

Background

- The **Other-Race Effect (ORE)** is an advantage for processing faces from one's own race compared to other races (Meissner & Brigham, 2001).
- ORE emerges at 6 months and is fully established by 9 months (Kelly *et al.*, 2007).
 - Caucasian 6-month-olds discriminated **Caucasian and Asian** face pairs.
 - Caucasian 9-month-olds only discriminated **Caucasian** face pairs.
- The development of ORE occurs as infants' perceptual systems become fine-tuned for faces to which they are exposed (Nelson, 2001).
- Little work has examined the development of ORE in infants living in a racially diverse society who experience many races.**

Experiment 1

Does exposure to other races affect Caucasian infants' discrimination of Asian faces?

- 6-month-olds *will* discriminate regardless of amount of exposure to other races.
- 9-month-olds with more exposure to other races will be *more likely* to discriminate Asian faces than 9-month-olds with limited exposure.

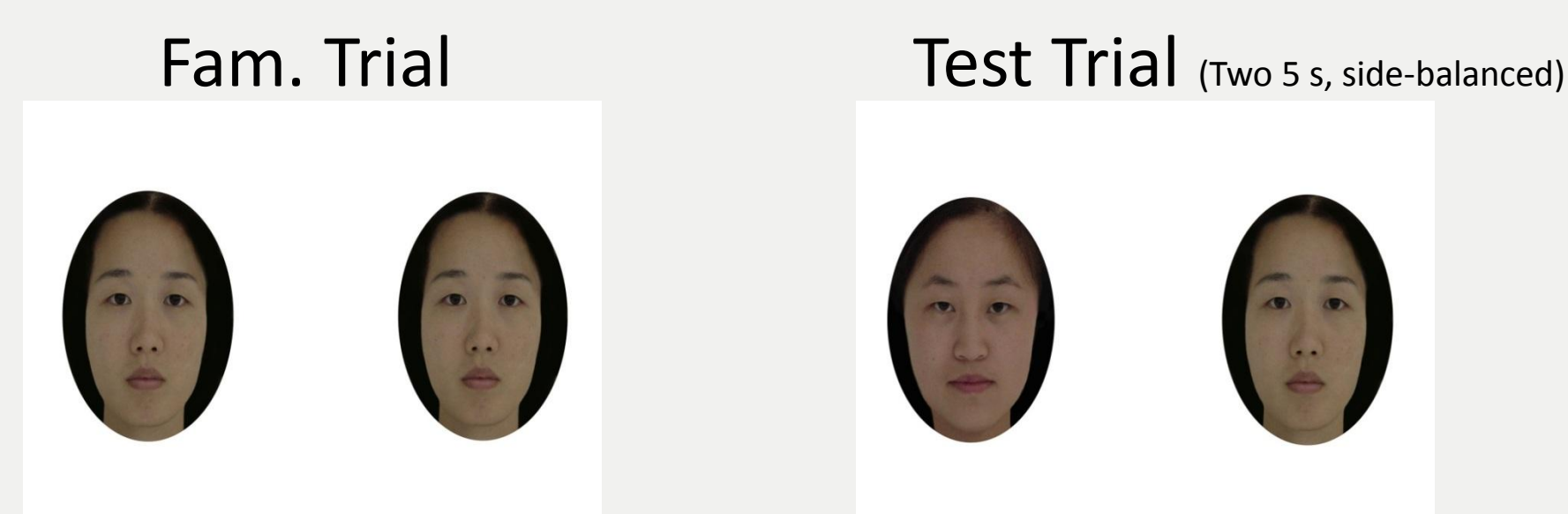
Method

Participants:

- 19 Caucasian 6-month-olds
(*M* age = 177 days, Range = 163-191 days)
- 16 Caucasian 9-month-olds
(*M* age = 277 days, Range = 249-305 days)

