Recognition of rotated faces by three- and six-month-old infants

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Faces, like most objects, change appearance when they are rotated. Adult viewers identify human faces from different viewpoints with remarkable accuracy. While the general interest of infants in faces is well documented, we know little about their ability to identify rotated faces.

Our study investigated three- and six-month-old infants’ recognition performance using images of laser-scanned three-dimensional head models preserving the natural texture (Troje & Bülthoff, 1996) as stimuli. 27 infants were habituated in six consecutive trials to the full-face view of either a female or a male face. Following habituation, infants were presented with two dishabituation trials, during which all infants viewed the habituated face in a new angle and a new face in the identical angle. The rotating angles used in this study varied from ±10 deg to ±50 deg.

The 6-months-old infants looked longer at the new face than at the habituated face in the 10 and 20 deg rotation when compared with the 3-months-olds, whereas higher degrees of rotation yielded no differences between the new and the rotated face for both age-groups.

Our results must be viewed with caution, since many infants did not show the expected drop in fixation time during habituation. Currently, we are modifying the protocol to gather additional data.