Who accepts *themself?*

Sociosyntactic variation in English –*self* reflexives

Kirby Conrod, Swarthmore College   they/them 🐦@kirbyconrod

Byron Ahn, Princeton University   he/him 🐦@ahnaphor

slides:

`https://osf.io/yg38n/`

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"Singular They"

English *they*-series pronouns (*them*, *their*, etc) can have antecedents that are syntactically and/or notionally singular (so-called "**singular they**"; henceforth "**ST**")

There is **variability in ST acceptability** according to antecedent definiteness/specificity

- *e.g., some varieties only allow ST with an indefinite/non-specific antecedent*

(*Bjorkman 2017, Konnelly & Cowper 2020, Conrod 2019, Camilliere et al. 2021*)

(1) <u>Every professor</u> praises <u>their</u> advisees daily	quantified
(2) <u>The ideal advisor</u> emails <u>their</u> advisees regularly	generic
(3) <u>My committee chair</u> signs <u>their</u> emails with a :)	definite
(4) <u>Richard</u> submits <u>their</u> manuscripts early	proper name

more specific →

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Reflexive Forms of Singular They

Reflexive form of singular *they* can variably appear as **themself** or **themselves**:

    (5) <u>Every professor</u> assesses <u>themself</u> on their teaching

    (6) <u>Every professor</u> assesses <u>themselves</u> on their teaching

...variably according to what?

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Questions and Hypotheses

RQ 1: How does **antecedent type** affect the ratings of *themself* and *themselves*?

H1a: *themself > themselves* **with more specific antecedents**   *(influenced by Ackerman et al. 2018)*
H1b: *themselves > themself* **with less specific**

RQ 2: What **speaker variables** (*macrosocial categories; ideological beliefs*) affect ratings of *themself / themselves*?

H2a: *themself* ↗ **with {nonbinary, younger, less prescriptive, less gender binarist}**
H2b: **proper names antecedents (***for either***)** ↗ **with those folks**   *(influenced by Conrod 2019)*

RQ3: Are there clear or coherent **'dialect groups'** that align with how people rate *themself/ves* with different antecedents?

H3: speakers will divide into 3 dialect groups: conservative, intermediate, and innovative   *(influenced by Konnelly & Cowper 2019's work on singular they)*

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Preview of Findings

- There is **variation in acceptability** of *themself* and *themselves*
  - ...varying according to grammatical variables **and** social variables
- The existence of variation is informative...
  - ...revealing that **feature-matching isn't as simple as what has been claimed** (for English reflexive binding)
  - and there is still more to understand about the **morphosyntax of English pronominals**

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Background

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Background: variation in acceptability of singular *they*

Analyses of **variation with singular *they***:

Bjorkman 2017	2 grammars	Morphosyntactic analysis acceptability ∼ antecedent's **definiteness/specificity**
Konnelly & Cowper 2020	3 grammars	Morphosyntactic analysis acceptability ∼ antecedent's **specificity & gender** features
Conrod 2019	3 grammars	Morphosyntactic analysis acceptability ∼ antecedent's **specificity & gender** features
Camilliere et al. 2021	3 grammars	Experiment (*k-means clustering, proper name antecedents*) acceptability **ratings cluster** ∼ grammar

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Background: morphosyntax of English number

Some English Pronouns

me	[auth, SG]
us	[auth, addr]
you	[addr]
her	[SG, FEM]
them	[ ]

- **Number features**
  - Pronouns like *my* or *her* are [SG], but pronouns like *they* and *our* **lack a number specification**
    - *(cf. Bjorkman 2017, Konnelly & Cowper 2020, Conrod 2019)*
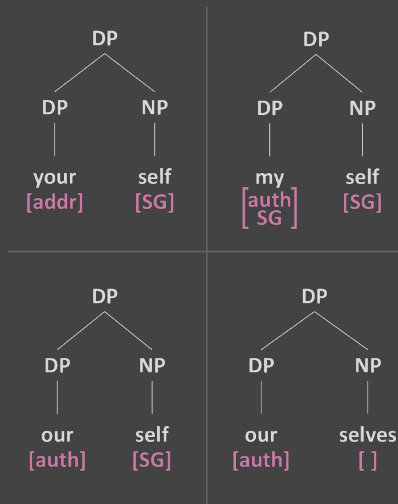 - **Interpretation** and (absence of) SG:
    - Lacking a number can be consistent with referring to a single individual *(cf. Sauerland et al 2005)*
- ***A null hypothesis***
  - *Constant across dialects: feature specifications for pronouns **and** how those features are interpreted*