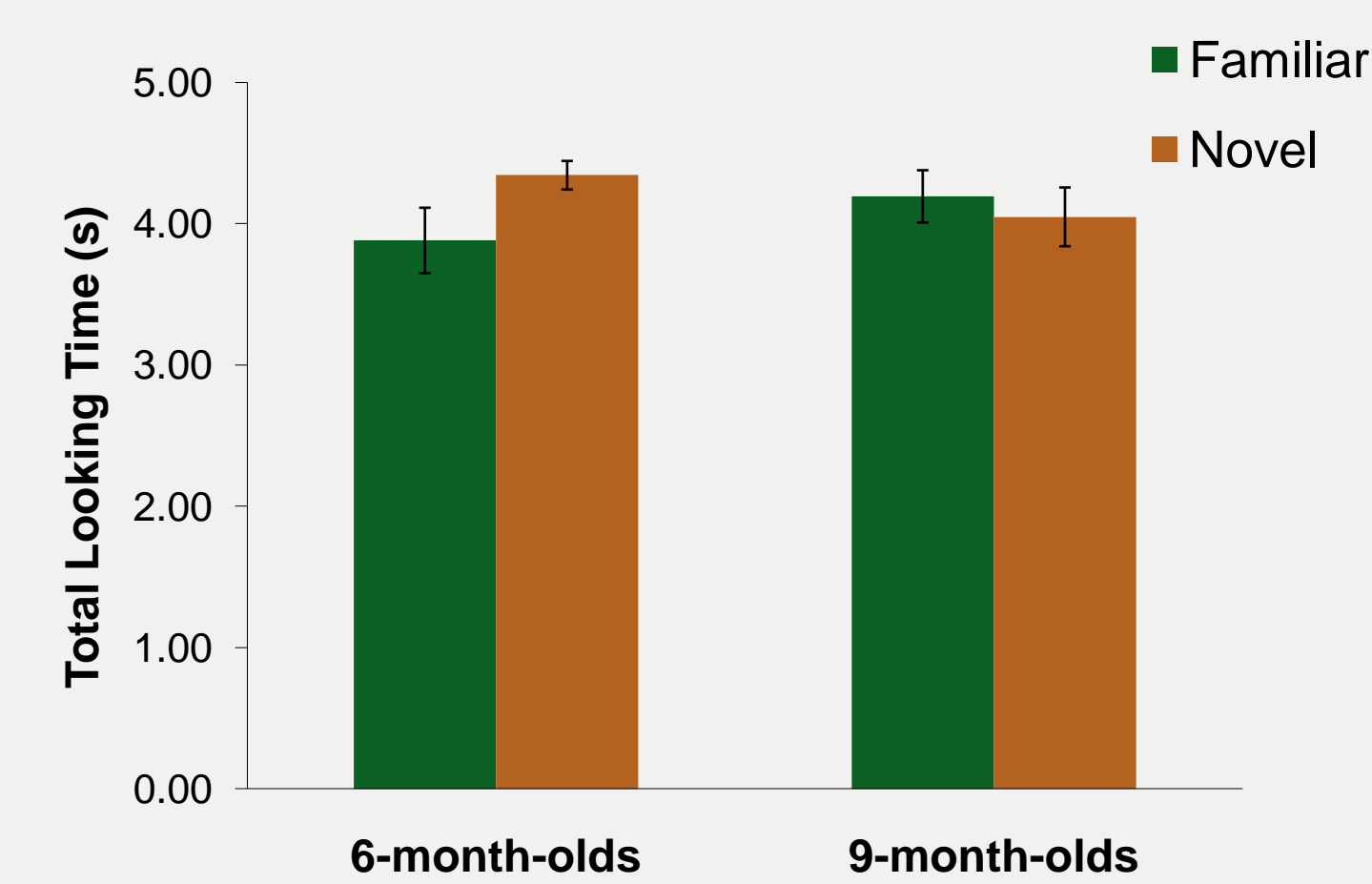
Procedure:

- Parents:** Race Exposure Questionnaire (REQ) about infants' exposure to other races.
- Dependent measure:** *Hours per week*.
- Infants:** Visual paired comparison (VPC) task.
 - Familiarization:** 1 Asian face for 20 s.
 - Test:** 10 s familiarized face & novel face.



