

Anaphor-Internal Syntax and φ -(Mis)Matches in English*

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1 Introduction

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

(1) We will not embarrass our selves

- It appears that these nominals match the local antecedent of binding in φ -features:

(2) *We will not embarrass one self

(3) STATEMENT ON φ -MATCHING

In English reflexives, pronouns φ -match the local antecedent of binding

- ▶ A statement like this has been widely assumed to be an empirically true generalization
 - (cf. discussion in Sundaresan 2018)
- ▶ It appears in a number of textbooks
 - (e.g., Adger 2003:94, Carnie 2013:10, Sportiche et al. 2013:160, Fromkin et al. 2014:168)
- ▶ And it is presupposed by researchers across a spectrum of analyses
 - Kratzer (2009:196), who adopts a syntactic analysis of matching φ -features:
“We don’t build [nonagreeing reflexives] to begin with.”
 - Hicks (2009:107–8), who does not a syntactic analysis of matching φ -features:
“[...]anaphors and their antecedents do share the same values for [φ].”

TWO QUESTIONS

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

- ▶ We will explore these questions **in the domain of English**
- ▶ To reinforce this: the term “**self-phrase**” is used to refer to English reflexive nominals

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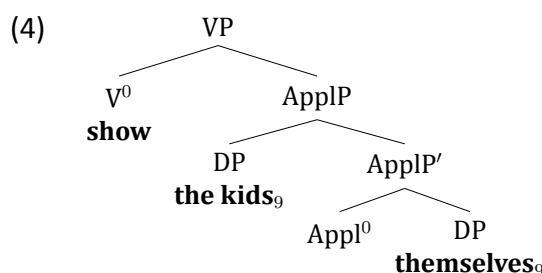
♦ Some results, to be motivated:

- ① φ -features in a self-phrase can **mismatch** the local antecedent of binding
 - Considering only 3.s anaphors, English (deceptively) appears to always require φ -match
 - But mismatch is possible for 1/2/3.PL anaphors
 - Instead, English has a split between 3.s and other reflexives, due to feature licensing
- ② These findings **undercut any account of binding that requires syntactic φ -match** with the local antecedent of binding, for a language like English
 - i.e., reflexivity in English arises separately from matched φ -features
- ③ “Binding” is a set of operations/constraints that are **distributed across the Grammar**

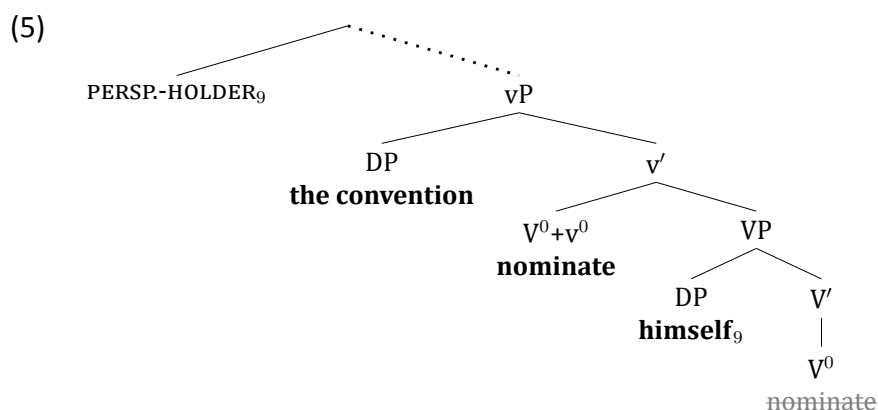
2 Some Reflexive Structures in English

2.1 Overview of Anaphor-External Syntax in English

- ♦ Binding in English is established through one of essentially two routes
 - Which derivations are involved gives rise to different LF/PF properties
- ♦ In most cases, the anaphor gets bound by a phase-internal nominal that c-commands it
 - This nominal can be overt, as in “*I showed the kids themselves*”:

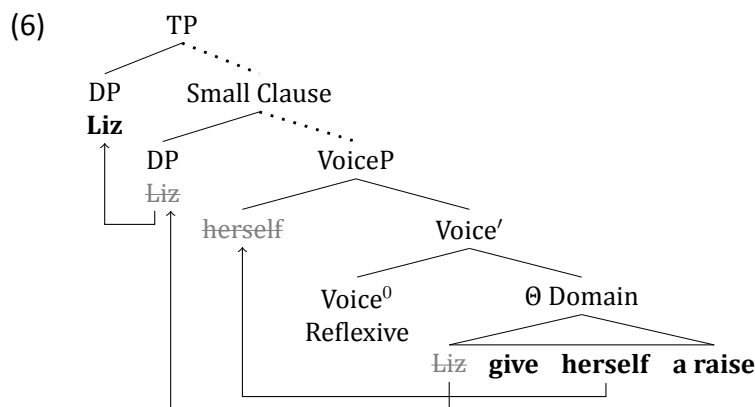


- An c-commanding antecedent within the same Spell-Out Domain licenses binding
- Or covert, as in “*Each candidate hopes the convention will nominate himself*” (example from Helke 1971:110):



- The binder is a covert logophoric element, yielding the interpretive properties of exempt reflexives (Charnavel *to appear*)

- ◆ When the antecedent is the local subject, a Reflexive Voice yields the binding relationship
 - ▶ Such a derivation is given for the sentence “*Liz gave herself a raise*”:

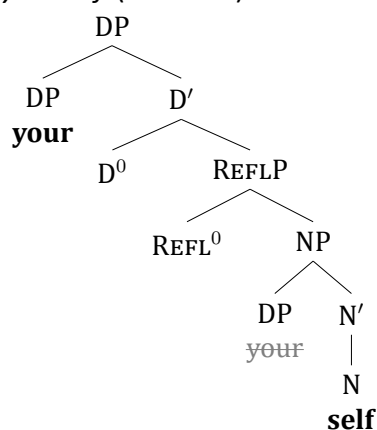


- This yields the exceptional prosodic properties of the self-phrase
 - (e.g., general lack of phrasal stress / special interpretation under prosodic focus; Ahn 2015)
- ◆ In all cases, the antecedent c-commands the self-phrase within the same spell-out domain
 - ▶ Providing a candidate for syntactically providing the φ -features for the bound pronoun

2.2 Overview of Anaphor-Internal Syntax in English

- ◆ English reflexives are morphologically complex (see also Postal 1966:182, Helke 1971:34ff.)
 - ▶ Possessive pronoun (*myself*) + a head noun (*myself*)
 - ▶ (A typologically common reflexive anaphor: a possessor and a inalienably possessed nominal)
- ◆ Ahn and Kalin 2018: A reflexive morpheme sits between D and NP¹

(7) *yourself* (reflexive)



- ◆ English anaphors are **not** the spell-out of a single bundle of features (*i.e., not a single vocab. item*)
 - ▶ Rather there are (at least) 2 feature bundles feeding separate instances of vocabulary insertion
 - One bundle per two nominal inside of the anaphor (pronominal possessor + $\sqrt{\text{SELF}}$)

¹In a Reinhart and Reuland 1993 style typology of anaphors as $\pm R$ and $\pm \text{SELF}$, English anaphors might be seen as $+R$ and $+\text{SELF}$, in the way that Anagnostopoulou and Everaert (1999) describe for Greek – and unlike both R&R’s and A&E’s classifications for English, as $+\text{SELF} -R$. (*Thanks to Nikos Angelopoulos for pointing this out to me.*) This would predict the pronoun to have φ -features specified; something that could also be suggested by the data in this talk.