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Background: morphosyntax & *-self* reflexives

```
        DP                    DP
       /  \                  /  \
     DP    NP              DP    NP
      |     |               |     |
    your   self            my    self
   [addr]  [SG]          [auth]  [SG]
                          [ SG ]

        DP                    DP
       /  \                  /  \
     DP    NP              DP    NP
      |     |               |     |
    our    self           our   selves
   [auth]  [SG]          [auth]   [ ]
```

- There are **two nominals** inside the -self reflexive
  - (*see Postal 1966, Helke 1973, Ahn and Kalin 2018*)

- Each nominal has its own **independent set of features**
  - Note the distribution of SG
  - [SG] self can be used with plural pronouns *(i.e. those without a number feature)* like *your*, *our*, and … *them*
    - *Ourself* is well attested (Stern 2019)

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Background: feature-matching

There are 3 nominals: the **antecedent**, the **pronoun**, and *-self*
- Which need to match in features?
- <u>Traditional answer</u>: all need to match in as many as possible features

There are mismatches between *-self* and the other two nominals in (7):

(7) Should **we** be bracing <u>our</u>-**self** for that?

(from Showbiz Tonight; COCA)

Ahn 2019: there are many cases of pronoun-antecedent mismatches

(8) If I were you, <u>I</u>'d get <u>your</u>-**self** a good lawyer

<u>Now our main question</u>: …What do we find for *themself/themselves*?

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Pilot study

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Pilot Study: methods

Two-part pilot task

- **Online survey** conducted using Qualtrics
- **Large-scale** (*n*=1,127) reach, via social media and Prolific

Demographics and ideology survey

- **Demographics**: Age, gender, location, languages
- **Prescriptivism scale**: how prescriptivist are you? (8 questions)
- **Binarist scale**: how much do you believe there are exactly 2 genders? (3 questions)

Ratings survey

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Pilot Task: Ratings Survey

Design:

14 conditions   2 pronoun types (*themself* or *themselves*)

     × 7 antecedent types:

Quantified indefinites	Quantified universals	Generic definites	Distal definites	Specific indefinites	Proximal definites	Proper names
Anyone who wants a good grade…	*Every person on this planet…*	*The ideal candidate for this job…*	*The driver of that car over there…*	*An employee at the movie theater…*	*The person I talked to yesterday…*	*Alex, who is quite short, …*

     × 2 sentences per condition   = **28 total sentences rated**

Question: "How natural or unnatural does this sentence sound?"

     Likert scale of 1 (*very unnatural*) to 5 (*very natural*)

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Pilot study: results preview

Demographics:

- Age, gender, and ideology scales had an impact on ratings

Antecedents:

- Impacted ratings, but not readily apparent if *themself/-selves* is collapsed
- Effects of antecedent specificity on ratings not gradient — proper names stood out

K-groups:

- 3 clusters of participants (based on ratings) were found; interactions with demographic and grammatical variables
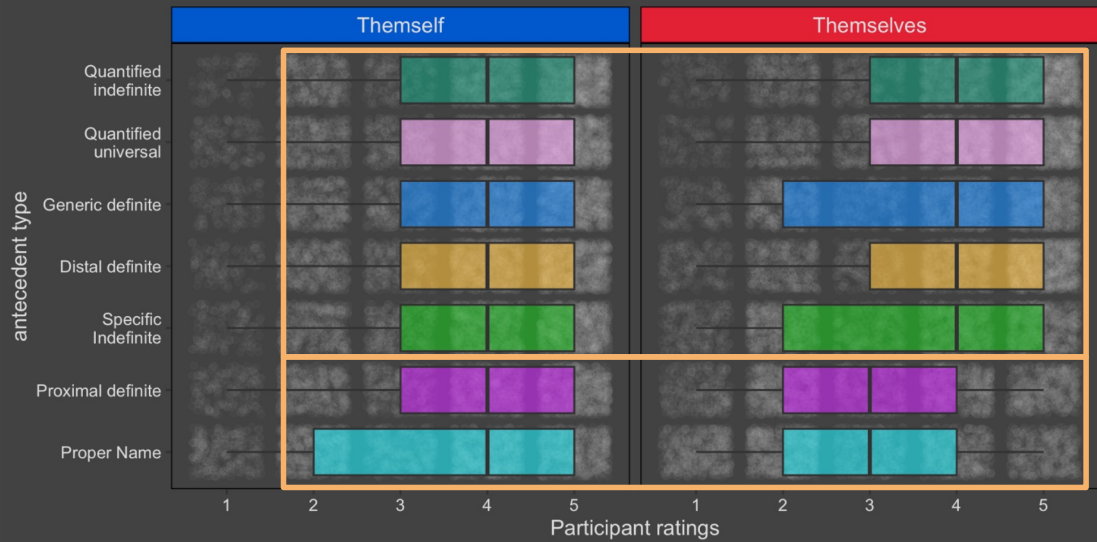
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Pilot Task Results: starting point

