

The Role of Social Meaning in the Emergence of Indexicality

Aini Li & Gareth Roberts

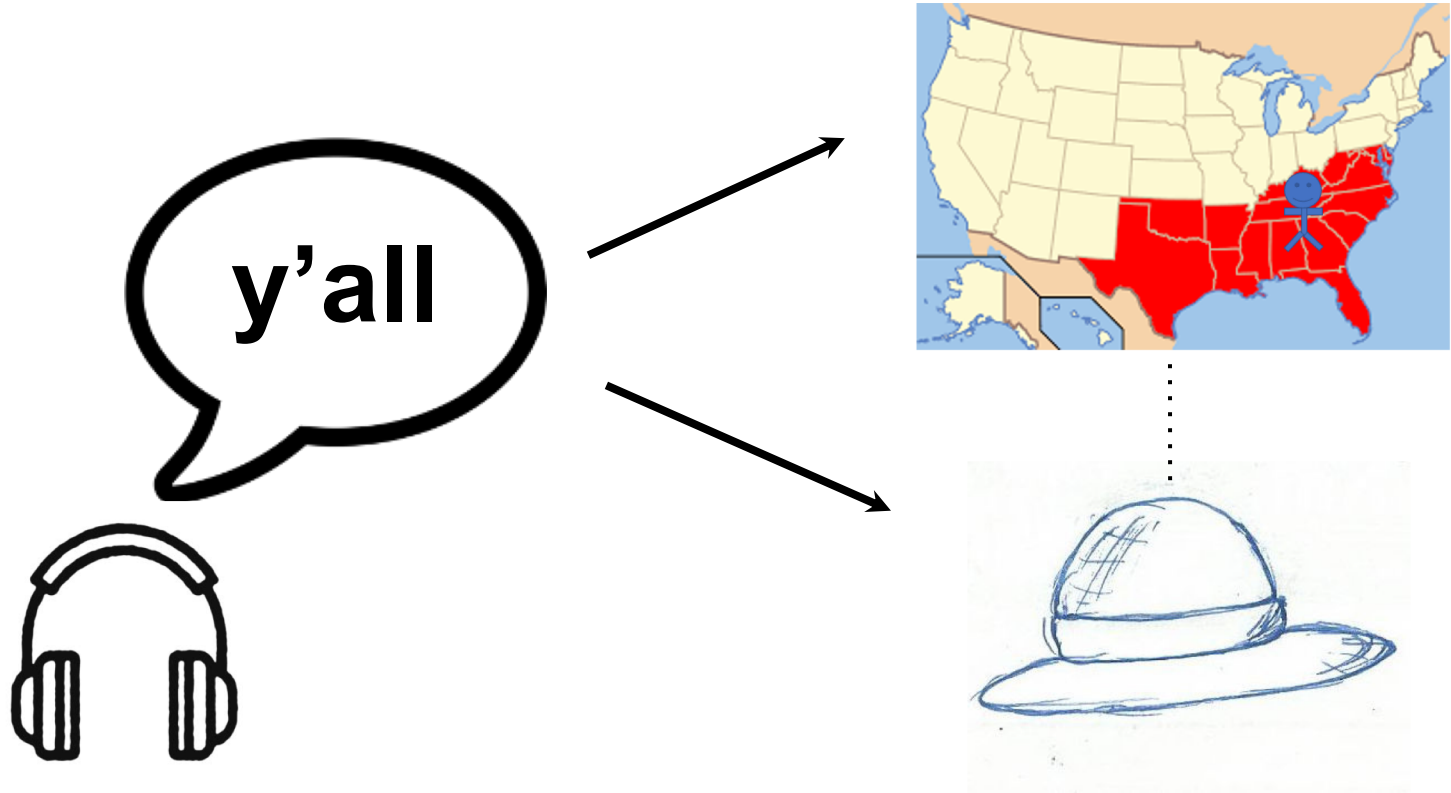
ICLAVE 11 — April 11-14



Indexicality

Speakers link linguistic features with social information

Indexicality



Indexicality

- Previous theoretical work on naturalistic data (e.g., Agha, 2007; Jaffe, 2009; Meyerhoff & Schlee, 2012; Pharo, Maegaard, Møller, & Kristiansen, 2014; Johnstone, 2016)
- **How does indexicality emerge?**
 - Agha (2007): indexicality requires “functional **reanalysis** of ‘diverse behavioural signs’”
 - Johnstone (2016): a sign possesses indexicality “by virtue of **co-occurring** with what it is taken to mean”

Indexicality

To extend further:

- Is mere co-occurrence of speakers, traits and linguistic variants sufficient? **Experiment 1**
- If co-occurrence is not enough, what else is needed?
Extension to new users? **Experiment 2**
- Is all co-occurrence equal? Probably not. Indexicality also requires **social meaning** to be attached.

Experiment 3

Indexicality

- To test these claims, we need an experimental paradigm where we can manipulate:
 - what co-occurs with what without worrying about the associations people already have with different linguistic features
- How should we do this?
- Artificial language learning experiments!

