Acceptability, production, and comprehension of definite singular *they*

Byron Ahn[1,a], **Kirby Conrod**[2,b], **Ameena Faruki**[1,b], **Steven Foley**[1,a/b], **Xander Guidry**[1,b], and **Ruth Schultz**[1,b]

[1] Princeton University; [2] Swarthmore College

[a] he/him; [b] they/them

NWAV 50 • Stanford University • October 13–15, 2022

SEPTA

Project–Launch Overview

Motivating Question:

- What social & linguistic factors predict variation in the use & interpretation of *they*?

Core components of the project:

- Acceptability judgement task
- Sentence-completion task
- Self-paced reading task

What we want feedback on:

- How we gather our social measurements
- The best ways to target participant populations
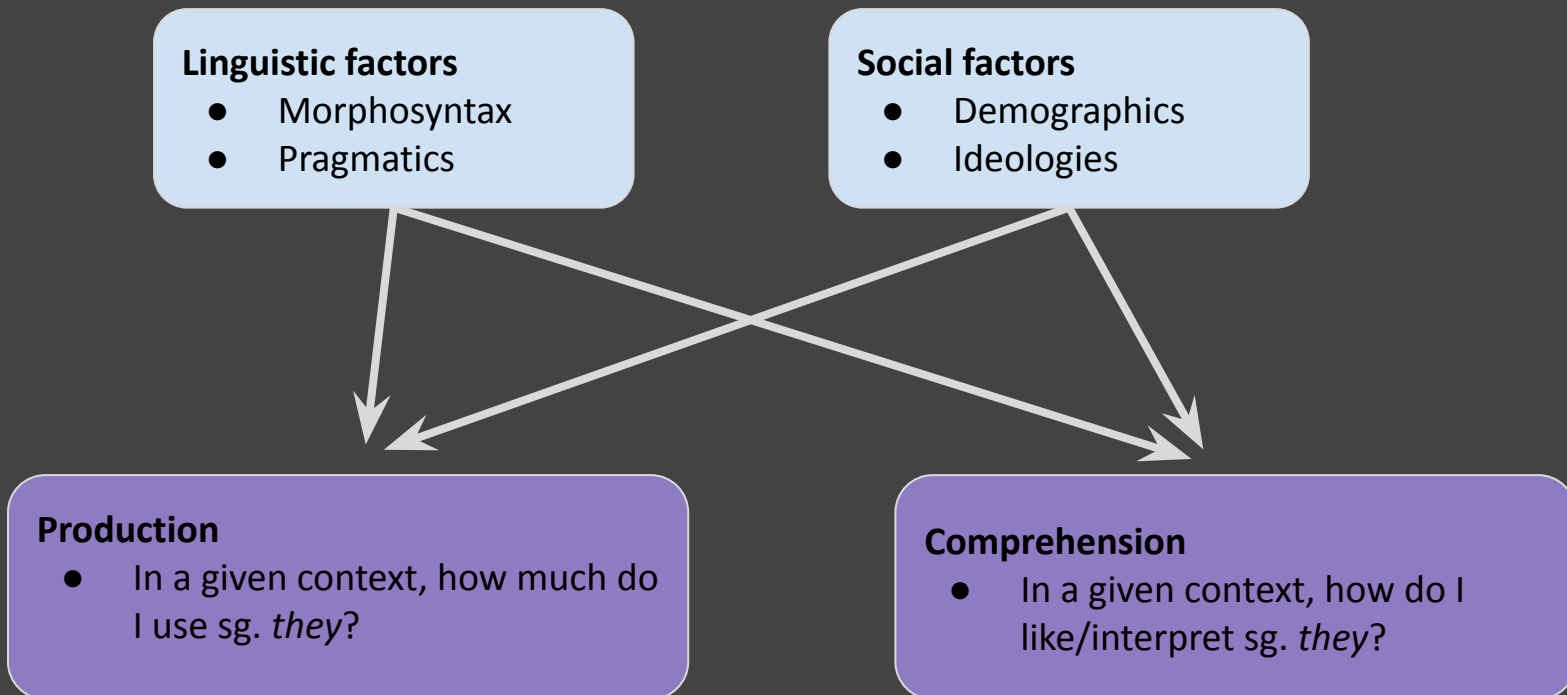
Overview
Core Question
Design Factors: Linguistic
Design Factors: Social
Future Directions

Core Question

How do social/linguistic variables predict use/comprehension of sg. they?