	median	mean	stdev
Themselves	4	3.5	1.36
Themself	4	3.68	1.28
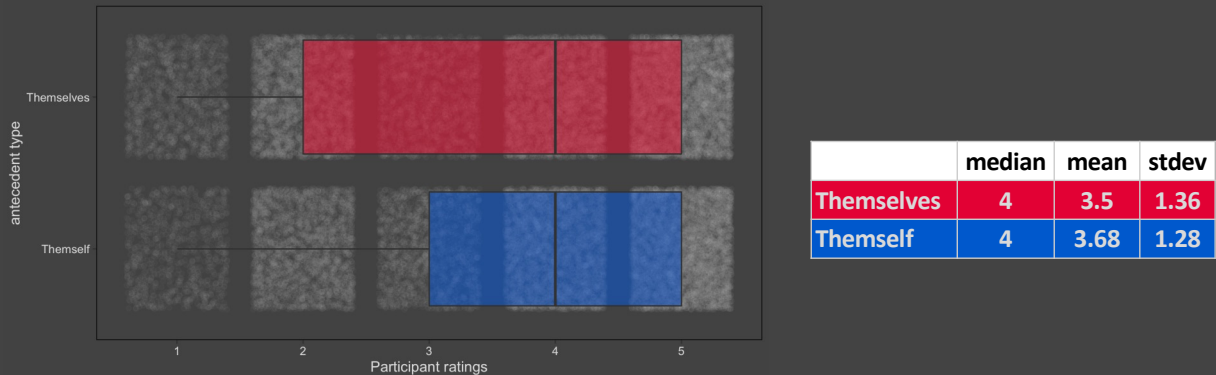
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Results: effect of antecedent type x –self/–selves

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Are there different populations?
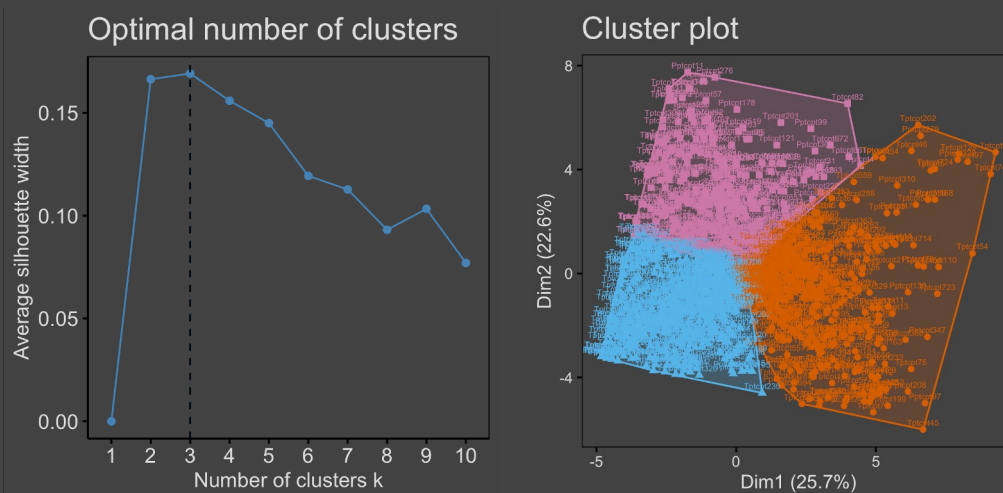
"K-cluster analysis"

- Clusters of participants that emerge based on a Machine Learning algorithm

Basics of process:

