Online Experiments for Language Scientists

Lecture 9: Priming and overspecification

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Final assessment Q&A (for both undergrads and postgrads!)

- Due on 10th December
- Read the assignment briefs and FAQ
- We can help with basic coding stuff in week 10 labs, or in extra drop-in labs (see times on github course page)
- **Happy to answer questions now, or in next week's lecture, or in labs, or in drop-in sessions**
- No questions after 4pm on Monday 7th December please (the final drop-in)

Loy & Smith (2021)

Loy, J. E., & Smith, K. (2021). Speakers Align With Their Partner's Overspecification During Interaction. *Cognitive Science, 45,* e13065.

5 confederate priming experiments

- Do people copy their partner's tendency to **overspecify**?



Jia Loy
(now works in industry)

Priming

Priming: people repeat what they have recently heard or produced

Structural priming: people repeat abstract structures they have recently heard or produced

E.g. Bock, J. K. (1986). Syntactic persistence in language production. *Cognitive Psychology, 18,* 355-387.

PRIMING SENTENCES

ACTIVE:

ONE OF THE FANS PUNCHED THE REFEREE.

PREPOSITIONAL:

A ROCK STAR SOLD SOME COCAINE TO AN UNDERCOVER AGENT.

PASSIVE:

THE REFEREE WAS PUNCHED BY ONE OF THE FANS.

DOUBLE OBJECT:

A ROCK STAR SOLD AN UNDERCOVER AGENT SOME COCAINE.

