

February 2007

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Preface for:

On Intersubjective Theories: The Implicit and the Explicit in Interpersonal Relations.

Carli, L. and Rodini, C., (Eds).

Preface

A Relational Systems Approach to Infant Research and Adult Treatment

Carli and Rodini have assembled a remarkable group of papers for this volume. I think it is fair to say that, across the last three decades, these authors have contributed to changing the face of psychoanalysis as well as infant research.

These authors operate at the interface of systems theories, the empirical analysis of mother-infant communication, and psychoanalysis. All have been influenced by the ethological tradition of careful observation of behavior, most through frame-by-frame analysis of film or video. Thus each has a base in empirical work. They have been influenced by developments in many fields which have moved from individual-centered approaches and linear views of causality toward systems and field approaches (see for example von Bertalanffy, 1968). Each author enriches our understanding of interactive models of the dyad, of development, and of mind. Together they can be seen as developing a relational systems approach to infant research and its implications for infant and adult treatment.

When I entered graduate school in 1968, the empirical microanalysis analysis of mother-infant face-to-face communication did not yet exist as a field of its own. It was just beginning. In addition to the authors represented here, additional early pioneers included Mary Catherine Bateson, T. Berry Brazelton, Margaret Bullowa, Tiffany Field, Michael Lewis, Lynne Murray, Hanus and Mechtilde Papousek, and Colwyn Trevarthen. Although they made important empirical contributions, these additional pioneers are not included in this volume because they did not also become known for integrating infant research with adult treatment.

Beginning the book with Sander's papers is a well-deserved tribute. Sander's systems ideas, and his articulation of self- and interactive regulation, have continued to influence the field in fundamental ways over the past three and a half decades. In his systems views, Sander emphasizes the primacy of process over more static notions of structure. He recommends that we shift our conventional view of psychological organization as the property of the individual (such as an infant), to a view of psychological organization as the property of the mutually organized system (such as mother and infant).

In his 1977 article reprinted here, Sander presents his view that the organism, the surround, and the exchanges between them, should be studied as a system. The person is always embedded an ongoing surround, with a specific context. Rather than viewing

either mother or infant as activated by the other (a typical stimulus-response mode of thinking), the two partners, who are each already complexly organized and self-regulating, must be interfaced to reach harmonious coordinations. The system can be conceptualized as having components (for example mother and infant) which become joined through coordinated exchanges of mutual modification. Patterns of coordinated exchanges recur, but they also shift with each engagement between the individual and the environment. Thus an interactive system is always in process, with a dialectic between predictability and transformation.

Sander (1977) identified the domain of time and temporal organization as providing the framework for “unscrambling...the difficulties in conceptualizing the interface between two ongoing organizations” (p.137). The two partners are interfaced at many temporal levels, for example the split-second micro-momentary level as well as the macro level of sleep-wake cycles, the arena of Sander’s empirical research. Sander in this early 1977 paper had already suggested that the nature of the “temporal organization interfacing the partners provides a way of defining the “structure of intersubjectivity.” (p. 139).

A central intellectual influence on Sander, as well as on Fogel, was the biologist Paul Weiss (1970). One of Sander’s premier questions has to do with how the coherence of the system emerges from complexity, and how the system grants the individual agency and identity. His answer uses Weiss’s principle of matched specificities, “a sort of resonance between two systems attuned to each other by corresponding properties” (Weiss, 1970, p. 62). An example of the principle of matched specificities is the selectivity of nerves in connecting with only certain types of peripheral tissue. Another example is the documentation that only certain ranges of tightness of vocal rhythm coordination, in certain partner (mother-infant, stranger-infant) and environment (home/lab) contexts, are optimal for particular developmental outcomes (attachment/ cognition) (Jaffe, Beebe, Feldstein, Crown & Jasnow, 2001). Sander argued that matched specificities generate procedural expectancies in both partners. These expectancies facilitate the process of mutual adjustment, by generating implicit/procedural awareness in each partner of the state of the other.

