

Intersubjective Communication and Emotion in Early Ontogeny

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CHAPTER 2

Infant intersubjectivity: broadening the dialogue to include imitation, identity and intention

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What is the problem of intersubjectivity and why does it intrigue us so? The problem stems from the fact that persons are more than physical objects. When we describe a person's height, weight, eyes, etc., we do not exhaust our description of that person. We have left off their psychological makeup. If a self-mobile, human-looking body were devoid of psychological characteristics it would not be a person at all, but a robot or, to use a philosopher's favourite, a zombie. A fundamental issue is how we come to know others as persons like ourselves.

Each one of us has the phenomenological experience that he or she is not alone in the world, in particular that we are not the unique bearer of psychological properties. We know that we think, feel, have intentions; we also find ourselves believing that others have similar psychological states, despite the fact that we do not experience others' states in the same way that we experience ours. Reflection on this gulf between ourselves and others intrigues us and can raise questions about our understanding of other persons. A computer with voice synthesis could be made to cry out, but we would not think it felt pain. A robot might be programmed to wrinkle its elastic 'face' when an internal chip detected sobbing, but we would not ascribe empathy to it. Why, then, do we ascribe psychological states to other humans?

Philosophers seek to justify the inference that the moving sacks of skin that we see are animated by psychological states just like our own. They contemplate whether this way of thinking might be a fiction and criteria for knowing whether it is or is not. Developmental psychologists ask different questions. They inquire how such a view takes hold among humans. Is it present at birth? Does it develop through social interaction? Does the nature of intersubjectivity change with age?

The philosophical questions about intersubjectivity remain unsettled, but every day people continue to talk, act and write in the (often vain) hope of changing the minds and hearts of others. Regarding the developmentalist's questions, there have been wide swings of the interpretive pendulum. At the apogee in one direction is Piaget (1936/1977, 1954) who famously argued that the infant is born a 'solipsist'. Piaget's infant was not an intersubjective infant, still less was his newborn. At the apogee in the other direction is Trevarthen (1979a, 1983; Trevarthen and Hubley, 1978; also Bråten, 1988a), who argued for an innate intersubjectivity wired into the human brain at birth.

Recent debates about early intersubjectivity often cite literature on three phenomena: the mutual timing and turn-taking aspects of adult-infant interactions (Bråten, 1988a; Brazelton *et al.*, 1974; Brazelton and Tronick, 1980; Stern, 1985; Trevarthen, 1979a), joint attention (e.g., Bruner, 1975, 1983; Butterworth and Cochran, 1980; Butterworth and Jarret, 1991; Moore and Dunham, 1995) and social referencing (e.g., Campos and Stenberg, 1981; Sorce *et al.*, 1985). These are thought to be important clues to non-verbal intersubjectivity, because they indicate a certain attitude, a 'taking into account' of the other by the infant.

The logical prerequisite for inferring intersubjectivity, however, is that the infant take into account the *psychological* aspects of the other, not solely the physics of the other. If a baby climbs on the shoulders of another simply as a footstool, this involves an other but not intersubjectivity, because it is not the other's mind that was taken into account. Thus not all interactions between social agents necessarily entail intersubjectivity.

A conservative reading of the oft-cited phenomena can shake one's confidence in them as direct measures of intersubjectivity (Baldwin and Moses, 1994; Hobson, 1994a; Meltzoff and Gopnik, 1993; Tomasello, 1995b; Tomasello *et al.*, 1993; Whiten, 1994). Some faith-shaking questions are the following. Does sensitivity to timing actually entail that the infant attributes psychological properties to the other? What if joint attention is accomplished solely through perceptual geometry, the extension of a line in space from the adult's pupil? How do we know that in the classic social referencing set-up, the adult's reaction to the novel toy (their fright face) does not itself frighten the infant without necessitating any understanding of the adult mental state? Moreover, both joint attention and social referencing have onsets late in infancy, and therefore do not uniquely support a nativist thesis; nor do they fall out of a Piagetian analysis. Far from being the foundation for intersubjectivity, they have developmental roots that need to be explained.¹

What was once settled ground in Piaget's time, and was resettled by Trevarthen and colleagues, is now again open for reconceptualization. In this window of opportunity, we need to re-examine what we mean by intersubjectivity and the kind of evidence developmental psychologists can bring to bear on its origins and development.

In this chapter we will argue that newborns are not isolated from others at birth, but on the other hand do not yet understand the internal feelings and mental states of others in the way a 2-year-old does (Gopnik and Meltzoff, 1997). A developmental view is needed. The promise of a developmental view is obvious, but it requires evidence and a cogent argument to be taken seriously. One goal of this essay is to provide the needed detail about the development of intersubjectivity in the preverbal period. We will propose that the imitation of human actions is the first bridge between the infant and others, and that imitation serves the dual functions of differentiating the broad class of 'others' into individuals and providing an early means of communication with them. It is through mutually imitative games, we argue, that infants progress from conceptions of others as entities with whom one can share actions to persons with whom one can share goals and intentions.

Overview of a developmental account

The bedrock on which intersubjective development is built is recognition of the 'like-me-ness' of others. This provides a basis for connection between the infant and other. Imitation is perhaps the first observable act demonstrating this connection. In newborn facial imitation, there is an apparent gulf to be bridged. The self can be felt, but cannot be seen. The other's face can be seen, but cannot be felt. Yet self and other somehow connect. The other can be understood as like me, at least in the sense that we can do the same acts.

True intersubjectivity requires not only connection but also differentiation. It involves more than a feeling of communion with an undifferentiated class of 'other'. It also entails relations with particular others who are valued as individuals. This in turn raises the question of how to determine their identity. A complete theory of early intersubjectivity must account for infants' ability to distinguish individuals from one another and reidentify a person as the same one again. We show that young infants deploy imitation as one means of sorting out the identity of individual people. Young infants are sometimes unsure about whether someone is the self-same person who has changed appearance or a new person who looks like the old one. They use imitation to help make these determinations. They do so by treating

