



# Infants continue to trust language even after multiple false testimonies

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## Background

Unlike preschoolers, children under 30 months seem to accept most verbal testimony as true<sup>1,2</sup>. As early as the second year, however, infants demonstrate the ability to evaluate a source's credibility when that source provides information through nonverbal means, such as pointing or looking<sup>3,4</sup>. This has led some to suggest that verbal testimony is particularly difficult to evaluate for credibility<sup>2</sup>.

Studies on young children's use of verbal testimony have demonstrated that difficulties are not with language per se, but with task demands<sup>5,6</sup>. For example, while it was previously believed that only 30-month-olds could use verbal testimony to update their expectations about object locations, we recently demonstrated 16-month-olds are able to do this when task demands are low<sup>6,7</sup>.

**Question:** Are infants' & toddlers' failures to evaluate the credibility of linguistic testimony due to the verbal modality, or task demands?

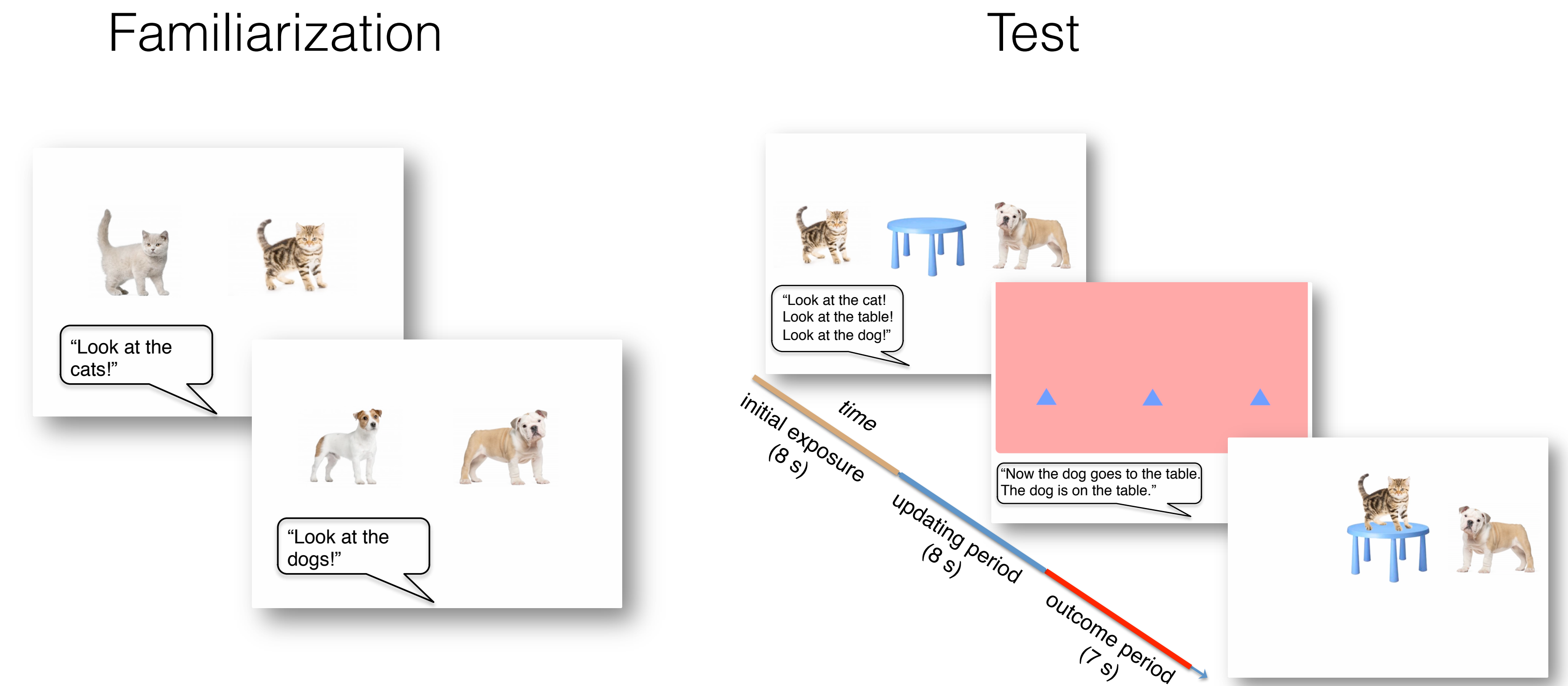
## Method

**Participants:** 26 healthy, monolingual infants (age range: 14;15-17;15, M=16;0 days, 12 F)

**Apparatus:** Tobii T120 Eyetracker, sampling at 60 Hz

**Procedure:** Violation-of-Expectation paradigm, 2 blocks of 6 trials (Incongruent/Congruent, order counterbalanced)

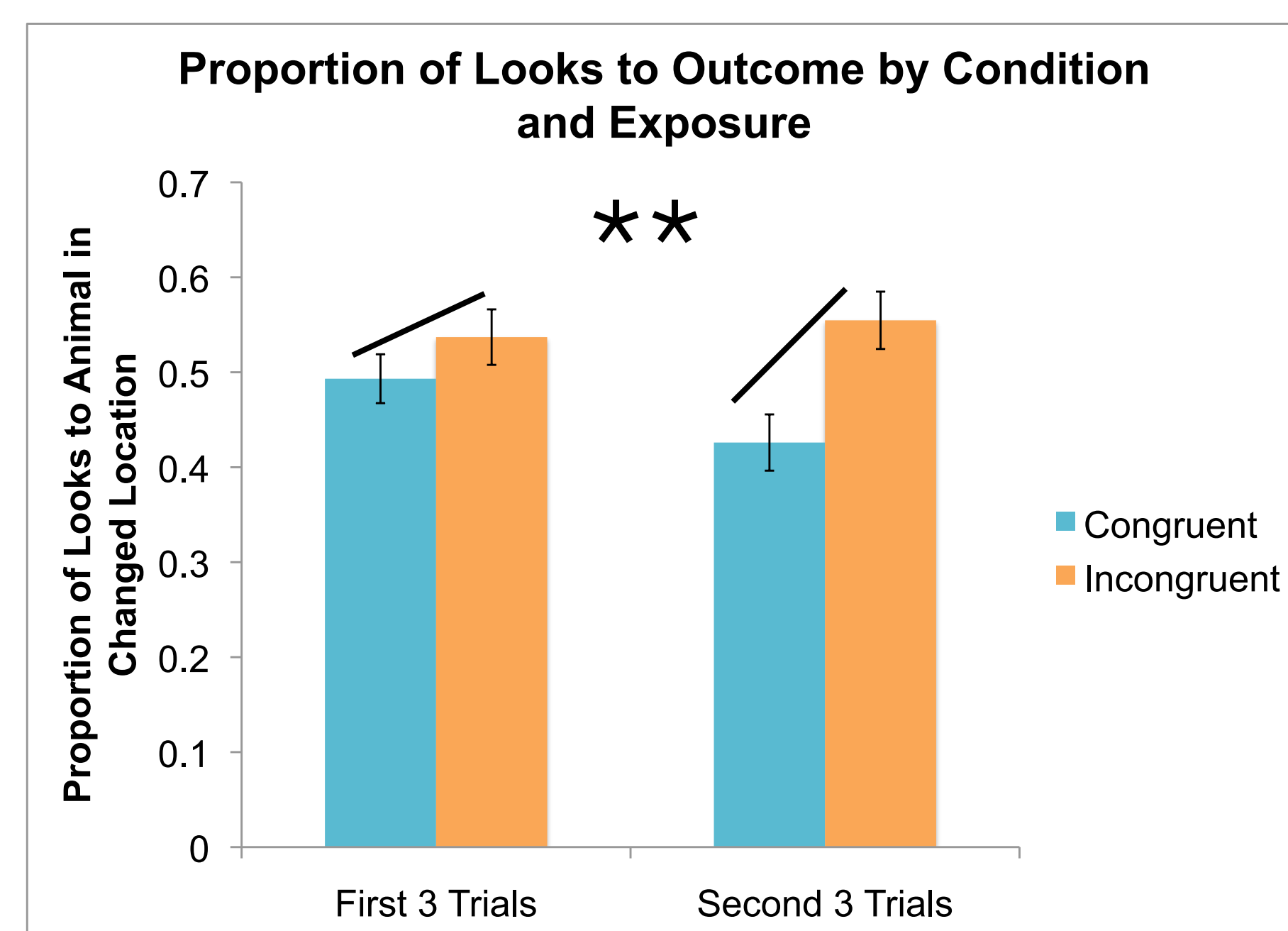
**Measures:** Proportion of looking time to the animal in the changed location, vocabulary size (MCDI)



