

When Words Just Won't Do: Introducing Parental Embodied Mentalizing

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ABSTRACT—*Parental mentalizing—parents' capacity to appreciate, even unconsciously, the infant's mental states and their role in motivating behavior—is related to infant attachment security and other social and cognitive capacities. Yet virtually all current measurements of parental mentalizing rely on parents' semantic and verbal expressions. Despite the demonstrated value of this approach, exclusive reliance on verbal processes may fail to fully capture interactive mentalizing processes. Reflecting an embodied relational perspective for investigating parent–infant interaction, this article introduces parental embodied mentalizing, which refers to parents' capacity to (a) implicitly conceive, comprehend, and extrapolate the infant's mental states from the infant's whole-body movement, and (b) adjust their own kinesthetic patterns accordingly. It concludes by outlining directions for future research.*

KEYWORDS—*mentalizing; parent–infant interaction; parental embodied mentalizing; nonverbal; body*

Mentalizing theory, a relational approach to early development, stipulates that the parental capacity to consider and treat the child as a psychological agent—motivated by mental states, such as thoughts, beliefs, intentions, feelings, and desires—critically

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influences the infant's development (Fonagy, Gergely, Jurist, & Target, 2002). Research clearly links parental mentalizing with attachment security and a variety of children's social and cognitive capacities. This research has conceptualized and measured parental mentalizing via parents' verbal and declarative expressions (Meins, 1999; Oppenheim, Koren-Karie, & Sagi, 2001; Slade, 2002). Despite the demonstrated value of this approach, our central premise is that this exclusive reliance on explicit verbal processes may fail to fully capture interactive mentalizing processes. We thus stress the importance of an explicit focus on bodily movement (kinesthetics) during parent–infant interaction and introduce a construct and method of assessment—parental embodied mentalization (PEM)—for investigating the meeting of parent and infant minds from an embodied relational perspective.

MENTALIZING

Based on the philosophy-of-mind notion of intentionality (Brentano, 1874/1973), mentalizing involves the capacity to move beyond observable actions and understand behaviors in terms of underlying mental states (Fonagy, Gergely, & Target, 2007; Fonagy et al., 2002). If one can recognize and understand various emotional and other mental states, one can manage and regulate them. Indeed, mentalizing makes behaviors of self and others meaningful, predictable, and explicable. This not only enhances self-understanding, organization, and regulation but, perhaps more importantly, increases the likelihood that individuals will engage in productive, intimate, and sustaining relationships, feeling connected to others at a subjective level while maintaining a sense of separateness (Fonagy et al., 2002).

PARENTAL MENTALIZING

According to mentalizing theorists, children come to understand that their own actions are motivated by mental states, desires, and wishes through an appreciation of the reasons behind the

caretaker's actions (Fonagy, Steele, Steele, Moran, & Higgitt, 1991; Fonagy et al., 2002). Indeed, the child's capacity to develop a mentalizing stance depends on the parental mentalizing capacity, allowing the parent to "create a world for the child in which he may experience himself as a feeling, wanting, thinking being" (Target & Fonagy, 1996, p. 461). This involves taking the child's perspective and treating him as a psychological agent whose actions are motivated by mental states while appreciating the inherent separateness of minds populated by different contents (Koren-Karie, Oppenheim, Dolev, Sher, & Etzion-Carasso, 2002; Sharp & Fonagy, 2008; Slade, 2002).

Children eventually internalize this parental representation of themselves as intentional beings, recognizing that behavior is motivated by ideas, understanding that feelings or thoughts determine action, and appreciating how others respond to their mental states (Fonagy et al., 2007; Mead, 1934; Rochat, 2007). However, the child's socioemotional development can become compromised if a parent consistently fails to provide the child with representations of her internal world and mind and either ignores her distress or represents it back with distortion or without modification (Fonagy et al., 2002). Consistent with such theorizing, evidence indicates that parents rated higher on mentalizing are more likely to have secure infants (e.g., Arnott & Meins, 2007; Oppenheim et al., 2001; Slade, 2002), even in the face of trauma and deprivation (Fonagy et al., 1995). Parental mentalizing is also positively associated with children's own mentalizing capacities at ages 4–6 (Meins, 1997), their psychosocial adjustment at 7–11 (Sharp & Fonagy, 2008), and their physiological regulatory abilities and peer relations (Katz & Windecker-Nelson, 2004).

