Sue likes himself*' are **not** ungrammatical; where deviant, it is infelicity (Conrod 2017, 2018)
    - ◇ Sue  $\Rightarrow$  Individual of female gender  $\Rightarrow$  infelicitous as binding *himself*
    - ◇ Sue  $\Rightarrow$  Individual of non-binary gender  $\Rightarrow$  infelicitous as binding *herself*
- **A lack of gender  $\varphi$ -features on the antecedent is problematic for analyses where bound pronouns are  $\varphi$ -deficient and rely on valuation from the antecedent**
- ◆ Instead what constrains felicity of particular bound pronouns in contexts like (25) is the **interpretation** of  $\varphi$ -features in context
  - What matters is **referential construability**<sup>11</sup>:

**(26) CONSTRUED REFERENCE CONDITION IN ENGLISH**

The bound pronoun in an English reflexive must be able to be construed as referring to its antecedent

- **Basic Idea:** The felicity of a pronoun in a reflexive anaphor is constrained in the same way as other (discourse-anaphoric) pronouns
- More work is necessary to define exactly how this notion of **referential construability** is precisely defined, constrained, and implemented by the grammar
  - Indeed, this is a (purposefully) weak theory, which may be able to generate expressions that are deemed unacceptable
  - Referential construability alone is not enough; auxiliary constraints (linguistic and social) will be necessary to capture the range of (un)acceptable data
- ◆ To expose the need for auxiliary constraints, consider a gap in the mismatches that we have seen
  - **Not attested: 3.SG anaphors with a 1st/2nd person or PL antecedent**
    - (27) a. **The football team** organizes the weekly tailgate **itself/themselves**.
    - b. **The football players** organize the weekly tailgate **\*itself/themselves**.
    - (28) [*Spoken by a single man in a group of men*]
      - a. **Each of us** is behaving **himself/ourselves/%ourself**.
      - b. **We** are each behaving **\*himself/ourselves/%ourself**.
  - This suggests that there is a morphosyntactic division in these reflexive pronouns, which goes beyond the interpretive constraint in (26) — *We will return to this*
- ◆ Let us turn to **contexts that alter how to refer** but which do not allow all types of mismatch
  - Reinforcing that there are additional constraints beyond the construed reference condition supplied by anaphor binding

<sup>11</sup>I leave open what grammatical/non-grammatical variables/operations should be used in modeling "construal".



### 3.4 Counter-Indexical Contexts

- ◆ One reason to believe construability is what matters in English are so-called **counter-indexical (CID) contexts** such as (29):

(29) *[Speaker A is going to the airport shortly, and asks Speaker B whether it's a good idea to bring food or buy food on the plane. B replies...]*

- a. If I were you, I'd do **my**self a favor and bring food! [✓1 ant, 1 ana]
- b. If I were you, I'd do **your**self a favor and bring food! [✓1 ant, 2 ana]

- ▶ In this sort of shifted context<sup>12</sup> that can be introduced with 'if I were someone else', the local syntactic antecedent of binding is a 1st person pronoun, but the self-phrase can contain a 2nd person pronoun

- Because they are construed as identical in the CID context where 'I' = 'you'

- ◆ As a first constraint, consider the fact that this CID context only allows for  $\varphi$ -mismatch with modals

(30) *[same context]*

- a. When I was you (in a dream), I did **my**self a favor and brought food! [✓1 ant, 1 ana]
- b. \*When I was you (in a dream), I did **your**self a favor and brought food! [\*1 ant, 2 ana]

- ▶ Which  $\varphi$ -features a pronoun in a reflexive self-phrase can bear —i.e., the availability of  $\varphi$ -mismatch— **depends on irrealis mood**

- ◆  $\varphi$ -mismatching in these CID contexts is constrained in complex ways

- ▶ **The reflexive pronoun cannot be 3.SG**: compare (29)–(32) to (33)

(31) *[Speaker A looks on at Speakers B and C, who are about to move the fridge, just the two of them. A says...]*

- a. If I were you guys, I wouldn't try to move the fridge by **my**self! [✓1 ant, 1 ana]
- b. If I were you guys, I wouldn't try to move the fridge by **yourselves**! [✓1 ant, 2.PL ana]

(32) *[Speakers A and B look on at Speakers C and D, who are having a meeting to plan an event. They note that C and D have been working alone and that it is a lot of work. B says...]*

- a. If I were them, I wouldn't try to plan the whole thing by **my**self! [✓1 ant, 1 ana]
- b. If I were them, I wouldn't try to plan the whole thing by **themselves**! [✓1 ant, 3.PL ana]

(33) *[Speakers A and B look on at Speaker C, who is holding a second place trophy. They note that C looks unhappy. B says...]*

- a. If I were her, I'd be proud of **my**self! [✓1 ant, 1 ana]
- b. \*If I were her, I'd be proud of **herself**! [\*1 ant, 3.SG ana]

- ▶ The contrast between reflexive pronouns *them* and *her* is perhaps surprising

- This seems to be a constraint on particular  $\varphi$ -features, and not reference

<sup>12</sup>In other investigations to anaphors in shifted CID contexts (e.g., Lakoff 1996, Kamholz 2012, Kauf 2017), what is explored is the interpretation of anaphors that  $\varphi$ -match their closest syntactic antecedent. For example, they have explored sentences like 'If I were you, I'd be looking at myself', and whether it is a looking-at-addressee action or looking-at-speaker action. As far as I know, CID contexts with  $\varphi$ -mismatch on the bound anaphor have not been given serious investigation up to this point.