- **Input**: numerical ratings of sentences, grouped by participant
- **Algorithm**: unsupervised classification based on numerical means
- **Output**: groups of participants ("K-groups")
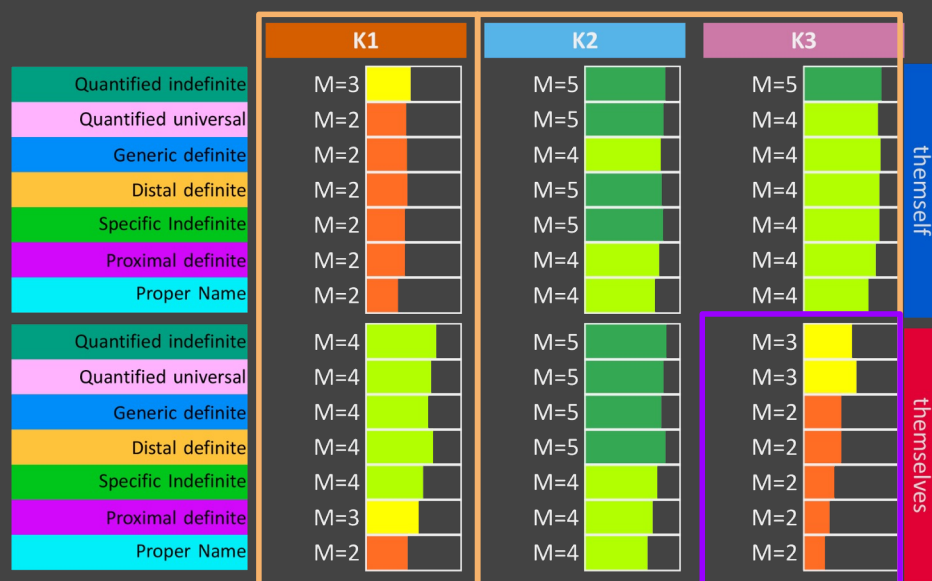
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Results: k-groups
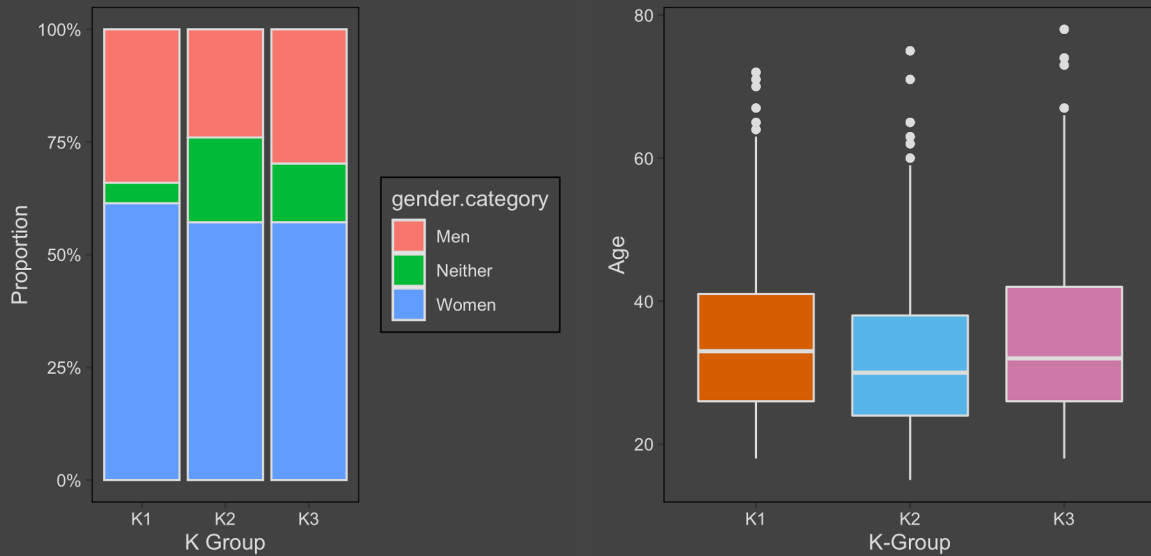

