Race through a baby’s eyes
Lab explores face recognition and race

Editor’s note: I was horrified when my Caucasian daughter, at age 17 months, pointed to a girl in the book we were reading and said the name of an African-American girl at her day care center—who bore no resemblance to the girl in the book other than skin color. Was my innocent toddler developing racial stereotypes, seeing people of other ethnicities as looking alike? It turns out that during visual development, infants learn to “specialize” in recognizing faces of the kind they’re exposed to most often, losing the ability to distinguish faces that are seen less often. Charles A. Nelson, PhD, director of the Laboratories of Cognitive Neuroscience at Children’s Hospital Boston, speculates that babies are born with a broad face-processing algorithm that narrows over time, influenced by their visual experience.

Capturing brain activity
Within the Laboratories of Cognitive Neuroscience, part of the Division of Developmental Medicine at Children’s, Kristin Shutts, PhD, is tracking babies’ eye movements and brain activity as they’re shown pictures of white and black faces. The electrodes are recording event-related potentials, or patterns of brain activity, to pinpoint the origins of social category distinctions even before children are able to perceive them as socially meaningful. In addition to white and black infants 5 months of age, the study will test adults and 3-to 6-year-old children.
Racial morphing

Benjamin Balas, PhD, is using these computer-generated faces, rendered in 3D, to study how 9-month-old infants and young adults of different ethnicities respond to differences in skin pigmentation and the shape of facial features. As both parameters are gradually "morphed," brain measurements and eye-tracking techniques will try to capture how they interact to influence facial perception and the ability to tell different faces apart.

"Understanding the development of facial recognition in infancy and childhood is the first step toward understanding the more complex nature of racial prejudice in adults."

—Charles A. Nelson, PhD, Director, Laboratories of Cognitive Neuroscience

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Listen to a podcast with Nelson and find out how you can participate in face processing studies.