◇ It is acceptable to have a mismatching antecedent for all uses of *them*

- Including plural-referring *them* in (32), as well as<sup>13</sup> nonspecific *them* as in (34)

(34) If I were any of them, I'd be proud of **myself/themselves**

- Moreover, **the antecedent must be 1.SG** – any of the contexts above repeated with 'we' is unacceptable

(35) *Speaker A is going to the airport shortly, and asks Speakers B and C whether it's a good idea to bring food or buy food on the plane. B replies on behalf of B and C...*

a. If we were you, **we**'d do **ourselves** a favor and bring food! [✓1.PL ant, 1.PL ana]

b. \* If we were you, **we**'d do **yourself** a favor and bring food! [\*1.PL ant, 2.SG ana]

(36) *[Speakers A and B look on at Speakers C and D, who are having a meeting to plan an event. They note that C and D have been working alone and that it is a lot of work. B says to C...]*

a. If we were them, **we** wouldn't try to plan the whole thing by **ourselves**! [✓1.PL ant, 1.PL ana]

b. \* If we were them, **we** wouldn't try to plan the whole thing by **themselves**! [\*1.PL ant, 3.PL ana]

- ◆ This data on the English CID contexts together yields three generalizations

### (37) SOME PRELIMINARY CONSTRAINTS ON $\phi$ -MISMATCH IN ENGLISH COUNTER-IDENTICALS

If (i) the antecedent of binding is a 1.SG pronoun, (ii) the mood is irrealis, and (iii) the reflexive self-phrase does not contain a 3.SG pronoun, then the pronoun and antecedent need not match  $\phi$ -features to allow a grammatical reflexive interpretation in a CID context. If any of the conditions is not met, a mismatching reflexive pronoun is ill-formed.

- *There appear to be additional constraints on when mismatch is permitted between a reflexive pronoun and its antecedent in CID contexts (see Appendix B)*

## 3.5 Experimentally Confirming Constraints

- ◆ These native-speaker linguist judgments have been confirmed with a pilot study on Amazon Mechanical Turk task ( $n=78$ )
  - Each sentence was accompanied by a comic strip to provide context

<sup>13</sup>Additionally, specific *them* (e.g., person whose known male/female gender identity is not being revealed), as well as gender non-binary *them* (i.e., person whose known gender is non-binary) seem to work fine here too, for speakers who accept these usages of *them*.

- 1.SG antecedent with 2.SG reflexive pronoun:



- 1.PL antecedent with 2.SG reflexive pronoun:



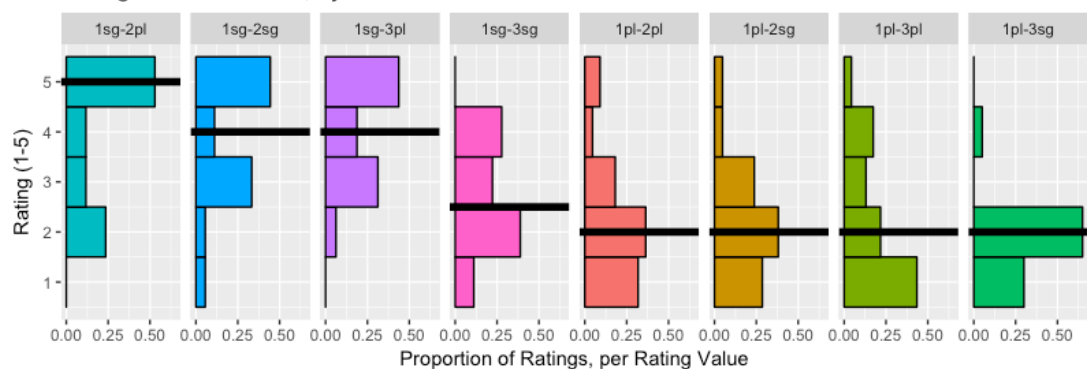
- Median scores so far are given below (1="unnatural"; 5="natural")

(38) Ratings for  $\phi$ -mismatch anaphors in conditionals

		Anaphor					
		1.SG	2.SG	3.SG	1.PL	2.PL	3.PL
Ant.	1.SG	—	4	2.5	—	5	4
	1.PL	—	2	2	—	2	2

- There is a sharp change in the distribution of the ratings when the constraints on antecedents/pronouns are not met<sup>14</sup> (Dark black lines indicate median score)

(39) Ratings of Mismatches, by Condition



- This corroborates the generalizations that 3SG pronouns cannot mismatch their antecedents, and that mismatch requires the antecedent to be 1SG

<sup>14</sup>Further details of the data and analysis are given in the appendix. A full-fledged follow-up study is in progress.



## 4 Interim Summary

### ♦ $\varphi$ -features are visible at LF

- ▶  $\varphi$ -compatibility with an antecedent is mediated by interpretation (cf. (26))

#### (26) **Construed Reference Condition in English**

The bound pronoun in an English reflexive must be able to be construed as referring to its antecedent

- e.g., ✓*Each of us is behaving ourselves*

### ♦ Anaphors are not a uniform class, morphosyntactically

- ▶ While some  $\varphi$ -bundles allow mismatch from the antecedent, 3.SG ones do not (cf. (37iii))

#### (37) **Some Constraints on $\varphi$ -Mismatch in English Counter-Identicals**

If (i) the antecedent of binding is a 1.SG pronoun, (ii) the mood is irrealis, and (iii) the reflexive self-phrase does not contain a 3.SG pronoun, then the pronoun and antecedent need not match  $\varphi$ -features to allow a grammatical reflexive interpretation in a CID context. If any of the conditions is not met, a mismatching reflexive pronoun is ill-formed.

