

## **LIMINAL SPACES AND NARRATIVES OF VOICE AND BODY IN INFANT VOCAL INTERCHANGE (COMMENTARY ON MORIOKA)**

Maya Gratier

*Université Paris X – Nanterre, France*

**ABSTRACT.** This paper explores the heuristic value of the Japanese concepts *utushi* and *ma*, as they are described by Masayoshi Morioka (2008), for the study of vocal interaction between young infants and adults. Intersubjective engagement between infants and communicative partners is thought to be based on a subtle attunement of temporally organised gesture and vocal expression. Voice is seen as a fundamental matrix for cultural belonging rooted in biological motives for sharing experience before and beyond the symbolic meanings of language-based communication. The process of everyday spontaneous vocal interchange between infants and close others, situated within increasingly familiar social and cultural frames, thickens intersubjective experience. The infant voice acquires a ‘grain’ and polyphonic cultural overtones. It is proposed that the semiotic processes of cultural grounding in early infancy are based on a ‘communicative musicality’ (Malloch, 1999-2000) that supports nonverbal narrative meaning-making involving well-coordinated expression of voice and body in playful motivated exchange.

**Keywords:** Mother-infant interaction; voice; narrative; intersubjectivity; musicality.

Masayoshi Morioka’s (2008) paper offers penetrating insights into the intimate spaces of psychotherapeutic encounter. The subtle meanings of Japanese concepts *utushi* and *ma* are explored through conversational transcripts taken from clinical vignettes in order to describe the complex nonverbal and unverbalizable processes that occur between therapist and client and through which the therapeutic chronotope is built. Morioka shows that therapeutic effects come about as a result of client-therapist dialogue involving multiple selves and others, both expressed and suppressed, internal and external, attached and detached. While emphasizing the role of self-coherence and authenticity in psychological wellbeing, the author describes how splintered conflicting selves can come to be reconciled within a well-managed space that invites real and implicit dialogue and the convergence of inner states. Morioka highlights some key elements that facilitate effective psychotherapy and in this sense he also provides a set

**AUTHOR’S NOTE.** Maya Gratier is assistant professor of psychology at the Université Paris X – Nanterre. She has a background in clinical and developmental cultural psychology and currently also works in the field of music psychology. Her main research focus is on mother-infant communication in the first 6 months and on musical communication. Contact the author at Centre de recherche en psychologie et musicologie systématique (Psychomuse), Université Paris X – Nanterre, UFR SPSE, 200 avenue de la République, 92001 Nanterre Cedex, France. Email: [mgratier@u-paris10.fr](mailto:mgratier@u-paris10.fr)

of practical tools for therapists based on ‘listening’ for narrative process, intonation and body tonus.

In this comment I propose that the fringes and layers of meaning that a therapist deftly manipulates with and for the client are also central in playful exchange between mothers and preverbal infants. In particular, I argue that the first communicative vocal expressions of young infants already carry rich overtones of past experiences and create narrative contexts for constructing the multiple voices that make up the self through intimate and affectionate dialogical exchange. Early communication before language shares a great deal with musical expression both in terms of its form and in terms of its semiotic/semantic processes. Morioka’s approach also inspires musical analogies that I will explore and relate to early interpersonal contexts.

### **Spaces and shades of meaning: the aura of language use**

Morioka seems to be concerned above all with meaning that works beyond language, with the textures and fringes of meaning as it emerges in interpersonal dialogue involving strands of sedimented history pulled back into the spaces of current encounters. In a *talking cure*, it is not just the words themselves or indeed their organization in terms of linguistic propositions that have an effect on the inner lives of people. What matters too is the act of speaking and in particular the mutually shaped and co-constructed actions, both verbal and nonverbal, that take place *between* the therapist and the client. The coordinated actions of the therapist and the client are rooted in the multimodal potentialities of the expressive human body, including all the subtle movements that accompany and support the production of speech.