Linguistic factors
- Morphosyntax
- Pragmatics

Social factors
- Demographics
- Ideologies

Production
- In a given context, how much do I use sg. *they*?

Comprehension
- In a given context, how do I like/interpret sg. *they*?

Some Prior Findings: acceptability

Prior findings: There are patterns of acceptability that are mediated by social and linguistic factors   [Ackerman 2018, Bjorkman 2017, Conrod 2019, Hekanaho 2020, Conrod et al. *in press*, a.o.]

(1)   Definite plural *they*:   ***Those dentists*** smiled before ***they*** sneezed.
(2)   Quantified/indefinite *they:*   ***Every dentist*** smiled before ***they*** sneezed.
(3)   Definite singular *they*:   ***That dentist*** smiled before ***they*** sneezed.

	Dialect A	Dialect B	Dialect C
(1) Def. pl. *they*	Acceptable	Acceptable	Acceptable
(2) Quant. *they*	Proscribed	Acceptable	Acceptable
(3) Def. sg. *they*	Unacceptable	Liminal	Acceptable

Core Components: Three Designs

Socio-pragmatics

Socio-syntax

Sentence completion
- Fill-in-the-blank, targeting syntactic positions that require pronouns

Task: Put a word in the blank to complete this sentence.

"My client (Casey) was not in ___ right mind."

Off-line acceptability
- Naturalness ratings using a Likert scale (1-5)

Task: Rate this sentence's naturalness.

"My client (Casey) was not in their/his right mind."

On-line comprehension
- Self-paced reading (grammaticality Maze)

Task: Read the sentence as it appears one word at a time

"Before they/he left, the tall client(s) sneezed."

For all stimuli, antecedent nouns/names are gender-normed *(pulling from Misersky et al. 2013 and Flowers 2015)*

Socio–Pragmatic Studies (*usage/acceptability*)

Question: When the speaker doesn't commit to / want to reveal the gender of the (definite/specific/named) referent, when does sg. *they* get used/accepted?

antecedent	gender not concealed	gender concealed
common noun	**(4a)** *My client, whose testimony we witnessed earlier, was not in PRONOUN right mind …*	**(4c)** *My client, who prefers to remain anonymous, was not in PRONOUN right mind …*
proper name	**(4b)** *My client Casey, whose testimony we witnessed earlier, was not in PRONOUN right mind …*	**(n/a)**

Usage: Sentence Completion
- *PRONOUN = blanks*

Acceptability: Likert Scale Rating
- *PRONOUN = their/his/her*

- *All stimuli in the project repo at* `https://osf.io/5mvpz/`
- *Demo usage task at* `https://farm.pcibex.net/r/WYCAgE/`

Socio–Syntactic Study (*processing*)

Broad Question: How do more conscious (off-line) acceptability/production behaviors correlate with unconscious (on-line) language-processing behavior?

Narrow Question: Given a cataphoric pronoun, what predictions do speakers of different dialects make about upcoming referent?

(5a) After **they** finished, **that cellist** took a bow. PL pronoun ⇒ SG subject *(sg. they)*
(5b) After **they** finished, **those cellists** took a bow. PL pronoun ⇒ PL subject
(5c) After **he** finished, **that cellist** took a bow. SG pronoun ⇒ SG subject
(5d) After **he** finished, **those cellists** took a bow. SG pronoun ⇒ PL subject

- *All stimuli in the project repo at* `https://osf.io/5mvpz/`
- *Demo processing task at* `https://farm.pcibex.net/r/RugJWe/`

Project Overview

*Reminder! We have design/experimental factors (IVs) that are **linguistic** and **social**:*

Linguistic factors
- Morphosyntax
- Pragmatics

Social factors
- Demographics
- Ideologies

Production
- In a given context, how much do I use sg. *they*?