- e.g., \**We are behaving himself*

## 5 A Dual Approach to $\varphi$ -Features

### ♦ Reflexive anaphors do not uniformly get their $\varphi$ -features valued in the derivation

- ▶ Premise: Reflexive anaphors structurally contain a (bound) pronoun
- ▶ Premise: Not all (bound) pronouns are  $\varphi$ -deficient
- ▶ Premise: Whenever a pronoun's  $\varphi$ -features are derivationally valued, those  $\varphi$ -features must match the antecedent's
- ▶ Observation: Reflexive pronouns do not always match the  $\varphi$ -features of the antecedent

∴ **Reflexive pronouns are not always  $\varphi$ -deficient**

- ♦ Perhaps one could rescue a valuation-across-the-board approach by positing covert elements that give rise to the appearance of  $\varphi$ -mismatch, without  $\varphi$ -mismatch at a derivational level

- ▶ i.e., something like the following:

(35') a. If  $I_5$  were  $them_8$ ,  $I_5$  wouldn't try to plan the whole thing by  $my_5$ self!

b. If  $I_5$  were  $them_8$ ,  $I_5$  wouldn't try to  $OP_8$  plan the whole thing by  $them_8$ selves!

- ▶ A covert-element approach would still require extra steps to explain the fact that **3.SG reflexive pronouns never mismatch their antecedents**:

(28) a. **Each of us** is behaving **ourselves**/°**ourself**/**himself**.

b. **We** are each behaving **ourselves**/°**ourself**/**\*himself**.

(33) a. If I were her, I'd be proud of **myself**!

b. \*If I were her, I'd be proud of **herself**!

◇ (Note: this is about  $\pi$  and #, and not about person alone; recall 'them')

∴ **3.SG reflexive pronouns require unique analysis**

## 5.1 3rd Singular

- Notably, English 3.SG pronouns show the most  $\varphi$ -features of any person/number
  - The only pronoun that marks distinctions in gender, animacy, or genericity

(40)

	SG	PL
1	me	us
2	you	
3.M	him	them
3.F	her	
3.INANIM	it	
3.GENERIC	one	

- Observation: English 3.SG pronouns are  $\varphi$ -valued for gender ( $\gamma$ ), unlike other (pro)nominals

(41)

	SG	PL
1	$\emptyset$	$\emptyset$
2	$\emptyset$	$\emptyset$
3	$[\pm F, \pm M]$	$\emptyset$

- Discourse-anaphoric 3.SG pronouns in English can, presumably, merge with specified  $\gamma$ -features, unconstrained by the derivation
- However, 3.SG *bound* pronouns<sup>15</sup> behave differently
  - They do not allow  $\varphi$ -mismatch from their binder

- (28) a. **Each of us** is behaving **ourselves**/%**ourself**/**himself**.  
 b. **We** are each behaving **ourselves**/%**ourself**/**\*himself**.

- (33) a. If I were her, **I'd** be proud of **myself**!  
 b. **\* If I were her, I'd** be proud of **herself**!

- This suggests their  $\varphi$ -features are **derivationally entangled** with those of the binder<sup>16</sup>

**Idea: 3.SG bound pronouns are subject to derivational constraints, due to  $\varphi$ -features**

- 3.SG is unique in exponing  $\gamma$ -features
  - This suggests that  $\gamma$ -features trigger some process/constraint for  $\varphi$ -matching/valuation

### (42) GENERALIZATION ON ENGLISH GENDER-CONDITIONED $\varphi$ -MATCH

If a bound pronoun has a gender  $\varphi$ -feature that is specified (i.e., not  $\emptyset$ ), then the bound pronoun cannot have  $\varphi$ -features that conflict with those specified on the binder.<sup>17</sup>

- In other person-number combinations, mismatch is possible: the  $\gamma$ -feature can remain unspecified, and the pronoun can go unconstrained by the morphosyntactic derivation)
- This condition is purposefully stated in general, descriptive terms

<sup>15</sup>I assume bound pronouns are identifiable by the grammar, due to a particular feature specification, e.g., the VAR feature discussed by Hicks (2009).

<sup>16</sup>Perhaps because in 3.SG bound pronouns  $\gamma$  is inherently unvalued (requiring syntactic valuation; cf. Sundaresan 2018's 3rd-PERSON anaphor). Perhaps because  $\gamma$  is valued (and there are constraints on where valued  $\gamma$ -features can appear).

<sup>17</sup>Stated more formally: If  $\gamma_{\text{pronoun}} \neq \emptyset$ , then  $\varphi_{\text{antecedent}} \subseteq \varphi_{\text{pronoun}}$

- (Different possible formal implementations which might capture (42) are briefly described in the grey box below)

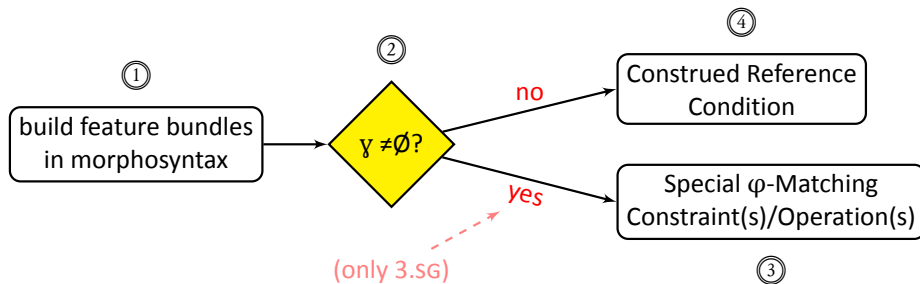
#### SOME WAYS TO FORMALLY DERIVE (42)

- ◆ I leave open the question how to formally define the  $\varphi$ -matching condition in (42)
  - ▶ It could be that this is about syntactic feature-checking (or valuation)
    - Perhaps 3.SG bound pronouns are indeed  $\varphi$ -deficient, in terms of  $\gamma$ , and that there is a syntactic feature-valuing process between the anaphor and an accessible  $\gamma$ -valuer, which may be a functional head/operator (see §B.2) or a nominal
      - ◇ At the same time, non-3.SG bound pronouns (including 3.SG discourse anaphoric pronouns) would have to not be  $\varphi$ -deficient
      - ◇ Sundaresan (2018) argues that some anaphors are  $\varphi$ -deficient while others are not, on the basis of Tamil and crosslinguistic data
  - ▶ It could be about interpretation of mismatches
    - Perhaps  $\gamma$ -features on bound pronouns is only well-formed in particular semantic/pragmatic contexts
  - ▶ It could be that this is about vocabulary insertion and how that works
    - Perhaps it is a question of where particular feature bundles are generable and which of those maps onto an available vocabulary items