It is interesting that the tools Morioka uses to explore these near-ineffable aspects of human interchange are words. Carefully selected words emanate from another cultural reality—and their meanings must be unpacked. And yet the meanings seem larger than the words as though they did not fit into them. Morioka warns us just before defining the word *utushi* that it has an ambiguous meaning and indeed shows that it contains three differentiated dimensions. Yet we are able to grasp the meanings of these words sufficiently well and it is their very polysemia – and perhaps metaphorical force - that seems to help us understand the argument that is put forward.

The fact is that these are real words used to express real experiences in another language but they also give form to tangible experiences for speakers living outside of a Japanese reality. And, in line with the Sapir-Whorf conundrum we must ask ourselves: do the words create a new reality that we think we have experience of or do the words cover up and settle over a reality that exists independently of language or at least merely in its interstices? It seems plausible that the words or turns of phrases of different languages offer better or worse opportunities for describing certain phenomena. And if words merely lie on top of meanings they must also create meaning by generating what Morioka refers to as ‘dialogic overtones’ between and within speakers.

While defining the useful concepts of *utushi* and *ma* for understanding therapeutic work, Morioka explores the semiotic boundaries of the two concepts and makes a convincing case for the importance of liminal (and perhaps subliminal) spaces in meaning making processes. Words carry multilayered, polyphonic meanings, some of which are intuitively sensed. A speaking voice, according to Morioka, is only the audible representative of multiple inner selves that must be brought into harmony so that they can speak together, at the same time. The developmental course of creating a self involves lasting relationships with others whose voices inhabit a person and participate in the inner dialogues that can be coherent and clear or chaotic and discordant (Winnicott, 1960). Verbal dialogue between therapist and client thus brings into play forms of ‘subordinate communication’ (Goffman, 1981) that can be orchestrated and brought to bear on the dominant life narratives that are being shaped or reshaped.

This form of resonant meaning is perhaps most directly accessible in musical expression: musical meaning is derived from a resonance within an unfolding musical structure with flexible ties to the contexts or scenes that surround it. Music has served throughout the history of mankind as a powerful means for sharing and bonding (Dissanayake, 2000; in press), yet its meaning is unstable, ‘non-discursive’ (Langer, 1953) and fluid (Kühl, 2007). Morioka in fact uses musical terms, such as ‘overtone’ and ‘polyphonic’ (Bakhtin, 1981) to describe the unspoken levels of therapeutic conversation, the silent voices that sense each other through the parallel narrative temporalities that are put into play. What music expresses is hard to capture with words because the very purpose of words is to encapsulate and fix stable meaning into repeatable patterns whereas the purpose of music is to move us emotionally and physically to join together in experience (Schütz, 1951).

### **Protoconversation and voice in the making of the infant self**

The concept of voice includes the embodied flow of audible sound in time as well as strands of inner narrative formed over time. The audible voice has a ‘grain’ (Barthes, 1981), its materiality is textured by its particular harmonies and dissonances, prosodic signatures, tonalities, rhythms and inflections. And as it progresses over the temporal prosodic contours it traces it moves its own history with it, it is thickened by the contexts of its uses and the subjectivities it touches. A person’s voice has a particular grain and it has its own dynamic style (Fónagy, 1983), one that it has settled into over the course of participation in cultural communities. Vocal style is colored in by common cultural expectations but it also reflects unique modes of relating and experiencing others. Prosodic signatures involved in defining vocal style range from the canonical to the idiosyncratic and they carry overtones of others’ speaking styles. In this sense a person’s voice is a collectivity of voices (Gilligan et al., 2003) as Morioka suggests. But the voice is polyphonic in another way too, in an invisible and silent way. The way a

person describes herself and relates events reflects various social and familial norms and expectations that can be in harmony, in opposition or contradictory.

