Individual strategies for resolving lexical and prosodic cues to certainty

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Belief verbs are pragmatically ambiguous

Depending on the context, mental state verbs can

- indicate that someone holds a **belief** without necessarily committing to its truth

(1) A: What is this?
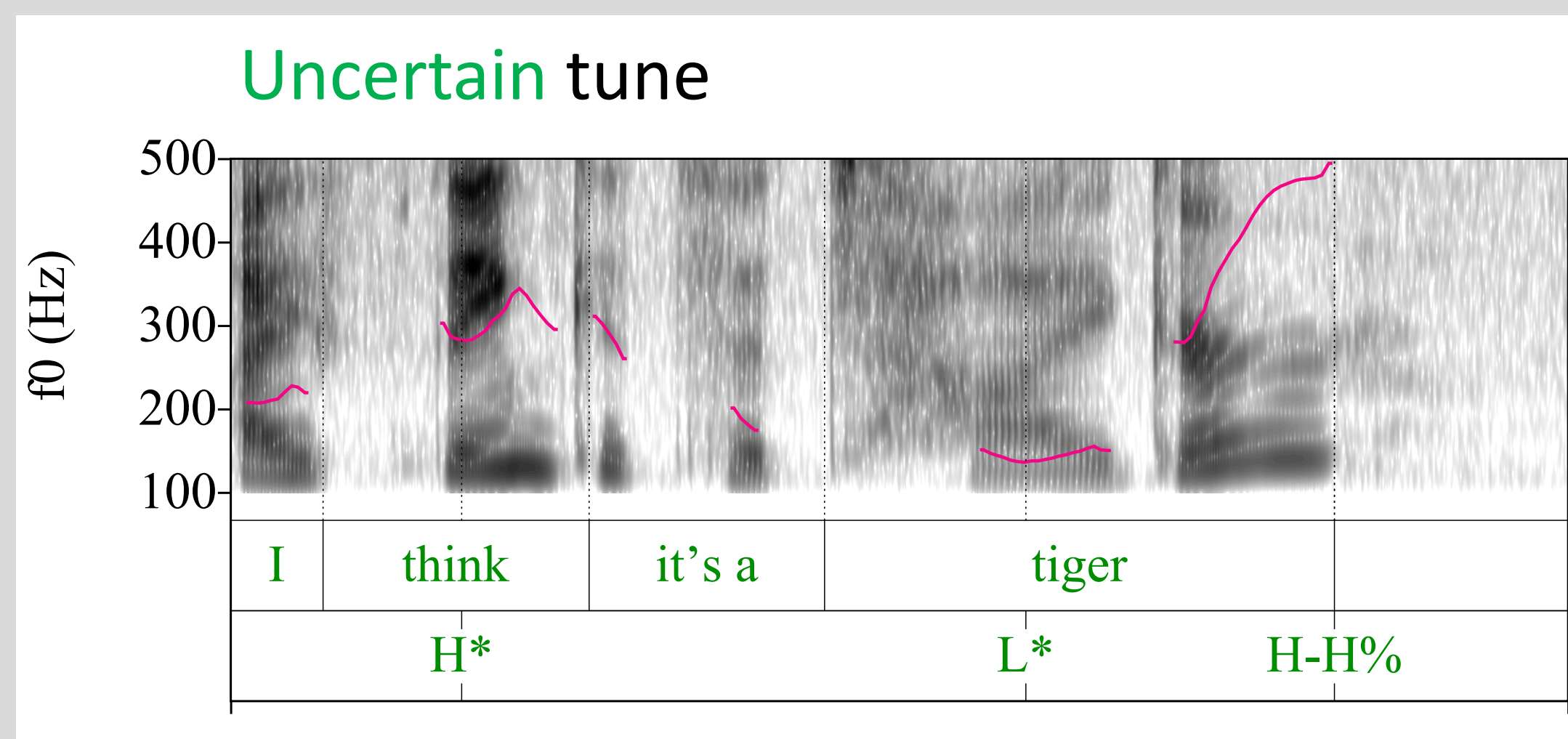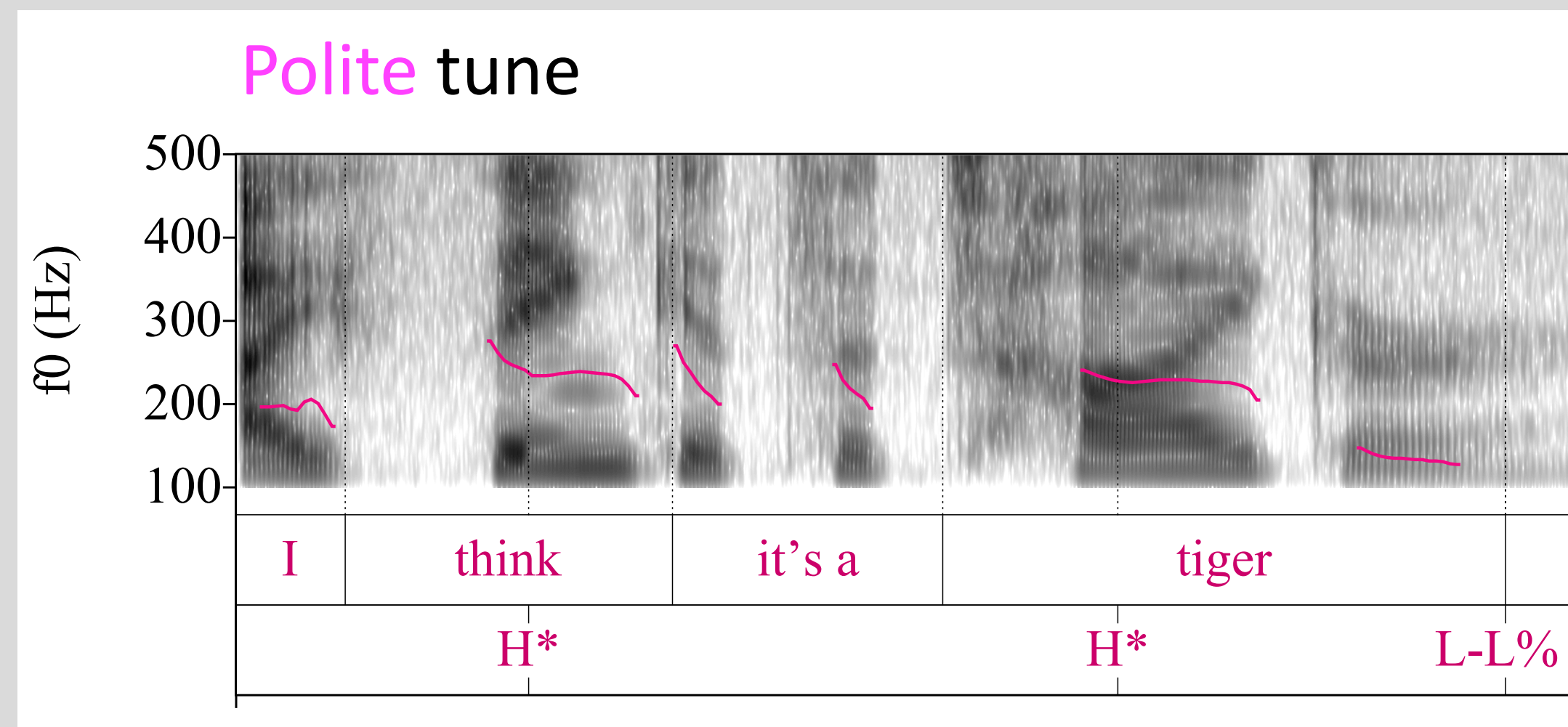   B: I think it's a tiger?   belief