## 5.2 Two Routes

- ◆ 3.SG bound pronouns are unique: their  $\gamma$ -features must match the  $\gamma$ -feature of an antecedent
- ◆ In this way, there are two algorithms for determining whether a bound pronoun  $\varphi$ -features are compatible with an antecedent
  - ▶ One route allows for  $\varphi$ -mismatch between the pronoun and its binder (non-3.SG)
  - ▶ The other disallows this, through additional constraints/operations on  $\varphi$ -matching (3.SG)

(43)



- ◇ (N.B.: this is not meant as a description of the formal derivation, but rather as a descriptive algorithm for the theoretician hypothesizing about derivations)

- ▶ ①: Feature bundles are built during morphosyntax

- e.g.,  $\begin{bmatrix} \pi: 3 \\ \#: \text{pl} \\ \gamma: \emptyset \\ \text{VAR}: x \end{bmatrix}$ , which spells-out as *they/them/their* and is interpreted as bound by  $x$

- ▶ If, as is the case for 3.SG bound pronouns, ②  $\gamma$  is not specified as  $\emptyset$ ...
  - ...because, e.g., *it* has  $\gamma$ -features valued as  $[-F, -M]$ ...
- ▶ ... then ③: invoke a separate set of constraints/operations



- Perhaps these are well-formedness constraints on possible  $\varphi$ -feature combinations between antecedents and bound pronouns (cf. (42))
  - ◊ (In morphosyntax? At LF? Both?)
- It should be noted that prospects are weak for a syntax-only solution in which the antecedent nominal values the gender  $\varphi$ -feature in 3.SG pronouns
  - ◊ Because  $\varphi$ -compatibility with an antecedent is mediated by interpretation (cf. the construed reference condition and discussion in §3, including the *cowgirl*-type examples)
- ▶ ④: **All bound pronouns are subject to the Construed Reference Condition, (26)**
  - Necessarily at LF, since it is about construal and context
- ♦ Notably the constraints/operations in ③ don't apply all the time
  - ▶ Allowing mismatch for bound pronouns that are 3.PL, 1st person, or 2nd person
- ♦ Different bound pronouns are subject to different derivations, **depending on the pronoun's  $\varphi$ -feature specification in the morphosyntax**

### 5.3 Deriving Well-/Ill-Formedness

- ♦ Let's consider some data and state explicitly how the well-/ill-formedness for each is predicted
- (44) **The team** will do it by **itself**
- Since  $y$  is specified for *it*, ③ is operative, and the  $\varphi$ -features of the antecedent match
- (45) \*/#**They** will do it by **itself**
- Since  $y$  is specified for *it*, ③ is operative, but the  $\varphi$ -features of the antecedent (namely PL) do not match, resulting in ungrammaticality and/or infelicity
- (46) **The team** will do it by **themselves**
- Since  $y$  is not specified for *them*, all that matters is Construed Reference, which can be met in this context
- (47) \*/#**He** will do it by **itself**
- Since  $y$  is specified for *it*, ③ is operative, but the  $\varphi$ -features of the antecedent (namely M) do not match, resulting in ungrammaticality and/or infelicity
- (48) #**He** will do it by **themselves**
- Since  $y$  is not specified for *them*, all that matters is Construed Reference, which cannot be met in this context: *he* cannot be construed<sup>18</sup> as a group or as having non-binary/unknown/irrelevant gender, resulting in infelicity
- (49) **This person** will do it by **themselves**
- Since  $y$  is not specified for *them*, all that matters is Construed Reference, which can be met in this context: *this person* can be construed as having non-binary/unknown/irrelevant gender

<sup>18</sup>While changing pronoun reference for an individual is possible over the course of a conversation (cf. footnote 9), it appears not to be possible within a clause. This is probably akin to alternating between informal and formal pronouns for a single individual (an idea inspired by the work of Kirby Conrod). It is an open question as to what constrains there are about changing pronouns used to refer to an individual.

- ♦ There are further constraints that have not yet been discussed
  - ▶ e.g., When mismatch is possible/impossible between the pronoun and the  $\sqrt{\text{SELF}}$  nominal
    - (Recall data like ‘*We all need to ask ourselves a very serious question*’)
  - ▶ Other constraints on mismatch in CID contexts are discussed in Appendix B

## 5.4 $\sqrt{\text{SELF}}$ Number Mismatches

- ♦ So far: the pronoun can  $\varphi$ -mismatch its antecedent in a ways that have interpretive constraints/effects
- ♦ Briefly: the number features on the  $\sqrt{\text{SELF}}$  nominal can mismatch the number of the antecedent and/or the reflexive pronoun

- (50) a. **Each of us** has lifted the table **our** **selves**  
            $[\#:\boxed{\text{sg}}, \pi:3]$                                      $[\#:\boxed{\text{pl}}, \pi:1]$   $[\#:\boxed{\text{pl}}]$
- b. %**We** have all lifted the table **our** **self**  
            $[\#:\boxed{\text{pl}}, \pi:1]$                                      $[\#:\boxed{\text{pl}}, \pi:1]$   $[\#:\boxed{\text{sg}}]$

- ▶ Number mismatch between the antecedent/pronoun and the  $\sqrt{\text{SELF}}$  can yield particular interpretations

(51) We have all lifted the table ourselves/%ourself.