A few weeks after birth infants begin to use their voices expressively to invite and respond to interested partners, giving rise to lively dialogues of sound that have been called ‘protoconversations’ (Bateson, 1979; Trevarthen, 1974, 1993). Video and acoustic analyses of interactions between mothers and infants from around the age of two months have revealed the precise timing of such reciprocal engagement (Beebe et al., 1985; Malloch, 1999-2000; Trevarthen, 1980; Murray & Trevarthen, 1985). Adults’ speech to young infants reflects a particular stance towards them as capable, emotionally intelligible partners who have things to ‘tell’. The modified form of speech they intuitively employ, known as Infant-Directed Speech, characterized by contrasting pitch and intensity, modulated prosodic contours, repetition and rhythmic patterning (Fernald & Simon, 1984; Stern, Spieker & McKain, 1982), is adapted on a moment-to-moment basis to the varying attentional and affective states of the infant (Pomerleau, Malcuit & Desjardins, 1993). Infants take part in turn-taking exchange by mimetically reflecting back their partners’ vocal ‘affective contours’ and dynamic gestures (Papoušek & Papoušek, 1989; Stern, 1985), by initiating antiphonic attuned call and response sequences (Nagy & Molnar, 2004) and by simultaneously joining their voice to the voices of their partners (Stern et al., 1975). The timing of protoconversational exchange has been shown to be central to building intersubjective engagement and lasting coherent forms of relating (Gratier, 2003; Jaffe et al., 2001).

Morioka shows how *utushi* and *ma* work together to create an engaging therapeutic chronotope, enabling creative experience and the arising of turning points that bring about positive change. The qualities of *utushi* and *ma* together make and maintain the dialogic space for psychological recovery and they are both inherently temporal qualities. However, as Morioka points out, they are not temporal in a linear way; *utushi* involves both sequentiality and simultaneity and *ma* involves a well-balanced spatio-temporal distance between self and other. In that these concepts imply a gentle intimacy, an unintrusive interpenetration of subjective boundaries, they seem particularly relevant for describing the meaningful sharing of sound and movement that ties parents and infants to each other in everyday communication. *Utushi* and *ma* can be thought of as two crucial aspects of intersubjective experience. Interlocutors must sympathetically and mimetically understand one another’s reciprocal inner states in order to produce meaning together, interactively, and at the same time they must maintain a tension between demarcated positions of self and other creating the space and time for creative interchange.

Vocal interaction between mothers and infants has been described and analyzed in musical terms: through rhythm, improvisational creativity, dynamic quality, counterpoint, resonance and narrative (Gratier & Apter-Danon, 2008; Malloch, 1999-2000; Malloch & Trevarthen, 2008; Stern, 1982; Trevarthen, 1999-2000). It is the

musicality of ‘Infant-Directed Speech’ that is meaningful to the very young infant, not the words that are spoken (Papoušek, Papoušek & Bornstein, 1985). The particular dynamics and poetics of sound and silence, of rising and falling tension, and the articulation of sound and gesture throughout, captivate the infant mind and body through co-experienced temporalities. Infants appear to grasp units of sense in the flow of affectionate expression that adults provide by segmenting melodic curves and gesture-shapes (Baldwin et al., 2001; Juczyk & Krumhansl, 1993). Daniel Stern (1999) describes the meaningful units of expression in mother-infant interaction as ‘vitality contours’, dynamic supra-modal emotion-shapes that map onto prosodic contours in voice and embodied gesture.

Studies of vocal mother-infant interaction show that mothers group their verbal and nonverbal expression into ‘phrases’ based on an underlying ‘pulse’ which infants contribute to shaping in synchrony (Delavenne et al., in press; Gratier, 2001; 2003; Malloch, 1999-2000). The ‘Theory of Communicative Musicality’ defines three key musical aspects in mother-infant communication (Malloch & Trevarthen, 2008). First, a regular but flexible ‘pulse’ of expression drives the emotional energy of the interactively engaged subjects; second, the ‘dynamic quality’ of perceptual proto-narrative units gives audible and visible shape to intention; and third, ‘narrative’ connects individual expressions into chains of purpose with lines of tension and dramatic moments.