- ▶ What gives rise to the nominal features (case and φ -features) that manifest on these nominals?

Pronoun: [K, π , #, γ , anim., gener.] || $\sqrt{\text{SELF}}$ nominal: [#]

- ◆ Let us briefly consider the pronoun's case

- ▶ It may see that there is a split between [π :1/2] and [π :3]: GEN and ACC, respectively

- e.g., *myself/yourself* vs. *himself*

- ▶ ACC in [π :3] is restricted to reflexive self-phrases

- (cf. the reified substantive reading in '*His 3-year-old self was very cute*')
(cf. *the reified substantive reading*)

- ▶ A&K note that this case split goes away with an intervene between the pronoun and $\sqrt{\text{SELF}}$:

(8) He has never perjured his/*him honest self.

- ▶ Instead: What looks like a 1/2 vs. 3 split may not be a true split, at the level of syntax

- A&K: **Reflexive self-phrase for all φ -features share the same core morphosyntax**

- ◇ There is special morphophonology for [π :3], yielding the surface split

- ▷ (possibly due to historical accidents)

- ▷ (Briefly: there is a morphosyntactic piece only present in reflexive self-phrases, REFL, that triggers 3.GEN \rightarrow 3.ACC, under certain locality conditions)

- ◆ Today: English does have a different anaphor split, and it's not in the surface morphology

3 Features in the Self-Phrase

3.1 Two Analytical Approaches to φ -Features

- ◆ Before exploring the data wrt where φ -match is required, let us briefly consider some of what has been said about the φ -Matching generalization in (3)

(3) Statement on φ -Matching

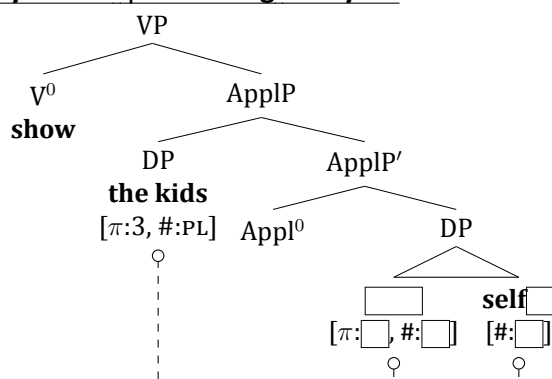
In English reflexives, pronouns φ -match the local antecedent of binding

- ◆ Some approaches treat bound pronouns as φ -deficient (possibly “minimal”) pronouns

- ▶ They get φ -features value via a syntactic relationship with the local antecedent of binding

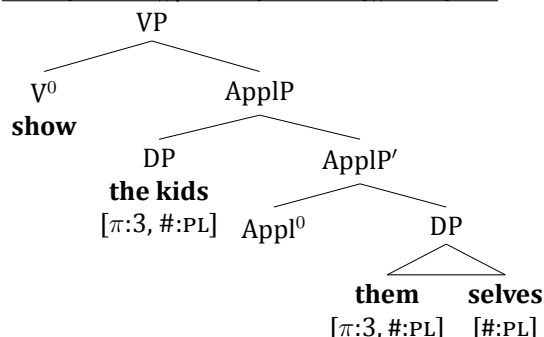
- AGREE (e.g., Heinat 2006, Reuland 2006, Rooryck and Vanden Wyngaerd 2011), FEATURE TRANSMISSION (e.g., Kratzer 2009), ...

(9) Syntactic φ -matching Analyses



- Others treat bound pronouns as having their φ -features specified as soon as φ -bundles are merged/built
 - Syntactic feature matching isn't necessary; instead there must be interpretive compatibility between the φ -features and the antecedent (e.g., Heim 2008, Hicks 2009, Safir 2014)
 - e.g., the φ -features yield presuppositions about the antecedent (Heim 2008)

(10) **Interpretive φ -compatibility Analyses**



\Rightarrow @ LF, check that the φ -features of *themselves* are compatible with the φ -features of *the kids*

THEORETICAL QUESTIONS FOR φ -FEATURES IN REFLEXIVE ANAPHORS

- Where in the grammar is/are the mechanism(s) that yield φ -feature matching between bound pronouns and their antecedents?
- How much uniformity should we expect across languages?
- Within English, are the pronouns in self-phrases uniform, regarding how φ -features are determined?

3.2 English Mismatches

- We will now see data that undermine the universality of the statement in (3), that the φ -features in a reflexive must match the φ -features of the local antecedent
 - The fact that mismatches are possible **suggests that a syntactic feature-matching analysis, like (9), is not tenable across-the-board** for a language like English
- Some first examples of this can be seen by looking at the $\sqrt{\text{SELF}}$ nominal's #
 - #-mismatches may hold between the $\sqrt{\text{SELF}}$ nominal and the antecedent:
 - (11) You guys pushed your self, drove your self, sacrificed, trained and competed ($\sqrt{\text{PL}} > \text{SG}$; *M. Romney 2002*)
 - (12) The team credits them selves. ($\sqrt{\text{SG}} > \text{PL}$)
 - Features of the maximal DP for an anaphor (whose head N would be $\sqrt{\text{SELF}}$ in English) can differ from the features of the antecedent
 - #-mismatches may hold between the $\sqrt{\text{SELF}}$ and the pronoun:²
 - (13) %Everyone loves them self ($\sqrt{\text{PL}} > \text{SG}$)
 - (14) %We each did it our self ($\sqrt{\text{PL}} > \text{SG}$)
 - (15) %We all need to ask our self [a very serious question] ($\sqrt{\text{PL}} > \text{SG}$; *ABC Nightline*)

²Self-phrases with a plural pronoun and a singular *self* are most often observed in distributive contexts.

- ▶ As the head noun of the self-phrase, these data show that **the #-feature of the self-phrase can mismatch...**
 - ...the antecedent of binding
 - ...the possessive pronoun within the self-phrase
 - ◇ i.e. an anaphor's features \neq features of its components
 - ◇ cf. discussion of an anaphor's φ -features in other languages (e.g., Greek clitic doubling, Iatridou 1988, Anagnostopoulou and Everaert 1999; Selayares agreement, Woolford 1999)
- ◆ Moving forward, we will focus primarily on the φ -features of the pronoun and of the binder
 - ▶ We will see three domains in which mismatch between the two is possible
 - Swapped identity contexts
 - Group / Quantified NPs
 - Imposters

3.2.1 Swapped Identity Contexts

- ◆ Swapped identity contexts are ones where one individual takes on the identity of another
 - ▶ e.g., in **counter-indexical (CID) contexts**, which can be introduced with '*Imagine I were in so-and-so's position.*' or '*if I were in so-and-so's shoes*':³
 - (16) [*Person B thinks they made a mistake, but Person A is sure that it is not their fault. Person A says...*]
 - a. I wouldn't blame myself for that!
 - b. I wouldn't blame yourself for that! (✓1.s > 2.s)
 - (17) [*On the other side of the studio apartment next-door is a baby that screams all night*]
 - If I were the person moving in next door...
 - a. ... I would get myself some ear plugs.
 - b. ... I would get themselves some ear plugs. (✓1.s > 3.p)
- ▶ π - and #-mismatch between the pronoun and the antecedent of binding is regularly available
- ◆ There are complex constraints on where these can occur
 - ▶ We will give an in depth treatment of this sort of data in §6

³In other investigations to anaphors in shifted CID contexts (e.g., Lakoff 1996, Anand 2007, Kamholz 2012, Kauf 2017), what is explored is the interpretation of anaphors that φ -match their closest syntactic antecedent. (That is, what interpretations are available for a fixed expression?) 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. On the other hand, this work explores the question: what morphological forms of the anaphor are available for a fixed interpretation? As far as I know, this question has not been investigated up to this point.