- have a **parenthetical** interpretation, politely softening an assertion (Rooryck 2001, Simons 2007)

(2) A: It's a lion.
     B: I think it's a tiger.   hedge

Prosody disambiguates two uses of *think*

de Marneffe et al. (2017) used two tunes "polite" and "uncertain", correlated with speaker certainty and uncertainty, respectively:


Polite tune

Uncertain tune

They showed that listeners use the tunes to decide which of two speakers' opinions to trust in short dialogues. Listeners made pragmatic inferences to judge speaker commitment, and the intent to be polite.

Here, we use the tunes in another experimental paradigm, to probe listeners' explicit judgments of whether a speaker is certain or not.
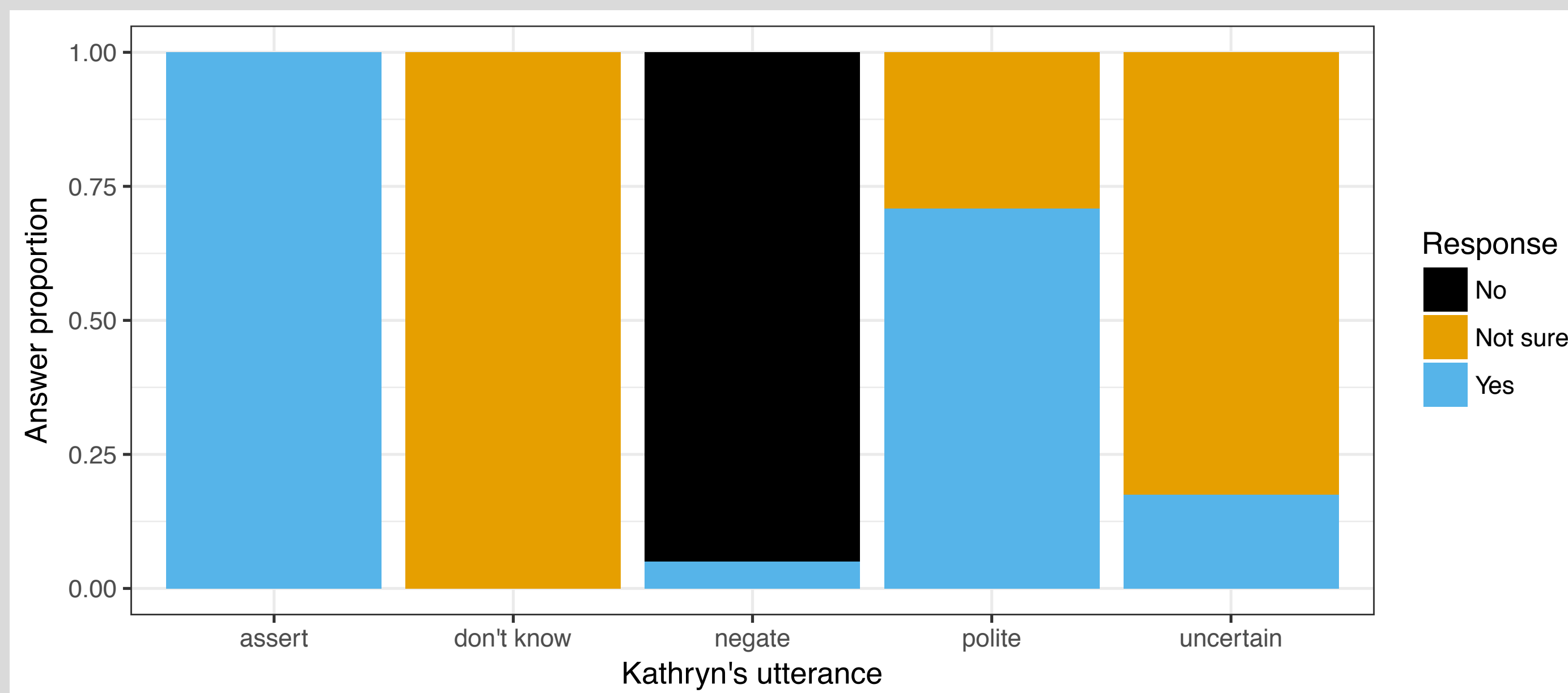
Blicket experiment