This ‘musical’ organization of expression in communication with preverbal infants can be thought of as creating a multilayered time in which the mother’s and the infant’s internal senses of time merge into an intersubjective dialogical chronotope. This patterning of expressive behavior affords anticipation and invites creative projection of shareable material into the common space. Mother and infant are bound together in time and through a timing that is neither too rigid nor too loose. A mid-range coordination in mother-infant vocal interaction, neither too tight nor too lax, has been found to predict both attachment relationships and language development in older infants (Jaffe et al., 2001; Hane, Feldestein & Dernetz, 2003; Hane & Feldstein, 2005). The importance of tautness, of finding the right balance in interpersonal timing is a key feature of *ma* as Morioka (2008) explains when he writes that “*ma* indicates the creative lively tension between I and you. If this tension diminishes, *ma* is lost. We say *ma-nobi* (overextension of *ma*) or *ma-nuke* (missing *ma*), which means boredom, crazy or bad timing.” The multiple temporalities of ‘communicative musicality’ strung together in taut togetherness may be considered as a basis for a polyphonically rich meaning in preverbal expression.

Improvised musical interaction is another context in which *ma* must play a crucial role. In-group improvisation like jazz, musicians must strive to introduce creative forms while maintaining a relational ecology of collaboration based on shared rules, practices and styles (Gratier, in press). If one of them departs too markedly from

the commonly held range of possible action, the group as a whole will lose its balance and will lose the ability to be expressive as one intentional ‘voice’. On the other hand, if each musician adheres too strictly to the expected behavior, the music will never really take off and move audiences to participation. Keith Sawyer (2003) has defined this space within which musicians must try to stay as the ‘improvisation zone’. By staying together within the improvisation zone, musicians can gradually push its boundaries by grounding newer forms of expression through repetition, mirroring and matching and pushing towards more tolerance for unpredictability (Gratier, in press). So tension at the boundaries of the zone is a gauge of vitality and inventiveness.

### **Liminality and polysemia in dialogical infant narratives of voice and body**

Nonverbal forms of narrative organisation and progression provide temporal contexts for change and development by crystallizing meaningful moments that stand out in narrative time. In verbal narratives, written or oral, these moments of change, that Stern (2004) has referred to as *Kairos*, are the result of the unravelling of plot lines or the coming together of protagonists in concerted action. In nonverbal narratives of mimetic sound and movement, these moments correspond to energetic high points based on crescendo and climax and involving the intensification of shared emotion. This has been documented in mother-infant vocal interaction where narratives of antiphonic and contrapuntal vocalisation last around 30 seconds and are made of periods of introduction or orientation, crisis and coda delineated by shifts in pitch space and intensity (Gratier & Trevarthen, 2008; Trevarthen, 1999-2000). Moments of ‘crisis’ or climax in mother-infant vocal interaction often come about after a gradual increase in pitch, intensity and tempo and are often characterized by simultaneous harmonious vocalisation by mother and infant. Timing in narrative form in mother-infant exchange plays an important role in holding attention and a shared sense of purpose. The transitions from one expressive vocal event to the next, that pauses and progressions in pitch, tonality, rhythm and intensity must be well orchestrated. Well-timed narrative connects past, present and future experience, creating a stable sense of self (Damasio, 1999; Gergen & Gergen, 1988; Ricoeur, 1983).

The narrative process of recounting and reconnecting strands of discontinuous memory also involves balancing events in their temporal relations, finding the right temporal distance between focal points in a narrative so that they hang together while maintaining their uniqueness, delineating possible futures. Narrative involves a particular way of listening and attending to subtle shifts in energy and tonus. Morioka’s emphasis on body tonus seems particularly important for understanding diverse contexts of human relating. In *ma*, the dynamically balanced positioning of self and other in the therapeutic encounter is founded on a physical moment-by-moment sensing of the tonus of body and voice. Subtle shifts of tension and relaxation and vocal intonation come about in response to or in anticipation of new events, and new meaning emerges through

this regulating process. Intonation is seen as an embodiment of inner selves expressing themselves in harmony, individually, or in dissonance, collectively.