3.2.2 Group/Quantified NPs

- ♦ Group NPs (aka “collective nouns”) are nominals that refer to a collection of individuals
 - ▶ For now, consider contexts where committee nouns agree with the verb as singular:
 - (18) a. The U.N. finds itself in a difficult position.
 - b. The U.N. finds themselves in a difficult position. ($\sqrt{3.S} > 3.P$)
 - (19) a. The football team organizes the weekly tailgate itself.
 - b. The football team organizes the weekly tailgate themselves. ($\sqrt{3.S} > 3.P$)
 - (We will come back to the important cases with plural verb agreement)
 - ▶ #-mismatch between the pronoun and the antecedent of binding is regularly available
- ♦ Quantified NPs in English can range over plural entities of any person, but also agree with the verb as 3rd person⁴
 - ▶ In the data below, I present *themselves* as the 3.P anaphor mismatch; for some, *themselves* is preferred in these contexts⁵
 - (20) [*Spoken by a woman in a group of women*]⁶
 - a. Each of us can choose for herself.
 - b. Each of us can choose for ourselves. ($\sqrt{3.S} > 1.P$)
 - c. Each of us can choose for themselves. ($\sqrt{3.S} > 3.P$)
 - (21) [*Spoken to a group of men*]
 - a. At least one of you has perjured himself.
 - b. At least one of you has perjured yourself. ($\sqrt{3.S} > 2.S$)
 - c. At least one of you has perjured themselves. ($\sqrt{3.S} > 3.P$)
 - (22) [*Spoken about a mixed-gender group*]
 - a. #? Every one of my students has praised himself.
 - b. Every one of my students has praised themselves. ($\sqrt{3.S} > 3.P$)
 - In fact, many have the intuition that, outside of prescriptive norms, (22) requires a #-mismatch between the pronoun and the antecedent of binding
 - ▶ π - and #-mismatch between the pronoun and the antecedent of binding is regularly available

⁴Data like (20) 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 would have 3.S φ -features, which should be incompatible with building *our* from a minimal pronoun under FEATURE TRANSMISSION.

⁵As will be discussed more later, I take *them* to have a plural # feature. The *themselves* self-phrase does not show that *them* has a [#:SG] specification, since we have seen already that *self* can φ -mismatch the anaphor-internal pronoun.

⁶Here, *ourselves* is also attested. See fn. 2.

3.2.3 Imposters

- ◆ “Imposters” (cf. Collins and Postal 2012) are nominals that appear to be 3rd person but can reference a 1st/2nd person

- ▶ Unlike group NPs, they always agree according to their surface morphosyntax, across dialects

(23) [*Spoken by a parent to a child*]

- Mommy and Daddy** need some time to themselves.
- Mommy and Daddy** need some time to ourselves. ($\sqrt{3.P} > 1.P$)

(24) [*Written by multiple authors of a text*]

- The present authors** do not commit themselves to that idea.
- The present authors** do not commit ourselves to that idea. ($\sqrt{3.P} > 1.P$)

(25) [*Spoken by a male-identifying individual*]

- I am a teacher who takes care of himself.
- I am a teacher who takes care of myself. ($\sqrt{3.S} > 1.S$)

(26) [*Spoken to a female judge*]

- Does **Your Honor** doubt herself?
- Does **Your Honor** doubt yourself? ($\sqrt{3.S} > 2.S$)

- ▶ π -mismatch between the pronoun and the antecedent of binding is regularly available

3.2.4 Mismatch Summary

- ◆ The self-phrase’s pronoun and the local antecedent of binding **can mismatch in π and # features**

⇒ **This sort of data is a serious problem for analyses that treat the generalization in (3) as a premise/explanandum**

- *N.B.: These mismatch data do not undermine theories in which syntax determines these φ -features in the self-phrase; rather that what is undermined is the idea that the local antecedent of binding that determines φ -features in the self-phrase*

- ◆ At the same time, not just anything goes

(27) *He₄ can choose for your₄ self.

(28) *If I were him, I₄ would behave him₄ self.

⇒ **Whatever rules out (27) and (28) cannot appeal mechanisms that require matching of φ -features across-the-board**

- (At least not matching to the antecedent of binding)

φ INDEPENDENCE OF SELF-PHRASE NOMINALS AND BINDERS

In English, the anaphor-internal pronoun, the $\sqrt{\text{SELF}}$ nominal, and the local antecedent of binding can all have distinct φ -features

4 Pronominal Appropriateness

4.1 Non-Reflexive Contexts

- ♦ What allows a pronoun to be used felicitously as referential to / covariant with an antecedent?
 - ▶ Intuitively, compatibility between a pronoun's φ -features and its antecedent appears to (in part) be **interpretively determined**
 - ▶ Perhaps by something like 'appropriateness', such that the pronoun and the antecedent are **interpretively compatible**⁷
 - (similar views in, e.g., Heim 2008, Hicks 2009, Safir 2014, Conrod 2019)
 - ▶ e.g., our knowledge of Michelle Obama and the context tells us that referring to that person as '*she*' (but not '*he*' or '*you guys*') is appropriate
 - (*Similar to honorific/politeness-marking nominals in other languages; cf. Conrod 2018*)
- ♦ It is **not** φ -match that is necessary in English pronoun-antecedent relationships
 - ▶ *each/any of us* and *us* are interpretively identical enough that a 1.P pronoun can be used even in covariation contexts with a syntactic antecedent of *each/any of us*

(29) a. Each of us likes our mother.

b. Whenever any of us is late, our spouse complains to us.
 - ▶ Referential appropriateness is perhaps highlighted by cases where the context impacts what pronouns are available as appropriate
 - Swapped identity contexts like (30) allow a 2nd person pronoun to be appropriate to refer back to *I*

(30) If I₅ were you₈, I_{5.as.8} would make your_{5.as.8} way home
 - ▶ **Gender is especially instructive**, showing a slightly more complex (but important) way in which context affects pronoun appropriateness is
 - There are claims that (the relevant sort of) gender features 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 φ -features (examples from Ackerman 2018)

(31) a. #At the farmhouse, the cowgirl₁ left his₁ lasso in the kitchen.

b. At the Halloween party, the cowgirl₁ left his₁ lasso in the kitchen.

◇ "The feminine definition associated with cowgirl is thus defeasible, since gender agreement between cowgirl and his should be impossible if the property being checked is a φ -feature" (Ackerman:p.4)
 - ▶ This highlights the role of context (social gender) for determining φ -gender in English pronouns
- ♦ The **interpretation** of a (non-reflexive) pronoun's φ -features **in context** matters for what is a possible antecedent
 - ▶ (Not syntactic φ -matching)

⁷I leave open what grammatical/non-grammatical variables/operations should be used in modeling "compatibility".

