

Online Experiments for Language Scientists

Lecture 7: Structural priming

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Assessment 1 Q&A

- Due on Thursday
- **Final chance to ask questions**

Loy & Smith (2020)

Joy, J. E., & Smith, K. (2020). Syntactic adaptation depends on perceived linguistic knowledge: Native English speakers differentially adapt to native and non-native confederates in dialogue.

<https://doi.org/10.31234/osf.io/pu2qa>.

5 confederate priming experiments

- Do people adapt differently to native and non-native speakers in dialogue?



Jia Loy

(now at Saarland University)

Structural 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.**

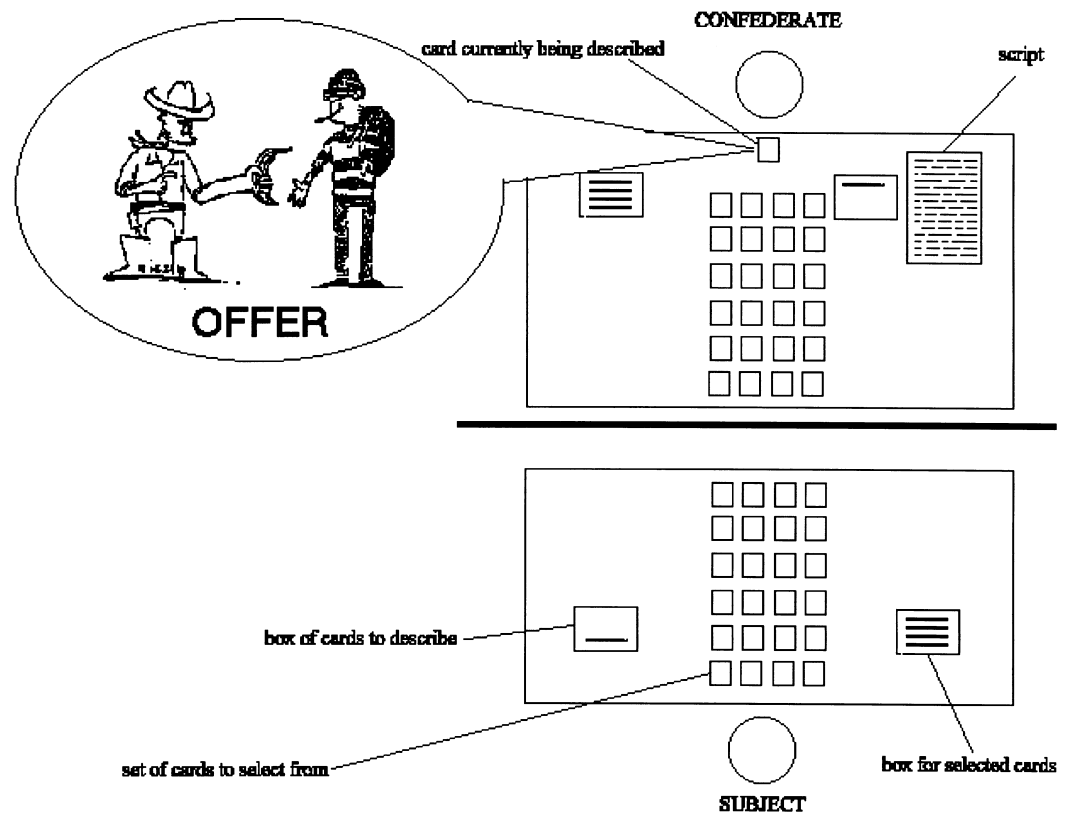
TARGET PICTURES



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.