Wallon (1949) and then Ajurriaguerra (1962) have described the ‘dialogues of tonus’ that take place between mothers and infants. Episodes of relating between mothers and infants are based on emotions spoken and sung as well as on physical contacts involving holding, rocking, cradling and feeding that are experienced as variations of tonus. The mother modulates her postures and voice through her own body tonus. This physical sensing of the infant’s state through invisible variations in body tonus is inherently emotional and defines a corporeal boundary of self-with-other. Through dynamic and sensitive mutual adjustments of tonus, energy and motivation mothers and infants can be together in mind and body, finding a balance in which the self is separate yet connected and finds coherence in and through the other.

The presence of the other in the self can be felt from the beginning of life, through social exchange situated in meaningful cultural contexts. Stein Bråten (1998, 2000) has proposed that infants are born with a “virtual other in place of which the actual other may step into the dialogic circle” (Bråten, 2000, p.206). It is this dialogic motive that drives protoconversation and perhaps then that endows infants with a sense of *utushi* and *ma*. How does the primary dialogic organisation of the infant mind become colored and ‘thickened’ with the actual voices and energies of others, themselves rich with the overtones of the people and cultural styles they’ve been shaped by? Some research suggests that through the earliest nonverbal intentional interactions, infants begin to acquire a cultural sense of protoconversational style and signature contours of expression (Gratier & Apter-Danon, 2008; Cowley et al., 2004). Comparisons between vocal interactions of mothers and infants in France, India and the US for example have shown that protoconversational styles defined by between-turn pauses and frequency of overlap are in tune with verbal conversational styles of adults within those cultures (Gratier, 2001; 2003).

Mothers bring to the encounters with their infants a multiplicity of voices, both audible and silent. They bring voices of their cultures and communities, voices of their personal stories and relations, voices that have been cultivated and voices that have been thwarted. It is in the liminal spaces between mother and infant, between self and other, between meaning and not meaning, that the infant voice becomes layered and resonant developing a unique self that has a unique place in the cultural spaces it inhabits. Morioka’s analyses of the sensitive unravelling of narrative threads of being through careful listening for plot, intonation and body tonus, provide an important framework for thinking about the origins of Voice as a multilayered, historically ‘thick’ phenomenon, before it becomes entangled.

References

- Ajurriaguerra, J. de. (1962). Le corps comme relation. *Revue Suisse de Psychologie pure et appliquée*, 21, 137-157.
- Bakhtin, M. M. (1981). *The dialogic imagination: Four essays by M.M. Bakhtin* (M. Holquist, Ed.). Austin: University of Texas Press.
- Baldwin, D. A., Baird, J. A., Saylor, M. M., & Clark, M. A. (2001). Infants parse dynamic action. *Child Development*, 72(3), 708-717.
- Barthes, R. (1981). *Le grain de la voix: Entretiens, 1962-1980*. Paris : Éditions du Seuil.
- Bateson, M. C. (1979). The epigenesis of conversational interaction: A personal account of research development. In M. Bullowa (Ed.), *Before speech: The beginning of human communication* (pp. 63-77). London: Cambridge University Press.
- Beebe B., Jaffe J., Feldstein S., Mays K., & Alson D. (1985). Inter-personal timing: The application of an adult dialogue model to mother-infant vocal and kinesic interactions. In F.M. Field & N. Fox (Eds.), *Social perception in infants* (pp 249-268). Norwood, NJ: Ablex.
- Bråten, S. (1998). Intersubjective communion and understanding: Development and perturbation. In S. Bråten (Ed.), *Intersubjective communication and emotion in early ontogeny* (pp. 372-382). Cambridge, UK: Cambridge University Press.
- Bråten, S. (2000). *Essays on dialogue in infant and adult*. Oslo, Norway: Sigma.
- Cowley, S. J., Moodley, S. & Fiori-Cowley, A. (2004). Grounding signs of culture: Primary intersubjectivity and social semiosis. *Mind, Culture and Activity*, 11(2), 109-132.
- Damasio, A. R. (1999). *The feeling of what happens: Body, emotion and the making of consciousness*. London: Heinemann.
- Delavenne, A., Gratier, M., Devouche, E., & Apter-Danon, G. (in press). Phrasing and fragmented time in ‘pathological’ mother-infant vocal interaction. *Musicae scientiae* (Special issue “Narrative in music and interaction”; M. Imberty & M. Gratier, Eds.).
- Dissanayake, E. (2000). *Art and intimacy: How the arts began*. Seattle: University of Washington Press.
- Dissanayake, E. (in press). If music is the food of love, what about survival and reproductive success? *Musicae scientiae* (Special issue “Narrative in music and interaction”; M. Imberty & M. Gratier, Eds.).