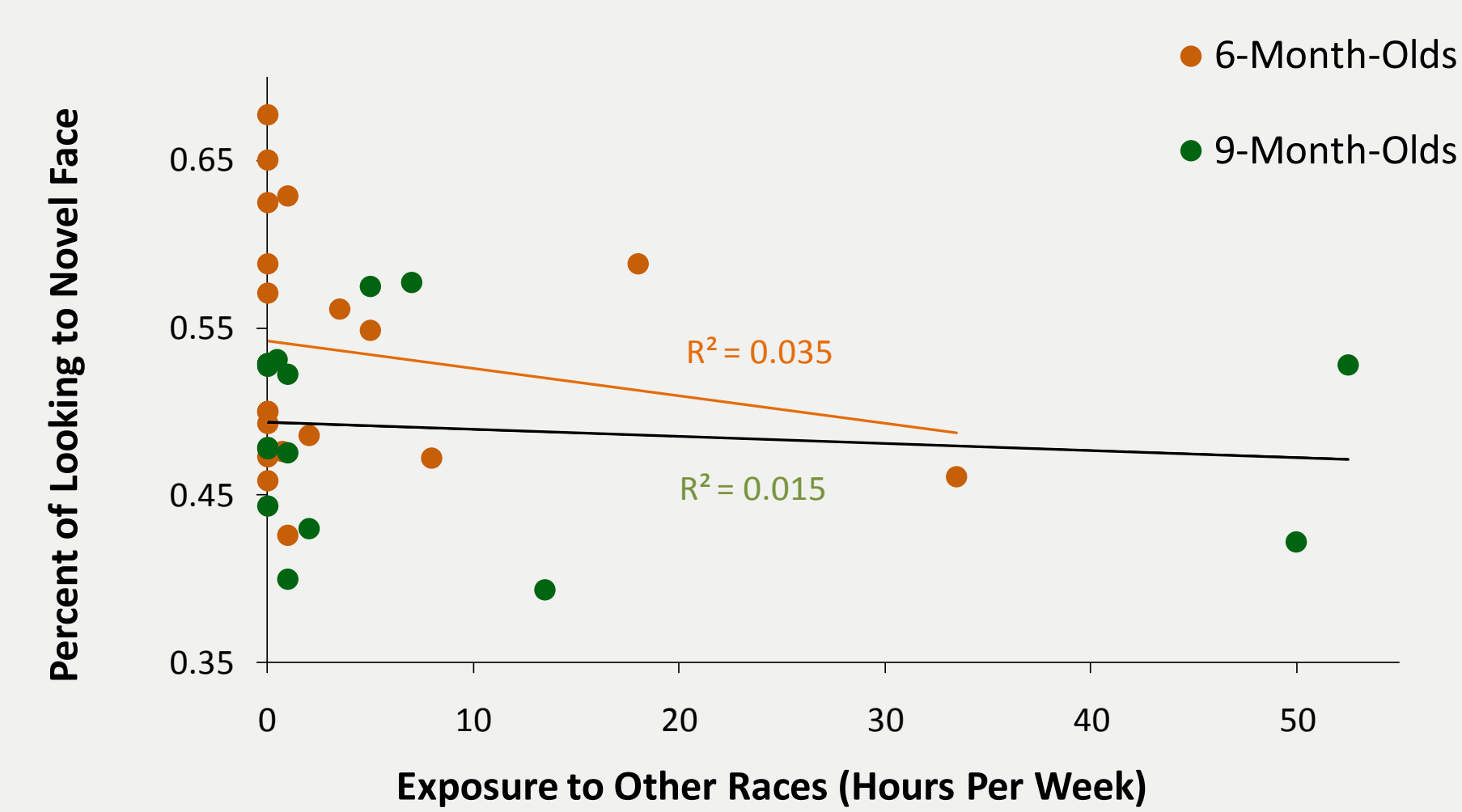
Results

Total Looking Time to Novel and Familiar Face During Test Trials



- 6-month-olds *did not* discriminate novel ($M = 4.34$ s, $SD = .44$) from familiar ($M = 3.88$ s, $SD = 1.01$) Asian faces.
 - $t(18) = 1.89, p = .07$
- 9-month-olds *did not* discriminate novel ($M = 4.05$ s, $SD = .83$) from familiar ($M = 4.19$ s, $SD = .74$) Asian faces.
 - $t(15) = -0.57, p = .58$

Novelty Preference Scores by Hours of Exposure to Other Races



- No correlation* between 6-month-olds' novelty preference and race exposure, $r(19) = -.19, p = .31$.
- No correlation* between 9-month-olds' novelty preference and race exposure, $r(16) = -.12, p = .65$.