Demo using this week's practical code

Loy & Smith: manipulating confederate nativeness and syntactic flexibility

Confederate: native English speaker vs non-native

Exps 1, 3 & 4: alternating verbs (PO or DO acceptable), confederate alternates

PO prime: *the chef gives the apple to the golfer*

DO prime: *the chef gives the golfer the apple*

Exps 2 & 5: Alternating and PO-only verbs, confederate uses DO throughout

Alternating verb, DO prime: *the chef gives the golfer the apple*

PO-only verb, DO prime: * *the chef reveals the golfer the apple*

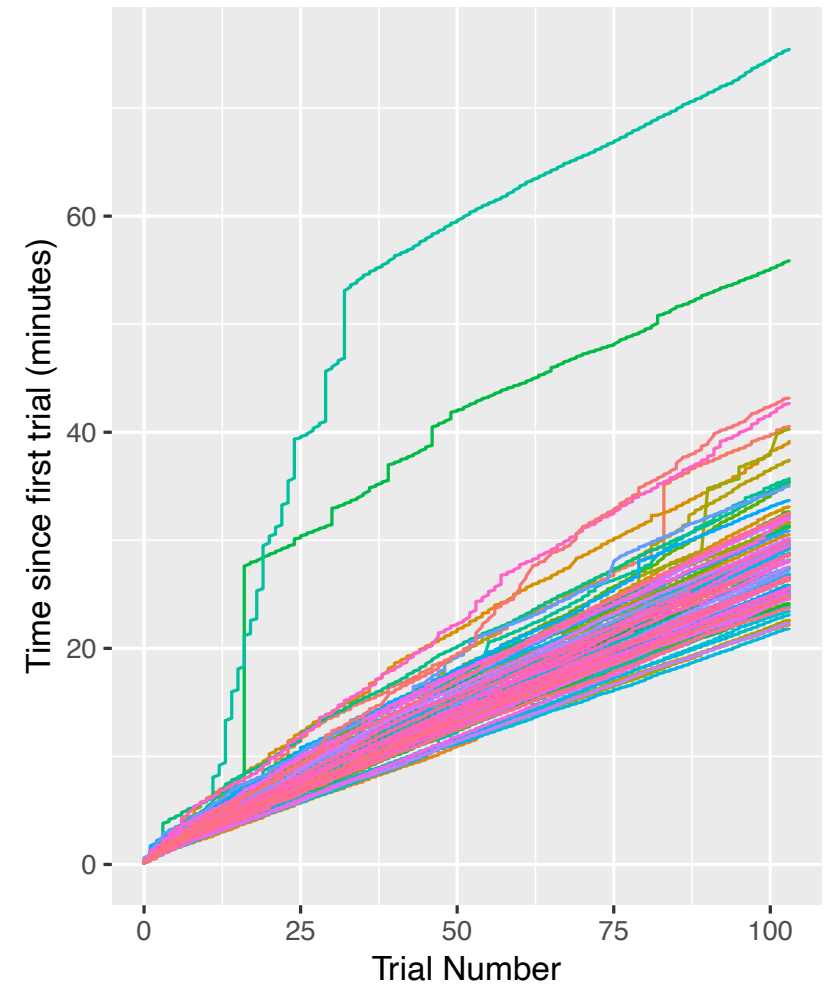
Loy & Smith sample size, study duration etc

Exps 1-3: lab-based

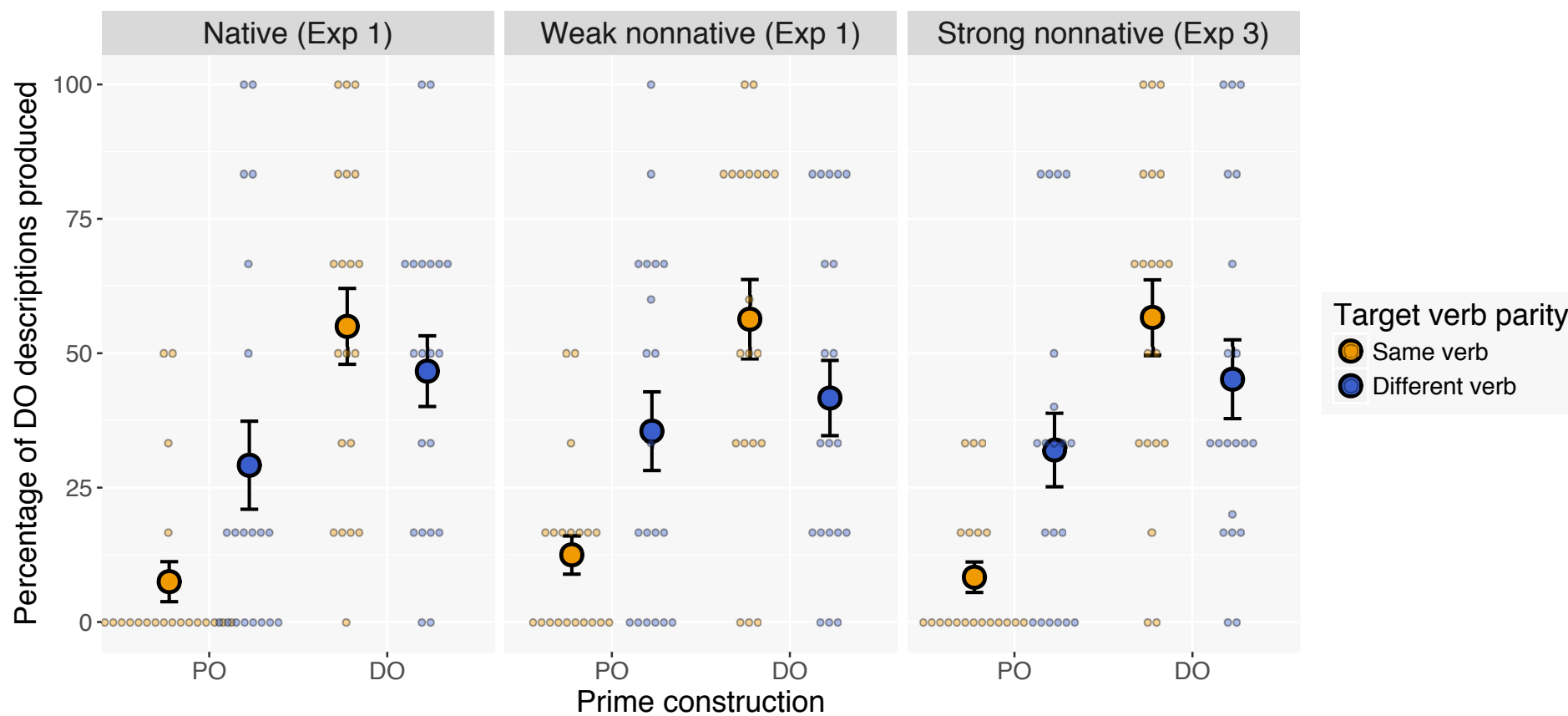
- N=20 per condition
- Took 30-40 minutes (?), paid £6