These findings derive from research in which parental mentalizing involves parents' explicit and metacognitive expression of their appreciation of the infant's mental states as motivators of actions. Parental reflective functioning (Slade, 2002, 2005) concerns the parent's capacity, manifest during an interview, to think reflectively about, and articulate verbally, the child and his mental states as motivators of behavior. Similarly, the Insightfulness Assessment, which requires the parent to discuss a videotaped parent–infant interaction, evaluates parental mentalizing capacity through a semantic analysis that addresses the extent to which the parent displays an ability to take the child's perspective and demonstrates insight into the child's motivations (Koren-Karie et al., 2002; Oppenheim et al., 2001). Meins (1999) and Meins, Fernyhough, Fradley, and Tuckey (2001) tap mentalizing as it unfolds in the real-life here-and-now of parent–infant interaction by monitoring "mind-minded" *comments* regarding the infant during free play.

LIMITATIONS OF PARENTAL MENTALIZING

Even though virtually all current approaches operationally treat parental mentalizing as a linguistic or a declarative capacity, involving explicit reflection on emotional experiences, consider-

ation of the original definition of mentalizing reveals no requirement restricting it to such metacognitive manifestations (e.g., Fonagy et al., 2002; Meins, 1999; Slade, 2002). Slade (2006) defines reflective functioning, for instance, as the "overt manifestation, *in narrative*, of an individual's mentalizing capacity" (p. 269, emphasis added). This implies that parental mentalizing could manifest itself in a myriad of ways, including implicit and nonreflective ones.

The developmental significance of such may depend on the child's capabilities. Whereas verbal manifestations of the parent's representation of the child may be meaningful, and thereby developmentally significant for the older child, it is unlikely that the preverbal infant could directly experience such mentalizing in a semantically meaningful way. Moreover, verbal parental mentalizing cannot illuminate the process by which parents' mental capacities actually affect the infant, even when it statistically predicts child functioning. It is possible that investigating observable aspects of parent–infant interactions might further explain the mechanisms through which parental mentalizing affects infant development. As Slade (2005) further observed, it is through "the mother's observations of the moment to moment changes in the child's mental state, and her representation of these *first in gesture and action*, and *later in words and play*" (p. 271, emphasis added) that the infant experiences and is influenced by the mentalizing parent.

Clearly, then, it is problematic to equate mentalizing with verbal expressions of parental representations of the child. It is increasingly accepted, in fact, that the construct of mentalizing requires consideration of *embodied* features independent of verbal ones (Fonagy & Luyten, 2009). Indeed, Slade (2005) broadened her definition of mentalizing, asserting that mentalizing capacities are the cumulative result of the capacity to group and represent "the links between affect, behavior, *the body*, and self-experience" (p. 271, emphasis added; see also Fonagy & Target, 2007).

EXPLICIT VERSUS IMPLICIT MENTALIZING

The cognitive-neuroscience discovery of independent mechanisms for implicit and explicit knowledge provides further grounds for distinguishing verbal and nonverbal parental mentalizing. Explicit knowledge concerns what we consciously experience and, thus, what is available for reflection; implicit knowledge is revealed in performance and action without any corresponding phenomenal awareness (Schacter, 1992). Studies of both healthy individuals and neuropsychological patients (with amnesia, blindsight, agnosia) show that dissociations between implicit and explicit knowledge seem to be a natural consequence of the functional architecture of the brain, reflecting the activity of computations that routinely occur during the course of perceiving, recognizing, and remembering (Schacter, 1992). Moreover, recent neuroimaging data showing that different brain areas are recruited for automatic (implicit) and controlled

(explicit) mentalizing (e.g., Lieberman, 2007) led Fonagy and Luyten (2009) to draw distinctions between implicit (nonconscious, nonverbal, automatic) and explicit (verbal, reflective, controlled) mentalizing.

Implicit mentalizing is especially important for interpersonal relations. Although nonverbal information plays a central role in interpersonal communication, it often does so outside of conscious awareness (Beebe, 2003; Merleau-Ponty, 1962; Pally, 1998). Spitz (1965) believed that adults are often unaware of autonomous bodily changes—in self and others—despite interpreting and responding to them. And Papoušek and Papoušek (1987) and Papoušek, Papoušek, and Kestermann (2000) found that parents are often so unaware of their responses to their infants' kinesthetic cues (such as fist flexing) as reflections of mental states that they had difficulty rationalizing them when queried.