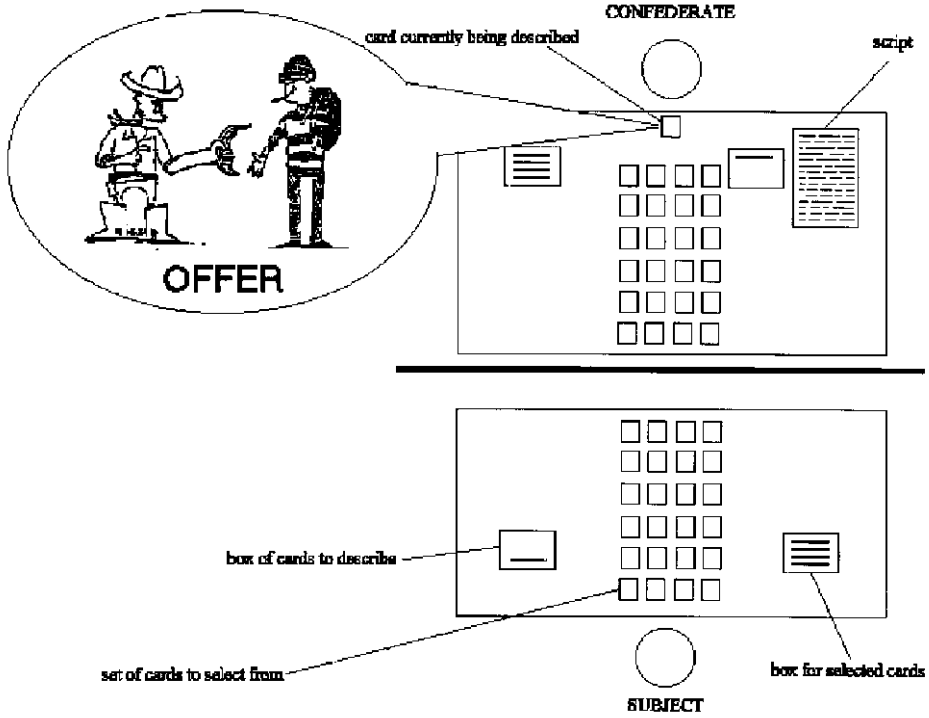
TARGET PICTURES





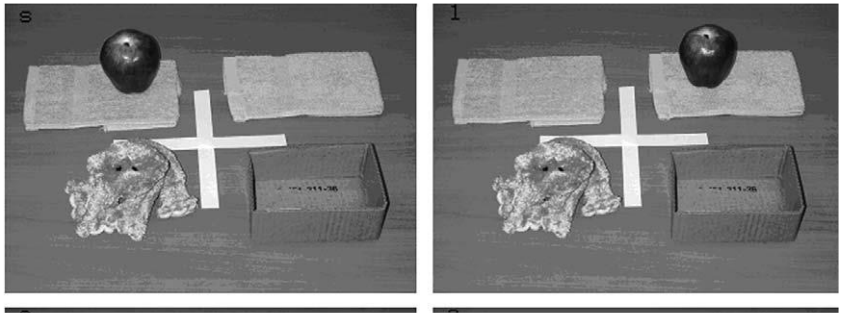
Confederate priming

Confederate: “a person one works with, especially in something secret or illegal; an accomplice”



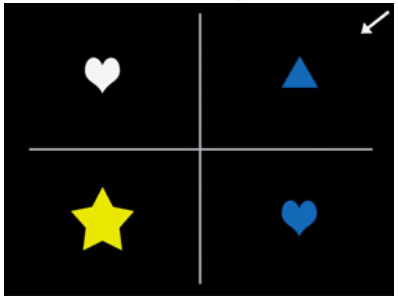
Branigan, H. P., Pickering, M. J., & Cleland, A. A. (2000). Syntactic coordination in dialogue. *Cognition, 75,* B13-25.

Overspecification

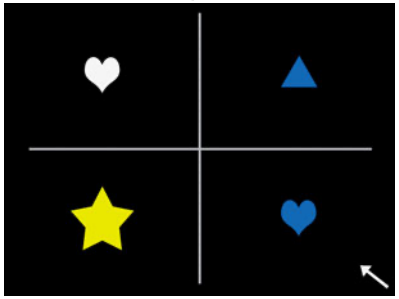


"Put the apple in the box"
"Put the apple that's on the towel in the box"