Exps 4-5: MTurk

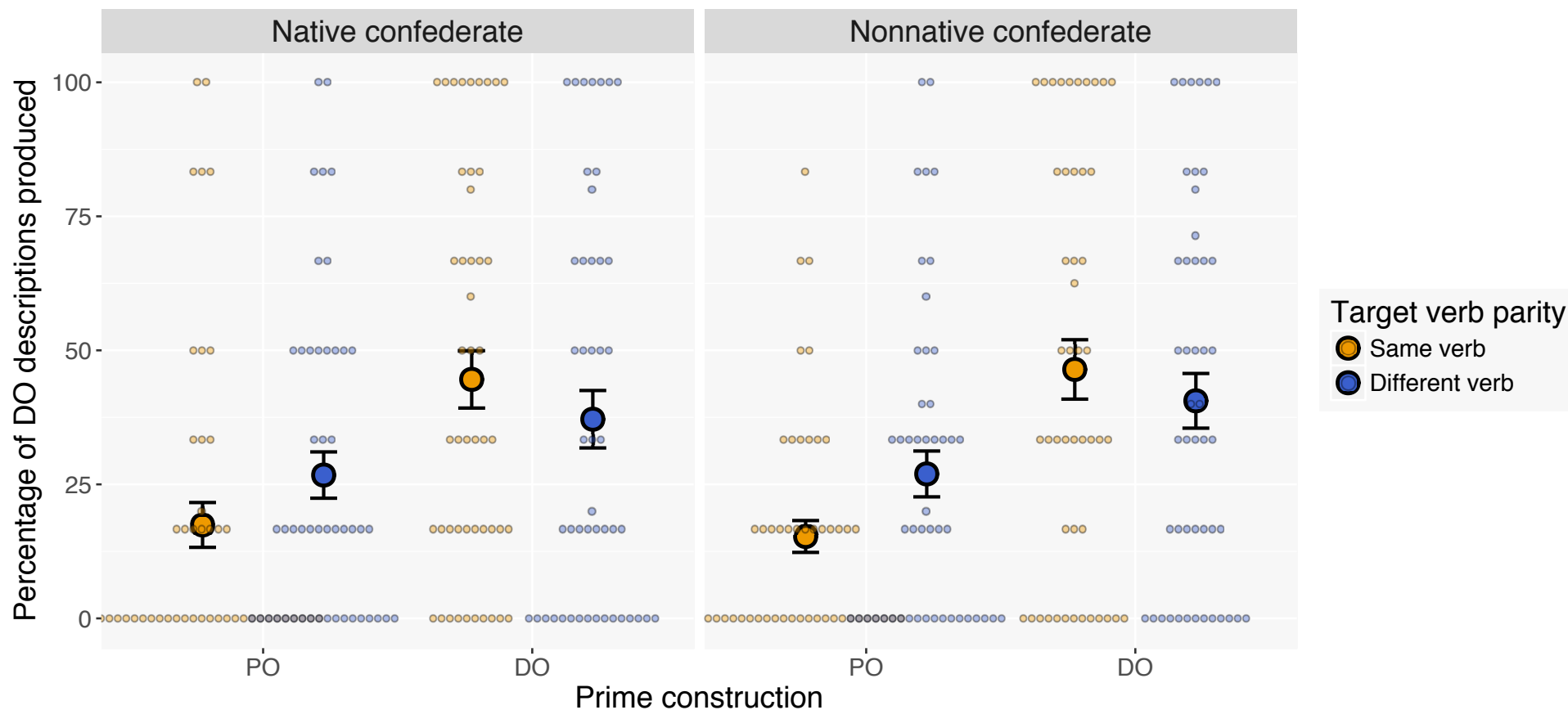
- N=48 per condition
- Average duration 27 minutes, paid \$6