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Results Divided by K-Groups: Grammatical Effects
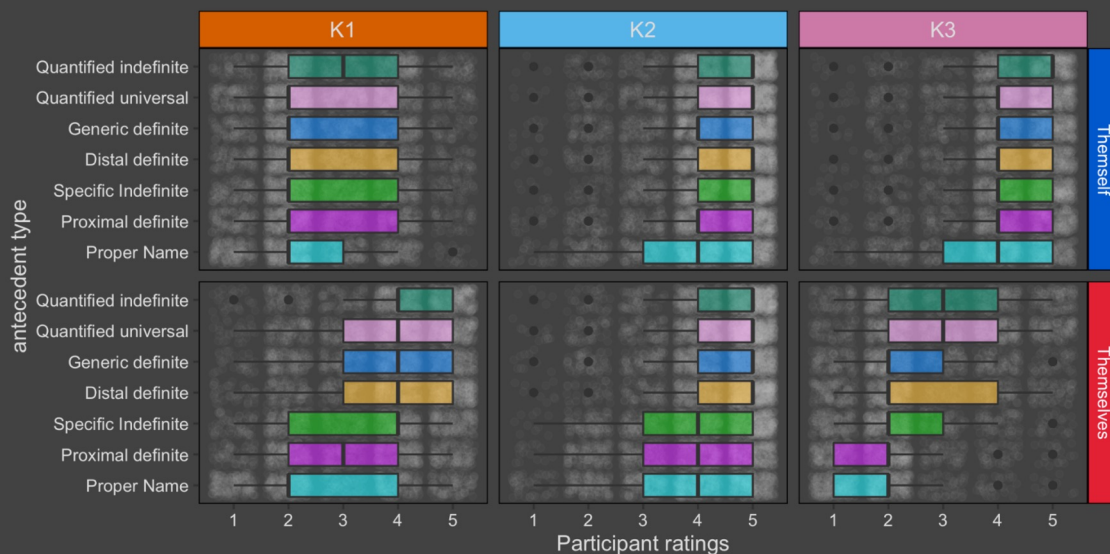
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Results Divided by K-Groups: Grammatical Effects

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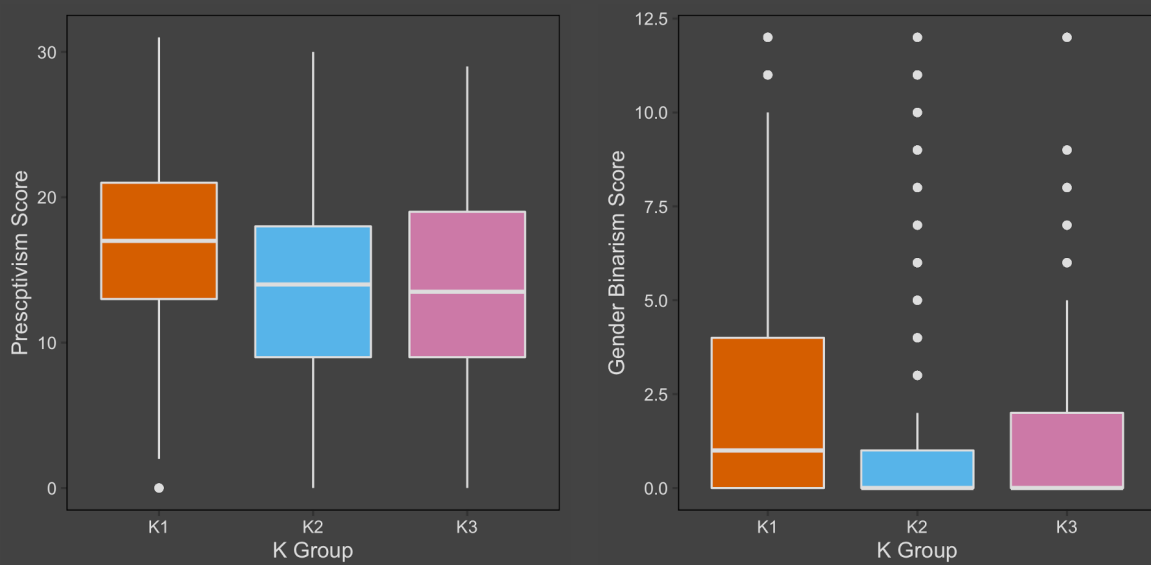22