Artificial Language Learning

- We created a miniature artificial alien language

- **Nouns:**

kabuq, bupod, hasot, wejun,
kenig, tulimur, petilet,
ropuko, luragur, gunawul



kabuq



kabuqdem/kabuqgok

- Each noun refers to an object in the alien language
- Two plural suffixes: *-gok* and *-dem*

Artificial Language Learning

- This language is used by **two different alien species**



Nulus



Gilis

Artificial Language Learning

- The two different alien species are in **two different ceremonial outfits**



Nulus



Gilis

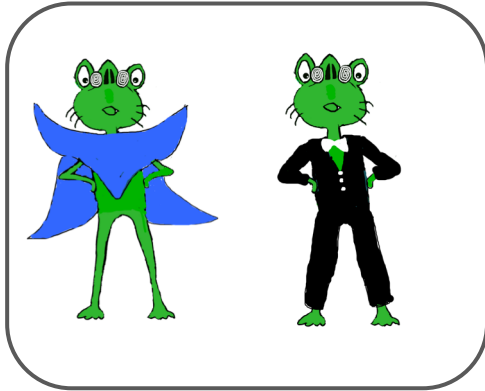
Artificial Language Learning















(1) Familiarization



Artificial Language Learning

(1) Familiarization



						
2	3	4	5	6	7	8
						
10	11	12	13	14	15	16

Please find all the images of Nulus and type their numbers in this box. Please separate numbers with commas. Press enter when you are done.

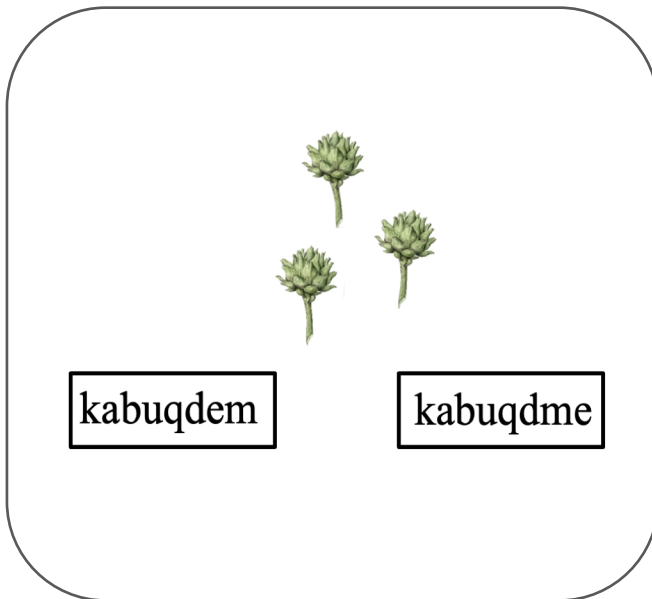
Artificial Language Learning

(2) Language training

Passive exposure



Forced-choice



Artificial Language Learning

(3) Memory test

Have you seen this alien before?



Artificial Language Learning

Reminder

kabuqgok



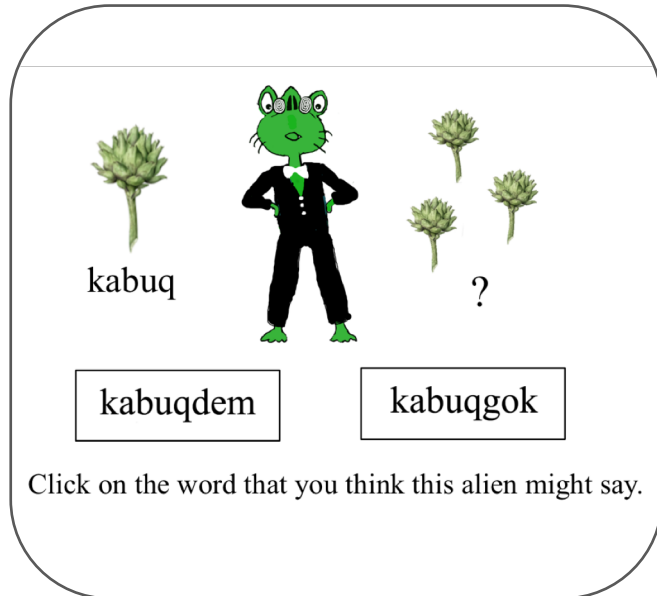
kabuqdem



Artificial Language Learning

(4) Association test

Suffix selection



The interface for the 'Suffix selection' test features a green alien character in a black suit standing in the center. To the left is a large green plant labeled 'kabuq'. To the right are three smaller green plants, with a question mark '?' below them. At the bottom, there are two rectangular buttons: the left one contains the text 'kabuqdem' and the right one contains 'kabuqgok'. Below the buttons is the instruction: 'Click on the word that you think this alien might say.'

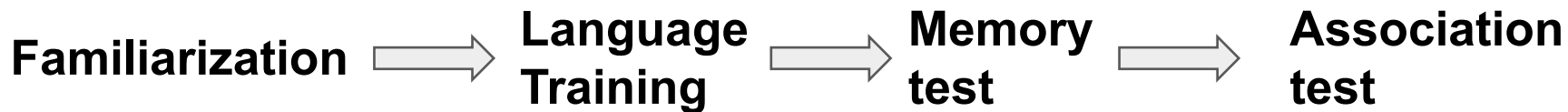
Alien selection



The interface for the 'Alien selection' test shows the same green alien character in a black suit on the left. On the right is a red alien with a blue cape and three eyes. A speech bubble above the red alien contains the word 'kabuqgok' and three small green plants. Below the aliens is the instruction: 'Click on the alien that might have said the word.'