- For those that allow both *selves* and *self* here, many people get a contrast in distributivity
- Namely that *ourselves* likely gets a distributive interpretation, whereas *ourself* likely gets a collective interpretation

### ♦ Number on $\sqrt{\text{SELF}}$ can have interpretive effects

- ▶ More work is necessary to uncover the precise interpretive effects, and what constraints there are – such investigation is not taken up here

## 6 Conclusions

### 6.1 Bound Pronouns and $\varphi$ -(mis)match

- ♦ These constraints/generalizations we have seen are meant to be seen as **descriptive explananda** to be captured by a deeper analysis

(26) **Construed Reference Condition in English**

The bound pronoun in an English reflexive must be able to be construed as referring to its antecedent

(37) **Some Constraints on  $\varphi$ -Mismatch in English Counter-Identicals**

If (i) the antecedent of binding is a 1.SG pronoun, (ii) the mood is irrealis, and (iii) the reflexive self-phrase does not contain a 3.SG pronoun, then the pronoun and antecedent need not match  $\varphi$ -features to allow a grammatical reflexive interpretation in a CID context. If any of the conditions is not met, a mismatching reflexive pronoun is ill-formed.

(42) **Generalization on English Gender-Conditioned  $\varphi$ -Match**

If a bound pronoun has a gender  $\varphi$ -feature that is specified (i.e., not  $\emptyset$ ), then the bound pronoun cannot have  $\varphi$ -features that conflict with those specified on the binder.

- ◆ They lead to some larger conclusions

### ❶ There are two ways for a bound pronoun to have well-formed $\varphi$ -features

- Most can  $\varphi$ -conflict with the local antecedent of binding
  - ◇ (1st, 2nd, and 3.PL can behave this way)
  - ◇ These bound pronouns are candidates for merging with all  $\varphi$ -features specified
    - ▷ As must be possible for (certain) discourse-anaphoric pronouns
- But a 3.SG one never  $\varphi$ -conflicts with its antecedent
  - ◇ Here, the derivation requires the pronoun's  $\varphi$ -features to match a binder; possibly because of  $\varphi$ -deficiency that requires derivational valuation

#### WE OUGHT TO REPLACE (2) IN ENGLISH WITH (26) AND (42)

- ◆ Recall (2) suggests that English reflexive pronouns will always  $\varphi$ -match their antecedent
  - ▷ This is true of only 3.SG reflexive pronouns
- ◆ Instead we need a weaker constraint
  - ▷ One about construed reference (26) applies to all reflexive pronouns
- ◆ 3.SG reflexive pronouns never violate (2) in English
  - ▷ They are subject to additional derivational constraints, loosely described in (42), because how its  $\varphi$ -features (particularly  $\gamma$ ) are valued

### ❷ Morphosyntax builds reflexive anaphors

- $\varphi$ -feature bundles for bound pronouns are built in the morphosyntax
  - ◇ If English makes any use of bound pronouns that are  $\varphi$ -deficient (e.g.,  $\gamma$ -deficient) at the point of merge, such deficient pronouns are required only for 3.SG
- How these  $\varphi$ -features are valued influences the derivation and where mismatch is possible
  - ◇ e.g., Part (iii) of (37) has to do with the morphosyntax of  $\varphi$ -features, as in (42)

### ❸ $\varphi$ -features must be active at LF

- Concepts like 'be construed as' in (26) are certainly interpretive
  - ◇ Social gender (continuously defined) matters, in ways different ways than grammatical gender (categorically defined) – even assuming gender manifests in English syntax
  - ◇ Contexts (such as CID contexts) can manipulate how  $\varphi$ -features are interpreted
- Assuming interpretation is involved in where mismatches are possible (and possibly involved in what  $\varphi$ -features match with), this means these features are interpretable at LF
- This contrasts with the view that is quite common amongst syntactic binding theorists:
  - ◇ "The form of the anaphor (e.g. the reflexive) plays no real role in the interpretation afforded [...] This means that the agreement features are essentially bereft of semantic interpretation" (Drummond et al. 2011:399)
- Instead, what has syntactic roots ( $\varphi$ -features inside self-phrases) also has interpretational consequence (see also Heim 2008, Safir 2014)



## 6.2 “Binding” Across Modules

- ◆ Properties of binding are **not solely the product of syntax**
  - ▶ Our investigation into  $\varphi$ -features and nominal structures English reflexive pronouns has depended on multiple components of grammar
  - ▶ Some syntactic
    - Building English reflexive anaphors (pronoun + REFL +  $\sqrt{\text{SELF}}$ )
    - Building the  $\varphi$ -bundles for the pronoun
  - ▶ Some postsynactic (based on syntactic input; see Ahn and Kalin *forthcoming*)
    - The case form of the reflexive pronoun
    - The (lack of) interpretation of  $\sqrt{\text{SELF}}$  in reflexive self-phrases
  - ▶ Some semantic/pragmatic (based on syntactic input)
    - Determining whether a bound pronoun can be construed as referring to an antecedent or not, on the basis of  $\varphi$ -features
    - Semantic constrains mismatches (e.g., modality) in the CID contexts
- ◆ We need a multi-module approach to binding, whose name makes this obvious

### “Distributed Binding Theory”

- ◆ Other discussion of English-type reflexivity have also exposed that binding is done at multiple modules and at the interfaces
  - ▶ Some of it is syntactic
    - Reflexive features in the (extended) verbal projection (e.g., Labelle 2008, Kratzer 2009, Reuland 2011, Ahn 2015)
  - ▶ Some of it is semantic/pragmatic (based on syntactic input)
    - What types of meanings are possible for anaphors (e.g., Reuland and Winter 2009)
  - ▶ Some of it is phonological (based on syntactic input)
    - Where anaphors are prosodically weak/strong (e.g., Ahn 2015)
- ◆ This talk hasn’t aimed to produce definitive analyses for all of these problems
  - ▶ Rather, the goal is to show that binding does not emerge from a single grammatical module
  - ▶ And working on binding is interface work

