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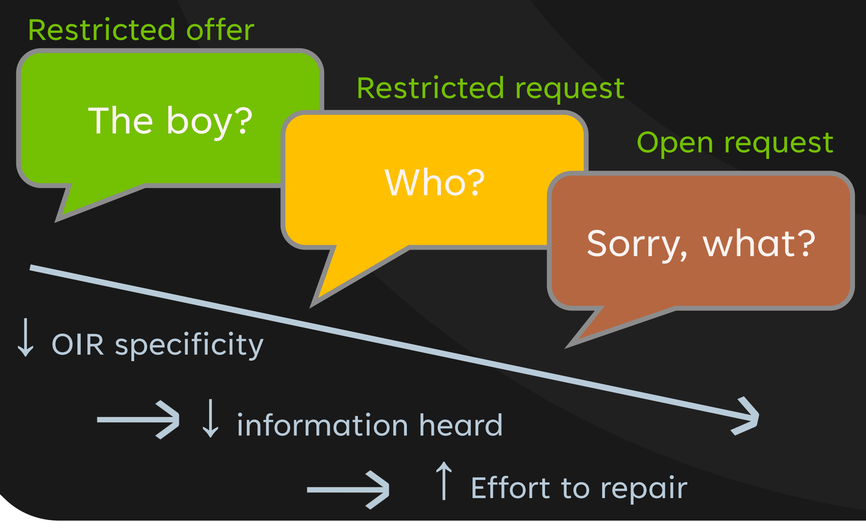
Sorry, what?
I said that communication breakdowns are affected by hearing impairment, noise, and hearing aid signal processing

→ Introduction

Nothing signals communication difficulty as clearly as having to ask conversation partners for clarification or repetitions, a so-called other-initiated repair (**OIR**) [1,2]

OIRs types:

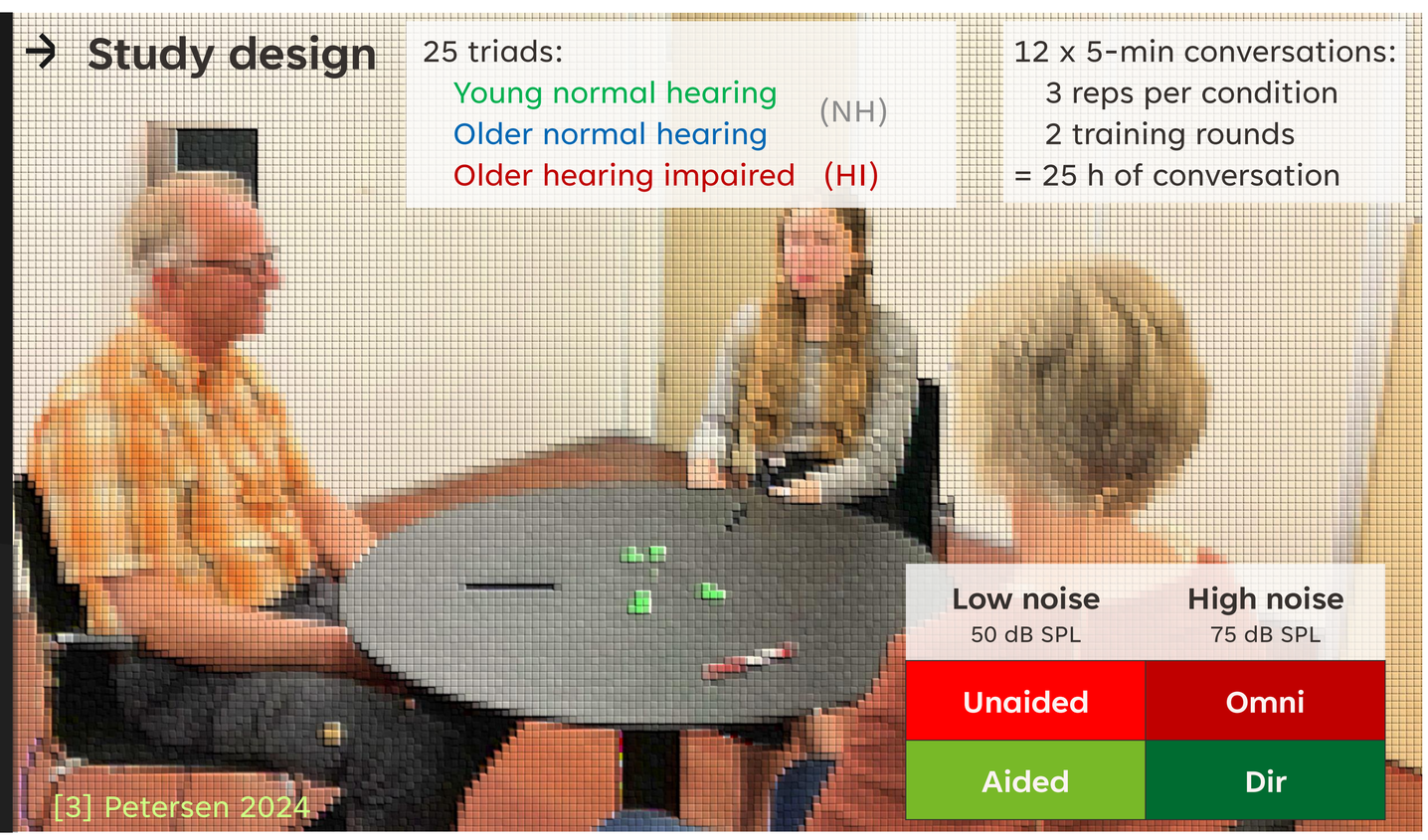


→ Study design

25 triads:
- Young normal hearing
- Older normal hearing (NH)
- Older hearing impaired (HI)

12 x 5-min conversations:
- 3 reps per condition
- 2 training rounds

= 25 h of conversation



? Are the number and type of OIRs affected by HI, noise, and hearing aid signal processing ?

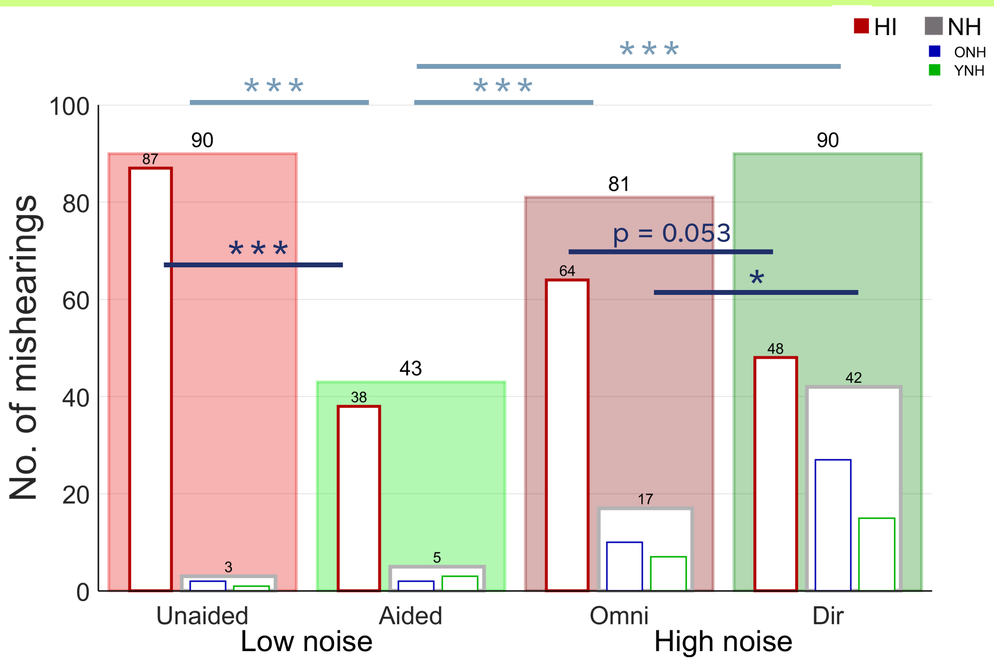
→ Result: Number of mishearings = OIRs + non-verbal OIR + other