Artificial Language Learning

Quick recap of the experimental set-up



Back to the question of emergence of indexicality...

Experiment 1: Co-occurrence

Experiment 1: Co-occurrence

- Conditions

Training



-gok

Nulus

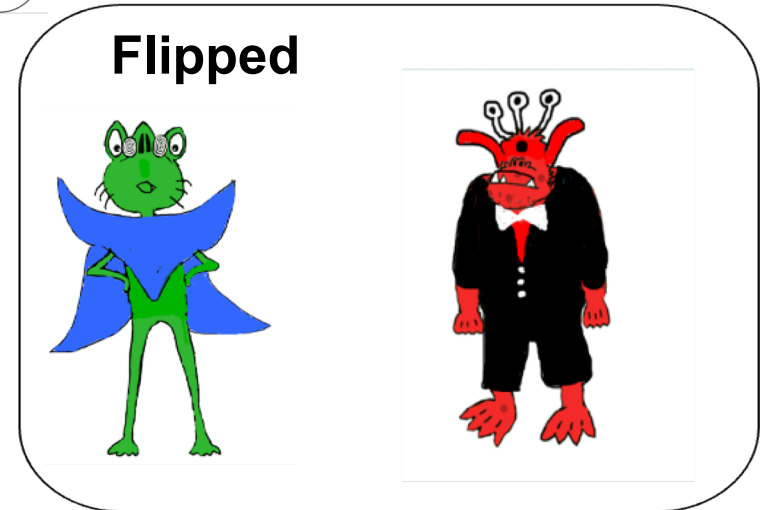
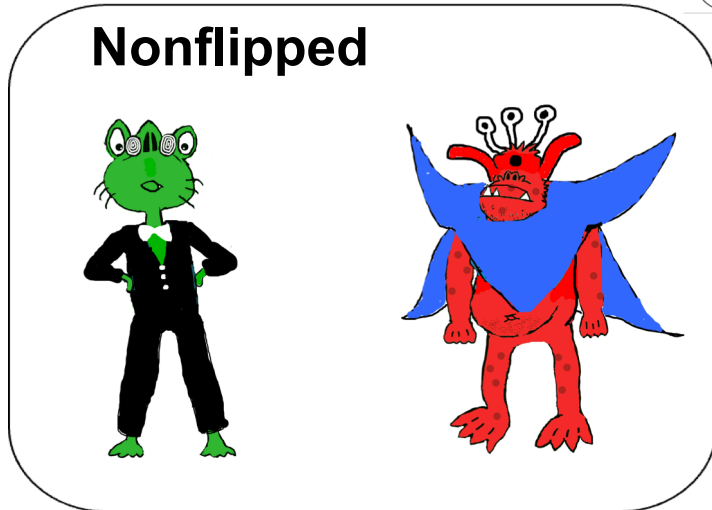
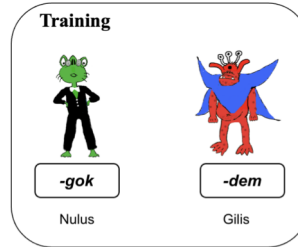