4.2 Reflexive Contexts

♦ Idea: interpretive ‘appropriateness’ extends to the reflexive cases

- ▶ i.e., pronouns in reflexive self-phrases are subject to the same condition on appropriateness as discourse-anaphoric pronouns

(32) CONDITION ON PRONOMINAL APPROPRIATENESS IN ENGLISH

A pronoun in an English reflexive self-phrase must be able to be appropriately construed as referring to / varying with its antecedent

- ▶ This construability is **enough** to rule out data like (27)

(27) *He₄ can choose for your₄ self.

- ‘he’ cannot be construed as referring to ‘you’ in this context

- ▶ Conversely, groups of individuals can be construed as a collection of individuals or a single inanimate entity

(19) [*Spoken about a group of individuals*] (✓3.S > 3.P)
The football team organizes the weekly tailgate itself / themselves.

- ▶ Also imposters (discussed by Collins and Postal (2012) in the frame of “ultimate antecedents”):

(33) [*Spoken to a king*]
Your majesty must protect yourself/himself.

(34) [*Spoken by a parent to a child*]
Mommy and Daddy need some time to ourselves/themselves.

- ♦ Context, appropriateness, and construal matter most obviously for English 3rd person pronouns, because of **gender**

- ▶ Effect of context with common noun antecedents:

(35) a. At the farmhouse, the cowgirl embarrassed herself / #himself.
 b. At the Halloween party, the cowgirl embarrassed herself / himself.

- ▶ Suggesting that antecedent nominals like *the cowgirl* do **not**, on their own, require/value a φ -value of [γ :+F] on a pronoun inside the self-phrase
- ▶ Names might have gender features (Bjorkman 2017), but their gender features must be flexible enough to account for social gender of the referent (Ackerman 2018)
 - Thus expressions like ‘*Sue likes himself*’ are **not** ungrammatical; where deviant, it is infelicity (Conrod 2017, 2018)
 - ◊ Kim \Rightarrow Individual of female gender \Rightarrow inappropriate as antecedent for *himself*
 - ◊ Kim \Rightarrow Individual of non-binary gender \Rightarrow inappropriate as antecedent for *herself*
 - A lack of gender φ -features for lexical NPs on the antecedent might be problematic for analyses where bound pronouns rely on φ -valuation from the local antecedent binding

- Effect of context with quantified antecedents:

(36) [*Spoken by a single woman in a group of women*]
Each of us is doing it ourselves / herself.

(37) [*Spoken by a single man in a group of men*]
Each of us is behaving ourselves / himself.

- Also instructive for these contexts are the referentially-singular uses of *they*,⁸ where social gender of the referent(s) is unknown, not fixed, irrelevant, or non-binary⁹

(38) [*Spoken about a group of mixed-gender artists*]
Each artist ought to express them %selves/%self.

(39) [*Spoken about an individual of unknown gender*]
Whoever that is ought to control them %selves/%self.

(40) [*Spoken about an individual with non-binary gender identity*]
Kim wrote a book by {them %selves/%self} / #himself / #herself.

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

- “The requirement [...] is φ -feature consistency, not φ -feature matching.” (Sundaresan 2018:8)
- More work is necessary to define exactly how this notion of appropriateness/consistency 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
- Pronominal appropriateness alone is not enough; auxiliary constraints (linguistic and social) will be necessary to capture the range of (un)acceptable data

4.3 Interim Summary

◆ φ -features are visible at LF

- φ -compatibility with an antecedent is mediated by interpretation (cf. (32))

(32) Condition on Pronominal Appropriateness in English

A pronoun in an English reflexive self-phrase must be able to be appropriately construed as referring to / varying with its antecedent

- (41) a. The U.N. finds itself / themselves in a difficult position.
 b. The football team organizes the weekly tailgate itself / themselves.
 c. [*Spoken by a single man in a group of men*]
Each of us is behaving himself / ourselves.

◆ Consequence: Reflexives do not uniformly get φ -features valued by the antecedent of binding

⁸There 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}₆ has told {his}₆ friends that {he}₆ won. [...] {Their}₆ opponents have not yet been informed.*’ (See also Conrod 2017.)

⁹There is lots of inter-speaker variation in the domain of the usages of ‘*they*’. A prediction not discussed in depth here: the sorts of usages of *they/them* that a speaker allows in non-reflexive contexts will predict the sorts of usages of *they/them* that a speakers allows in reflexive contexts too.

► Simple proof

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

∴ Reflexive pronouns are not always φ -dependent on the local antecedent

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

- i.e., something like the following:

(42) The U.N.₄ finds OP₇ them₇ selves in a difficult position.

- ◆ This would be insufficient; consider a gap in the mismatches that we have seen

- **Not attested: 3.s anaphors with a 1st/2nd person or 3.P antecedent**

(43) a. Those nations in the U.N. find *itself/themselves in a difficult position.

b. The football players organize the weekly tailgate *itself/themselves.

c. [*Spoken by a single man in a group of men*]

We are each behaving *himself/ourselves.

- A covert operator account like (42) would need to explain why the operator cannot provide 3.s φ -features, but it can provide any other pronoun's φ -features
 - ◇ (*Note: this is about π and #, and not about person alone; recall 'them'*)
 - ◇ This suggests that there is a morphosyntactic division in these reflexive pronouns, which goes beyond the interpretive constraint in (32)

∴ 3.s reflexive pronouns require a unique, more complex analysis

5 3rd Singular Pronouns in English

- ◆ To be very repetitive: 3.s *bound* pronouns¹⁰ do not allow φ -mismatch from their local binder

(44) a. The U.N. finds itself/themselves in a difficult position.

b. Those nations in the U.N. find *itself/themselves in a difficult position.

- ◆ What is it about 3.s pronouns that is different?

- Notably, English 3.s pronouns show the most φ -features of any person/number

¹⁰I assume bound pronouns are identifiable by the grammar, due to a particular feature specification, e.g., the VAR feature discussed by Hicks (2009).

- ▶ 3.s pronouns are the only ones in English that mark gender, animacy, or genericity

(45)

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

- ◆ Observation: English 3.s pronouns are φ -valued for grammatical gender (γ), unlike other (pro)nominals

(46)

	S	P
1	$\gamma: \emptyset$	$\gamma: \emptyset$
2		$\gamma: \emptyset$
3	$\gamma: \pm F, \pm M$	$\gamma: \emptyset$

- ◆ In order to spell out a 3.s pronoun, γ needs to be specified
 - ▶ Perhaps because there is no spell-out for $[\pi:3, \#:sg, \gamma:\emptyset]$
- ◆ Pronominal γ features in a language like English depend on the antecedent, in the context
 - ▶ Conrod (2019, p.c.): γ features on pronouns need to be licensed by an appropriate antecedent in the context
 - A very rough paraphrase of the felicity condition for $[\gamma: +F]$:
“It is socially appropriate for me to refer to the antecedent as ‘she’ in this context”
 - *One possible appropriate antecedent: an accessible syntactic nominal with a γ feature (i.e., a gendered pronoun)*
 - *Another: an accessible context that defines an individual/set that can help determine the appropriateness of the particular gender features on pronouns*
 - ▶ Sigurðsson (*to appear*): Context is represented in the clause’s left periphery
- ◆ Thus to license γ on a pronoun, the syntax needs access to an antecedent in context
 - ▶ Meaning the syntax needs to access both to the γ feature and information about the antecedent/context
 - ▶ One possibility: the γ features are ‘in-born’ at merge, and what is needed is a comparison to the antecedent’s interpretation (Conrod 2019)
 - This would mean all anaphors in English can come fully φ -specified
 - ▶ Another possibility: the pronoun is deficient such that its γ features are determined by the features of the context/antecedent (Sigurðsson *to appear*)
 - This would mean anaphors in English exhibit a gender-based split (cf. Sundaresan 2018’s discussion of language-internal splits in anaphors)
 - ▶ (I will not adjudicate between these possibilities)
- ◆ **Core Idea:** The licensing of γ features in English involves a derivation that disallows φ -mismatches
 - ▶ This core idea is stated in the generalization in (47)