Experiment 2

Do external features facilitate 6-month-olds' discrimination of other-race faces?

- 6-month-olds *will* discriminate when external facial features are present.

Method

Participants:

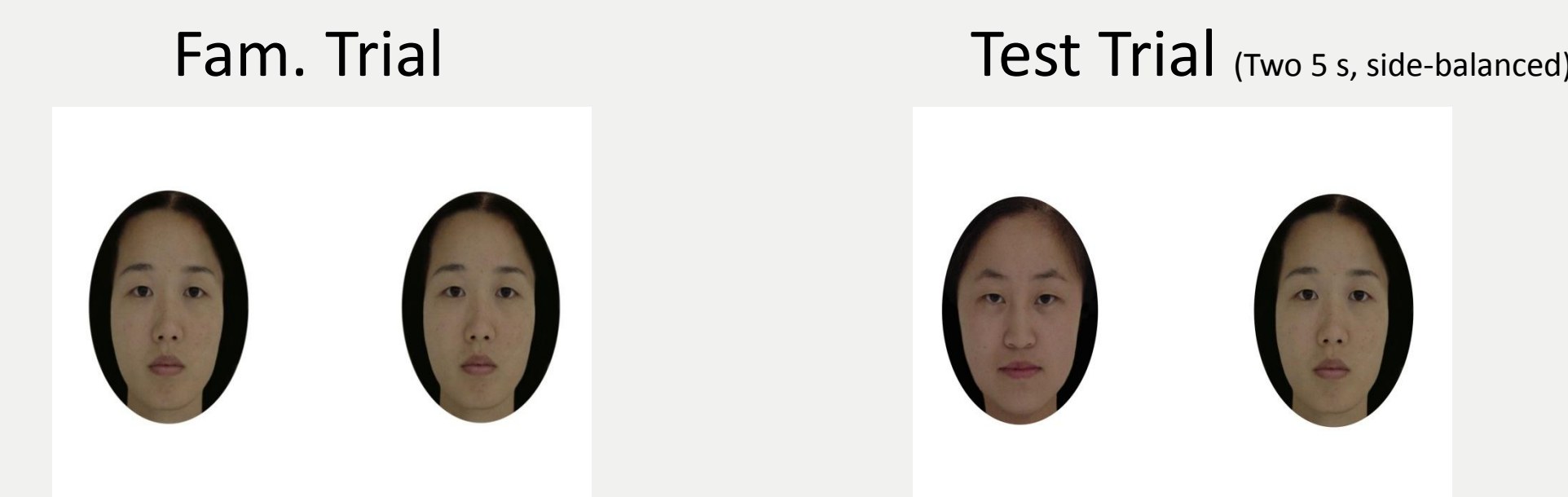
- 16 Caucasian 6-month-olds
(*M* age = 180.31 days, Range = 166-221 days)

Procedure:

- Each infant completed two VPC tasks.