Consequently, although the capacity to mentalize may be apparent in verbal behavior, it could also manifest itself in more implicit ways. Even if they are not mutually exclusive, there seems little reason to presume that verbal and nonverbal mentalizing are perfectly correlated with each other. As Kestenberg (1975, p. 190) noted, “language and motility are different means of self-expression and cannot substitute for one another. However, both systems are accessible to codification, decoding, and interpretation, and each of them . . . can be used to make inferences regarding the nature of mental functioning” (see also Lyons-Ruth et al., 1998). This is why we highlight the need to complement the study of parental mentalizing by verbal means with the study of its nonverbal and embodied manifestations in research on parent–infant interaction.

PARENTAL EMBODIED MENTALIZING

Our fundamental premise is that parental mentalizing capacities are reflected in (and can be assessed by considering) parents' use of the very communicative means that infants employ: the nonverbal kinesthetic mode. Thus, PEM is the parental capacity to (a) implicitly conceive, comprehend, and extrapolate the infant's mental states (such as wishes, desires, or preferences) from the infant's whole-body kinesthetic expressions, and (b) adjust one's own kinesthetic patterns accordingly. Importantly, and reflecting a relational perspective, studies of PEM consider parental kinesthetic behaviors in reference to the infant's behaviors, not in isolation. Although, a rich literature on parent–infant interaction highlights the importance of nonverbal communication, most of this work is head centric rather than whole-body oriented (Boone & Cunningham, 1998; Hertenstein, Holmes, McCullough, & Keltner, 2009), something perhaps most evident in work on face-to-face interaction (e.g., Beebe, 2000; Gergely & Watson, 1996), parent–infant gaze (e.g., Jaffe & Feldstein, 1970; Kaye & Fogel, 1980), and rhythmical and musical features of vocal sounds (Beebe et al., 2000; Malloch, 1999).

Stipulating that observable kinesthetic behavior reflects mental processes inevitably raises philosophical issues about the cor-

respondence between internal processes inherently accessible only to the individual and external observable behavior. Nonetheless, psychological and neuroscientific work clearly shows that kinesthetic patterns consistently convey distinct mental states (Atkinson, Tunstall, & Dittrich, 2007; de Gelder et al., 2010), as evident in work on the spontaneous execution of kinesthetic action (Crane & Gross, 2007), the witnessing of others moving or being touched (Boone & Cunningham, 1998), and the experience of another's kinesthetic action or tactile stimulation (Hertenstein et al., 2009). For example, jerky, fast, and swift movements, executed with tensed muscle tone, are associated with anger (Boone & Cunningham, 1998; Hertenstein et al., 2009). Moreover, studies of infants (Stack & Muir, 1992), children (Boone & Cunningham, 1998), and adults (Montepare, Goldstein, & Clausen, 1987) from a variety of cultures (Hertenstein et al., 2009) show them to be sensitive to specific qualities of movement in reflecting specific emotions.

The relative neglect of whole-body kinesthetic communicative processes is especially regretful because evidence suggests that it influences parent–infant interactions, even independently of head-centric communicative ones such as facial expressions. For example, when mothers of blind infants observed their infants' facial movements, they detected little affective signaling, concluding that their infant was bored. When Fraiberg (1979) trained them to monitor whole-body movement, however, mothers interpreted their infant's behavior in mental-state terms (such as engaged, interested). The independence of head and whole-body behaviors in expressing mental states is evident also in the infant's emotional response to the parent, as demonstrated in experiments using the still-face paradigm in which maternal touch of the 3- to 5-month-old infant's body generated positive emotional displays and moderated typical stress responses (Stack & Muir, 1992).

Not all parent–infant nonverbal studies are head centric; notable work includes research on touch (Field, 2003; Jean, Stack, & Fogel, 2009), infant posture in relation to parent (Fogel, Dedo, & McEwen, 1992; Fogel, Messinger, Dickson, & Hsu, 1999), parent–infant spatial proximity (Brown, Pipp, Martz, & Waring, 1993), and body contact (Lyons-Ruth, Connell, Zoll, & Stahl, 1987). Most of this work, however, studies discrete behaviors, such as picking up and tickling. These actions comprise many simultaneously occurring movement qualities, and if we operationalize them as discrete behavioral units, they may convey little about the quality of the interaction. After all, touch can use varying degrees of muscle tone or intensity, which presumably convey different meanings and elicit distinctive experiences for the infant and parent.