(47) GENERALIZATION ON ENGLISH GENDER-CONDITIONED φ -MATCH

If a bound pronoun has a gender φ -feature that is specified (i.e., not \emptyset), then the bound pronoun must have φ -features that do not conflict with those specified on the local binder.¹¹

- ▶ In other person-number combinations, mismatch is possible: the γ -feature can remain unspecified, and the pronoun can go unconstrained by the morphosyntactic derivation)
- ◆ Prediction: if a particular antecedent of binding can behave as $[\#:SG]$ or $[\#:PL]$, whenever it behaves as PL it cannot antecede a 3.SG bound pronoun
 - ▶ Varieties where a group NP can agree as plural are an ideal testing ground
 - ▶ Smith 2017: English speakers of all varieties accept (18a,b), and speakers of some varieties also accept (49a)
 - (18) a. The U.N. finds itself in a difficult position.
 - b. The U.N. finds themselves in a difficult position. ($\sqrt{3.S} > 3.P$)
 - (48) a. %The U.N. find themselves in a difficult position. ($\sqrt{3.P} > 3.P$)
 - b. *The U.N. find itself in a difficult position. (* $3.P > 3.S$)
 - ▶ Assumption: when the group NP occurs with plural verb agreement, (48), the group NP has an active $[\#:PL]$ φ -feature¹²
 - Thus (48b), but not (48a), is a case of mismatch between the binder and the pronoun
 - (48b) is unacceptable, as predicted
- ◆ Prediction: if the syntax cannot access the antecedent and the context, a 3.S pronoun cannot have its γ feature evaluated for its appropriateness
 - ▶ That is, 3.S pronouns should be ineffable where such access is blocked — back to the data!

6 Swapped Identity Contexts

- ◆ We saw, in passing, that the effects of context in English on reflexive φ -features can be seen in swapped-identity contexts
 - (49) [*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 myself a favor and bring food! ($\sqrt{1.S} > 1.S$)
 - b. If I were you, I'd do yourself a favor and bring food! ($\sqrt{1.S} > 2$)
 - ▶ In this sort of shifted context, the local syntactic antecedent of binding is a 1st person pronoun, but the self-phrase can contain a 2nd person pronoun¹³
 - Because they are construed as identical in the CID context where 'I' = 'you'

¹¹Stated more formally: If $\gamma_{\text{pronoun}} \neq \emptyset$, then $\varphi_{\text{antecedent}} \subseteq \varphi_{\text{pronoun}}$

¹²If *the U.N.* has two sets of φ -features, then it must be that the ones bundles with plural number are the only ones accessible for 3.S pronouns in cases like (48b) with plural verb agreement. Smith (2017) explains this as an issue of the timing of the set of operations involve in agreement.

¹³It is not the case that the local binder 'I' is, at the relevant level, $[\pi:2]$. Consider the following, where a 2nd person adnominal emphatic reflexive is out: "*If I were you, I myself/*yourself would be enjoying this.*"

- ◆ This sort of mismatch context has some surprising constraints, that go beyond the ‘appropriate pronoun’ generalizations we have seen so far
 - ▶ (But they also respect those generalizations)

6.1 Two Constraints on CID ϕ -Mismatch

① The antecedent has to be 1.s

- (50) a. If I₅ were you₈, I wouldn’t worry myself_{5.as.8} / yourself_{5.as.8} .
 b. If we₅ were you₈, we wouldn’t worry ourselves_{5.as.8} / *yourselves_{5.as.8} .
 c. If you₅ were me₈, you wouldn’t worry yourself_{5.as.8} / *myself_{5.as.8} .

- ▶ This constraint reveals that contextual ‘appropriateness’ matching is not enough
- ▶ Suggestion: this has to do with semantic/syntactic privileges afforded to the speaker of the utterance

② A 3.s reflexive pronoun can’t mismatch the antecedent

- (51) a. If I₅ were her₈, I’d be proud of myself_{5.as.8} / *herself_{5.as.8}
 b. If I₅ were him₈, I’d be proud of myself_{5.as.8} / *himself_{5.as.8}
 c. If I₅ were them₈, I’d be proud of myself_{5.as.8} / %themselves_{5.as.8} / %themselves_{5.as.8}

- ▶ The contrast between reflexive pronouns *them* and *her* is *a priori* surprising – *though hopefully we might expect it at this point in this talk*
 - It reveals that this is a **constraint on 3.s pronouns not all 3rd person pronouns**
- ▶ Also, this seems to be a **constraint on particular ϕ -features, and not reference**
 - It is acceptable to have a mismatching antecedent for all uses of *them*
 - Including plural-referring *them* in (51c), as well as¹⁴ epicene *them* as in (52)

- (52) If I were any one of them, I’d be proud of myself/themselves

- ▶ This constraint against 3.s pronouns will be understood through the lens of gender
 - But first we’ll have to look at two more constraints

- ◆ These first two constraints have been corroborated by a pilot study on Amazon Mechanical Turk task ($n=78$)
- ◆ Median scores so far are given below (1=“unnatural”; 5=“natural”)

(53) Ratings for ϕ -mismatch anaphors in conditionals

		Pronoun					
		1.S	2.S	3.S	1.P	2.P	3.P
Ant:	1.S	–	4	2.5	–	5	4
	1.P	–	2	2	–	2	2

- ◆ Details in the appendix (Appendix B)

¹⁴Additionally, 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*.

6.2 Two More Constraints on CID φ -Mismatch

③ The embedded clause must be in the irrealis mood

- (54) a. If I₅ were you₈, I_{5.as.8} would buy myself_{5.as.8} / yourself_{5.as.8} a new car.
 b. When I₅ was you₈ in a dream, I_{5.as.8} bought myself_{5.as.8} / *yourself_{5.as.8} a new car.
- Suggestion: this irrealis mood licenses a counterfactual perspective operator in the syntax
- This (optionally introduced) operator brings in the perspective of the person whose identity is being taken on¹⁵

④ φ -mismatch is impossible between coindexed elements within the scope of the modal

- (55) a. If I₅ were you₈, I_{5.as.8} 'd [keep myself_{5.as.8} to myself_{5.as.8} / *yourself_{5.as.8}]
 b. If I₅ were you₈, I_{5.as.8} 'd [keep yourself_{5.as.8} to yourself_{5.as.8} / *myself_{5.as.8}]

(56) If I₅ were you₈ ...

