The Effects of Stimulus Familiarity on Infants' Facial Processing
Emily W. Touchstone and Melanie J. Spence
The University of Texas at Dallas

Abstract
This study explored 6- and 10-month-old infants' categorization of one positive (happy) and one negative (disgust) expression when viewing dynamic female faces. Categorization was assessed using an infant-controlled habituation paradigm that presented 3 blocks in repetition for no more than 20 trials. Subsequently, 2 within-category and 2 between-category test trials were presented. Infants (n=24) per category were assigned to 1 of 2 groups: those who habituated in 6-9 trials and those who habituated in 12-15 trials. Results reveal that infants in both groups detected new faces, but that infants with more familiarization trials were less likely to detect the new emotion.

Introduction
Role of motion in identity versus emotion
Motion facilitates face recognition in infants
Four-month-old infants (6 and 12 months)
Motion affects adults' recognition of faces
Categorical information is processed by the brain
Use of multistable stimuli effective in affect processing
Adults' recognition of emotional expressions is related to cognitive processing
Individual differences in attention to visual stimuli
Individual differences in processing speed related to cognitive performance

discussion
Both less and more familiar groups detected identity changes
Effect of familiarization group need analysis?
Only less familiar group detected emotion change
More experience with 3 faces during habituation biased attention to identity rather than emotion
Individual differences in processing speed influence processing of emotion

Future Goals
Are infants with more familiarization also shorter lookers?
Are infants more likely to categorize emotional expressions when using more faces (or fewer) (fixed) trials during familiarization?
Is there an effect of motion (vs. static) on identity when comparing less and more familiar experiences during habituation?

Acknowledgements
This research was funded by
Timmerman Psychiatric Research Foundation Award
UTD Faculty Research Initiative Award

The stimuli were provided by DOD/DARPA Human ID Project
(G'O'Toope, Hamra, Snow, Hunt, Pappas & Abdi, 2005)
Address correspondence and reprint requests to:
Emily W. Touchstone or Melanie J. Spence, School of Behavioral and Brain Sciences, University of Texas at Dallas, Box 83055, 8744 L. Richardson, TX 75083-0553
e-mail: o1230@utdallas.edu, mspence@utdallas.edu

We would like to acknowledge all of the families who participated in this research, and express our sincere gratitude.