

Anchoring Intersubjective Models in Recent Advances in Developmental Psychology, Cognitive Neuroscience and Parenting Studies: Introduction to Papers by Trevarthen, Gallese, and Ammaniti & Trentini

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The papers in this special section review and extend the bold, creative body of current theory and research about the intersubjectivity. From different points of view, they all show that interpersonal recognition and collaboration play as central a role in motivating and organizing personality as other motivations like sex and attachment. Taken together, the papers offer a panoramic perspective, integrating cognitive and affective neuroscience, phenomenological philosophy, early development research, and psychoanalysis. Written by leading European academics, they reflect a Continental style of investigating the theoretical implications of “scientific” data.

For the last decade or so, developmental psychoanalysts and neuroscientists have argued that there is an “intersubjective motivation system,” as basic as the attachment or sexual motivations (Emde, 1988a,b; Stern, 2004; Trevarthen, 1993; Tomasello, 1999, among others). The following articles, by Trevarthen, Gallese, and Ammaniti & Trentini, present current, innovative “leading-edge” research that substantiates and elaborates this postulate: There are structures at every biopsychosocial level—cells, brains, bodies, dyads, families, cultures—that prepare and organize life in relationships with other people who recognize, respond, and communicate together. Many contemporary analysts, of course, have taken this for granted, but some critics have regarded it as sentimental thinking. Taken together, these papers reflect a substantial advance in integrating emerging information from the many scientific fields that are organizing around intersubjectivity theory, approaching their data philosophically and psychoanalytically as well as empirically. They are both panoramic and detailed, including recent findings from cognitive neuroscience, developmental research, attachment theory, and ethology. All of this is presented in a form directly bearing on psychoanalytic theory and practice.

Although they are European, an intellectual and cultural location that is reflected in their basic affinity for the intersubjectivist view. Even as they are they are elite, internationally known empirical researchers, they are more prone than their American counterparts to see data as a basis for theorizing and investigating fundamental questions about the mind and culture. They want to know the *what the findings mean*: Research is a means to an end rather than an end in itself. In this way, there is a ready affinity to psychoanalysis, although only one of the authors (Ammaniti) is an analyst, and neither Trevarthen nor Gallese is a clinician.

Colwyn Trevarthen is Professor of Psychology at the University of Edinburgh. He has distinguished himself for more than four decades as one of the most inventive and rigorous explorers of infant development and its implications. Among the infant research *cognoscenti*, he ranks with Bowlby (1969), Sander (2008), Stern (1985), and Emde (1988a,b) in breaking through the misleading assumptions of their varied disciplines to see what babies and mothers really do. Trevarthen's paper, on the "intersubjective psychobiology of human meaning," begins almost as a ramble on human nature, leaving us wondering if we are going to get some homespun wisdom rather than the usual disciplinary paper. But it soon becomes clear that Trevarthen (this issue) is instead taking the late-career liberty of saying what he thinks is most important, in the plainest language: that "our shared world ... does depend on an intrinsically motivated sympathy, the 'feeling of company,' and upon creative pretence. Everything meaningful we know is 'made up'" (p. 509). Emde's (1983) discussion links this to the developmental models, such as his own, that call for analysts to take "we-ness," as their point of departure, following George Klein's (1967) proposal that midcentury psychoanalysis needed a theory of the "we-go" to complement its ego psychology, a proposal that contemporary intersubjectivist-Relational analysis has implemented on its own terms.

Trevarthen then goes beyond this basic postulate to present the radical idea that the bases of sociability and, hence, human culture lie in motor activity and musicality, by which he means not merely the usual blend of melody, harmony, and rhythm, but the more basic patterning of shared, coordinated movements and sensations of all sorts, articulated over time and the interpersonal space. Just as Kerman (1994) declared that "relational structure in music is created by sound in time" (p. 54), Trevarthen finds the essence of self-development in what emerges from moving and feeling with others over time, in embodied intersubjectivity (Merleau-Ponty, 1945/2002; see also Orange, in press).