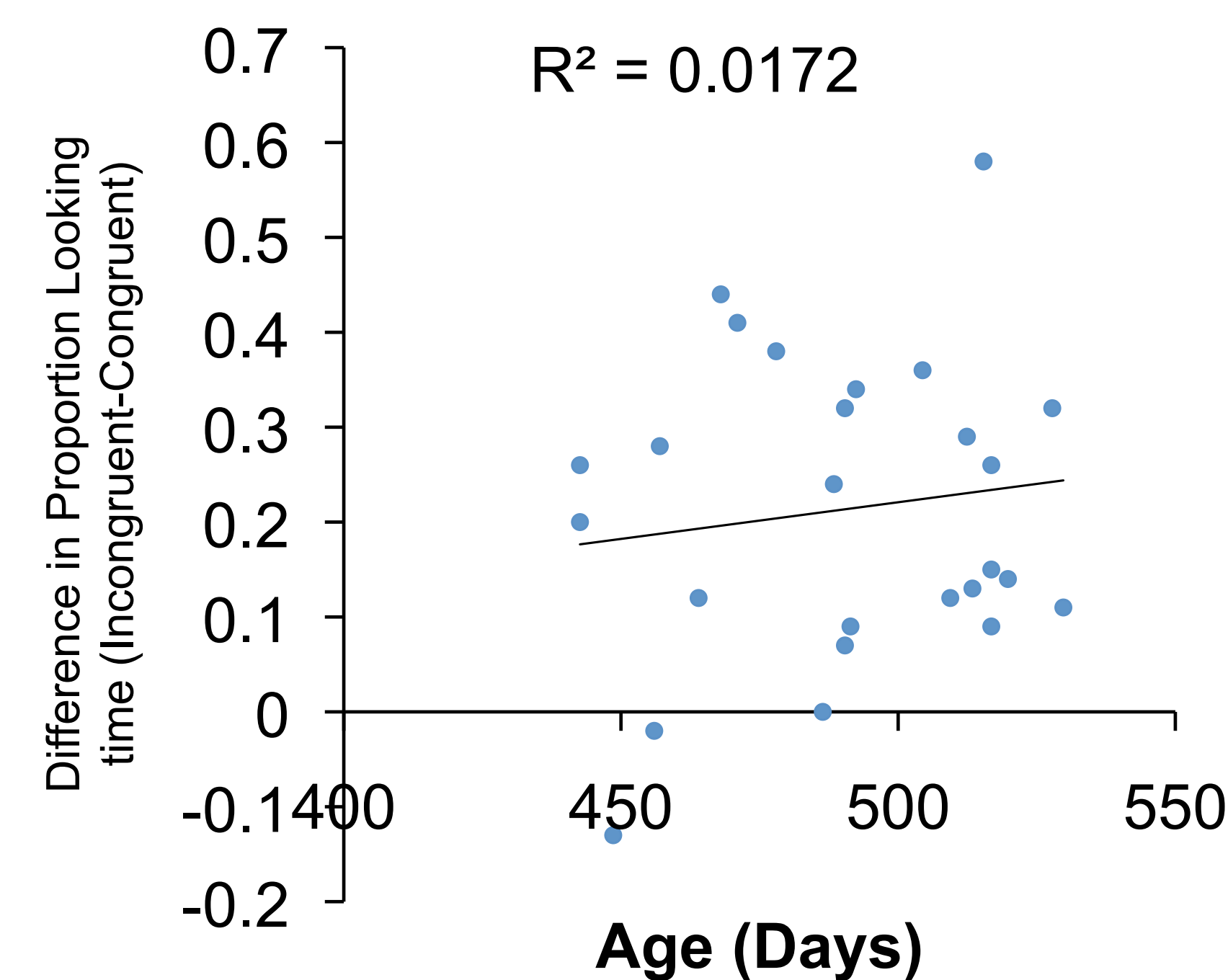
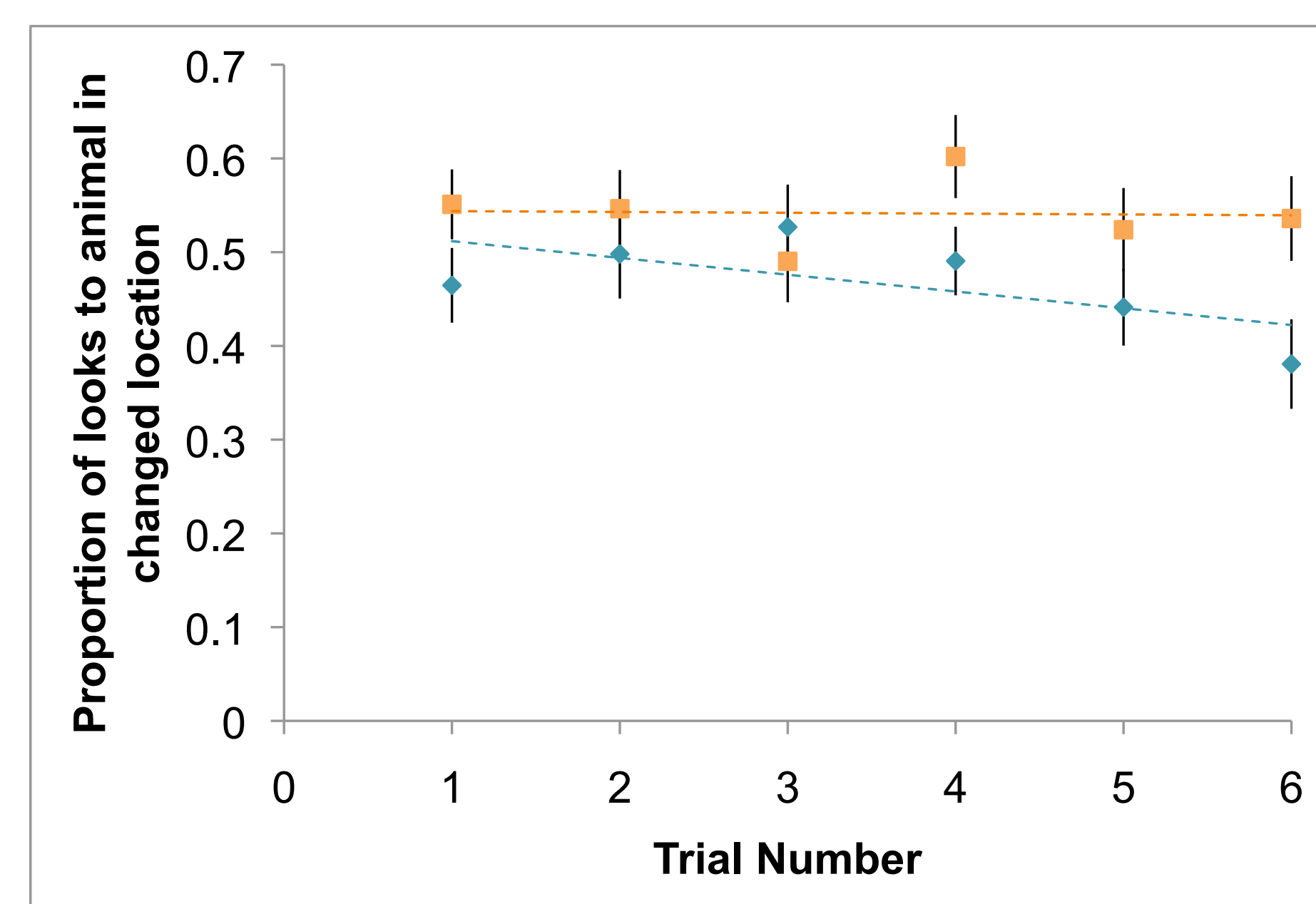
Infants were given testimony about an occluded event (either of the agents moving to the central location), followed by an outcome that either matched (congruent condition) or did not match (incongruent condition) the testimony. All trials within a block were either congruent or incongruent, such that on a given block, the source of testimony was either consistently reliable (as in the congruent condition), or consistently unreliable (as in the incongruent condition).

