



# Interactive and embodied repair: Displaying, recognizing, and negotiating misalignment in an emerging language context

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## Background

Repair is a resource to resolve troubles of hearing and understanding in conversation. It is a two part sequence (Initiation and Solution), each part of which can be performed by either the SELF or OTHER.



Universal pragmatic principles guiding repair:

- Be specific with initiation
- Cost of repair is shared by interlocutors
- Preference for self-repair (SISR)

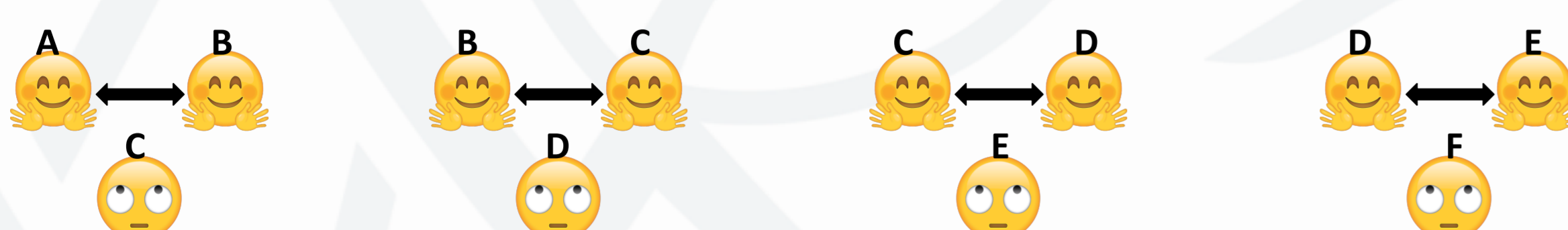
Multiple resources can be recruited in repair, including prosody, gesture, the face, and the body.

Repair is a site for achieving interactive alignment. How is this done in emerging language contexts?

## Methodology

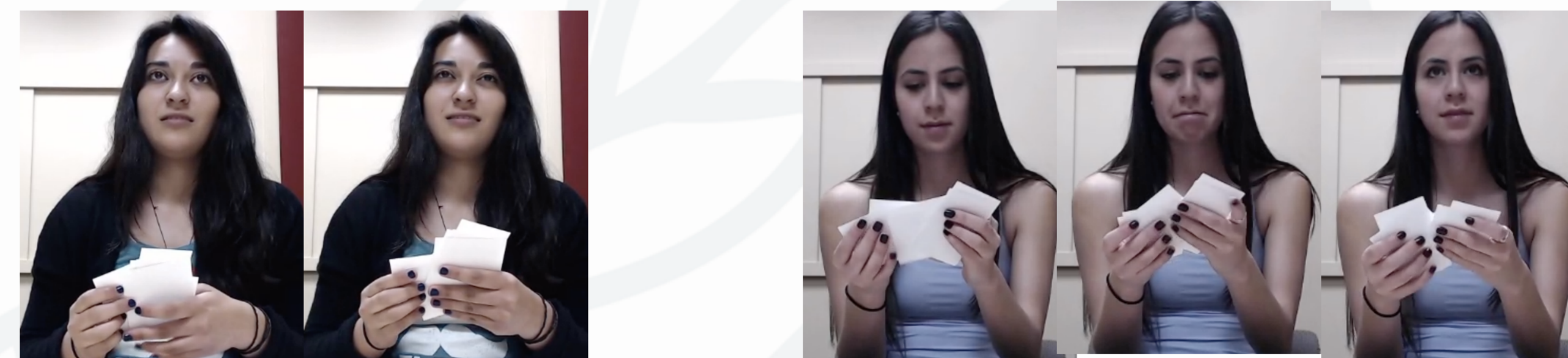
Referential communication task requiring the disambiguation of easily confusable noun-verb pairs using only silent gesture

- Face-to-face dyadic communication
- Iterated over simulated generations using gradual turn-over (observer paradigm)
- Conditions: Repair v. No Repair (or just by amount of repair/interaction?)