A. No modifier required.



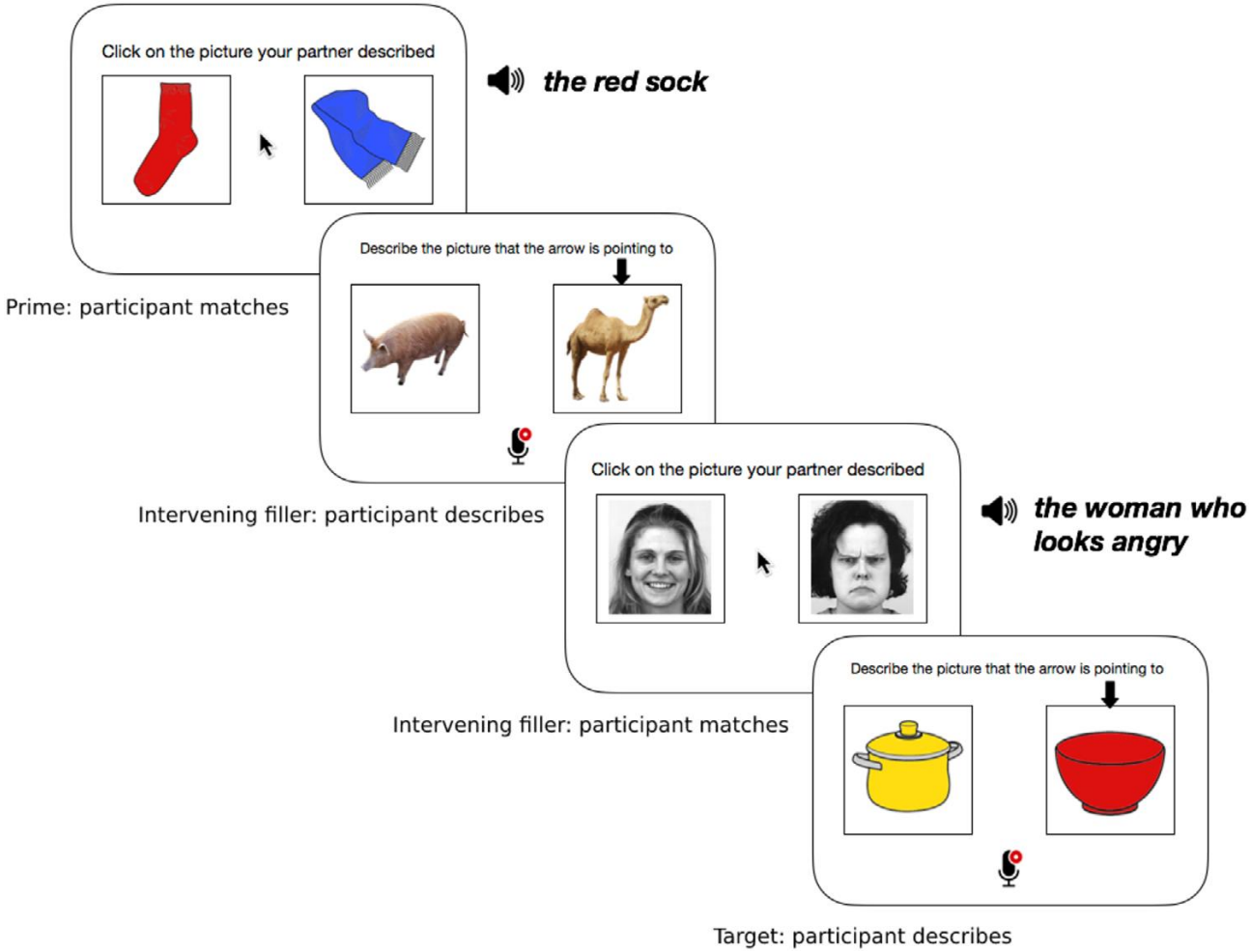
B. Modifier required.



"The (blue) triangle"
"The (small) blue heart"

Engelhardt, P. E., Bailey, K. G. D., & Ferreira, F. (2006) Do speakers and listeners observe the Gricean Maxim of Quantity? *Journal of Memory and Language, 54, 554-573.*

Engelhardt, P. E., & Ferreira, F. (2014) Do speakers articulate over-described modifiers differently from modifiers that are required by context? Implications for models of reference production. *Language, Cognition and Neuroscience, 29*, 975-985


Click on the picture your partner described
the red sock
Prime: participant matches
Describe the picture that the arrow is pointing to
Intervening filler: participant describes
Click on the picture your partner described
the woman who looks angry
Intervening filler: participant matches
Describe the picture that the arrow is pointing to
Target: participant describes

Demo using this week’s practical code

Loy & Smith: manipulating partner's tendency to overspecify

Exps 1, 2: colour, partner either consistently overspecifies (uses colour adjectives) or not (uses bare nouns)

Exp 3: size, partner either consistently overspecifies (uses size adjectives) or not (uses bare nouns)