-dem

Gilis

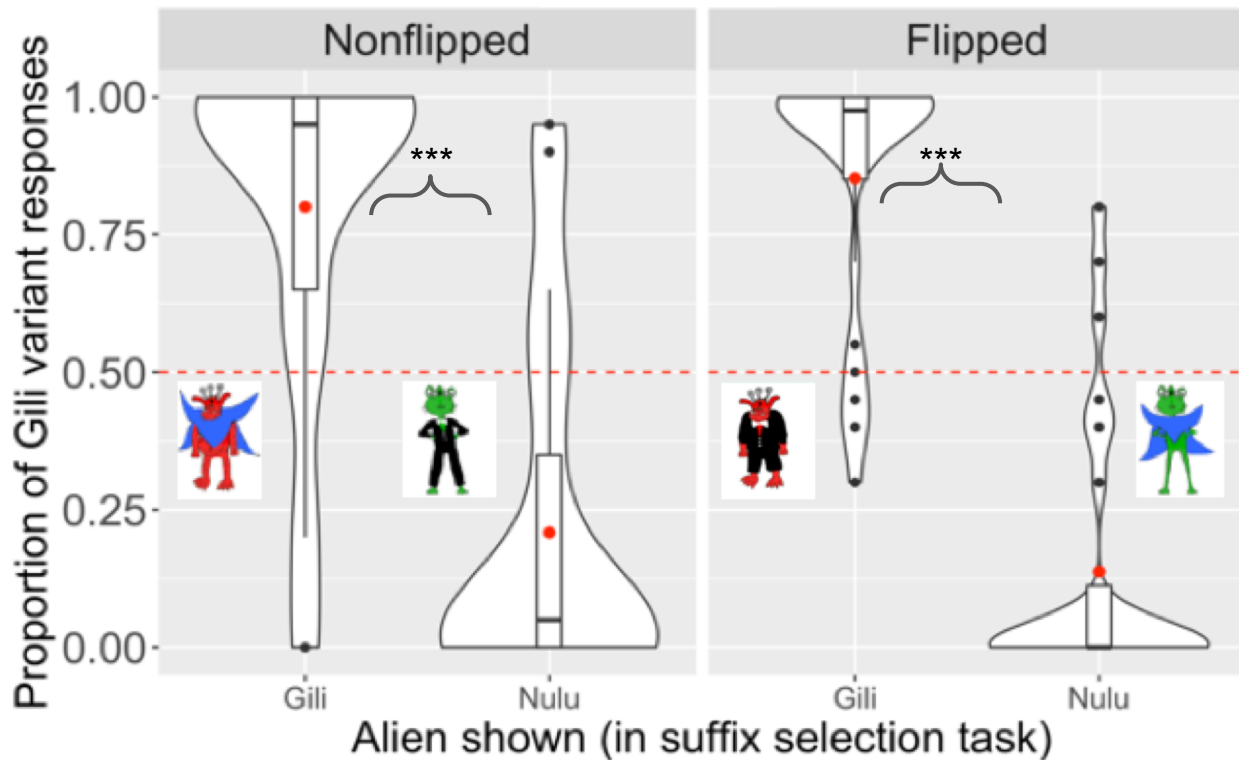
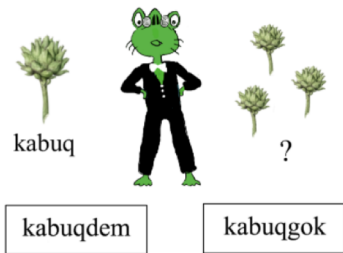
Experiment 1: Co-occurrence

- Conditions: Association test



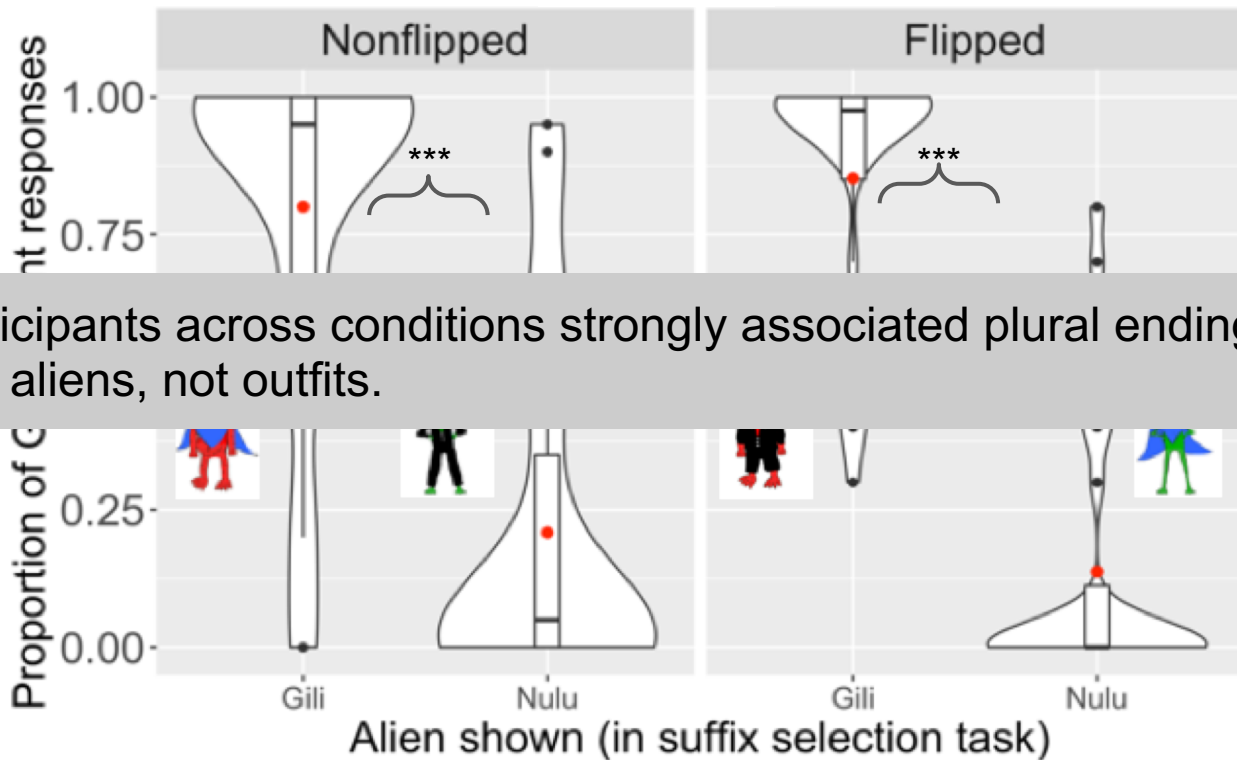
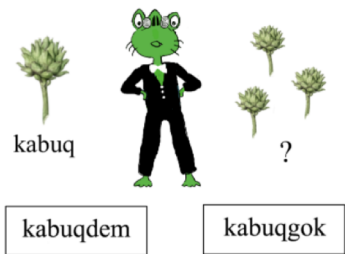
Experiment 1: Co-occurrence

