Introduction

- From their second year, infants use verbal testimony to generate and update mental representations about absent referents. For example, when told about a change in a hidden object’s location, 16-month-olds show a Violation-of-Expectation (VoE) if that change has not actually occurred (Ganea et al., 2016).
- It is believed that they do so without regard to the credibility of the testimony. Findings from pointing and hiding tasks suggest children 3 years and younger have a strong bias to trust verbal testimony (e.g. Ganea et al., 2011; Jaswal, 2010).
- This is difficult to reconcile with findings from eye-tracking tasks in 6-month-olds, who evaluate the credibility of nonverbal testimony, and will revoke their trust in unreliable informants (e.g. Tummelthammer et al., 2014).
- Two possible interpretations:
  1. Differences in findings are the result of the medium of the testimony (verbal/linguistic vs. nonverbal/nonlinguistic)
  2. Differences in findings are the result of different task demand
- Current study investigates Hypothesis 2 using a low-demand eye-tracking study to test infants’ ability to revoke trust in an unreliable informant. This is the first study to examine selective trust in verbal (episodic) testimony in infants.

Method

Participants: 24 full-term, monolingual infants (10 F, 14;15-19;24, M = 17 months)

Apparatus: Tobii T120 Eye-Tracker, sampling at 60 Hz

Procedure: Violation-of-Expectation, 1 familiarization block (each stimulus 2x for 6 trials), followed by 2 blocks of 4 test trials, order counterbalanced:
- 1 reliable informant block (no violation)
- 1 unreliable informant block (violation)

DV: Proportion of looking time to the animal that changed location

Hypothesis: In early trials, we expect a Violation-of-Expectation, and thus longer looking in the unreliable (violation) block relative to the reliable (no violation) block. In later trials, trust is revoked from unreliable informants, and Violation-of-Expectation is diminished.

Results

Overall, infants look more (proportional to overall looking) to the animal that changed location in the violation (unreliable) condition than the no violation (reliable), replicating Ganea et al., 2016. There is no effect of block order or informant’s gender.

Discussion

- Findings demonstrate clear Violation-of-Expectation effects, replicating Ganea et al. 2016’s claims that infants at this age can update mental representations of absent scenes based on verbal testimony.
- Contrary to the hypothesis, Violation-of-Expectation effects only began to appear after repeated exposures to an unreliable informant, and did not diminish after four trials.
- This suggests that although infants did not revoke trust in the unreliable informant, they also were not initially surprised by their unreliable testimony.
  - This may be due to differences in methods. Three-year-olds revoke trust more easily if the informant is out of the room—here, the informant was never physically present.
- Conclusion: The inability to revoke trust in verbal testimony at this age appears unrelated to task demands. Our findings contribute to the body of work in older children that language is particularly difficult to withhold trust from, and extends this to infants. However, infants may be less biased to initially trust testimony than previously thought.

References