PART ONE

The amazing social capabilities of babies

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From birth babies have some sophisticated social capacities (Beebe & Lachmann, 2002), which they use to maintain a relationship with their primary caregiver. These social capacities are established in the days and weeks after birth. This three-part series shares some insights into baby's amazing capabilities.

Right from the beginning babies are capable of distinguishing between different people's voices. They can detect the different ways in which we express ourselves. They are sensitive to rhythm (Condon & Sandler, 1974), intonation (Morse, 1972), and other features of speech (DeCasper & Fifer, 1980). A baby less than 3 days old will choose to listen to a recording of his/her own mother's voice rather than another mother's voice (DeCasper & Fifer, 1980), and they prefer to listen to her reading a familiar story (one read aloud during the pregnancy) over an unfamiliar one (DeCasper & Spence, 1986).

Newborn babies also know and prefer their mother's smell, and will turn their heads towards the smell of their own mother's breast milk, rather than that of another mother (McFarlane, 1975, cited by Stern, 1985).

Infants have an early tendency to orient towards faces (Johnson, Posner, & Rothbart, 1991). A study of face processing found that baby's of just 2 months old are using the majority of the parts of the brain that adult's use in face processing (Tzourio-Mazoyer et al., 2002). They are already sophisticated readers of people.

Infants are sensitive after birth to another's gaze, this is reflected in their preference for looking at faces that have their eyes open rather than closed (Batkia, Baron-Cohen, Wheelwright, Connellan, & Ahluwaliab, 2000; Schacter & Moscovitch, 1984) and a tendency to orient towards direct eye contact from others (Farroni, Csibra, Simion, & Johnson, 2002).

By three months infants will orient more to direct gaze and a fearful adult expression than direct gaze with a neutral face or averted gaze and either neutral or fearful expression (Hoehl, Wiese, & Striano, 2008). Their survival instinct to identify danger and seek support from people is already well established.

As Helen Fisher quoted "Touch is the 'mother of all senses'". Infants smile more to touch with an interactive face reaction than to still face and touch. Touch can reinforce and maintain high rates of infant eye contact responses, vocalisations and smiles during face-to-face contact with their mother (Parsons, Young, Murray, Stein, & Kringelbach, 2010).

From birth, infants work to maintain an optimal level of arousal, keeping themselves in a comfortable range.

The limited strategies they have available to them to do this include: choosing what to look at, sucking, self-touching and restricting their range of facial expressiveness (Beebe & Lachmann, 2002). For example, when faced with a display of flashing lights, infants in a low state of arousal (fed & swaddled) look longer at the lights as the tempo of the flashing increases, whereas infants in a high state of arousal (unfed & unswaddled) look less as the tempo increases (Gardner & Karmel, 1984).

In face-to-face interactions, infants use brief visual disengagement (i.e. looking away) from their parent, to regulate their arousal. A few seconds before the infant averts his gaze, his heart rate accelerates. Within 5 seconds of looking away (if the mother responds by becoming less active and 'waiting'), his heart rate returns to baseline, and he quickly returns his gaze to her (Field, 1981).

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