Suffix selection



Experiment 1: Co-occurrence

Suffix selection

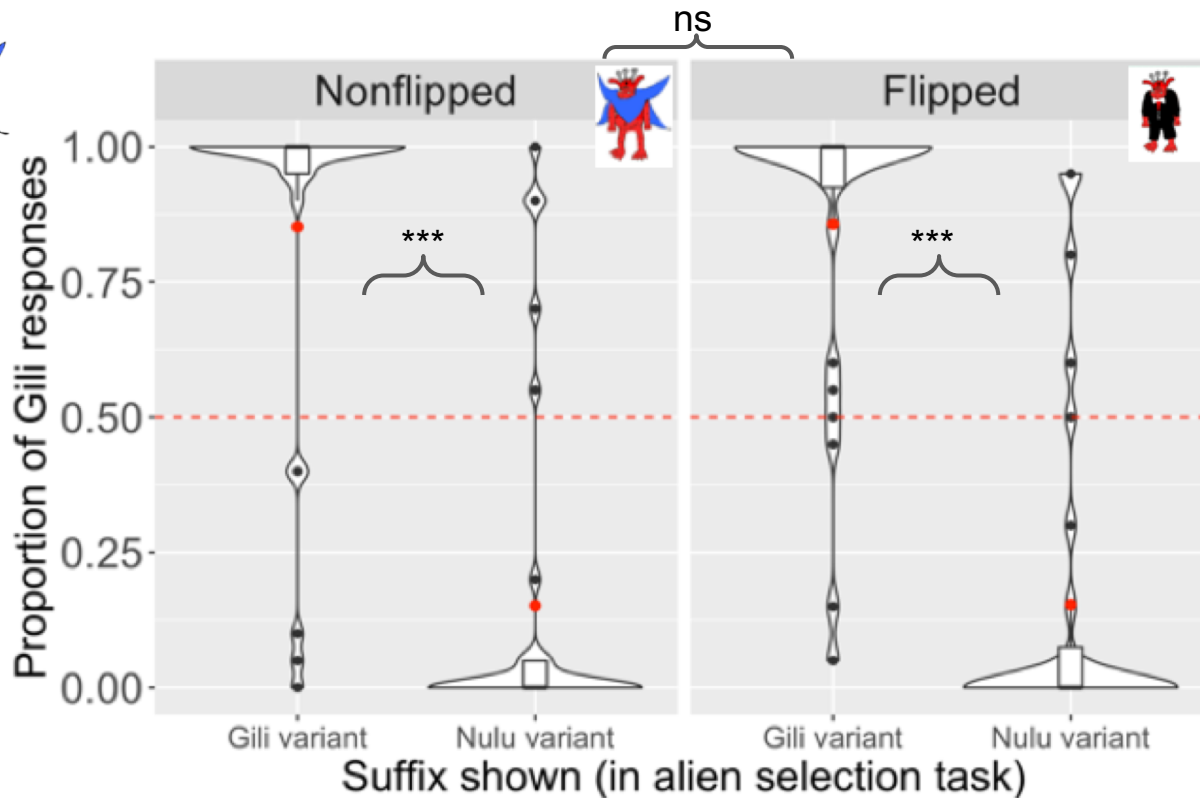


- Participants across conditions strongly associated plural endings with aliens, not outfits.

Experiment 1: Co-occurrence



Alien selection



Experiment 1: Co-occurrence

- According to Experiment 1, participants primarily associate plural endings with aliens. But perhaps they have made secondary associations with outfits that did not show up in our task.
- If so, one reasonable possibility is that these associations may show up with new language users.

Experiment 2: Extension

Experiment 2: Extension



(a)