- a. I_{5.as.8} 'd [ask the administrator to assign me_{5.as.8} to myself_{5.as.8} / *yourself_{5.as.8}]
 b. I_{5.as.8} 'd [ask the administrator to assign you_{5.as.8} to yourself_{5.as.8} / *myself_{5.as.8}]
 c. I_{5.as.8} 'd [ask for myself_{5.as.8} to be assigned to myself_{5.as.8} / *yourself_{5.as.8}]
 d. I_{5.as.8} 'd [ask for yourself_{5.as.8} to be assigned to yourself_{5.as.8} / *myself_{5.as.8}]

- Notice the interpretation here
- In the irrealis clause, all pronouns/anaphors are interpreted in the same way: me-as-you
 - (The facts in (56) can repeat with 2.P and 3.P pronouns)
- BUT, if *me* is interpreted as in the non-counterfactual sense, then mismatch is possible again
- (57) If I₅ were you₈, I_{5.as.8} 'd [ask them to assign me₅ to myself_{5.as.8} / yourself_{5.as.8}]
- When interpreted me-as-you, all pronouns in the scope of *would* are either 1.S or match the φ -features of perspective holder
- Consistent with an operator in the middle-field, tied up in irrealis mood
- And the operator can only have an effect on the φ -features of pronouns interpreted in this way of 'me-as-X'
 - (And the operator cannot be in the high left-periphery of the clause, since the subject above *would* does not have the φ -features of the perspective hold)

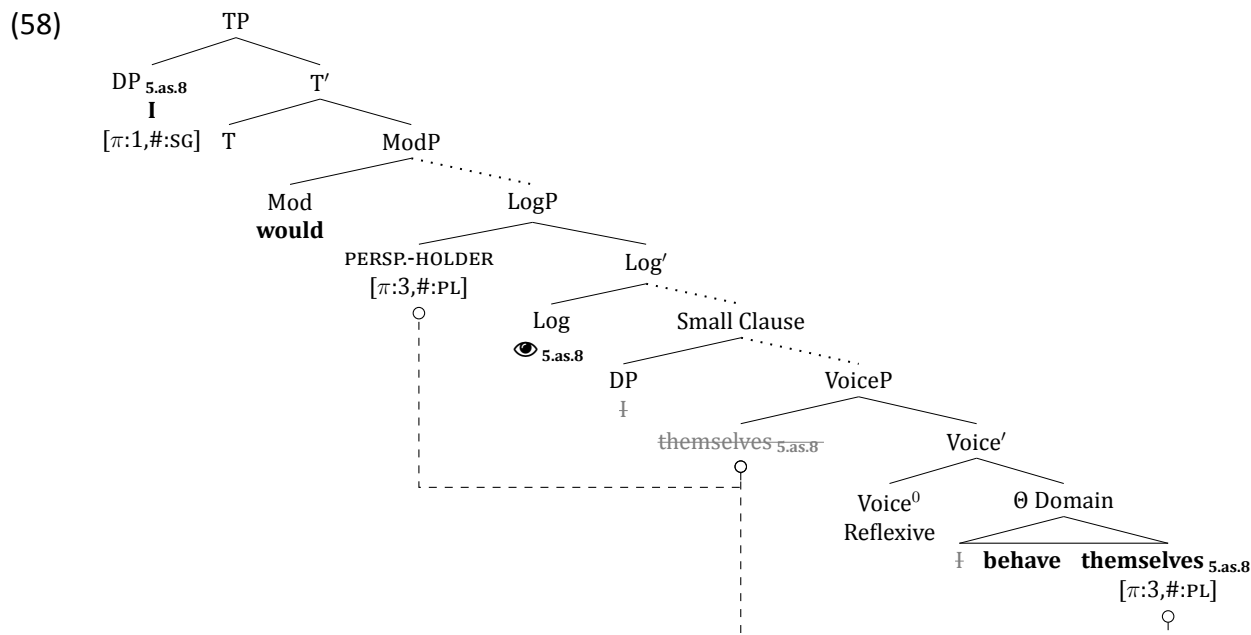
6.3 Some Nascent Ideas Towards Understanding CID Constraints

- ♦ Counter-indexical contexts suggest that the mismatch is influenced by the syntax/semantics of irrealis mood and of a middlefield perspective shifting operator
 - 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 then seems to cause all pronouns in its scope with the 'me-as-X' interpretation to have the same φ -features as the perspective holder (the X in me-as-X)

¹⁵Thanks to Sandhya Sundaresan for pointing me in this direction.

- (Assumption: the formal φ -features of the perspective holder are introduced by the logophoric head or by a pronoun in Spec,LogP; cf. Charnavel *to appear*)

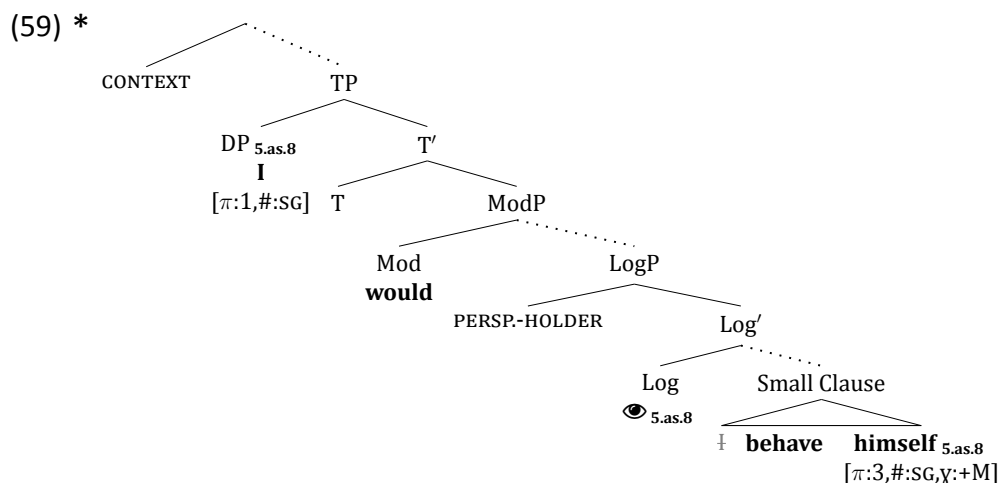
◆ Possible sketch of '*If I were them, I'd behave themselves*'



- ▶ Proposal: this operator, 👁, can only shift the perspective of the [AUTHOR] participant
 - Explaining our first constraint on CID mismatches: only 1.s antecedents are possible
- ▶ In cases like this, the local antecedent of binding is determined before the middle field, in the verbal phase (between Log and v, VoiceP; Ahn 2015)
 - So it is still the case that there is φ -mismatch with the local antecedent of binding ("*I*")
 - At the same time, this counter-indexical perspective operator, 👁, provides the φ -features of the perspective holder for the pronoun ("*they*")
- ▶ In this way, these CID contexts still constitute a violation of the generalization that anaphors φ -match the local antecedent of binding
 - But there is also a syntactic explanation of why these features can be the ones we find on the bound pronoun

◆ But now that we have the 👁 and its argument, **what blocks a 3.s bound pronoun** in CID contexts?

