
ATTENTION-SHARING IN HUMAN INFANTS FROM 5 TO 10 MONTHS OF AGE IN NATURALISTIC INTERACTIONS

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Abstract

Attention-sharing is fundamental for learning in social contexts. Some accounts of shared attention skills (Baron-Cohen, 1995) explain them as unverified, innate modules. An alternative account (Deák & Triesch, in press) proposes that attention-sharing skills like gaze- and point-following emerge from a combination of perceptual routines, affective dispositions, learning capacities, and exposure to structured social input. Thus, shared attention behaviors like gaze- & point-following should emerge gradually from interactive processing of predictable adult behaviors. In this study, 11 parent-infant dyads, with infants between 5 and 10 months of age (i.e., before or during the emergence of reliable laboratory-based gaze- and point-following skills) were videotaped at play at their home. The object was to observe how gaze- and point-following change from 5 to 10 months in everyday social interactions. Dual-video files (2 synchronized, 15 min DV streams, one each focused on parent and infant) were coded for events and variables including infant's direction and target of gaze, parent's direction and target of gaze, and parent's manual actions. The results for "showing" interactions (when parents were told, with no specific instructions, to "try to get [your baby] to pay attention to these [4 toys]"), and for "peek-a-boo" interactions, were coded. Inter-coder reliability for gaze target was acceptable; parent kappa = .73; infant kappa = .70. Results showed that infants and parents spent a mean of 12% (range = 1-25%) of the sharing episode in mutual gaze, and 9% (range = 3-23%) in shared gaze. Frequency of infant following events was positively correlated with infant's age, $r(10) = .69$. From 5 to 10 months, infants' following rate for all gestures reliably and gradually increased, and no sudden change around 9-10 months evident, as modular theories would predict. Unexpected from the experimental literature, we found that infants followed only 3.6% of parents' gaze shifts, versus 40.1% of parents' pointing gestures. across the age range followed parents' points far more than gaze. It has been claimed that infants younger than 10 months do not understand others' pointing gestures; these data disconfirm that claim. The results indicate that gaze- and point-following emerge gradually in the first year, implying learning processes based on

structured input, rather than the "turning on" of a specialized module or modules.