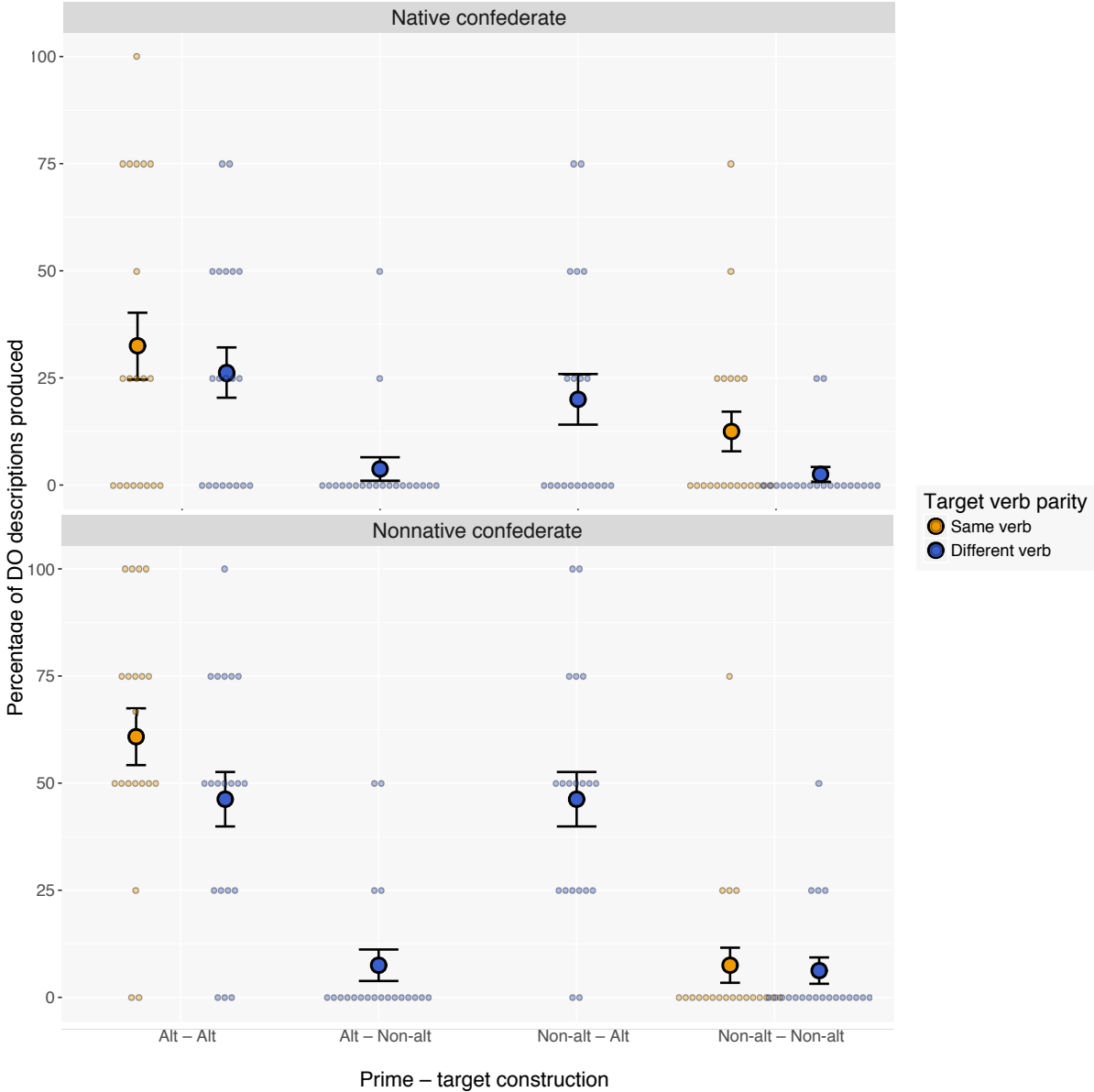
Exps 1, 3: lab, alternating verbs, alternating confederate