Comprehension
- In a given context, how do I like/interpret sg. *they*?
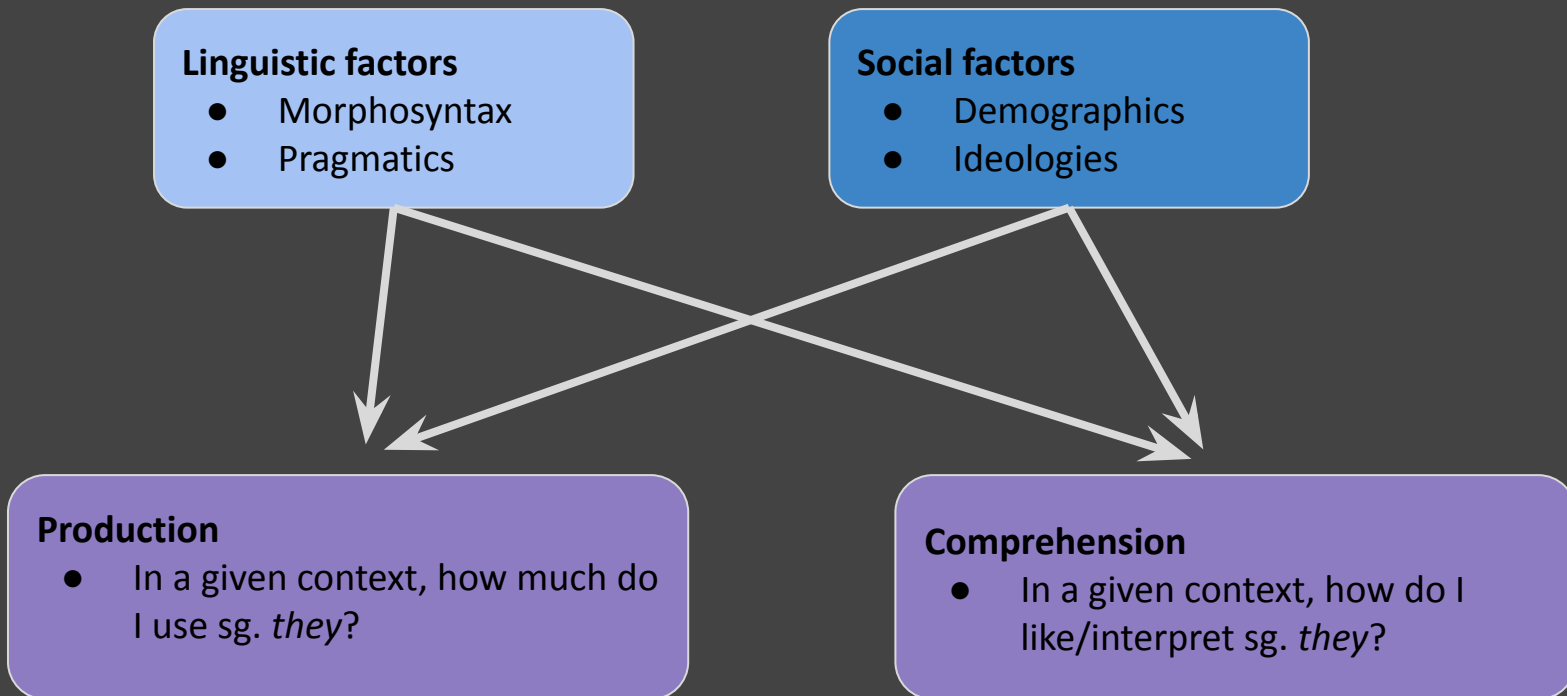
Targeting demographic variables

What questions would best capture these variables?

- *Gender:* cis vs. trans, non-binary vs. binary, 'naive' cis vs. 'in-the-know' cis
- *Age:* older vs. younger
- *Location:* urban vs. rural, coastal vs. heartland, place of origin vs. current location
- *Sexuality and queer-familiarity:* LGBTQ identity, queer community members, etc.
- *Factors without predictions:* socioeconomic status (profession, class, education), ethnicity, race
- *Neurotypicality* (for reading task): memory/attention disorders

Post-task demographics questionnaire

- Link to draft: **https://bit.ly/theyQs**

Targeting ideological variables

What questions would best capture these variables?

- *Political ideology:* conservative vs. liberal
- *Gender ideology:* benevolent sexism, binarist views, transphobia, trans-acceptance
- *Language ideology:* (benevolent) prescriptivism scale

Post-task ideologies questionnaire

- Link to draft: **https://bit.ly/theyQs**

Targeting Participant Populations

No targeting specific demographics: A very large, random sample

      N = 1,000 adult American native English speakers

Pre-task targeting with Prolific (with demographic/ideological surveys in the task)

- Some large sample(s) with demographic targets

      N = 500 participants, including x trans people, y women, z people under 40, etc.

- Multiple smaller studies targeting specific populations

      N_1 = 100 = 50 cis + 50 nonbinary 18-25 year olds

      N_2 = 100 = 25 trans/nonbinary people in four age brackets

Pre-task targeting with our surveys:

- Run our surveys on Prolific first, to achieve targeting for exp'ts as described above

Overview
Core Question
Design Factors: Linguistic
Design Factors: Social
Future Directions

Goals moving forward

- Social perception study to explore social meaning
- Finer-grained analysis of intersections of social variables
- Connections between sociolinguistics and psycholinguistics

Sociolinguistic Theorizing

- Analyze debriefing questions targeting metalinguistic awareness of pronoun variation
- Sociolinguistic interview: variation driven by conscious and/or subconscious attitudes?