- Mishearings ~ hearing(HI/NH) * condition(Unaided/ Aided/Omni/Dir)

- Across talkers : Aided have fewer mishearings (Unaided = Omni = Dir)
- HI drive above effect because Unaided >> Aided

- HI > NH, except when listening to Dir
- NH drive above effect because Dir > Omni

  HI speaks softer in Dir relative to Omni → **NH mishears more in Dir**

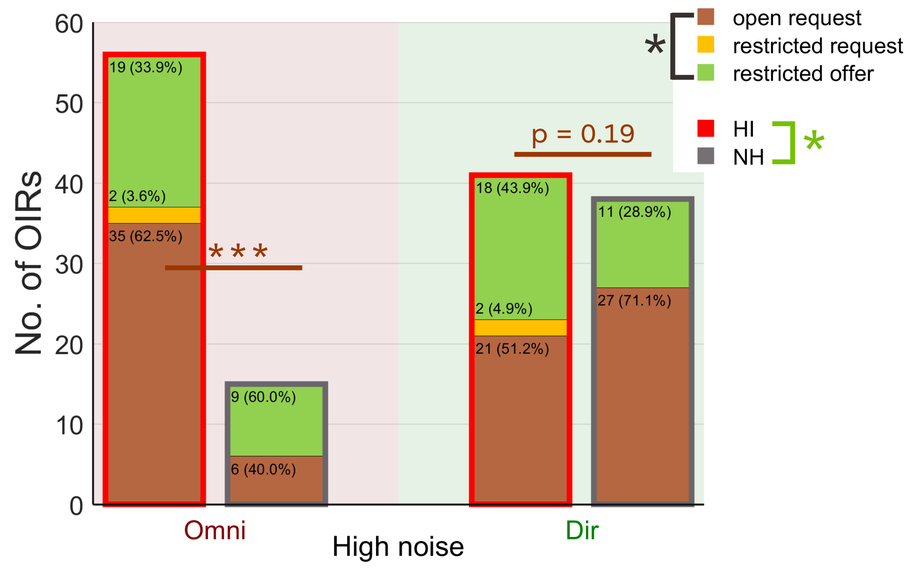


→ Result: Type of OIR

- OIRs manually identified and categorized in high noise (Omni and Dir)
- Overall restricted offer < open requests (p=0.02)

- Restricted offer : HI > NH, no difference between conditions
- Open request : HI >> NH in Omni, but in Dir HI = NH
  with Dir HI decrease, but NH increase, no. of open requests

→ **Hearing aids affect NH to ask non-specific OIRs**



→ Conclusion

- HI generally mishear more often, however being aided in low noise significantly reduce this effect
- Directional processing cause HI speak softer (Petersen 2024), causing NH to mishears more
- Relative to omni, directional sound processing change the type of OIRs produced :
  HI have the same number of restricted offers, but fewer open requests, resulting in less effortful repair-sequences
  NH makes more open requests, resulting in noise effortful repair-sequences

**Hearing impairment increase the frequency and nature of mishearings,
while hearing-aid processing can affect all conversation partners:
When the hearing-impaired person receiving directional processing in noisy conditions,
the normal-hearing conversation partners initiate more non-specific requests for clarifications**

[1] Schegloff EA, Jefferson G, Sacks H (1977) The Preference for Self-Correction in the Organization of Repair in Conversation. 10.2307/413107
[2] Dingemanse M et al (2015) Universal Principles in Repair of Communication Problems. 10.1371/journal.pone.0136100
[3] Petersen EB (2024) Investigating conversational dynamics in triads: Effects of noise, hearing impairment, and hearing aids. 10.3389/fpsyg.2024.1289637

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