Keep track of Kathryn's judgments of whether the pompon is a blicket

Yes — blicket
Not sure — ?
No — blicket (X)
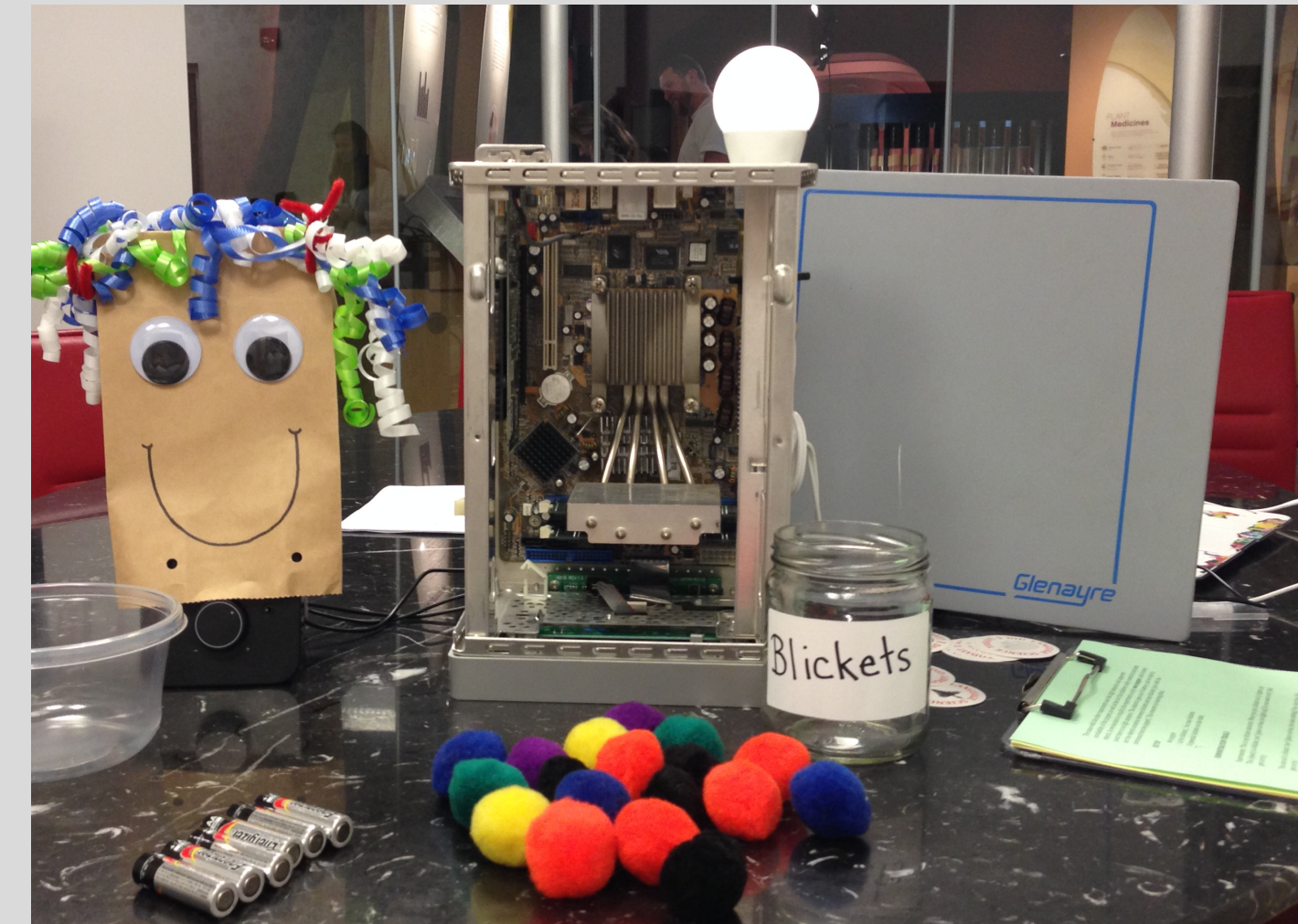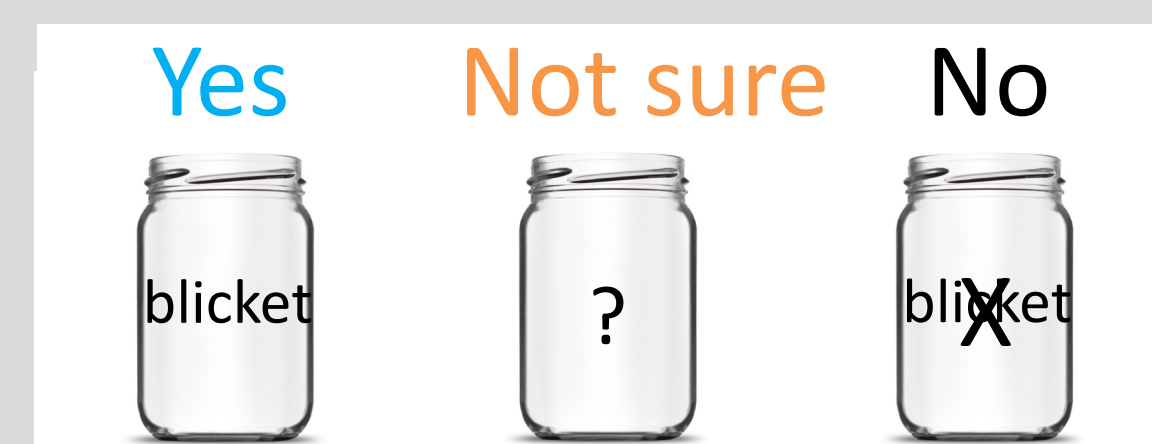
Condition	# trial	Utterance	Expected behavior
Assert	2	Yes, it is.	*Yes* jar
Don't know	4	I don't know.	*Not sure* jar
Negate	2	No, it is not.	*No* jar
Polite	6	I think it is.	*Yes* jar
Uncertain	6	I think it is?	*Not sure* jar