Exp 4, 5: colour, partner switches behaviour mid-way through experiment

Loy & Smith sample size etc

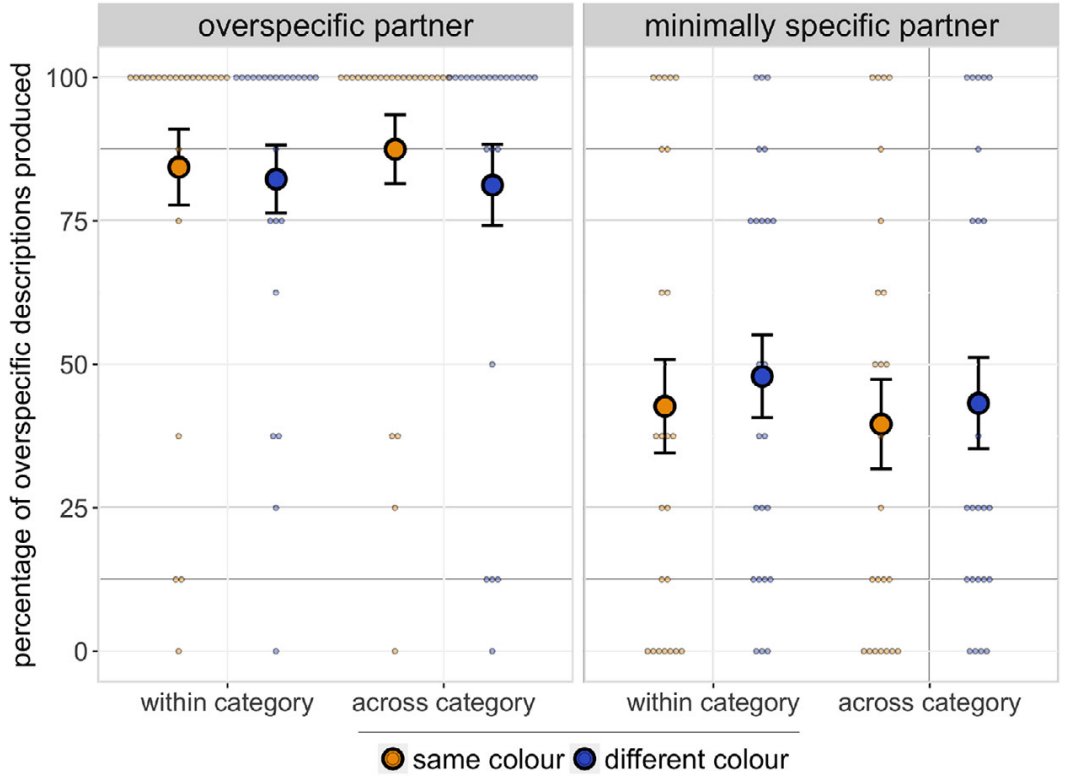
Exp 1: lab-based

- N=24 per condition after exclusions
- Paid £6

