

Navigating Complexity: Pupillometry in Infant Social Cognition Research

Wednesday, September 25, 2024 9:40 AM (20 minutes)

Eyetracking serves as a valuable method for objectively assessing early theory of mind and related social cognitive processes in preverbal infants. Recent studies have extended this approach by analyzing pupillary responses, offering deeper insights into infants' processing of others' mental states. This shift responds to critiques of traditional measures like looking time, which have been argued to be challenging to interpret and insufficiently comparable across age groups.

Importantly, incorporating pupil dilation measures in experimental studies necessitates careful selection of stimuli to prevent confounding effects such as changes in pupil size due to stimuli luminance variations or infant gaze behavior patterns, such as frequent eye movements. Selecting appropriate stimuli poses particular challenges in the investigation of social cognitive abilities, as those are usually required during social interactions entailing a lot of different information. As a consequence, when aiming for naturalistic stimuli, materials can easily become highly complex.

We conducted a study investigating 18-month-olds' ability to detect changes in adults' attitudes towards different action effects signaled through emotional expressions and verbalizations. We implemented a violation-of-expectation design measuring pupil dilation in response to expected and unexpected emotional reactions. In my talk, I will present the insights gained from analyzing infants' pupillary responses to relatively complex video stimuli together with the specific challenges and limitations encountered during implementation and analysis of our experiment.

If you're submitting a poster, would you be interested in giving a blitz talk?

No

If you're submitting a symposium talk, what's the symposium title?

Breaking into the attentional mechanisms underlying cognition via the science of pupil

If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

Yes

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