Overall, results are as expected (N = 20)

Individual differences: Bimodal distribution

Polite tune (6 trials)   Uncertain tune (6 trials)
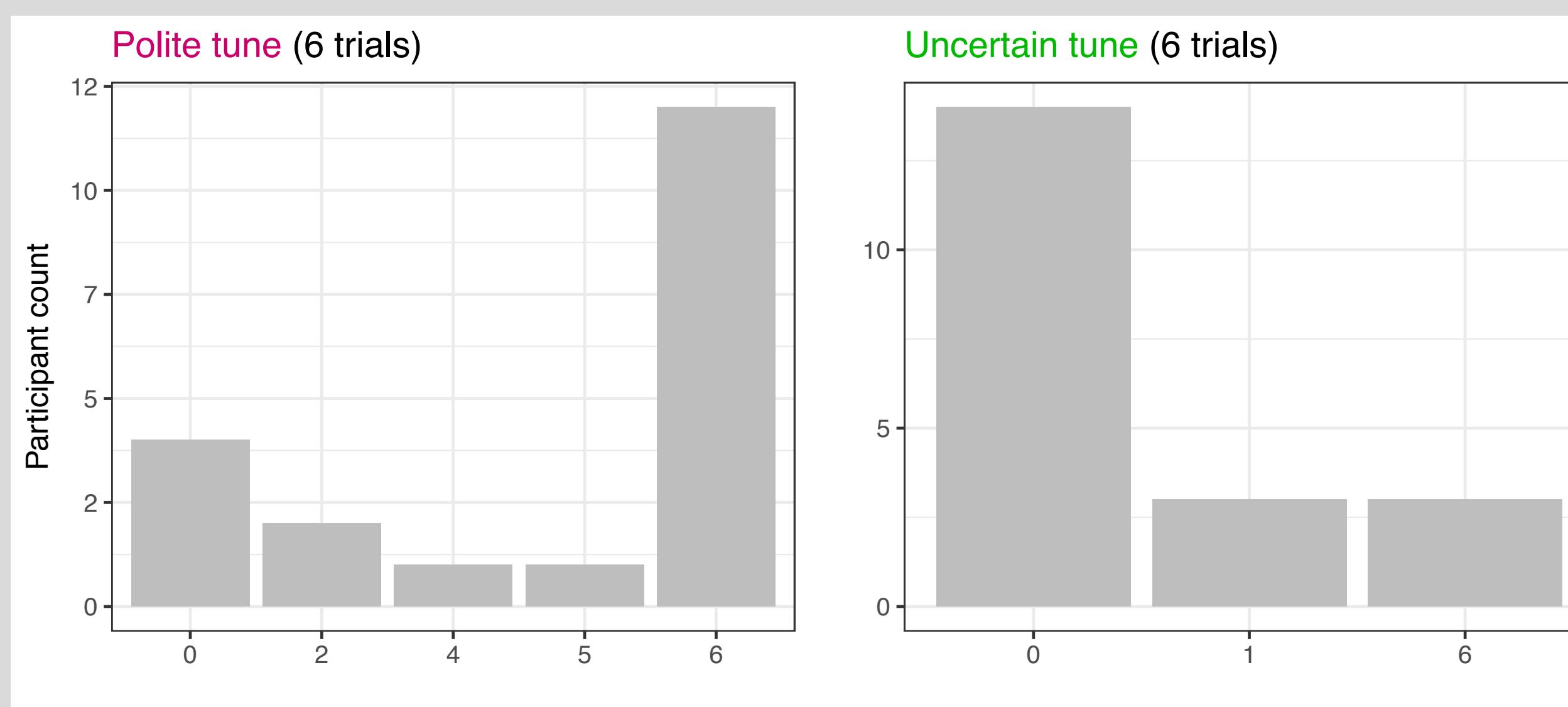
Number of trials on which participants selected the *yes* jar