- Fernald, A., & Simon, T. (1984). Expanded intonation contours in mothers' speech to newborns. *Developmental Psychology*, 20(1), 104-113.
- Fónagy, I. (1983/1991). *La vive voix: Essais de psycho-phonétique*. Paris: Éditions Payot.
- Gergen, K. J., & Gergen, M. M. (1988). Narrative and the self as relationship. *Advances in Experimental Social Psychology*, 21, 7-56.
- Gilligan, C., Spencer, R., Weinberg, M. K., & Bertsch, T. (2003). On the listening guide: A voice-centered relational method. In P. M. Camic, J. E. Rhodes, & L. Yardley (Eds), *Qualitative research in psychology: Expanding perspectives in methodology and design* (pp. 157-172). Washington DC: American Psychological Association.
- Goffman, E. (1981). *Forms of talk*. Philadelphia: University of Pennsylvania Press.
- Gratier, M. (2001). *Rythmes et appartenances culturelles: Etude acoustique des échanges vocaux entre mères et bébés autochtones et migrants*. Unpublished doctoral dissertation, Université René Descartes (Paris V).
- Gratier, M. (2003). Expressive timing and interactional synchrony between mothers and infants: Cultural similarities, cultural differences, and the immigration experience. *Cognitive Development*, 18, 533-54.
- Gratier, M. (in press). Grounding in musical interaction: Evidence from jazz performances. *Musicae scientiae* (Special issue "Narrative in music and interaction"; M. Imberty & M. Gratier, Eds.)
- Gratier, M., & Apter-Danon, G. (2008). The improvised musicality of belonging: Pepetition and variation in mother-infant vocal interaction. In S. Malloch & C. Trevarthen (Eds.), *Communicative musicality: Exploring the basis of human companionship*. Oxford, UK: Oxford University Press.
- Gratier, M., & Trevarthen, C. (2008). Musical narrative and motives for culture in mother-infant vocal interaction. *Journal of Consciousness Studies*, 15(10-11), 122-158.
- Hane, A. A., & Felstein, S. (2005, April). *The divergent functions of early maternal and infant vocal coregulation in the growth of communicative competence*. Paper presented at the biennial meeting of the Society for Research in Child Development, Atlanta.

- Hane, A. A., Feldstein, S., & Dernetz, V. H. (2003). The relation between coordinated interpersonal timing and maternal sensitivity with four-month-old infants. *Journal of Psycholinguistic Research*, 32(5), 525-539.
- Jaffe, J., Beebe, B., Feldstein, S., Crown, C. L., & Jasnow, M. D. (2001). Rhythms of dialogue in infancy. *Monographs of the Society for Research in Child Development*. 66(2), 1-153.
- Jusczyk, P. W., & Krumhansl, C. L. (1993). Pitch and rhythmic patterns affecting infant's sensitivity to musical phrase structure. *Journal of Experimental Psychology: Human Perception and Performance*, 19, 627-640.
- Kühl, O. (2007). *Musical semantics*. (European Semiotics: Language, Cognition and Culture. No. 7). Bern, Switzerland: Peter Lang.
- Langer, S. (1953). *Feeling and form: A theory of art developed from philosophy in a new key*. London: Routledge & Kegan Paul.
- Malloch, S., & Trevarthen, C. (Eds.). (2008). *Communicative musicality: Exploring the basis of human companionship*. Oxford, UK: Oxford University Press.
- Malloch, S. N. (1999-2000). Mothers and infants and communicative musicality. *Musicae Scientiae, Special Issue*, 29-57.
- Morioka, M. (2008). Voices of the self in the therapeutic chronotope: *Utushi* and *ma*. *International Journal for Dialogical Science*, 3(1).
- Murray, L., & Trevarthen, C. (1985). Emotional regulation of interactions between two-month-olds and their mothers. In T. M. Field, & N. A. Fox (Eds.), *Social perception in infants* (pp. 177-197). Norwood, NJ: Ablex.
- Nagy, E., & Molnar, P. (2004). Homo imitans or homo provocans? Human imprinting model of neonatal imitation. *Infant Behavior and Development*, 27, 54-63.
- Papoušek, M., & Papoušek, H. (1989). Forms and functions of vocal matching in interactions between mothers and their pre-canonical infants. *First Language*, 9, 137-158.
- Papoušek, H., Papoušek, M., & Bornstein, M. H. (1985). The naturalistic environment of young infants: On the significance of homogeneity and variability in parental speech. In T. M. Field & N. Fox (Eds.), *Social perception in infants* (pp. 269-297). Norwood, NJ: Ablex.