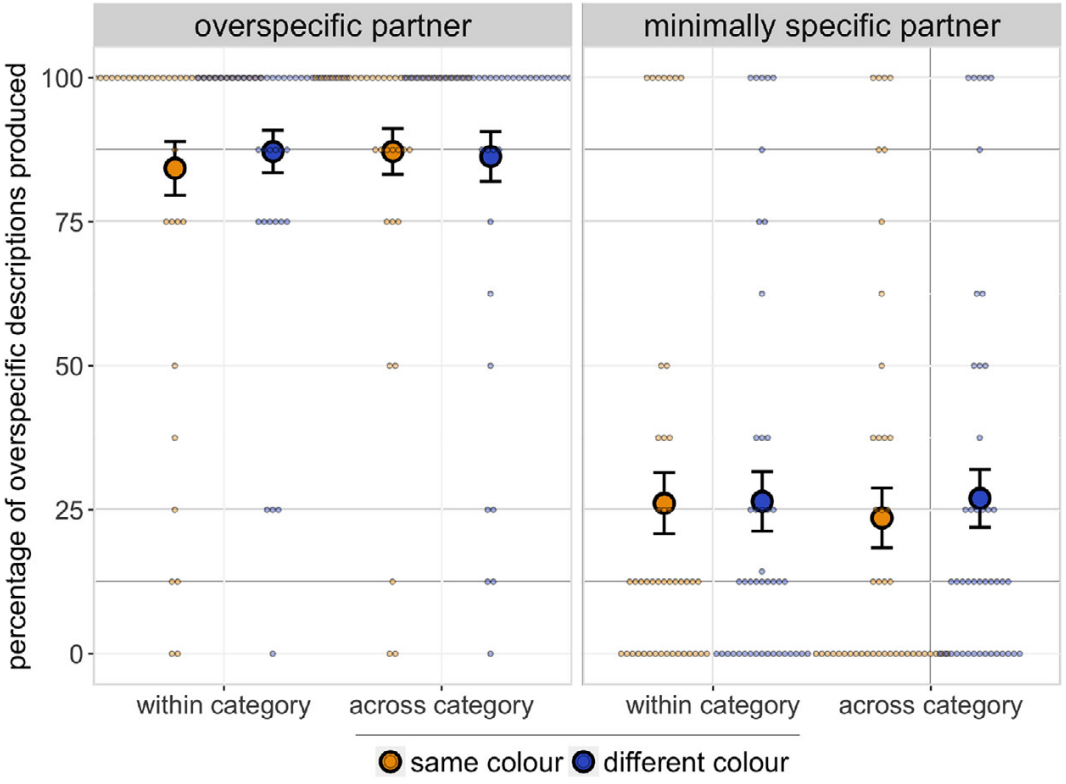
Exps 2-5: MTurk

- N≈50 per condition after exclusions
- Paid $6

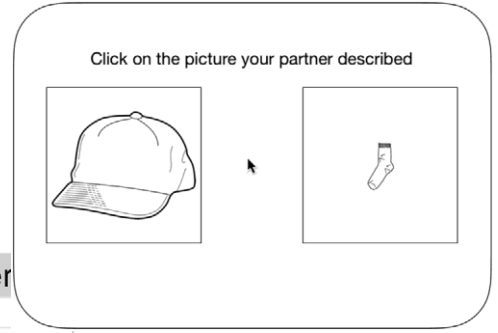
Exp 1: lab, colour

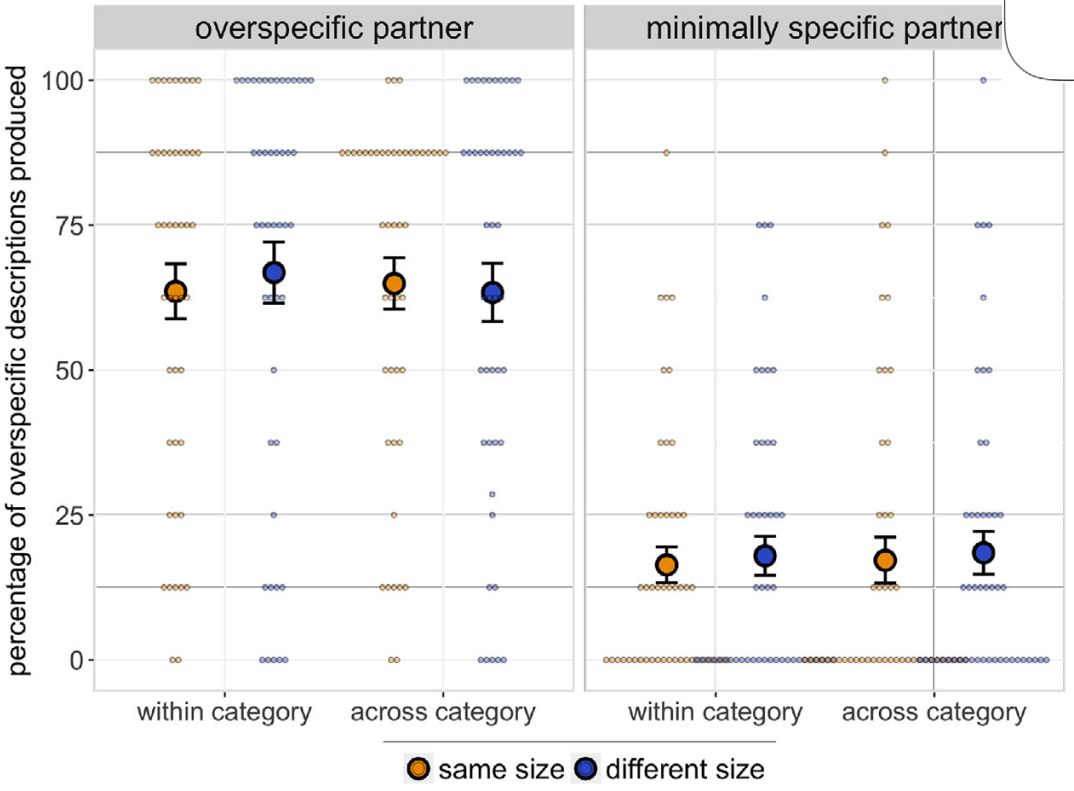