23
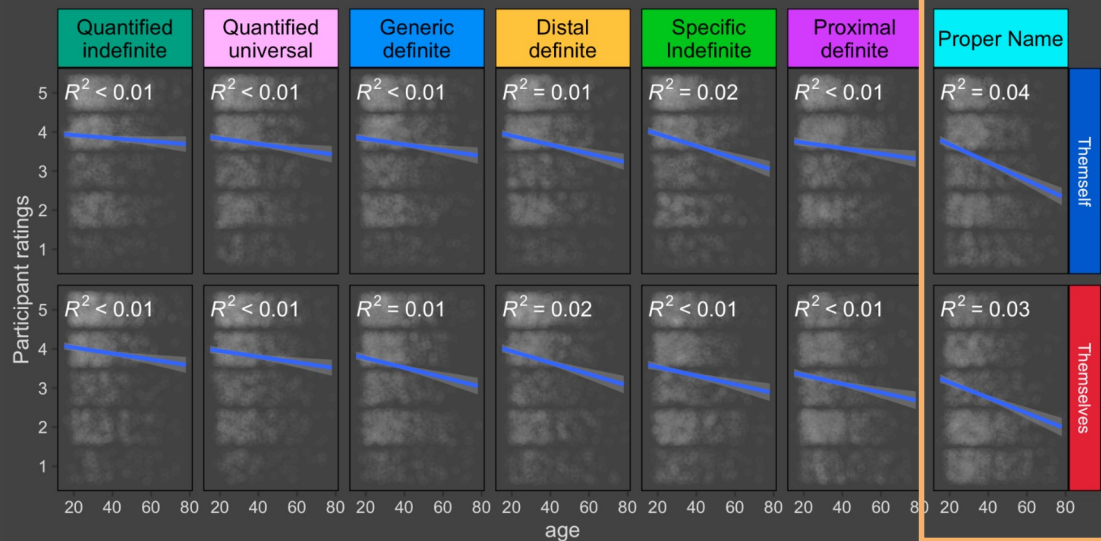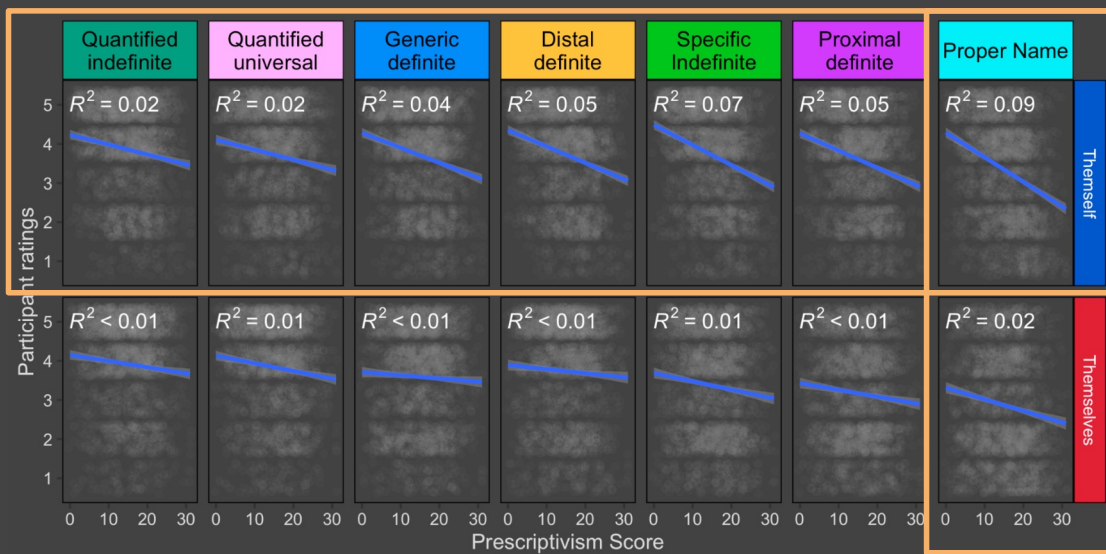
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Discussion of Pilot Study

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Return to Questions

RQ 1: How does **antecedent type** affect the ratings of *themself* and *themselves*?

H1a: *themself > themselves* **with more specific antecedents**
H1b: *themselves > themself* **with less specific**

- **As presupposed, acceptability of themself vs themselves depends on antecedent type**
  - Without interaction with antecedents, *themself* vs. *themselves* were very similar
  - Antecedents differ syntactically (*functional structure*) **& pragmatically** (*specificity*)
- **Which is preferred when depends on dialect**
  - H1a only true for K3
  - H1b only true for K1

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Return to Questions

RQ 2: what **speaker variables** (macrosocial categories; ideological beliefs) affect ratings of *themself / themselves*?

