

Follow Buzzy Bee: The effects of arrows, eye gaze and finger pointing cues on saccadic orienting in infants

Timothy Lewis Hodgson², Nicola Jean Gregory¹ & Rebecca Facey³

¹Bournemouth University, United Kingdom

²University of Lincoln, United Kingdom

³University of Exeter, United Kingdom

Little is known about the developmental trajectory of saccadic orienting caused by eye gaze, finger pointing and arrow cues in young children, although many studies have shown that adults' attention and saccades are facilitated in the direction of these cues even when uninformative. We have developed a pro-saccade task designed for children. Children were instructed to ignore cues presented at fixation and saccade towards a cartoon bee (the target) which appeared randomly to the left or right of fixation irrespective of the direction of the central cue. Thirty-six children aged 4 to 10 years completed 56 trials. A mixed-measures ANOVA showed an interaction between Age, Cue type and Congruency ($F_{4,66} = 3.75, p = .008$) with 4-5 year old children displaying a 70ms congruency advantage for pointing cues, but no advantage for eyes or arrows. Children aged 6-7 and 8-10 years showed cueing effects for all three cues. Linear regression revealed that Age was a significant predictor of cueing effect for pointing cues. These findings suggest that pointing is an influential cue in young children, but that automatic orienting to arrows and gaze does not develop until age 6 years.

Contact information: ngregory@bournemouth.ac.uk