## Results

On average, infants looked longer in incongruent condition relative to congruent, regardless of previous exposures



- Sig. main effect of condition ( $p = .006$ ).
- No sig. main effect of exposure.
- No sig. interaction.



- No correlation between age and proportion of looking time.
- Also no correlation between MCDI and proportion of looking time.

## Conclusions

Despite lower task demands, infants looked longer to the outcome in the incongruent condition, regardless of previous exposure. This suggests that they did not take the source's past reliability into account when generating expectations about the agents' location. This effect was not related to age or vocabulary as measured by the MCDI.

**These results support accounts suggesting that infants are unable to evaluate source reliability when testimony is communicated verbally.**

Alternative: Infants may have been unable to track the disembodied voice across multiple trials, and therefore may not have attributed the testimony to a single source. Future research providing a visual anchor for the testimony, and/or a clearer distinction between a reliable and unreliable source will clarify this.

**References:** 1. Ganea, Koenig & Gordon-Millet, 2011, *JEC*. 2. Jaswal, Croft, Setia & Cole, 2010, *Psych Sci*. 3. Tummeltshammer, Wu, Sobel & Kirkham, 2014, *Psych Sci*. 4. Harris & Lane, 2014, *Topoi*. 5. Galazka & Ganea, 2014, *JEC*. 6. Ganea, Fitch, Harris & Kaldy, 2016, *JEC*. 7. Ganea & Harris, 2013, *JEC*.

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