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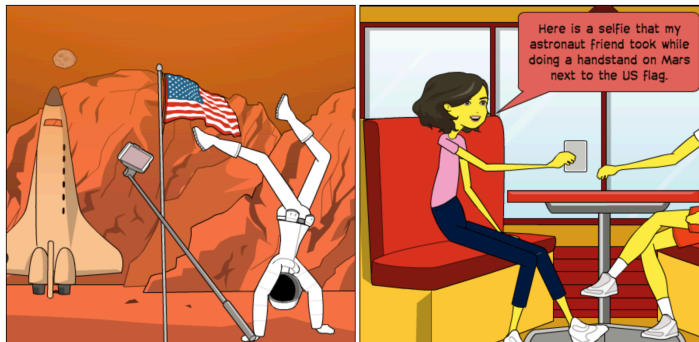
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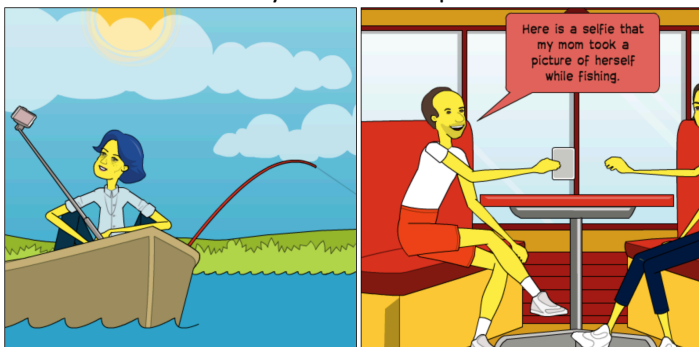
## A Rating Task Details

### ◆ Introduction to the task:

- ▶ “Here is a selfie that my astronaut friend took while doing a handstand on Mars next to the US flag”



- ▶ “Here is a selfie that my mom took a picture of herself while fishing”



### ◆ Target Stimuli:

- ▶ “If I were you, I’d do yourself a favor and bring food”



- ▶ “If we were you, we’d do yourself a favor and bring food”



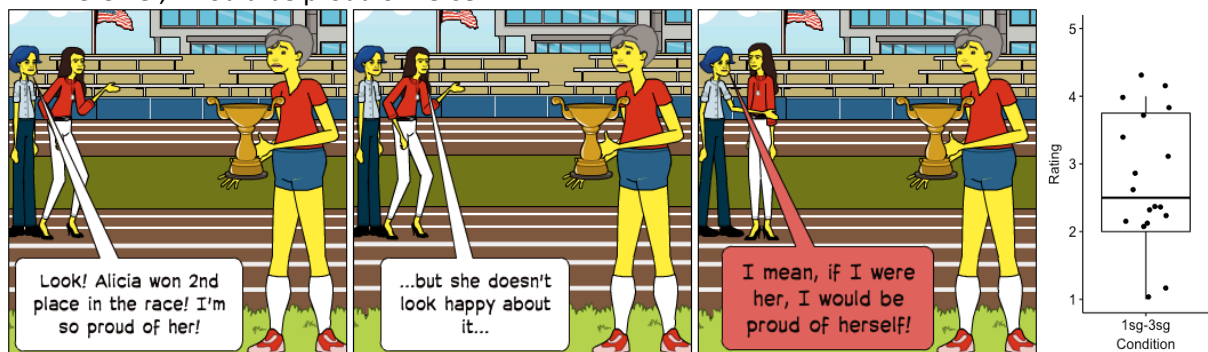
- “If I were you guys, I wouldn’t try to move the fridge by yourselves”



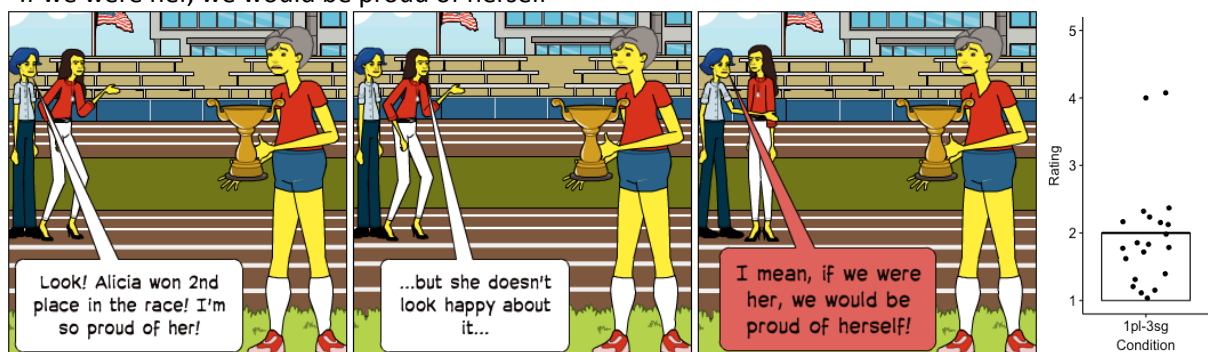
- “If we were you guys, we wouldn’t try to move the fridge by yourselves”



- “If I were her, I would be proud of herself”



- “If we were her, we would be proud of herself”



- “If I were you, I wouldn’t try to plan the whole thing by themselves!”