- 50% of the participants are prosodically tuned: polite to *yes*; uncertain to *not sure*
- 20% of the participants are lexically tuned: both tunes to *not sure* (due to the lexical item *think*)
- 15% are lexically and prosodically insensitive: both tunes to *yes* (due to Kathryn expressing an opinion)
- 15% switch answers midway through trial sequence

de Marneffe et al. (2017)
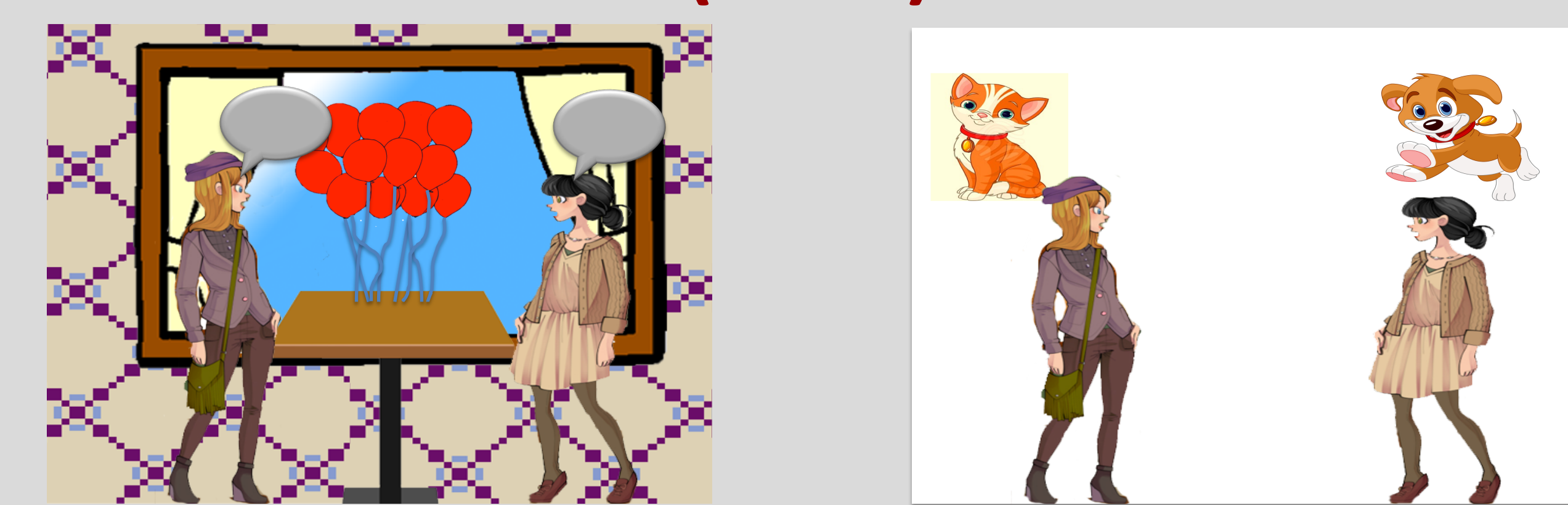
Condition	First speaker	Second speaker	Speaker trusted?
Assert-Assert	Look! There's a cat.	It's a dog.	No preference
Assert-Polite	Look! There's a cat.	I think it's a dog.	No preference
Assert-Uncertain	Look! There's a cat.	I think it's a dog?	**First**
Uncertain-Assert	Look! I think it's a cat?	It's a dog.	**Second**