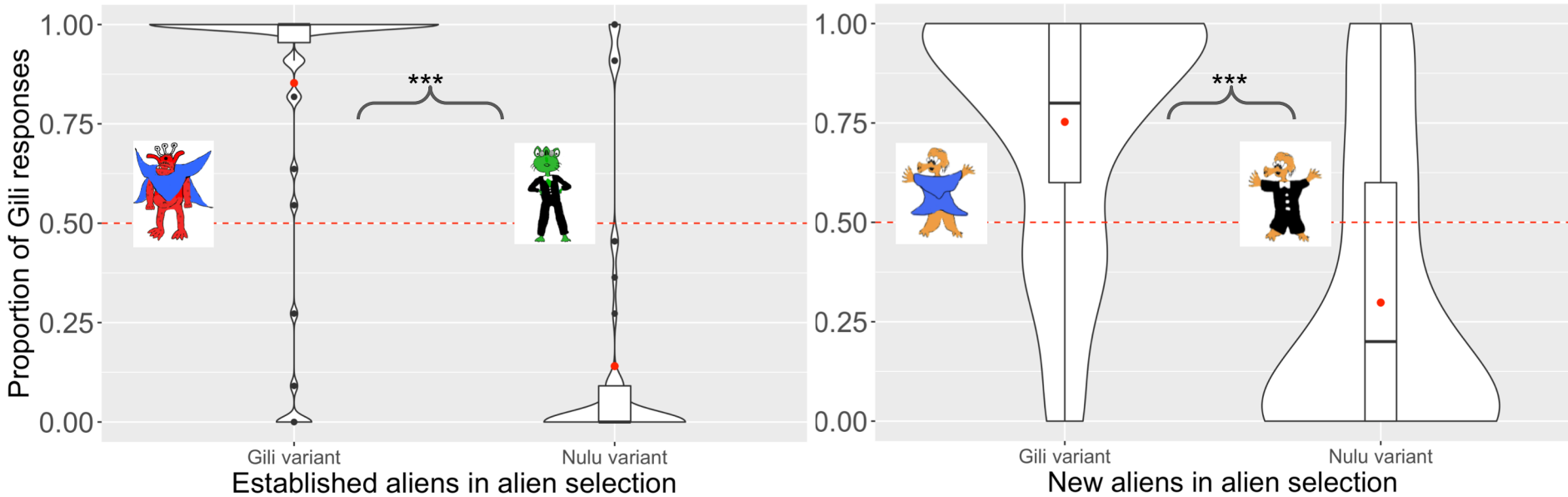


(b)

Only in the association test phase!