Trevarthen's paper sets the stage for those to follow. Vittorio Gallese of the University of Parma is one of the original cognitive neuroscientific researchers into the phenomena of mirror neurons (Iacoboni, 2008; Rizzolatti, Fadiga, Gallese, & Fogassi, 1996). These are well-described by Gallese (this issue): "Mirror neurons are premotor neurons that fire *both when an action executed and when it is observed being performed by someone else*" (p. XX, italics mine). These remarkable findings have intrigued the intersubjectivist developmentalist community, including analysts, demonstrating that the registration of other people's experience is "wired" into brain structure, much like vision, hearing, or movement itself.

A neuroanatomical basis for empathy and identification thus appears in view, especially when mirror neurons are taken along with the already substantial attention to imitation, affective resonance and the co-regulation of behavior and inner states. Further, the emerging model of mirror neuron functioning corresponds to a second feature of the intersubjective core of experience: that as others are encountered, they are simultaneously taken as similar and different from oneself. For

Gallese, as for the phenomenologists, these are inextricable: the encounter with the world is an encounter with the intersubjective. Reis's philosophically oriented response extends this perspective, disclosing further richness at the intersection of cognitive neuroscience, phenomenology, and psychoanalysis.

In a similar resonance with the phenomenologists, Gallese stresses that personality and relatedness are rooted in the experience of one's own and others' bodies in time and space; he describes the fundamental basis of identification in the "embodied simulation" of the observed person's motions, affects, pain, and so on. Intersubjectivity is constituted at the very beginnings of perception and proprioception. Here the parallels to Trevarthen are clear: The basic elements of becoming oneself by being with others are in the first place, movement, time, space, all coordinated in social interaction. Subsequent developments, including language, theories of other minds, and the like, while significant, are not the primary core of personal and social meaning. Personality arises in our disposition to collaborate.

Echoes of Winnicott's (1958, 1960) radical emphasis on the dyadic, bodily origins of psychic life resound here, as such concepts as "psyche-soma," "going on being," and "the spontaneous gesture" can be clarified and elaborated when read along with this imaginative but nonetheless empirically rigorous research. In addition, the contemporary interest in the nonverbal, implicit, interactive dimensions of psychotherapy and psychoanalysis is well supported (see, e.g., Beebe, Knoblauch, Rustin, & Sorter, 2005; Damasio, 1999; Fosha, 2000; Knoblauch, 2000; Ogden, Minton, & Pain, 2006; Stern, 2004, among many others.)

Massimo Ammaniti and Cristina Trentini work at the University of Rome. Ammaniti, a psychoanalyst and international leader in child psychiatry, has incorporated new developments in analysis and developmental research into an array of clinical and theoretical arenas, as he, Trentini, and other colleagues have carried out their own research. Their current paper provides an encyclopedic review of research on parenting from the different fields that have studied it—affect research, attachment theory, mirror neuron research, neuroscience, parenting research, psychoanalysis—to show that parenting is a coherent system that draws on an array of interarticulated subsystems at the levels of the brain, the emotions, cognition, dyadic interaction, attachment, and family life. They offer a panoramic view of the place of care, empathy, attachment, and recognition in this most basic form of human interrelatedness. The paper is a model multidisciplinary literature review that transcends the genre, creating a collage of hundreds of research studies to substantiate their strongest implications: That the apparently disparate levels of the human biopsychosocial systems are best understood as part of integrated systems that support the species and the most tender but complex and robust aspects of what makes us human. For Ammaniti and Trentini, that the intersubjective paradigm organizes such broad arrays of data substantiates the postulate of the fundamental intersubjective motivation system.

Analysts are often skeptical of empirical data, and "hard science" has often been taken as disconfirming psychoanalytic ideas. But the tide may be turning. The broad integrations presented in these papers correlate well with the Relational psychoanalytic assertion of the central role of social relations in organizing psychic reality. Buttressed by fMRI's, statistics, and publications in leading research journals as well as conceptual and clinical analytic experience, they are fundamental, creative, generative, and holding up well over time. The notion that "life is with people" (Zborowski & Herzog, 1952) can no longer be taken as a mere sentiment or cultural style. It is a basic biopsychosocial fact.

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