H2a: *themself* ↗ with {nonbinary, younger, less prescriptive, less gender binarist}
H2b: proper names antecedents (*for either*) ↗ with those folks

- *Both confirmed*: age, prescriptivism, gender binarism, and gender all had significant effects on ratings *(in the direction predicted!)*
  - (Note that the social variables with the biggest effect on k-group are also the social variables that affected ratings [as in H2a,b])

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Return to Questions

RQ3: are there clear or coherent **'dialect groups'** that align with how people rate *themself/ves* with different antecedents?

H3: speakers will divide into 3 dialect groups: conservative, intermediate, and innovative   *(influenced by Konnelly & Cowper 2019's work on singular they)*

- *We did find 3 groups — but along different dimensions*

K1 Conservative	Themself << Themselves	*(but proper name antecedents generally bad)*
K2 Innovative (A)	Themself ≈ Themselves	*(proper name antecedents had highest variability)*
K3 Innovative (B)	Themself >> Themselves	*(themselves is best with quantificational antecedents)*

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Summary: K-Clusters Effects

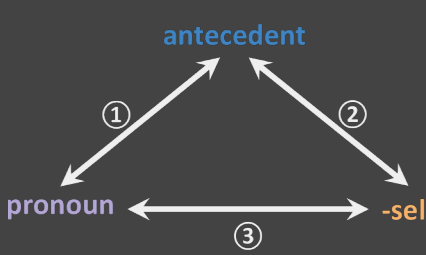- **K-group membership is independent of demographic variables**
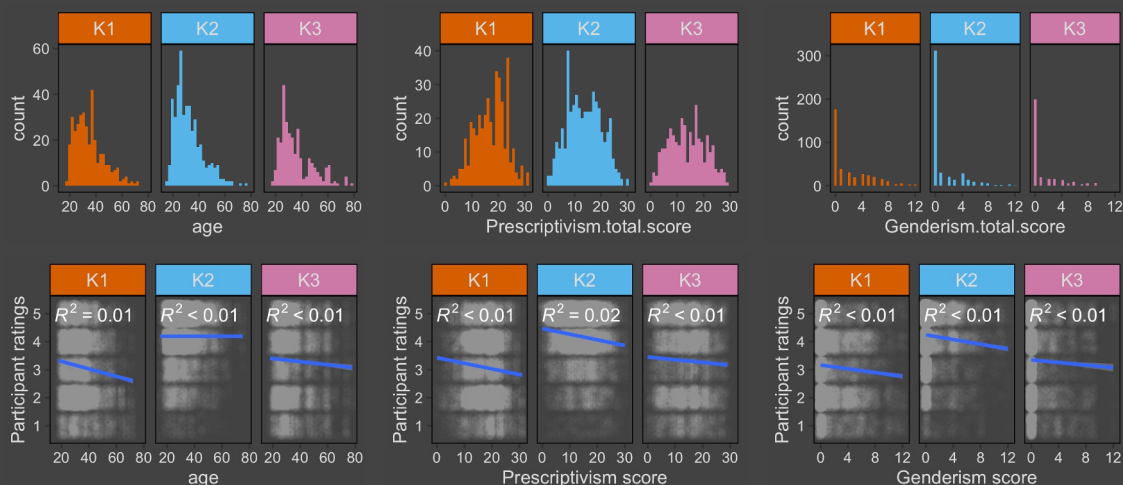
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Summary: K-Clusters Effects

- There are **different grammars of English**, varying on how to deal with [sg]-anteceded genderless 3rd person reflexives

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Summary: Points of Grammatical Variation

antecedent

① ②

pronoun ←→ -self

③

		Constraints on ①	Constraints on ②	Constraints on ③
K1		[SG] familiar antecedents don't allow pronouns without gender	[SG] antecedent should not occur with [ ] -selves	[SG] -self can only occur with [SG] pronouns
K2		no constraints with *they*	no constraints with [SG] -self	no constraints with *they*
K3		no constraints with *they*	[SG] -self + ant. must #-match	no constraints with *they*

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Zooming In: Predictions

[SG] antecedent

① ②

pronoun -self

	✓ant-pron mismatch (*my kid ... them*)	*ant-pron mismatch (**my kid ... them*)
For familiar ant.s… (*proximal def. / proper name*)		
✓ant-self mismatch (*my kid ... -self*) (*my kid ... -selves*)	**K2** ✓themself ✓themselves	**K1** *themself *themselves
*ant-self mismatch (*my kid ... -self*) (**my kid ... -selves*)	**K3** ✓themself *themselves	**K1** *themself *themselves