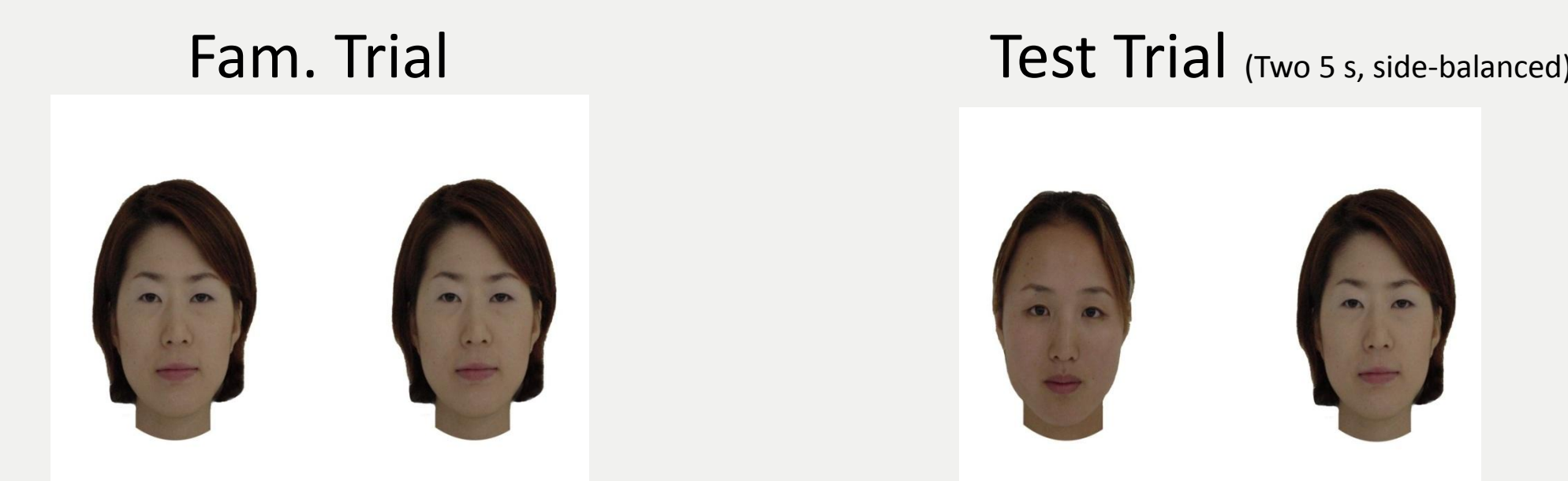
#1: Familiarization: Cropped Asian face for 20 s.

Test: 10 s familiar vs. novel cropped faces.



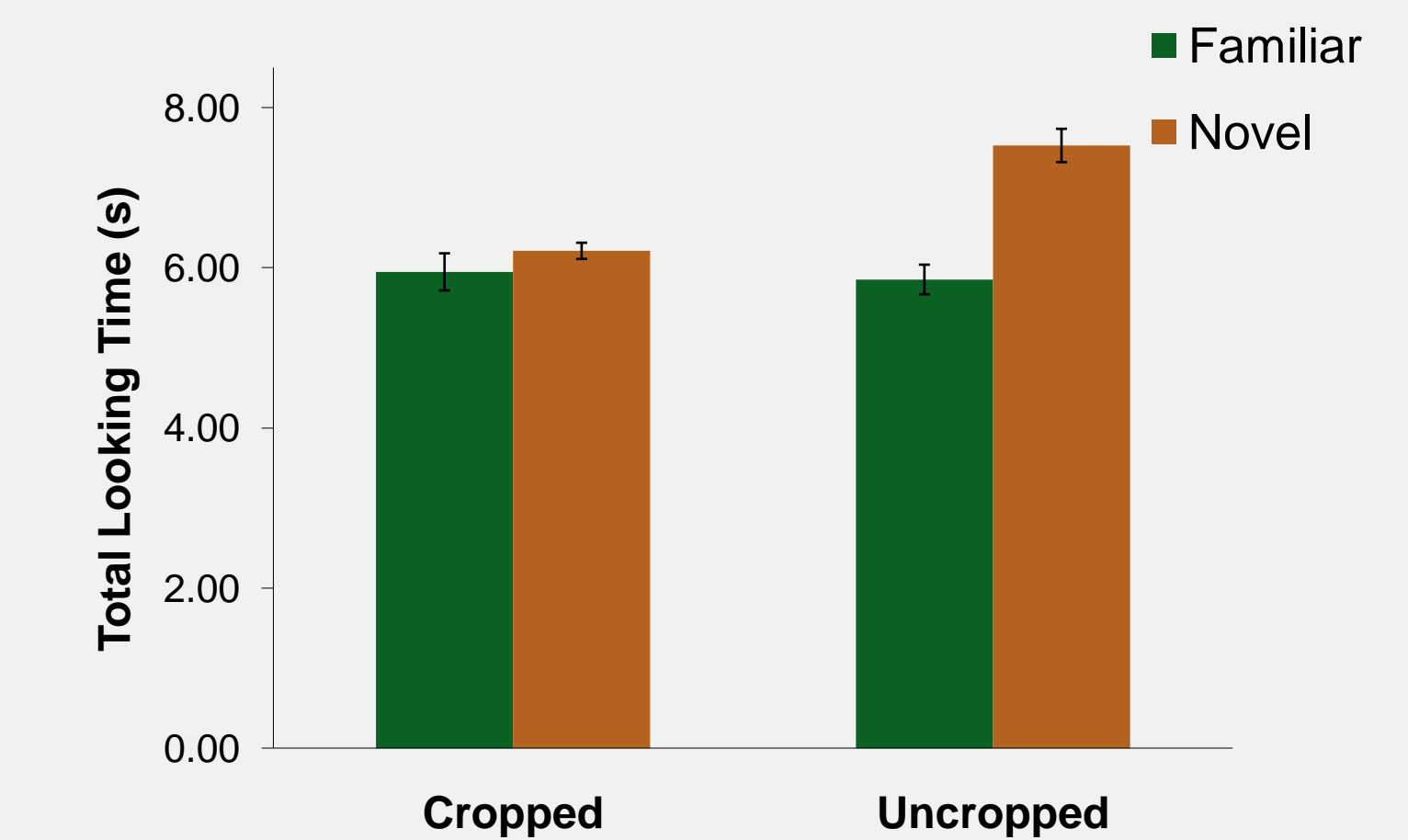
#2: Familiarization: Uncropped Asian face for 20 s.

