

## **Neural entrainment in infancy: the role of social signals in early dyadic interactions**

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Synchronizing with others is crucial for efficient social interactions throughout the lifespan. From the earliest stages of life, the interactive exchange and reciprocal adjustment of multisensory social cues that scaffolds the development of socio-communicative skills (Markova et al., 2019). Crucially, coordinating with interacting partners relies on the abilities to respond to others' communicative signals contingently and requires anticipating other's behaviours. If multiple studies investigated the role of behavioural cues (i.e. gaze and touch) for the development of social cognition, how these ostensive cues influence neural dynamics in caregiver-infant dyads is scarcely explored. According to a recent model, neural synchrony within dyadic interactions might be achieved using behavioural ostensive cues that could contribute to a phase-reset of ongoing neural oscillations with cascading effects on attention and learning (Wass et al., 2020). The present contribution will outline possible precursors of interpersonal synchrony, building on some behavioral data that emphasize the importance of temporal contingency and social engagement for interpersonal interactions throughout development. The state of the art regarding neural entrainment in early life will also be presented, highlighting its mechanisms, functions, and how the use of ostensive cues such as gaze and touch affect such synchrony.