Exp 2: online, colour

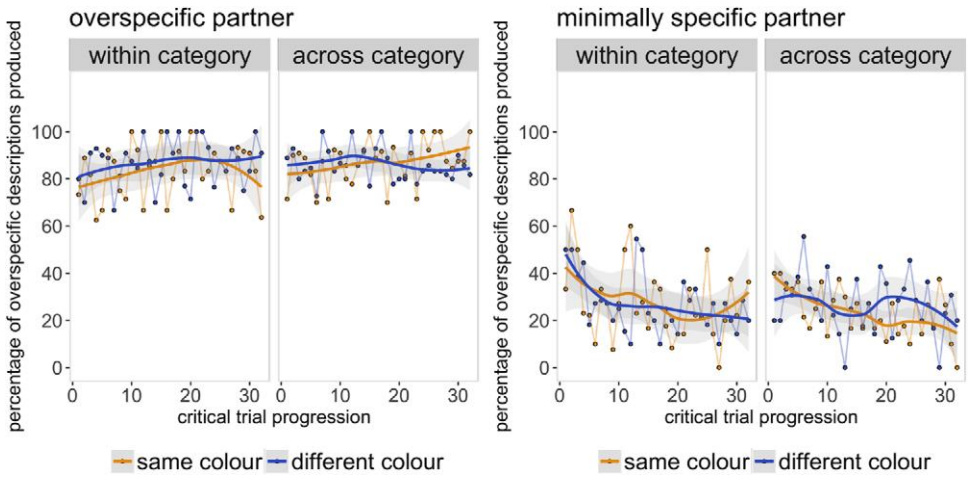


Exp 3: online, size

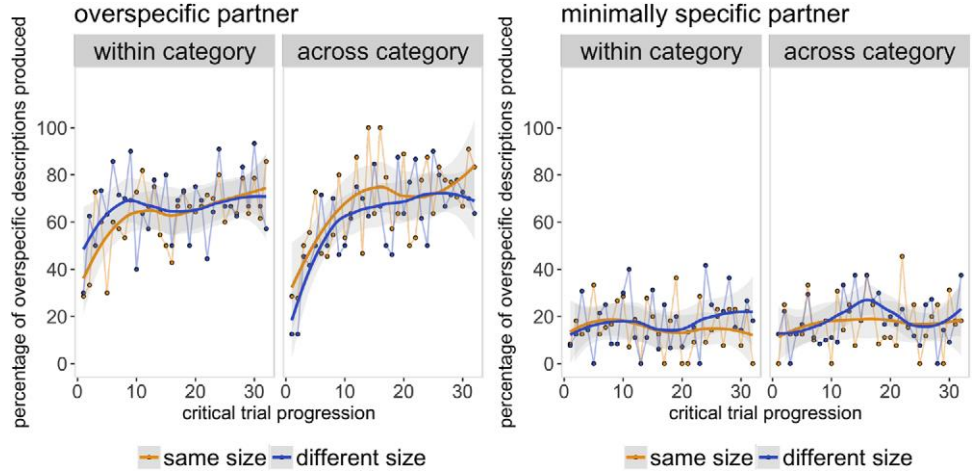




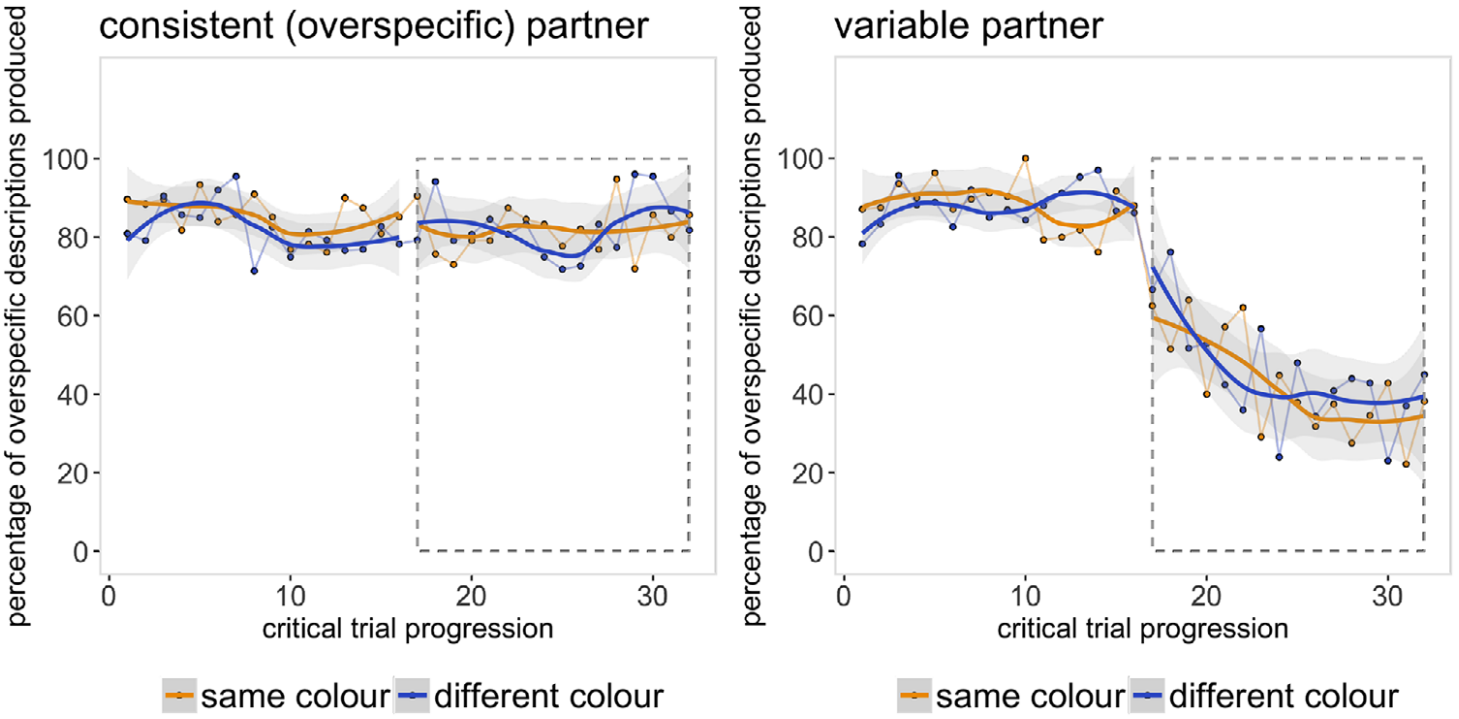
Colour


overspecific partner
within category
across category
minimally specific partner
within category
across category
percentage of overspecific descriptions produced
critical trial progression
same colour
different colour