Qualitative Work

- Look for ways of eliciting sg *they* or other pronouns (without clear prompt)
  - Large-scale online (not interviews) but more naturalistic (not fill-in-the-blank)
- Differences between on-line and off-line responses?
  - Conscious vs. subconscious variation *(e.g., ratings vs. reading times)*

Quantitative Work

Questions Asked During Q&A

Project Repository

- Link to the repository for this project:

https://osf.io/5mvpz/

- This repository will host:
  - Preregistrations for each experiment
  - All experimental materials (stimuli and PCIbex code)
  - Survey instruments
 - Handouts, slides, and manuscripts

Thanks and Acknowledgements

Thank You!

Thanks to the rest of the Scientific Explorations of Pronouns and Trans Acceptance (SEPTA) consortium of labs, the past and present RAs in these labs, Lauren Ackerman for sharing gendered name data, Brian Dillon and Matt Wagers for helpful discussion on reading tasks, and Princeton University and Swarthmore College for funding research and travel.
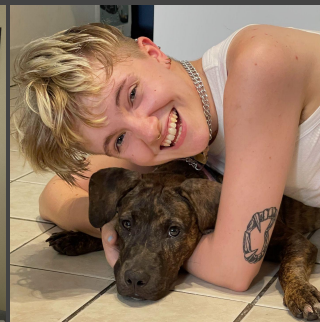

Byron Ahn
he/him
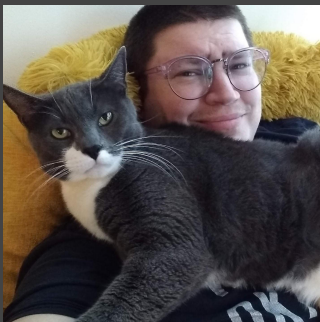
Kirby Conrod
they/them

Ameena Faruki
they/them

Steven Foley
him/them

Xander Guidry
they/them

Ruth Schultz
they/them

Works cited

- Ackerman, Lauren. 2018. Being themself: processing and resolution of singular (im)personal *they*. Presented at The 31st CUNY Conference on Human Sentence Processing. doi:osf.io/qba7d
- Bjorkman, Bronwyn. 2017. Singular *they* and the syntactic representation of gender in English. Glossa 2(1). doi:10.5334/gjgl.374
- Bradley, Evan, Maxwell Schmid and Hannah Lombardo. 2019. Personality, prescriptivism, and pronouns: Factors influencing grammaticality judgments of gender-neutral language. English Today 35(4). doi:10.1017/S0266078419000063
- Bradley, Evan. 2020. The influence of linguistic and social attitudes on grammaticality judgments of singular 'they'. Language Sciences 78. doi:10.1016/j.langsci.2020.101272
- Conrod, Kirby. 2019. Pronouns raising and emerging. Doctoral dissertation, University of Washington.
- Conrod, Kirby, Ruth Schultz, and Byron Ahn. *In Press*. How many selves for them? In *NELS 52: Proceedings of the 52nd Annual Meeting of the North East Linguistics Society.*
- Flowers, Andrew. 2015. The Most Common Unisex Names In America: Is Yours One Of Them? https://fivethirtyeight.com/features/there-are-922-unisex-names-in-america-is-yours-one-of-them
- Hekanaho, Laura. 2020. Generic and nonbinary pronouns: Usage, acceptability and attitudes. Doctoral dissertation, University of Helsinki.
- Hernandez, Ellis. 2020. Pronouns, prescriptivism, and prejudice: Attitudes toward the singular 'They', prescriptive grammar, and nonbinary transgender people. Doctoral dissertation, Purdue University.
- Misersky et al. 2013. Norms on the gender perception of role nouns in Czech, English, French, German, Italian, Norwegian, and Slovak. Behavior Research Methods 46. doi:10.3758/s13428-013-0409-z
- Schultz, Ruth. 2021. Usage of, Opinions on, and the Future of a Nonbinary Pronoun. Unpublished ms., Princeton University.
- Zehr, Jeremy and Florian Schwarz. 2018. PennController for Internet Based Experiments (IBEX). doi:10.17605/OSF.IO/MD832

Grammaticality Maze Task