- ▶ Consider the unacceptable structure in (59):



- ▶ Recall from §5 that gender on a 3.s pronoun relies on an syntactically present antecedent with a \bar{y} -feature and/or a contextually represented entity to help determine the appropriateness of the \bar{y} -feature of the pronoun
- ▶ **The 3.s pronoun's \bar{y} feature cannot be licensed in this structure**, so (59) is unacceptable
 - No nominal licenser of [\bar{y} :+M]: The only pronominal in the derivation is a 1.s pronominal, which doesn't have \bar{y} specified
 - No contextual licenser of [\bar{y} :+M]: If the context is in the CP region (Sigurðsson *to appear*), the logophoric operator serves as an intervener, blocking access to it
- ♦ Open Question: Why can't the perspective-holder have gender features?
 - ▶ This would allow 3.s phi-mismatch
 - ▶ Perhaps it is grammatical, but such perspective holders are simply less easily accessible (cf. Zribi-Hertz 1989:711), yielding lower ratings in most contexts
 - ▶ Perhaps it is indeed ungrammatical, and has to do with the types of φ -features that the perspective-holder can have and/or which elements of English can bear \bar{y} features

7 Conclusions

7.1 Bound Pronouns and φ -(mis)match

- ♦ We started with a common statement, and developed some deeper constraints/generalizations
 - (3) **Statement on φ -Matching**
In English reflexives, pronouns φ -match the local antecedent of binding
 - (32) **Condition on Pronominal Appropriateness in English**
A pronoun in an English reflexive self-phrase must be able to be appropriately construed as referring to / varying with its antecedent
 - (47) **Generalization on English Gender-Conditioned φ -Match**
If a bound pronoun has a gender φ -feature that is specified (i.e., not \emptyset), then the bound pronoun must have φ -features that do not conflict with those specified on the local binder.
 - (60) **Constraints on Counter-Indexical φ -Mismatch in English**
Counter-indexical contexts can only support φ -mismatch if (i) the antecedent is 1.s, (ii) the bound pronoun is not 3.s, (iii) the embedded clause is in the irrealis mood, and (iv) all pronouns in the scope of the modal φ -match each other
- ▶ We saw data motivating that these latter three constraints/generalizations are more accurate successors to the statement in (3)
- ⇒ **We should replace (3) in English with (32) and (47)**
 - English bound pronouns do not always φ -match their antecedent, contra (3)'s suggestion
 - Instead we find different generalizations that sometimes allow φ -mismatch
 - ◊ One about pronominal appropriateness (32), which applies to all bound pronouns
 - ◊ One suggesting additional derivational constraints, described in (47), which only applies \bar{y} -marked bound pronouns in English
- ▶ By “replace (3)”, I mean “**replace as descriptive explananda** to be captured by deeper analyses”

- ◆ This investigation has lead to some more specific conclusions

❶ Morphosyntax builds English reflexive anaphors

- φ -feature bundles for bound pronouns are built in the morphosyntax
- How these φ -features are licensed influences the derivation and where φ -mismatch with the antecedent is possible

❷ English bound pronouns can have well-formed φ -features in at least two ways

- For 1/2/3.PL bound pronouns, φ -mismatch is regularly possible
 - ◇ This is not consistent with a φ -valuing approach¹⁶
 - ◇ The constraints appear to be interpretive instead of syntactic; these bound pronouns are candidates for merging with φ -features specified
 - ◇ This suggests an interpretive φ -appropriateness approach for these reflexive self-phrases (cf. (10))
- But a 3.S one *never* φ -conflicts with its antecedent
 - ◇ Here, the derivation requires the pronoun's φ -features to match a binder; because of the grammar of English γ -features
 - ◇ This suggests a syntactic φ -matching approach for these reflexive self-phrases (cf. (9))
 - ◇ If you only examined English binding with 3.S bound pronouns, the data could (inappropriately) support an analysis that English binding is predicated upon φ -AGREE
- English reflexives exhibit a grammatical split, based on γ : 1/2/3.P vs. 3.S
 - ◇ cf. grammatical splits along other nominal features in Sundaresan 2018
- Open Question: Does English employ AGREE to achieve φ -matching, where we see it?
 - ◇ (i.e., with 3.SG across-the-board / and in non-mismatch cases)
 - ◇ No evidence either way, in this work

❸ φ -features must be active at LF

- Concepts like 'appropriate construal' in (32) are certainly interpretive
 - ◇ Social gender (continuously defined) matters, in ways different ways than grammatical gender (categorically defined)
 - ◇ Contexts (such as CID contexts) can manipulate how φ -features are interpreted
- Assuming interpretation is involved in where mismatches are possible (and possibly involved in what φ -features match with), this means these features are interpretable at LF
- This contrasts with the view that is not uncommon:
 - ◇ "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 (φ -features inside self-phrases) also has interpretational consequence (see also Heim 2008, Safir 2014, Conrod 2019)

¹⁶Unless there are very different assumptions made about the φ -features of antecedents.

7.2 “Binding” Across Modules

- ◆ Properties of binding are **not solely the product of syntax**
 - ▶ Our investigation into φ -features and nominal structures English reflexive self-phrases has depended on multiple components of grammar
 - ▶ Some syntactic
 - Building English reflexive anaphors (pronoun + REFL + $\sqrt{\text{SELF}}$)
 - Building the φ -bundles for the pronoun
 - ▶ Some postsynthetic (based on syntactic input; see Ahn and Kalin 2018)
 - 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 φ -features
 - Semantic constrains mismatches (e.g., modality) in the CID contexts
 - ◆ Also, languages appear to differ on which grammatical operations comprise the set of binding operations
 - ▶ (Reminder! Some number of the analytical moves made here are specific to English)
 - ◆ We need a multi-module approach to binding
 - ▶ The aim of which is not to reduce binding to a single operation
 - ▶ Instead the aim is to reduce it to a number of operations, distributed across the grammar
- “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., Anand 2007, Reuland and Winter 2009, Kauf 2017)
 - ▶ 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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A Some Notes on the Internal Structure of Reflexive Self-Phrases

① There is a self component, which is a nominal:

- Consider the object-incorporation-like compounding process:

- (61) a. They are completely self-reliant.
 b. They rely on themselves completely.
- (62) a. He is a self-described polyglot.
 b. He describes himself as a polyglot.
- (63) a. We chose the self-install option.
 b. We chose the option to install it ourselves.
- (64) 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:

- (65) 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 intensifier¹⁷
 - 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.

② What precedes *self* is a possessive pronoun:

- Consider the form of the pronoun:

- (66) a. I will defend myself.
 b. You can do it yourselves.

- Headline allows for null bound pronoun possessors

- (67) a. ...Bill O'Reilly embarrasses self, colleagues, country... (http://wapo.st/1TYFgoH)
 b. Bill O'Reilly embarrassed himself, **his** colleagues, and **his** country.

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

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

- (68) a. They did it them/*their selves.
 b. After spending two years in meditation, their/*them selves were fully realized.

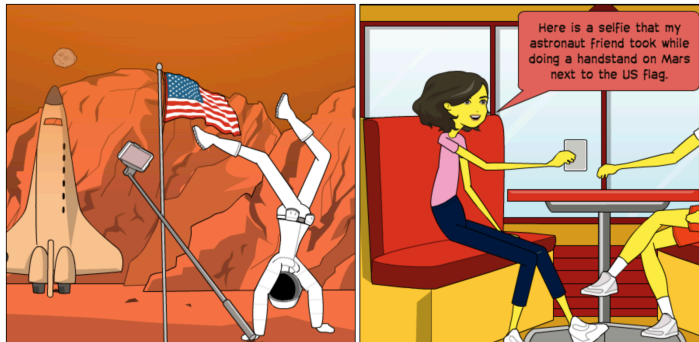
¹⁷In fact, this difference is almost certainly related to the other differences between English reflexive anaphors and reflexive anaphors in other Germanic languages (e.g., absence/presence of possessive pronouns within the anaphor, and possibly even (un)availability of long distance binding).