## Displaying Misalignment and Other-Repair Initiation

OPEN request for repair are initiated by Brow Furrow, Eye Narrowing, and/or Mouth Frown:



OFFERS, or candidate understandings, are marked by Brow Raises, which seek confirmation:



## Recognizing Misalignment and Self-Repair Solutions

Brow/Eye repair initiators met with CLARIFICATION:



Mouth frown repair initiators met with REPETITION:



## References

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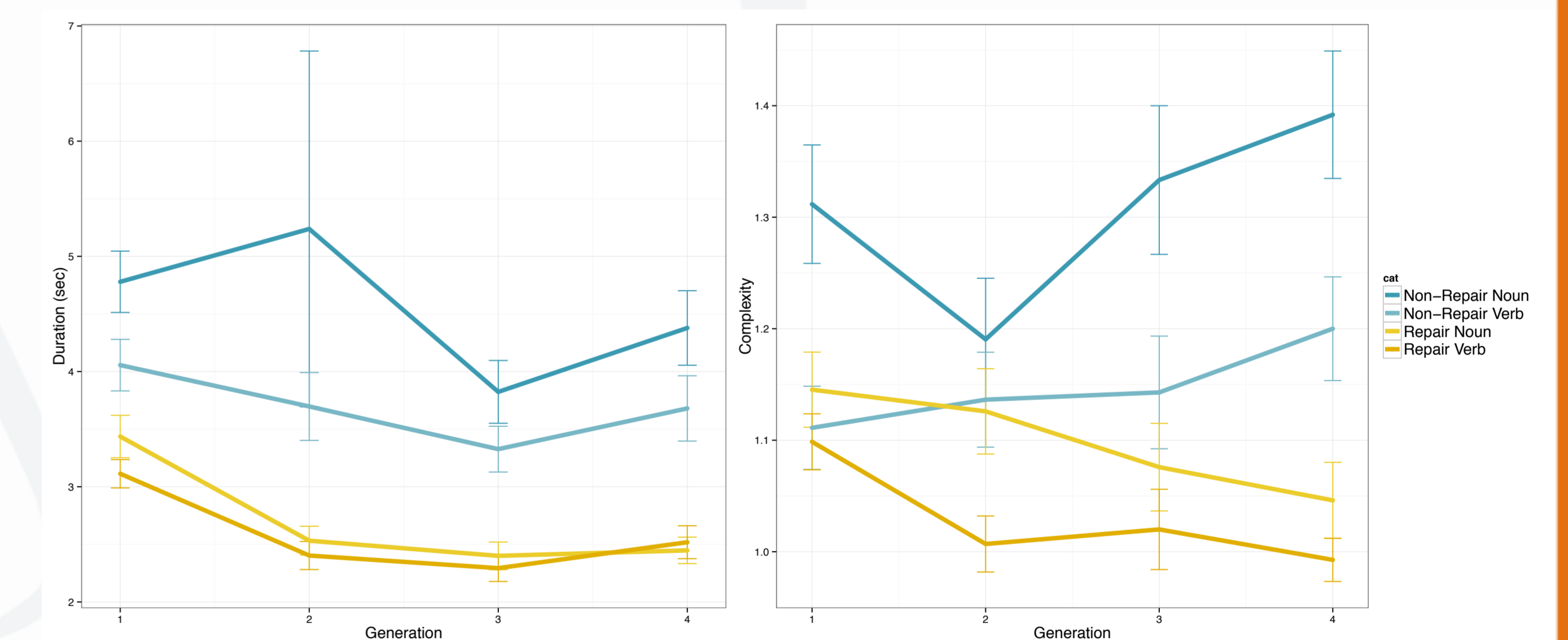
## Self-Initiated Repairs and Negotiated Alignment

SIRs (simultaneous brow raise laminates gesture as repaired) reflect the alignment towards form-meaning conventions negotiated in prior repair sequences:



## Repair in an Emerging Language

Referential gestures of chains using repair become shorter and less complex over generations compared with chains not using repair:



## Conclusions

Repair is a valuable resource for establishing form-meaning mappings in an emerging communication system

- Boosts communicative efficiency
- Speeds up conventionalization

Mitigated repair initiations, seeking to decrease face-threat for instance, are met with less modified solutions as Directors interpret them as less severe misalignments than un-mitigated initiations which have more modified treatment