- Disallowing **ant-pron** mismatch means rejecting ST (*themself* + *themselves* both bad)… where does K1 go w/r/t **ant-self** mismatches?
    - **How can we check?**

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Follow-up study
(skipped for time)

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Follow-up study: methods *(skipped for time)*

Changes to experiment design:

- Added defective 2x2 design for **ourself** and **ourselves**
- Reduced *themself/ves* design to 3x2
- Better design for hypothesis-testing

Changes to demographic questions:

- Includes more information about political affiliation, location, race/ethnicity, socioeconomic class

Technical changes:

- Continuous sliders, PCIbex

ourself/ves	**1pl**	**non-1pl**
ourself		n/a
ourselves		

themself/ves	**Quantified**	**Unfamiliar**	**Familiar**
themself			
themselves			

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Followup: expected outcomes *(skipped for time)*

ourself/ves	1pl		non-1pl
ourself	✅	❌	n/a
ourselves	✅	✅	❌ ❌

themself/ves	Quantified	Unfamiliar	Familiar
themself	❌ ❌	❌ ❌	❌ ❌
themselves	✅ ✅	✅ ✅	❌ ❌

Hypothesis: **There should be a** K4 that rejects *themself* (b/c *ST), but accepts *ourself*

RESULTS: in progress!

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Conclusions

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Theoretical implications

What does this mean for English reflexive binding?

- Phi-Agree valuing the features in English anaphors would <u>undergenerate</u>
  - i.e., no mismatches would be allowed, counter to fact (see also Ahn 2019)
  - **English reflexive binding does not involve phi-Agree**
- *What to do about feature matching where we find it?*
  - Proposal: English nominal features are governed by variable semantico-pragmatic constraints even in binding contexts
    (cf. Heim 2008 among others)

REMAINING QUESTION: How to derive the patterns that we find?

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Theoretical implications

What does this mean for the morphosyntax of English "gender"?

- A primary motivation English nouns having gender as a phi-feature has been "obligatory gender matching" in reflexive binding — **our findings refute this**
- *How to analyze "gender" in English now?*
  - Proposal: English "gender" is not a noun-class feature and is instead essentially a modifier that marks social relationships (see Conrod 2019)
  - Another English feature that is no longer "grammatical"/*"inflectional"*

REMAINING QUESTION: How do social features and inflectional features differ in the morphosyntax, if at all?

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Takeaway Messages

- **Methodological takeaways**
  - In cases of grammatical variation in participants, **deep analysis is necessary to analyze ratings task data**
    - mean(*themself*) ≈ mean(*themselves*)
  - K-means clustering in the data analysis allowed us to…
    - …identify grammatical variation
    - …generate better descriptions of the patterns
    - …develop new hypotheses

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Takeaway Messages

- **Grammatical takeaways**
  - English reflexive feature-matching is pretty complex; there are relevant features on three nominals

    antecedent
    ① ②
    pronoun ←——→ -self
    ③
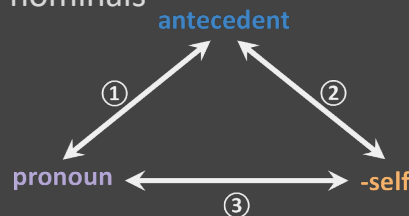
  - ***None*** of these three relationships ***always*** result in feature-matching
    - For each dialect group identified, at least one of these could have a feature-mismatch in some context or another

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Takeaway Messages

- **Grammatical takeaways (cont'd)**
  - There are **different grammars of English**, varying on how to deal with [sg]-anteceded genderless 3rd person reflexives
    - Varieties differ in feature matching systems in reflexive binding
    - Such variation is expected for language change in progress where input can underdetermine plausible grammatical systems in learners

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Work Remaining

- Explore the featural composition of English pronouns more carefully
  - Draw more on ongoing work on singular *they*
  - Explore the possibility that feature-composition of pronouns is where grammars diverge
- Explicit model of feature-matching in English reflexive binding
  - Looking at other domains of feature mismatch in English
  - Looking at other ST reflexive anaphors (e.g. *theirself, theyself*, &c)
  - Looking at how learners approach novel pronouns w/r/t reflexive forms (e.g. *ze, ey*)
  - Compare/contrast with *non*-reflexive pronoun-antecedent feature matching

Thank you!

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