- A reflexive morpheme, REFL⁰, 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 REFL⁰
 - But REFL⁰ triggers a lack of semantic contribution by the root $\sqrt{\text{SELF}}$ (cf. camouflage constructions; Collins et al. 2008, Collins and Postal 2012)

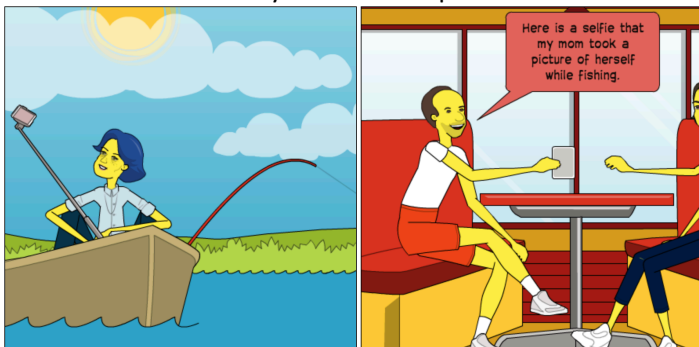
B Rating Task Details

◆ 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”



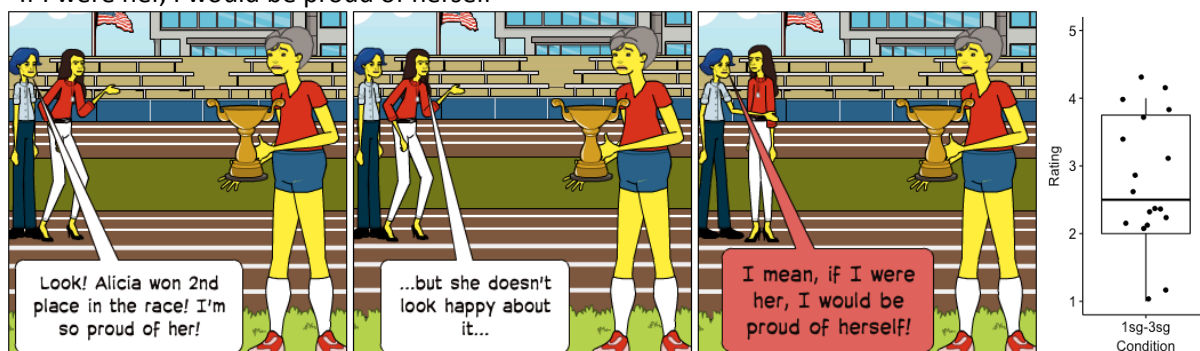
- “If I were you guys, I wouldn’t try to move the fridge by yourselves”



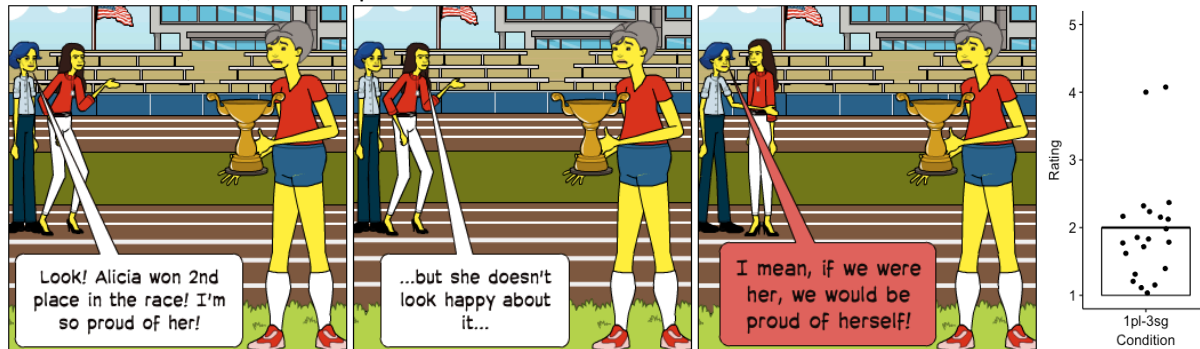
- “If we were you guys, we wouldn’t try to move the fridge by yourselves”



- “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!”

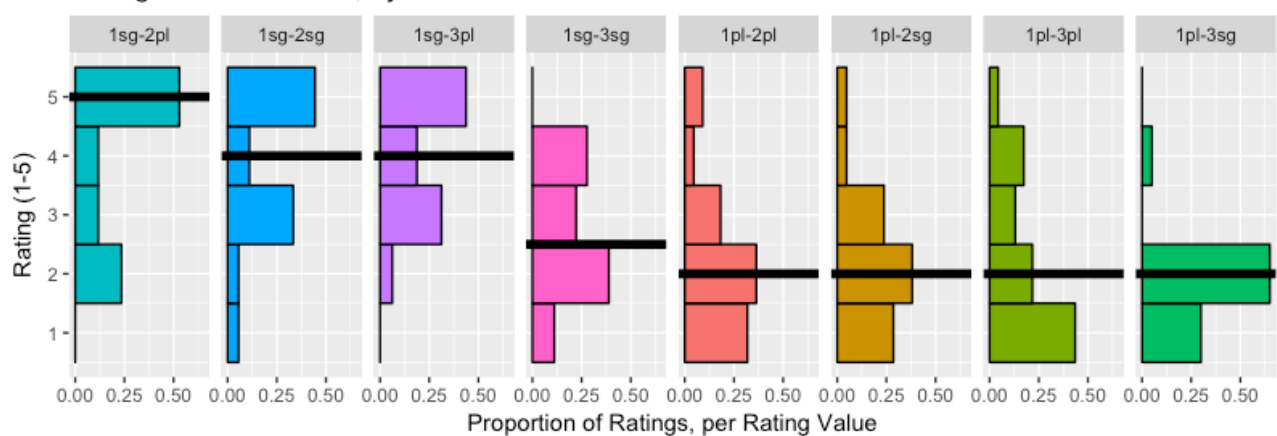


- “If we were you, we wouldn't try to plan the whole thing by themselves!”



◆ Summary of results:

Ratings of Mismatches, by Condition



- There is a sharp change in the distribution of the ratings when the constraints on antecedents/pronouns are not met¹⁸ (Dark black lines indicate median score)

¹⁸Further details of the data and analysis are given in the appendix. A full-fledged follow-up study is in progress.

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

	1p-2p	1p-2s	1p-3p	1p-3s	1s-2p	1s-2s	1s-3p
1p-2s	-0.1; ns						
1p-3p	-0.1; ns	-0.1; ns					
1p-3s	-1.2; ns	-1.1; ns	-1.1; ns				
1s-2p	4.7; ***	4.7; ***	4.9; ***	5.7; ***			
1s-2s	4.5; ***	4.5; ***	4.7; ***	5.5; ***	-0.3; ns		
1s-3p	4.8; ***	4.8; ***	5.0; ***	5.8; ***	0.2; ns	0.4; ns	
1s-3s	1.2; ns	1.3; ns	1.4; ns	2.4; ns	-3.3; *	-3.1; *	-3.4; *

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

- ▶ The 3 conditions deemed grammatical by native speaker linguists (**1s-2p, 1s-2s, 1s-3p**) were **all given ratings significantly different from** (in a positive direction) **the other conditions**
 - In addition, the ratings given to the 1s-3s condition was not significantly different from the ratings given to the conditions with 1P antecedents
- ▶ This corroborates the generalizations that 3s pronouns cannot mismatch their antecedents, and that mismatch requires the antecedent to be 1s