



SFU researchers discover babies and caregivers communicate similarly across cultures

BY CINDY LI | March 12, 2019

In the first study of its kind, Simon Fraser University professor of psychology Tanya Broesch and her collaborator, Dr. Mikolaj Hernik of Central European University, used eye-tracking technology to compare the ways babies and caregivers communicate with each other in the U.K. and on the rural South Pacific island of Tanna, Vanuatu.

Broesch and Hernik observed that despite vast differences in socialization practices and early experiences between Ni-Vanuatu and Western care-

givers, the babies' ability to follow adult caregivers' gaze behaviour was strikingly similar.

"We found that babies in both cultures will follow an adult's gaze to a target object only after the adult produces an attention-grabbing utterance signaling that she is addressing the baby, such as infant-directed speech (IDS)," explains Broesch. "We assessed this by examining the duration and frequency of the infants' gazes to the target object in two conditions—with IDS and without IDS.

“What we found was that infants look longer and more frequently at the target object after they hear IDS, but not when they hear adult-directed speech.”

The study is the first to use eye-tracking technology in a non-Western, rural location, and Broesch hesitated to bring the eye tracker to the field for several reasons.

“There are still beliefs in witchcraft in the region,” she says. “I wasn’t sure how the Ni-Vanuatu people would view a strange device that demonstrates where they are looking with a red dot on the screen.”

To combat this potential skepticism and caution, Broesch and Hernik carefully introduced the eye tracker to the locals in Vanuatu by showing them photos, explaining how it worked, and allowing them to play with the device independently of experimental testing.

Broesch and Hernik also had to contend with the lack of publically provided amenities and electricity in Tanna. “I have a solar system set up at the field site lab, but we intended to travel around to villages with the portable eye-tracking device,” says Broesch. “It definitely required us to do some clever technological gymnastics.”

With infant eye-tracking usually only used in lab settings, Broesch was excited to bring this meth-



odology to the field. She and Hernik conducted the study in 18 different locations, necessitating flexibility from the researchers. “For instance, we always made sure to explain why we need everyone nearby to remain quiet so as to not to distract our baby-participants. But you cannot ask the same from the livestock that may just happen to run around, and on some occasions we had some visitors.”

Broesch says it is gratifying and humbling to learn such universal qualities exist in human behaviour and communication, and she looks forward to where this research could go from here.

“I’m always in awe when we discover striking commonalities across such disparate societies,” says Broesch. “The early environment for Ni-Vanuatu babies could not be any more different from that of their Western counterparts. So it’s really remarkable that we find these similarities.”

Broesch will speak at St. Francis Xavier University on March 29, where she will be presenting her findings. The complete paper is published in the psychology journal *Developmental Science*.