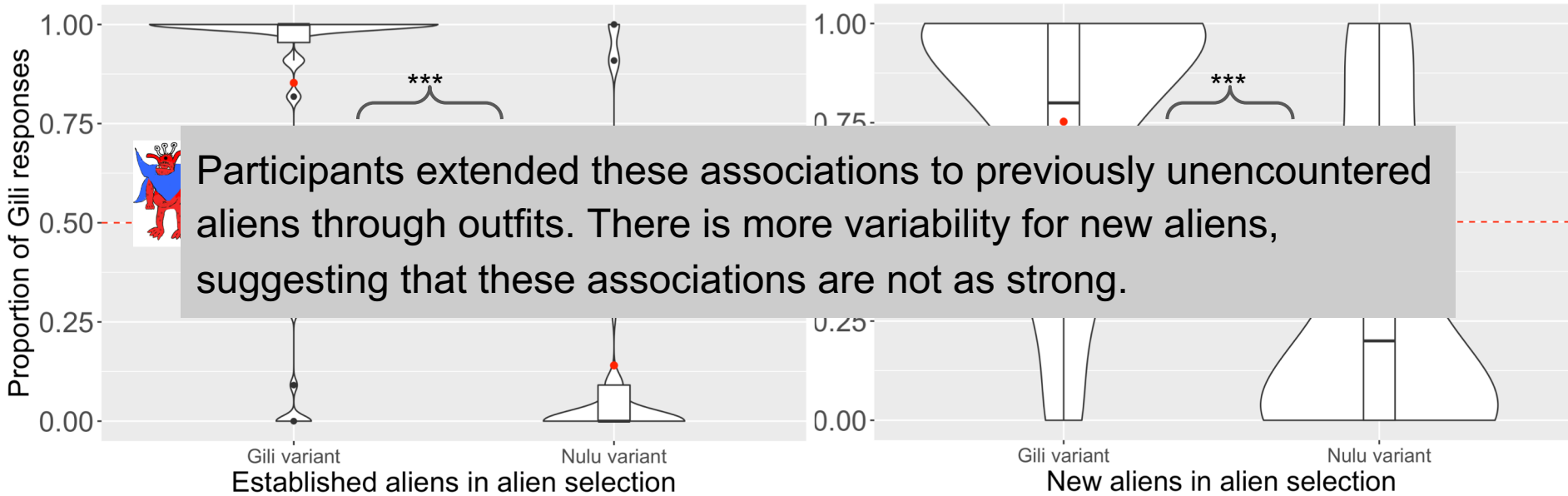
Experiment 2: Extension

Alien selection



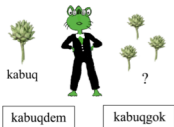
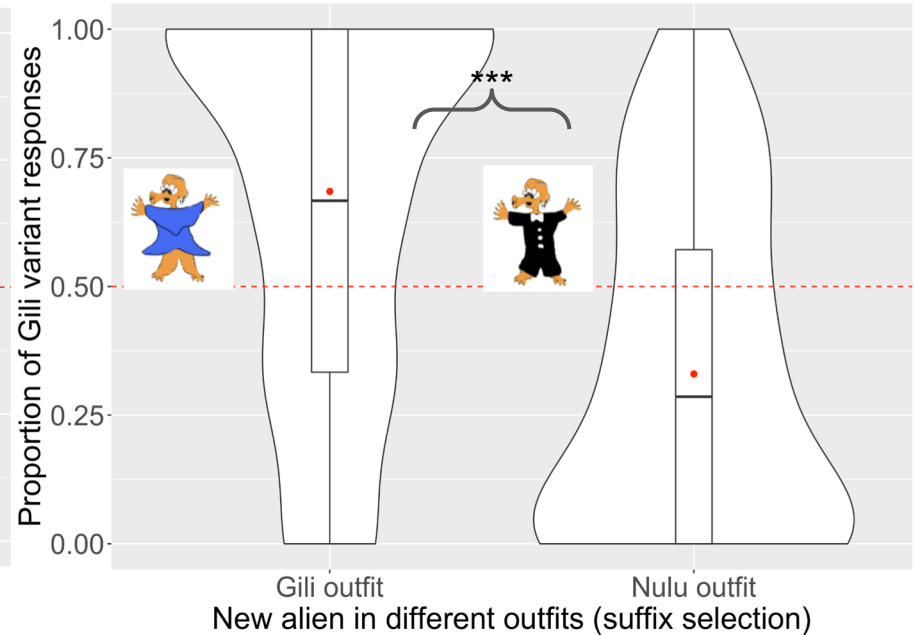
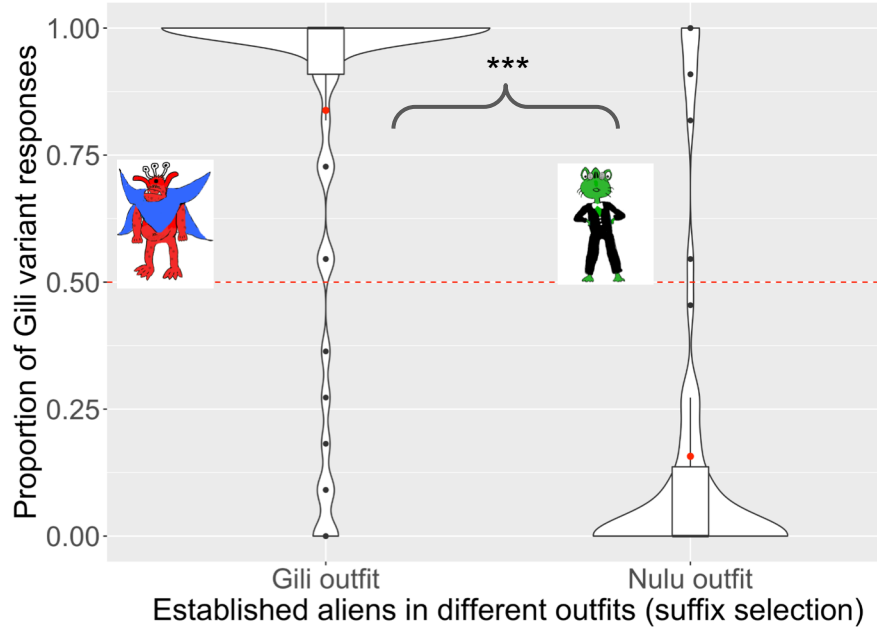
Experiment 2: Extension

Alien selection



Experiment 2: Extension

Suffix selection



Experiment 2: Extension

- While participants acquired strong first-order associations between suffixes and alien species, they extended these associations **via clothing** to previously unencountered aliens.
- Participants must have established some latent secondary association with clothing. **Now**, would this association become strengthened if it were given more social importance?

Experiment 3: Social meaning

Experiment 3: Social meaning

- Introducing a new familiarization task

Diplomatic gathering



Experiment 3: Social meaning

- **Conditions**

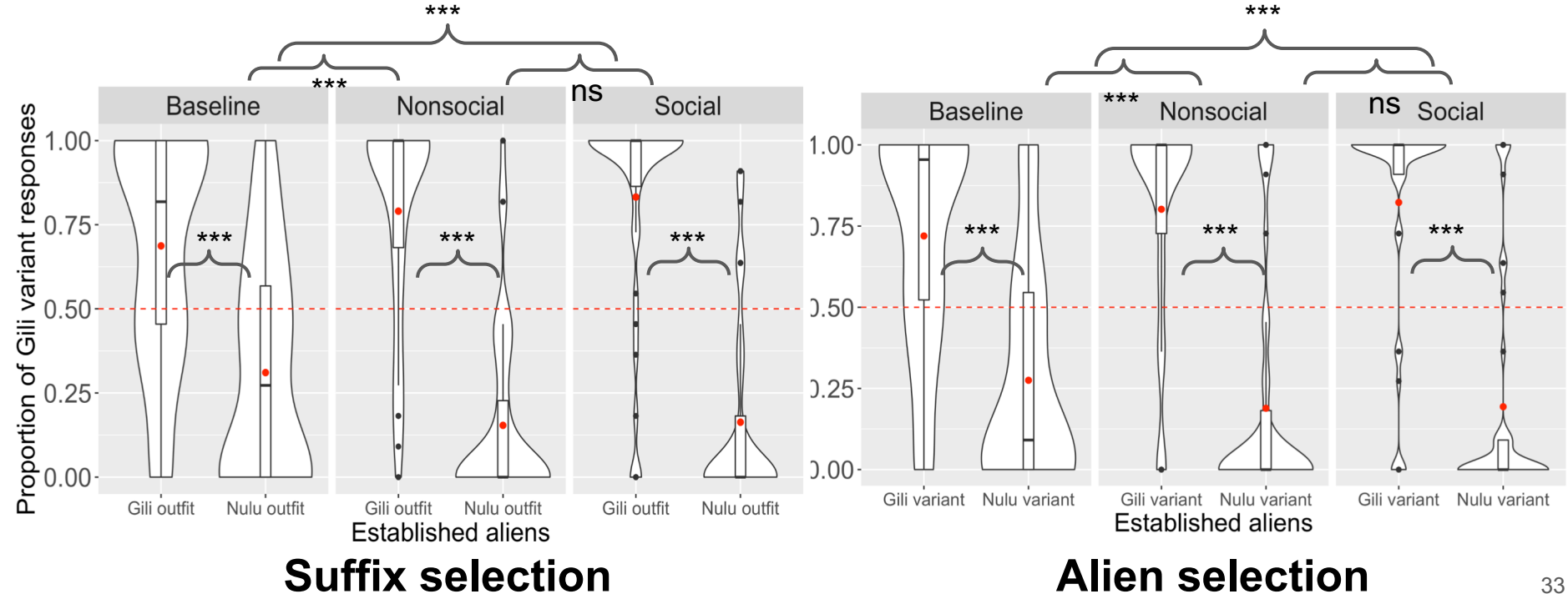
Social condition:
clothing is socially important and aliens will be offended if you do not have an equal number of each color outfit.