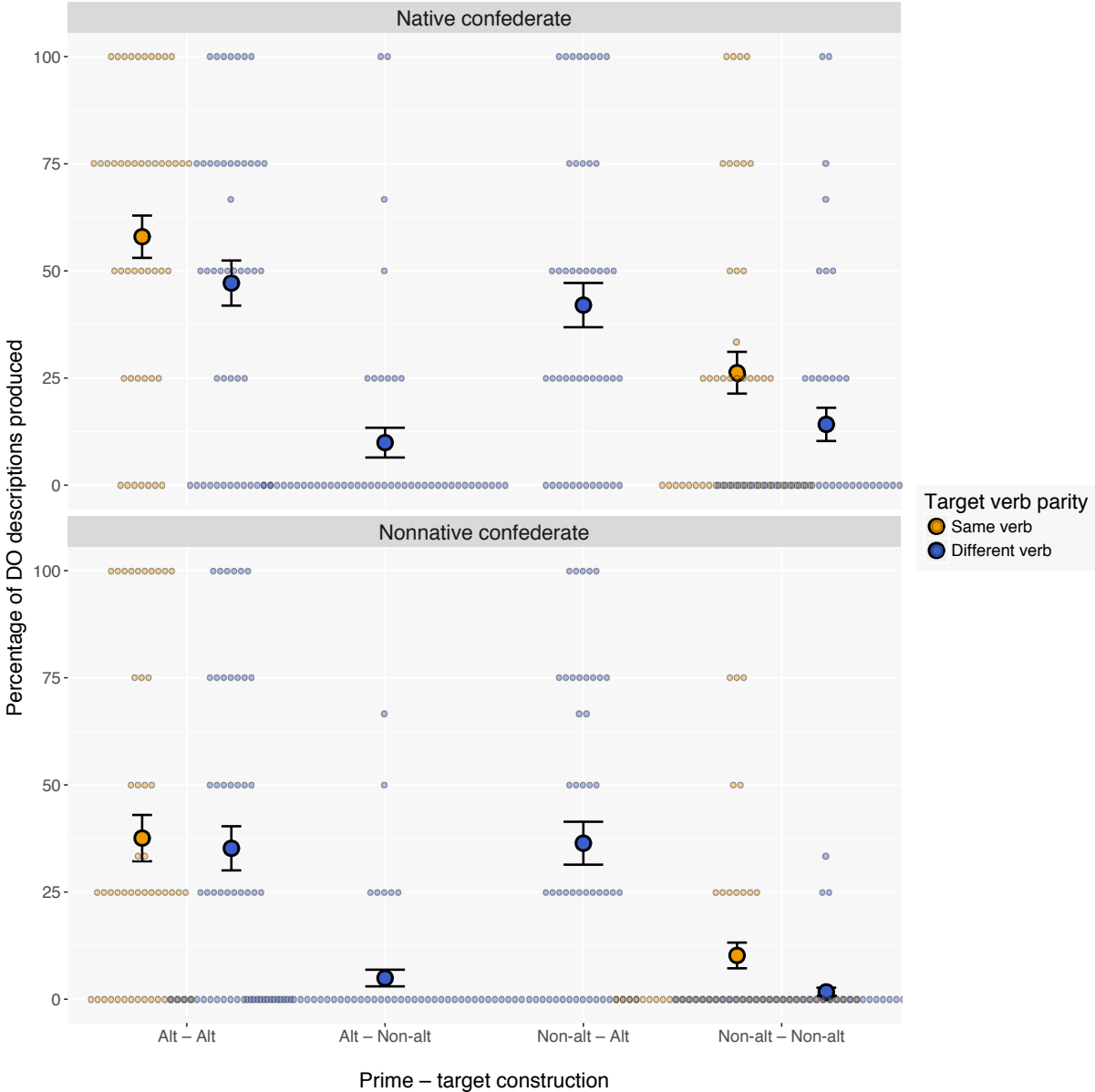
Exp 4: online, alternating verbs, alternating confederate



Exp 2: lab, alternating or PO- only verbs, DO-only confederate



Exp 5: online, alternating or PO- only verbs, DO-only confederate



Loy & Smith's conclusions

Perceived nativeness of a dialogue partner **does** affect adaptation

- It interacts with their actual linguistic behaviour (no effect of native/non-native when the confederate uses both PO & DO)
- The effect is in opposite directions in the lab and online?? Was the lab result a fluke? Or do the populations or the mode of interaction account for this difference?

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

Next up

Wednesday, 9am: lab on Gather

- A confederate priming experiment, recording spoken responses

Next week:

- Language evolution by iterated learning