PEM, therefore, focuses exclusively on the quality of dynamic, moment-to-moment changes in whole-body kinesthetic patterns during parent–infant interactions. Central to PEM, then, is explicit consideration of *how* interactive bodily actions are performed and coordinated rather than *what* actions are performed, thus calling attention to the “shading” of behavior rather than its

“color,” similar to Stern’s (1985) notion of “vitality affects.”¹ However, whereas vitality affects refer to the temporal dynamic contours of affect such as accelerating or surging, PEM also emphasizes spatial dynamic contours such as retracting and approaching.

Various movement analysis paradigms offer rich means of characterizing human movement, but of the individual, not of the dyad (e.g., Kestenberg Movement Profile; Kestenberg-Amighi, Loman, Lewis, & Sossin, 1999; Laban; Laban & Lawrence, 1947). Drawing on these paradigms, the assessment of PEM involves considering several kinesthetic qualities. *Directionality* refers to the direction of movement in relation to the individual’s body center. Movement toward a stimulus, resulting in the individual “growing” toward it, is associated with desire, interest, or attraction; movement directed away from the stimulus, resulting in the individual withdrawing, can suggest repulsion, avoidance, or saturation (Kestenberg-Amighi et al., 1999). Another kinesthetic quality, *tension flow*, refers to sequences of fluency and restraint of the muscles. Relatively low muscle tone allowing movement to flow with little restraint is associated with pleasure and relaxation, but also with helplessness when especially loose (Davis, 1978), whereas the greater the contraction of muscles, the more restrained and controlled the movement is, reflecting a sense of distress or discomfort (Papoušek & Papoušek, 1987; Tortora, 2006).

Yet another kinesthetic quality is *tempo*, referring to the pulse of movement within a time unit. A movement can occur at a fast, accelerating pace, reflecting excitement, enthusiasm, or agitation; or slowly, in a decelerating fashion, reflecting calmness or ease (Kestenberg-Amighi et al., 1999; Tortora, 2006). Clearly, diverse aspects of a given kinesthetic quality may reflect and/or convey different mental states, especially in combination with others (Brazelton, Koslowski, & Main, 1974; Cicchetti & Rogosch, 1996). Thus, any simplistic “taxonomy” of mental meaning of particular body movements would be misleading and erroneous. What is fundamentally significant is that kinesthetic qualities often reflect *some* kind of mental state that an observer can reliably interpret.

Just as importantly, most of the work that focuses on areas other than the head fails to emphasize the *dyadic* interactive process, as the focus is almost exclusively on parental behavior with little regard for the infant. For instance, the parent can initiate and maintain bodily contact while disregarding the infant’s kinesthetic expressions of protest and preference or can initiate it only after ongoing and persistent signaling by the infant. These different dynamics surely affect the infant’s experience and, presumably, the infant–parent relationship as well. Hence, central

¹Vitality affects are forms of affect, rather than content, described in dynamic, kinetic terms, such as *exploding* or *fleeting*. Vitality affects are constantly present in every experience, whether the individual is conscious of them or not, and infants are especially sensitive to them. In fact, the infant is wrapped in the expressiveness of vitality affects and, according to Stern (1985), “the social world experienced by the infant is primarily one of vitality affects before it is a world of formal acts” (p. 57).

to the conceptualization and assessment of PEM is the claim that we can fully capture interactive processes only when we consider them as an intrinsically dyadic and relational phenomenon involving the mutual influence of both partners so that moment-to-moment nonverbal actions of one regulate those of the other (Fogel & Branco, 1997; Gianino & Tronick, 1988). Indeed, PEM regards the dyad as the unit of analysis rather than the actions of the parent or the infant separate from the dyadic context in which they are embedded (Beebe, 2000; Fogel, 1993). Specifically, in the dyadic embodied interactive process, each participant responds to the kinesthetically manifested mental state of the other; thus, meeting of parent and infant bodies reflects the meeting of their minds. PEM concerns the parental capacity to perceive the infant as a mentalistic partner in this kinesthetic discourse process.

