

September 2016

Dear Parents, Teachers and Children,

2015-16 was an exciting year in the Face Perception Lab. We said goodbye to two postdoctoral fellows who have returned to Europe for the next stage of their careers and we welcomed a new postdoctoral fellow (Abbie Coy from the UK) and a new MA student (Claire Matthews). And, of course, we've learned lots more about face perception and how our perception of faces is shaped by experience.

Most of us think we are quite good at recognizing faces. We look at pictures of family members, friends, and co-workers and instantly recognize those we know. We can recognize our neighbor when she is dressed up for a wedding or wearing a ball cap while working in her yard! But are we equally good when recognizing photos of people with whom we are unfamiliar? No! When shown a pair of photos and asked whether they are pictures of two different people or two pictures of the same person we make mistakes. It is only as we are exposed to someone that we learn to recognize her despite variability in appearance.

One goal of this letter is to thank you for your participation. Without your help we could not learn about the fascinating world of face perception! A second goal is to provide you with information about what we've learned. Two years ago we showed children a picture of a woman on the front of a toy house and then gave them a stack of photos. That pile contained other pictures of the woman on the house (the target identity) and pictures of someone else. We asked children to put all of the photos of the target identity into the house, while setting photos of other people aside. Some children were unfamiliar with the target identity; they made lots of errors, with older children performing better than younger children. But other children were familiar with the target identity because she was their teacher. When tested with their own teacher children aged 6 years and older performed nearly perfectly—just like adults; younger children continued to make errors. These findings told us that by age 6 years children can become highly familiar with a new face. However, given that young children continued to make errors despite knowing their teacher for several weeks or months we wondered whether children's learning differs from that of adults.

So, last year we decided to learn about how a face becomes familiar. We knew that variability helps children to learn new words. Children recognize a word better if they hear it spoken by many different people than if they hear it spoken by a single person. Variety appears to be the 'spice of development'! We wondered if variety also contributes to face learning. To find out, we had children and adults watched a video in which a woman read a storybook for 10 minutes. In the low-variability condition the video was filmed on a single day. In the high-variability condition the video was filmed across three days and so the model had different hairstyles and make-up and she was filmed under different lighting conditions. After watching the video, participants completed the sorting task described above. Other participants completed the sorting task without watching the video; these participants were completely unfamiliar with our model.



Some photographs of Sarah Laurence, a recent postdoctoral fellow and now faculty member at Keele University, UK. For those unfamiliar with Sarah it is likely that you perceive 2 or 3 different identities. Would your performance improve after watching a 10-minute video?

What did we find? Adults' accuracy increased (i.e., they recognized more pictures of the model) after viewing either the high- or low-variability video. Indeed, watching the video as it was filmed across three days provided no benefit over and above watching the video as it was filmed on a single day. Adults even recognized the model after viewing a slide show comprising 12 photographs! In contrast, children's accuracy only increased in the high-variability condition. Those who experienced low variability in appearance seemed to learn nothing about the model's face! This explains why young children failed to recognize their own teacher despite knowing her for several weeks or months. Their learning seems to be less efficient than that of adults.

This work has many implications in real-world settings. In September children meet many new friends as they start a new year. A challenge appears to be learning what these new friends look like. We imagine that young children might struggle on the first days of winter when people start wearing hats and scarves. Sometimes children serve as eyewitnesses. Our work suggests that unless a face is highly familiar to a child, providing accurate identification will be especially challenging for children.

You are invited to join our growing database of families who are interested in having their child(ren) participate in our research at Brock. Joining our database means that when your child enters a relevant age range for one of our studies, we will contact you to see if you would like to bring him or her to Brock to participate. If you are interested in becoming part of our database, or if you have any questions, please feel free to call our lab (905.688.5550 x4944) or send us an email at faceperception@brocku.ca and one of our Research Assistants would be happy to speak with you.

You can also help us by telling your friends about our research lab at Brock University! We look forward to seeing you and your family at our lab.

Sincerely,

Cathy Mondloch Professor
Department of Psychology
Director, Face Perception Lab