Nonsocial condition:
clothing is aesthetically important and the party will not succeed if you do not have an equal number of each color outfit.

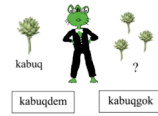
Baseline condition
Same grouping activity as Experiment 1 and 2

Experiment 3: Social meaning

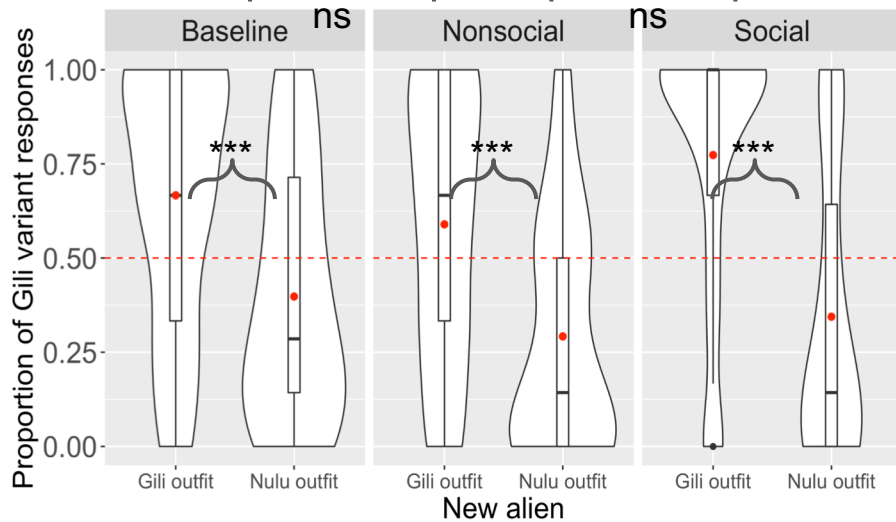
Established aliens



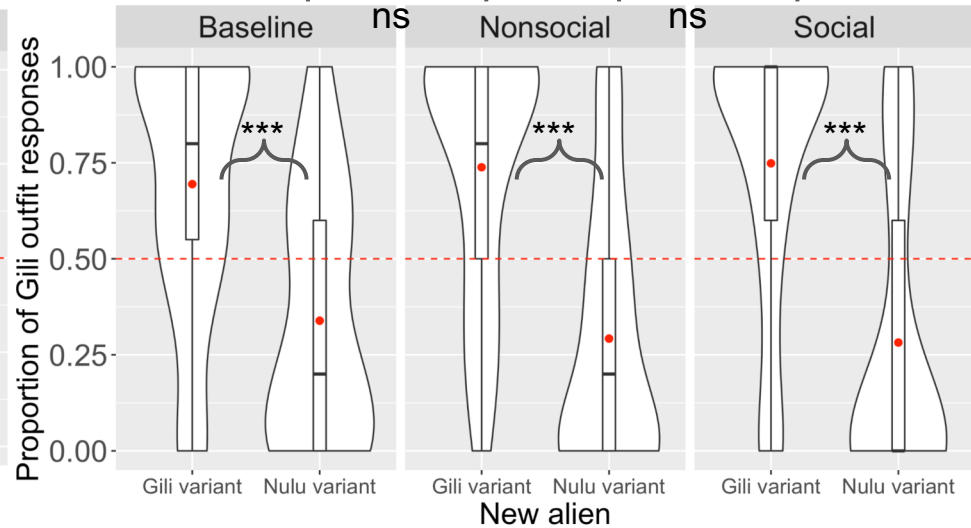
Experiment 3: Social meaning



New aliens



Suffix selection



Alien selection

Conclusion

We found that indexicality seems to arise partly through:

- Exposure to **co-occurring** socially salient and contrastive **variation**.
- Extension to **new contexts** in which the indexed trait is dissociated from the originally observed bearers.
- Modulated by the perceived **practical importance** of the trait in question.

Thank you!

Acknowledgements:

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Contact us for further questions:

Aini Li: liaini@sas.upenn.edu & Gareth Roberts: gareth.roberts@ling.upenn.edu