PEM regards a parent’s ability to repair dyadic miscoordination as especially significant. During the 1st year, less than 30% of mother–infant face-to-face interactions are coordinated (Tronick, 1989). Intriguingly, interactive repairs in the first months of life, far more than interactive miscoordination, play a key role in establishing secure attachment (Tronick & Cohn, 1989). In this context, scholars of mentalizing stress that it does not imply being able to read the minds of others but actually to appreciate the opaque nature of minds, understanding that it is impossible to know the mental states of one with certainty (Fonagy et al., 2002). Indeed, assessing PEM involves examining the parent’s ability to repair dyadic interactive miscoordination.² Parents with high PEM capacities do not always automatically know what needs or desires the infant is expressing, but they prove capable of modifying their own kinesthetic patterns in response to failures to respond more accurately to the infant’s kinesthetically manifested mental state. Parents with low PEM capacities, in contrast, are less likely to exhibit appropriate kinesthetic modifications while interacting with the infant; they fail to detect or misinterpret the kinesthetically manifested mental states and thus respond to them in ways contrary to the infant’s mental state, such as moving the infant in a direction opposite from which he is turning his body to approach or withdraw from a stimulus.

Clearly, PEM is not unrelated to concepts such as embodied attunement (Kestenberg, 1975) or kinesthetic empathy (Tortora, 2006), both of which involve the observer’s conscious reflection on the emotional experiences rising from the movement. PEM, however, involves implicit relating to infant movement, not so much to allow the parent to produce the same movement but to respond kinesthetically to the infant’s various mental states in a complementary fashion, thereby engaging in a kinesthetic dialogue.

Ultimately, it is only possible to assess the parental capacity to repair interactive miscoordination through infant kinesthetics

²Clearly, infants are involved in reparation attempts while interacting with parent (e.g., Tronick & Cohn, 1989). PEM, however, focuses on the parent’s contributions to repair interactive errors by means of kinesthetic adjustment.

during the interaction. As we stated earlier, there is an inherent challenge in inferring mental states from observable behavior, so it is often impossible to know what mental state the infant is expressing kinesthetically or what kinesthetic response is most appropriate. In fact, only the infant can judge this. Therefore, PEM regards the infant's kinesthetic response as point of reference from which to evaluate the appropriateness of the parental embodied behavior.

EXAMPLE OF PEM

To concretize the concept of PEM, consider the following description of a videotaped mother–infant free-play interaction. The infant lies on his back and his mother sits facing him; the mother leans forward and tickles the infant's belly, positioning her head and torso close to his personal space; the infant smiles and giggles; the mother repeats this series of actions several times, with the infant continuing to express positive affect both facially and vocally.

Established measures of parent–infant interaction would likely score this sequence as playful and positive. However, close examination of the dyadic kinesthetic patterns provides quite a different perspective. When the mother moves into the infant's personal space, the infant shrinks his body so that his shoulders, arms, and legs come close to body center in an enclosing movement, thereby withdrawing from the mother's stimulation (directionality). During withdrawal, the infant's muscles tense (tension flow). When the mother moves away from him (directionality), he twists his torso to turn away from her (directionality). We can presume that a parent with high PEM capacities would detect these subtle movements, implicitly interpreting them as signaling displeasure and thus modifying her own kinesthetics, perhaps by reducing tempo, moving back to create more interpersonal space, or reducing tension flow in fingers. A parent with low PEM capacities, however, like the one in this example, might well continue stimulating the infant, intensifying tension flow in her fingers and arms, increasing the tempo while tickling, and further invading the infant's personal space.

The actual mother in this video seems to have detected the infant's kinesthetic signaling, as at some point she presses his arms to the floor, thereby restricting any efforts to move away. As this kinesthetic sequence proceeds, the infant intensifies withdrawal and high tension-flow movements. After a minute or so of such a repetitive kinesthetic exchange, the infant brings his arms toward his belly, attempting to block the stimulus. Such precocious use of defensive movements signals the infant's desperation and distress (Beebe, 2000; Kestenberg-Amighi et al., 1999). Indeed, the infant's body eventually stiffens (tension flow) and is turned away from the mother (directionality). Nevertheless, the mother continues tickling the infant. Perhaps at the age of 6 months, this infant possesses some knowledge of what is expected of him when interacting with his mother and, in an attempt to please her, smiles and vocalizes cheerfully even while

his bodily movements convey contrasting sentiments. That this is the case is certainly suggested by the vocal distress he eventually expresses, which ends only when the mother stops stimulating him and picks him up.