Adult participants were asked who was correct (N = 24)

No individual differences: Gradient distribution

Polite tune (3 trials)   Uncertain tune (6 trials)
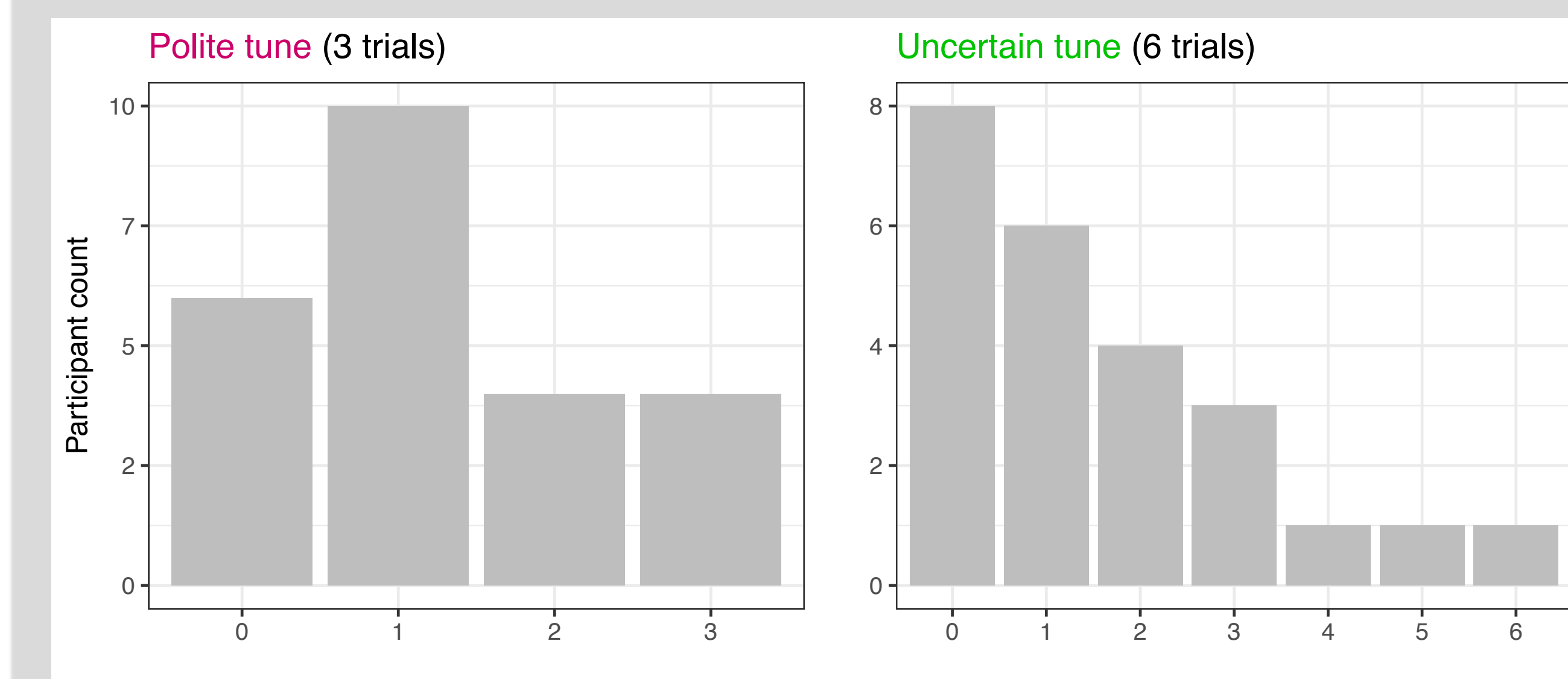
Number of trials on which participants trust the speaker who uses *think*

When asked which speaker's opinion was right, participants were more influenced by prosody

The experimental paradigm has an effect in how participants weigh lexical and prosodic cues.

When participants are explicitly asked to make a judgment about speaker certainty, individual differences emerge in the ways that participants weigh the cues.