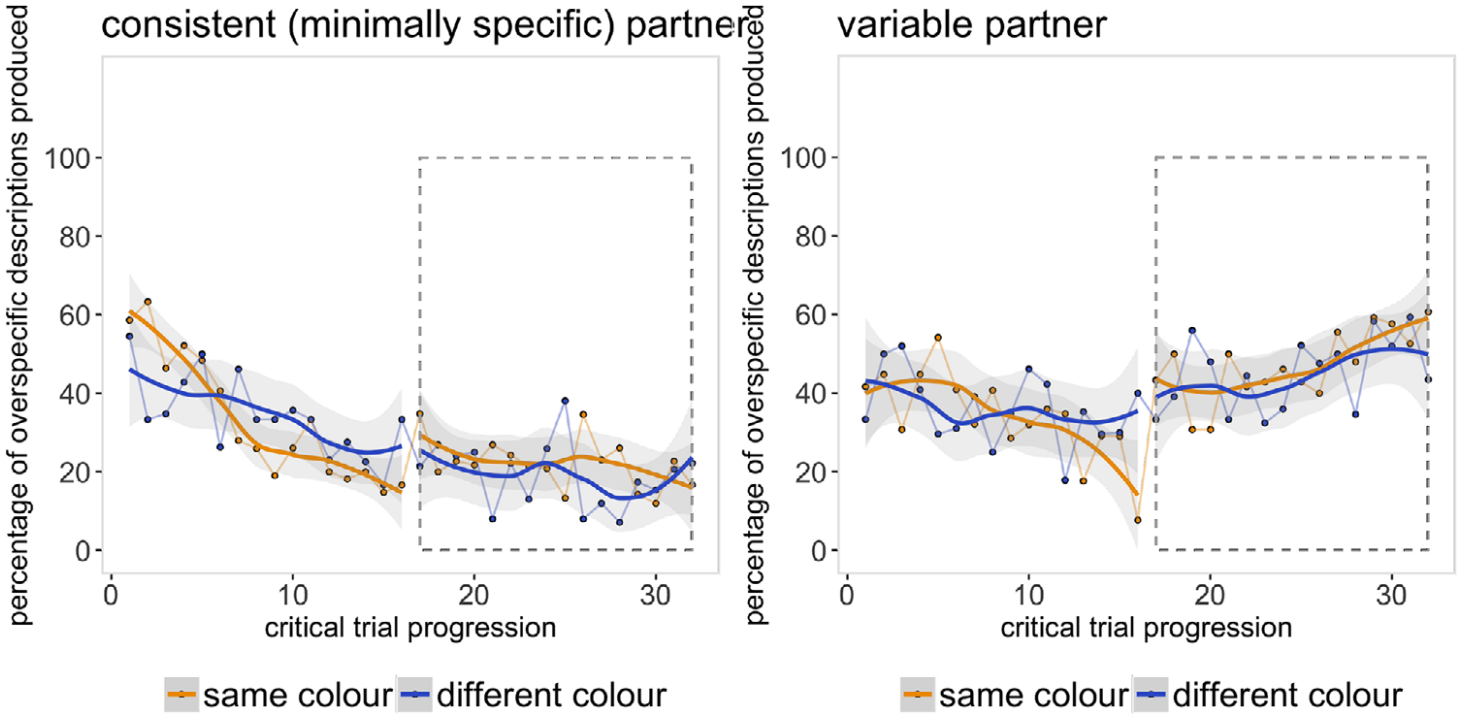
Size


overspecific partner
within category
across category
minimally specific partner
within category
across category
percentage of overspecific descriptions produced
critical trial progression
same size
different size

Exp 4: online, colour, partner **switches** from overspecific to minimally specific



Exp 5: online, colour, partner **switches** from minimally specific to overspecific



Loy & Smith's conclusions

People follow their partner in overspecifying (or not)

- Including if their partner switches behaviour mid-way through the experiment

Social effects are a large constraint on people's tendency to behave in an optimally efficient manner in communication

Time for Q&A/discussion on this week’s reading

Next up

Lab

- A confederate priming experiment, recording spoken responses

Next week (the final week of classes!)

- Language evolution by iterated learning