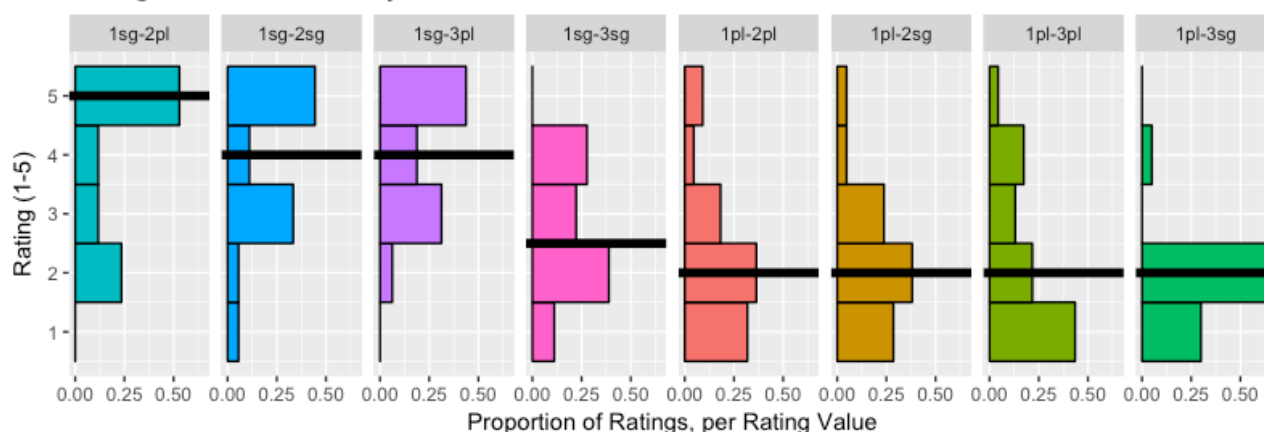


- “If we were you, we wouldn’t try to plan the whole thing by themselves!”



◆ Summary of results:

Ratings of Mismatches, by Condition



- ◆ T-tests confirm what can be seen visually above (data formatted as “*T-value*; *p* significance”)

	1pl-2pl	1pl-2sg	1pl-3pl	1pl-3sg	1sg-2pl	1sg-2sg	1sg-3pl
1pl-2sg	-0.1; ns						
1pl-3pl	-0.1; ns	-0.1; ns					
1pl-3sg	-1.2; ns	-1.1; ns	-1.1; ns				
1sg-2pl	<b>4.7; ***</b>	<b>4.7; ***</b>	<b>4.9; ***</b>	<b>5.7; ***</b>			
1sg-2sg	<b>4.5; ***</b>	<b>4.5; ***</b>	<b>4.7; ***</b>	<b>5.5; ***</b>	-0.3; ns		
1sg-3pl	<b>4.8; ***</b>	<b>4.8; ***</b>	<b>5.0; ***</b>	<b>5.8; ***</b>	0.2; ns	0.4; ns	
1sg-3sg	1.2; ns	1.3; ns	1.4; ns	2.4; ns	<b>-3.3; *</b>	<b>-3.1; *</b>	<b>-3.4; *</b>

Pairwise comparisons using t tests with pooled SD (df=147)

- The 3 conditions deemed grammatical by native speaker linguists (**1sg-2pl, 1sg-2sg, 1sg-3pl**) were all given ratings significantly different from (in a positive direction) the other conditions
- In addition, the ratings given to the 1sg-3sg condition was not significantly different from

the ratings given to the conditions with 1PL antecedents

- This corroborates the generalizations that 3SG pronouns cannot mismatch their antecedents, and that mismatch requires the antecedent to be 1SG

## B Generalizations on $\varphi$ -Mismatch in English Counter-Identicals

### B.1 Review of the First Three Generalizations

#### ① The embedded clause must be in the irrealis mood

- (52) a. If I<sub>5</sub> were you<sub>8</sub>, I<sub>5.as.8</sub> would buy myself<sub>5.as.8</sub>/yourself<sub>5.as.8</sub> a new car.  
 b. When I<sub>5</sub> was you<sub>8</sub> in a dream, I<sub>5.as.8</sub> bought myself<sub>5.as.8</sub>/\*yourself<sub>5.as.8</sub> a new car.

- Perhaps the semantics of irrealis mood is necessary
- Perhaps it has to do with an operator in the syntax, introduced by irrealis mood

#### ② The antecedent has to be 1.SG

- (53) a. If I<sub>5</sub> were you<sub>8</sub>, I'd do it myself<sub>5.as.8</sub>/yourself<sub>5.as.8</sub>.  
 b. If we<sub>5</sub> were you<sub>8</sub>, we'd do it ourselves<sub>5.as.8</sub>/\*yourselves<sub>5.as.8</sub>.  
 c. If you<sub>5</sub> were me<sub>8</sub>, you'd do it yourself<sub>5.as.8</sub>/\*myself<sub>5.as.8</sub>.

- Perhaps this has to do with semantic/syntactic privileges afforded to the speaker of the utterance

#### ③ A 3.sg reflexive pronoun can't mismatch the antecedent

- (54) a. If I<sub>5</sub> were her<sub>8</sub>, I'd be proud of myself<sub>5.as.8</sub>/\*herself<sub>5.as.8</sub>  
 b. If I<sub>5</sub> were him<sub>8</sub>, I'd be proud of myself<sub>5.as.8</sub>/\*himself<sub>5.as.8</sub>  
 c. If I<sub>5</sub> were them<sub>8</sub>, I'd be proud of myself<sub>5.as.8</sub>/themselves<sub>5.as.8</sub>  
 d. If I<sub>5</sub> were them<sub>8</sub>, I'd be proud of myself<sub>5.as.8</sub>/themself<sub>5.as.8</sub>

- Recall that this is a constraint on syntactic  $\varphi$ -features and not number of referents: examples with *themselves/themself* are fine with singular referents

### B.2 Three Additional Generalizations

#### ④ The antecedent cannot be a local object(?), though passive subjects will do

- (55) If I<sub>5</sub> were in your<sub>8</sub> shoes...
- I<sub>5.as.8</sub>'d ask the administrator to assign me<sub>5.as.8</sub> to myself<sub>5.as.8</sub>/\*yourself<sub>5.as.8</sub>
  - I<sub>5.as.8</sub>'d ask the administrator to assign you<sub>5.as.8</sub> to yourself<sub>5.as.8</sub>/\*myself<sub>5.as.8</sub>
  - I<sub>5.as.8</sub>'d ask the administrator to assign the task(s) to myself<sub>5.as.8</sub>/yourself<sub>5.as.8</sub>
  - I<sub>5.as.8</sub>'d ask PRO<sub>5.as.8</sub> to be assigned to myself<sub>5.as.8</sub>/yourself<sub>5.as.8</sub>