Test: 10 s familiar vs. novel uncropped faces.



Results

6-month-olds' Total Looking Time to Novel and Familiar Face During Test Trials



- Cropped faces:** Infants *did not* look longer to novel ($M = 6.21$ s, $SD = 2.18$) vs. familiar ($M = 5.95$ s, $SD = 2.55$) face, $t(15) = 0.35, p = .73$.

- Uncropped faces:** Infants' looking to novel ($M = 7.53$ s, $SD = 2.71$) vs. familiar ($M = 5.85$ s, $SD = 2.40$) face *approached significance*, $t(15) = 1.99, p = .06$.

Discussion: Experiment 2

External features appear to aid 6-month-old Caucasian infants' discrimination of Asian faces.

- Hairline and face shape may provide distinctive cues for discrimination.
- Additional data collection underway.

GENERAL DISCUSSION

Neither 6- nor 9-month-olds discriminated Asian faces in Experiment 1.

- Our face stimuli differed from those used in previous research reporting 6-month-olds' other-race (Asian) discrimination.

Experiment 2 results suggest external features may aid 6-month-olds' discrimination of other-race faces.

- Infants' discrimination of unfamiliar, other-race faces may be helped by distinctive hairline and facial shape cues.

Amount of exposure to other races was unrelated to 6- and 9-month-olds' novelty preference scores.

- Future research should examine the impact of exposure to Asian-only individuals and prospective assessment of other-race exposure prior to 9 months.

Discussion: Experiment 1

Neither age showed evidence of discrimination.

- Previous other-race discrimination studies presented face images with hair (Kelly *et al.*, 2007).
 - Did absence of external features hinder 6-month-olds' face discrimination?**

Other-race exposure was not related to novelty preference.

- Exposure assessment was retrospective and parent-reported.
- Questionnaire did not assess exposure to Asian-only faces.
 - Specific exposure to Asian faces may be necessary to reduce ORE in 9-month-olds.**

References

- Kelly, D. J., Quinn, P. C., Slater, A. M., Lee, K., Ge, L., & Pascalis, O. (2007). The other-race effect develops during infancy: Evidence of perceptual narrowing. *Psychological Science, 18*, 1084-1089.
- Kim, H. C., Sung, J. W., Je, H. M., Kim, S. K., Jun, B. J., Kim, D., & Bang, S. Y. (2001). Asian face image database PF01. Technical Report, Intelligent Multimedia Lab, Department of CSE, POSTECH.
- Meissner, C. A. & Brigham, J. C. (2001). Thirty years of investigating the own-race bias in memory for faces a meta-analytic review. *Psychology, Public Policy, and Law, 7*, 3-35.
- Nelson, C. A. (2001). The development and neural bases of face recognition. *Infant and Child Development, 10*, 3-18.