THE SIGNIFICANCE OF PEM TO THE CHILD'S DEVELOPMENT

Having defined and illustrated PEM, our attention turns to how PEM capacities may influence infant development. The core hypothesis is that the *embodied* interaction with the mentalizing parent promotes infants' embodied sense of self and affects their representations of interpersonal relationships. This view is consistent with ideas from phenomenological philosophy (e.g., Merleau-Ponty, 1962), embodied cognition (e.g., Port & van Gelder, 1995; Thompson & Valera, 2001), and developmental psychology (e.g., Stern, 1985; Winnicott, 1988). Collectively, they stipulate that cognition, consciousness, and all mental processes are deeply grounded in the interplay between sensorimotor systems of the body, somatosensory regions of the brain, and the environment, which together shape the development of an embodied self.

We further presume that it is specifically the *interpersonal* environment that promotes the development of the embodied self (Orbach, 2004; White, 2004; Winnicott, 1949, 1970). Work with infants with health conditions sheds light on the emergence of the embodied self in the relational domain. Dowling (1977), for instance, observed a marked difference in the development of personal and interpersonal capacities depending on whether infants were fed directly to the stomach or whether, additionally, a parent provided a “sham” feeding. Infants who did not experience the (interpersonal) sham feeding lacked motivation, vitality, and intentionality in their overall functioning, and their relationship with their mother was tenuous and lacked investment. Also pertinent is the case of a young man suffering from a congenital absence of sensation³ who experienced severe impairments in affect regulation and empathy and failed to develop a differentiated, cohesive sense of self; he also never achieved meaningful interpersonal relations (Dubovsky & Groban, 1975). These cases indicate that a profound lack of interpersonal sensory and bodily experiences impairs the ability to develop a coherent sense of self and to establish sustainable and meaningful relationships.

Stern (1977, p. 11) asserts that “before events could be verbally and symbolically represented, infants' early interactive knowledge was somehow encoded in a nonverbal register.” We presume that the ongoing experience of parental kinesthetic responsiveness is the vehicle through which relational knowledge becomes somatically ingrained (McDougall, 1989; Orbach,

³Congenital absence of sensation refers to the inability to feel pain, temperature, touch, or vibrations; additionally, there is no sense of body organization, hunger, or thirst, and no experience of pleasurable sensations.

2004). Specifically, we hypothesize that PEM determines the parent's capacity to recognize, attend, regulate, or ignore the infant's bodily expressions of distress and anxiety, as well as those of exploration and playfulness (Gratier & Trevarthen, 2008; Reddy, 2008; Trevarthen, 2005). The infant registers—through the body—the extent to which the parent attends to her kinesthetically manifested mental states and, thereby, the extent to which the parent is responsively attuned to her mental world. A relationship with a parent with high PEM capacities should imbue the infant with a sense that her actions are motivated by mental states and therefore meaningful; that she is the agent and owner of her body and actions; that she can share her mental states, both positive and negative, with others; and that other people can and want to communicate with her on a mentalistic level. We hypothesize that such experiences foster a sense of security and trust in the parent.

Conversely, an infant who repeatedly encounters a low-PEM parent experiences his mental states being ignored, distorted, or overridden. Without parental assistance in making sense of his kinesthetically manifested mental states, the infant is likely to have restricted access to, and understanding of, the contents of his mind, leading to limitations in developing a coherent representation of it and an impaired sense of ownership and agency over his embodied mind. We presume that such an infant has limited confidence that others will be attentive and responsive to his mental states, and that his mental experiences can be shared with others, eventually contributing to the development of insecure attachment. We thus hypothesize that body-based mentalistic interactions with parent eventually become somatic registrations of the attachment relationship embedded in procedural memory (Fonagy et al., 1995).

Although few of the ideas we present here are entirely new, the conceptualization of PEM nevertheless provides an alternative theoretical and empirical approach to the study of parent–infant relationship in general, and of parental mentalizing in particular, one that places relational embodied discourse at the forefront of investigation. Despite the claim that kinesthetically manifested mentalizing merits attention—as a means of complementing verbally based mentalizing assessments—it remains to be determined whether the two are associated and whether the former increases prediction of infant and child development over and above the latter. That is the question to address now that we have created a reliable PEM coding system that requires that sound be turned off when viewing videotaped interactions so that observers are not distracted from an exclusive focus on body movements.

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