- Notice the interpretation here
  - In the irrealis clause, all pronouns/anaphors are interpreted in the same way: me-in-your-shoes



- This yields maps onto a reflexive predicate: two identical (enough) arguments
- Perhaps this is a condition on interveners?
  - That would mean that, in CID contexts, there are syntactically-specified features/operators that lead to the apparent mismatch
- In this way, 'me' in (55a) intervenes between the reflexive pronoun and the feature/operator that allows it to have an interpretation of *5.as.8*
  - Similarly for 'you', as in (55b), but 3rd person expressions do not intervene, as in (55c)
  - This sounds like 1/2 blocks long distance antecedents
- Of course, the 1st person subject doesn't intervene between the features/operators and the bound pronoun
  - So the relevant features/operators must be lower than subject position, in the middle-field, but not in the high left-periphery of the clause
  - This is a similar position to where modality might be specified; recall that irrealis mood is necessary for mismatch in CID contexts
- Moreover, if *me* is interpreted as in the non-counterfactual sense, then mismatch is possible again
 

(56) If *I*<sub>5</sub> were in your<sub>8</sub> shoes, *I*<sub>5.as.8</sub> 'd ask them to assign *me*<sub>5</sub> to myself<sub>5.as.8</sub>/*yourself*<sub>5.as.8</sub>

  - This suggests that the two pronouns in object position need to match *only* if both are interpreted counterfactually

#### ⑤ Mismatch is impossible if there is another matching anaphor in the predicate/clause

- (57) a. If *I*<sub>5</sub> were you<sub>8</sub>, *I*<sub>5.as.8</sub> 'd keep *myself*<sub>5.as.8</sub> to myself<sub>5.as.8</sub>/*\*yourself*<sub>5.as.8</sub>  
 b. If *I*<sub>5</sub> were you<sub>8</sub>, *I*<sub>5.as.8</sub> 'd keep *yourself*<sub>5.as.8</sub> to yourself<sub>5.as.8</sub>/*\*myself*<sub>5.as.8</sub>
- This suggests some kind of grammatical constraint that, when the mechanism that allows mismatch applies, it applies uniformly
  - (Perhaps this is defined by the scope of some operator in the middle-field)

#### ⑥ Adnominal ERs don't allow mismatch, (58); even though agentive ERs and by-Xself do, (59)

- (58) a. If *I*<sub>5</sub> were you<sub>8</sub>, *I*<sub>5.as.8</sub> would myself<sub>5.as.8</sub>/*\*? yourself*<sub>5.as.8</sub> formulate it differently  
 b. If *I*<sub>5</sub> were you<sub>8</sub>, *I*<sub>5.as.8</sub> myself<sub>5.as.8</sub>/*\*yourself*<sub>5.as.8</sub> would formulate it differently
- (59) a. If *I*<sub>5</sub> were you<sub>8</sub>, *I*<sub>5.as.8</sub> would do it myself<sub>5.as.8</sub>/*yourself*<sub>5.as.8</sub>.  
 b. If *I*<sub>5</sub> were you<sub>8</sub>, *I*<sub>5.as.8</sub> would do it by myself<sub>5.as.8</sub>/*yourself*<sub>5.as.8</sub>.
- (See Ahn 2010 for a discussion of these terms; in this case, it is similar to the notion of *additive* vs. *exclusive* intensifiers employed by Eckardt 2001)
    - At the same time, it's not that adnominal ERs must match the 'real' antecedent; it can match a local counter-identical pronoun
- (60) If *I*<sub>5</sub> were you<sub>8</sub>...
- a. *I*<sub>5.as.8</sub> would describe *you*<sub>5.as.8</sub> *yourself*<sub>5.as.8</sub>.
  - b. *I*<sub>5.as.8</sub> would describe *me*<sub>5.as.8</sub> *myself*<sub>5.as.8</sub>.
- But in those cases, the adnominal ER cannot mismatch its antecedent

(61) If I<sub>5</sub> were you<sub>8</sub>

a. \* I<sub>5.as.8</sub> would describe **me**<sub>5.as.8</sub> **yourself**<sub>5.as.8</sub>.

b. \* I<sub>5.as.8</sub> would describe **you**<sub>5.as.8</sub> **myself**<sub>5.as.8</sub>.

- ▶ Perhaps adnominal ERs (unlike adverbial ones) are too local to their antecedent, and no operators/heads intervene to yield a surface-mismatch

### B.3 Suggestions Towards Understanding CID Constraints

- ◆ Counter-indexical contexts suggest that the mismatch is influenced by the syntax/semantics of mood and of scope/intervention
  - ▶ In particular, there appears to be some sort of operator in the inflectional middle-field or perhaps in the low left periphery in the verbal spell-out domain
    - This will cause everything to shift together
  - ▶ The inflectional middle-field seems a likely choice, given the facts about modality
    - Perhaps irrealis modals (that are in the middle-field) co-occur with the proper syntactic/semantic material to license apparent mismatch
- ◆ In this way, these CID contexts give the appearance of mismatch, but perhaps local match could be happening between the bound pronoun and the covert head/operator
  - ▶ Still unexplained: Why does this only happen with 1SG subjects? Why are the *you* and *we* subjects in (52) unacceptable?
- ◆ If there is local functional material that drives apparent mismatch in CID contexts, what blocks a 3.SG bound pronoun?
  - ▶ i.e., What about the covert material is incompatible with a 3.SG pronoun in the anaphor?
  - ▶ Perhaps it's that the feature matching constraint described in (42) can't be met with this silent material as a binder
    - (Perhaps this head/operator doesn't have the  $\gamma$ -features necessary to match/value those of the 3.SG pronoun)