- Pomerleau, A., Malcuit, G., & Desjardins, N. (1993). Comportement d'attention du nourrisson et modulation du langage maternel. *Revue Canadienne de Psychologie Expérimentale*, 41(1), 99-112.
- Ricoeur, P. (1983). *Temps et récit* (Vols. 1-3). Paris: Seuil.
- Sawyer, K. R. (2003). *Group creativity: Music, theatre, collaboration*. Mahwah, NJ: Lawrence Erlbaum.
- Schütz, A. (1977). Making music together: A study in social relationship. In J. L. Dolgin, D. S. Kemnitzer, & D. M. Schneider (Eds.), *Symbolic anthropology: A reader in the study of symbols and meanings* (pp. 106-120). New York: Columbia University Press. (Original work published 1951)
- Stern, D. N. (1982). Some interactive functions of rhythm changes between mother and infant. In M. Davis (Ed.), *Interaction rhythms: Periodicity in communicative behavior* (pp. 101-117). New York: Human Sciences Press.
- Stern, D. N. (1985). *The interpersonal world of the infant: A view from psychoanalysis and developmental psychology*. New York: Basic Books.
- Stern, D. N. (1999). Vitality contours: The temporal contour of feelings as a basic unit for constructing the infant's social experience. In P. Rochat (Ed.), *Early social cognition: Understanding others in the first months of life* (pp. 67-90). Mahwah, NJ: Erlbaum.
- Stern, D. N. (2004). *The present moment in psychotherapy and everyday life*. New York: Norton.
- Stern, D. N., Jaffe, J., Beebe, B., & Bennett, S. L. (1975). Vocalization in unison and alternation: Two modes of communication within the mother-infant dyad. *Annals of the New York Academy of Science*, 263, 89-100.
- Stern, D. N., Spieker, S. & MacKain, K. (1982). Intonation contours as signals in maternal speech to prelinguistic infants. *Developmental Psychology*, 18, 727-735.
- Trevarthen, C. (1974, May). Conversations with a two-month-old. *New Scientist*, 2, 230-235.
- Trevarthen, C. (1980). The foundations of intersubjectivity: Development of interpersonal and cooperative understanding of infants. In D. Olson (Ed.), *The social foundations of language and thought: Essays in honour of J. S. Bruner* (pp. 316-342). New York: W.W. Norton.

- Trevarthen, C. (1993). The self born in intersubjectivity: An infant communicating. In U. Neisser (Ed.), *The perceived self: Ecological and interpersonal sources of self-knowledge* (pp. 121-173). New York: Cambridge University Press.
- Trevarthen, C. (1999-2000). Musicality and the intrinsic motive pulse. *Musicae Scientiae, Special Issue*, 155-215.
- Wallon, H. (1949). *Les origines du caractère chez l'enfant*. Paris: Presses Universitaires de France.
- Winnicott, D. W. (1960). Ego distortion in terms of true and false self. In *The maturational processes and the facilitating environment* (pp. 140-152). London: Hogarth.