This principle of matched specificities underlies Sander’s concept of the “moment of meeting,” which became the springboard for the theory of therapeutic action developed by “The Boston Change Process Study Group,” represented in this collection by the Stern et al (1998) and the Lyons-Ruth (1998) articles in Part 3. Matched specificities between two systems attuned to each other yield awareness in each partner of the state of the other. In a moment of meeting, two states of consciousness are matched, such that the way that one is known by oneself is matched by the way one is known by the other. Sander gives as an example Winnicott’s squiggle game, in which Winnicott and the child reach a “sacred moment,” in which the child recognizes being known. This match in the moment of meeting facilitates the development of agency, identity, and a new coherence in the child’s experience of inner and outer. In the moment of meeting, a mutual recognition occurs that changes the patient’s ability to act as an agent in his own self-regulation.

Fogel argues that the concept of system is the central intellectual contribution of 20th century thinking (Fogel, 1993). Whereas traditionally the individual is the focus and relationships are examined as inputs and outputs of individuals, Fogel sees the relationship as the primary unit of analysis. He coined the term “co-regulation” to describe the dynamic mutual adjustment of action between partners, a process of “being-in-relation.” Fogel’s own powerful and influential description of the dyadic system is that all behavior is simultaneously unfolding in the individual while at the same time modifying and being modified by the changing behavior of the partner.

For example, Fogel (1992c) suggested that we view emotions as inherently relational, rather than existing within the person. “Emotion is not felt experience alone, nor a pattern of neural firing, nor an action such as smiling. Emotion is the process that emerges from the dynamic interaction among these components as they occur in relation to changes in the social and physical context” (Fogel, 1992c, p. 129). Emotions are relatively stable patterns continually constructed through a complex dynamic process of interaction among components. The components are flexible, open to transformations that may alter the pattern of action.

Weiss also influenced Fogel’s systems views (see Fogel, 1993), particularly Weiss’s position that life is process, not substance; that there are patterns, but the patterns are not pre-arranged; and that the activity of all the components of the system exert ordering restraints. This systems view is very compatible with the systems views of Thelen and Fogel.

Theorists of nonlinear dynamic systems conceptualize a mind that continuously re-assembles and “updates” its “maps,” as a function of context and task (Fogel, 1992a & b; Freeman, 1991; Thelen & Smith, 1994). Thelen and Smith argued that it is context-sensitivity which allows behavior its enormous flexibility and allows for the possibility of change. They proposed that a representation is not something we “have” but something we assemble and re-assemble in the moment, according to context and task. One implication is a radical change in our concept of representation, which is reconceptualized as a continuously shifting process. Another implication is that our concepts of bi-directional coordination and co-construction must expand to include the ideas of re-assembly and emergent organization. In the hands of Thelen and Fogel, the concept of co-construction shifts to “co-assembly,” pointing to the continuous transformational quality.

In a traditional representational view, which has been the working assumption of psychoanalysis, symbolic (explicit/declarative) representations of other persons, their behavior, and their relationships to self, guide social behavior (Newtson, 1990). In contrast, Fogel (1992a; 1993) and Thelen (see also Newtson, 1990; Gibson, 1979) hold a perception-action or “procedural” view in which the control of social behavior is largely out of awareness, and lies in the organism-environment relation, such that the information sufficient to structure action is inherently present in the organism-environment relation. Actions contain information as an objective property, rather than the view that

information has no psychological reality until it is symbolically represented. The perception-action view sees actions as dynamical systems, as products of a dynamic organism-environment interaction, which is in continuous moment-by-moment re-organization, highly responsive to context. It is at this level that social behavior is regulated or coordinated on a split-second, moment-by-moment basis, largely out of awareness. The rapidity and density of information does not allow central cognitive control (Bernstein, 1967; Newton, 1990). This view also provides a central underpinning of the work Stern, Lyons-Ruth, and the Boston Change Process Study Group.

Although Sander articulated both self- and interactive regulation as two core organizing principles of interactions, empirical infant research on face-to-face communication has tended to emphasize interactive regulation. The key exception has been Edward Tronick, who has been at the forefront of an attempt to integrate these two processes in an understanding of the mother-infant system. Tronick's (1989) mutual regulation model has had a pivotal and continuing influence on the field. In this model, each partner has the dual task of interacting with the environment and regulating one's own state. Gianino and Tronick (1988) argued that self- and interactive regulation occur at the same time. When interactions are successful, self- and interactive regulation are in balance. But when self-regulation becomes the predominant goal, it sets the stage for psychopathology. Tronick and his key collaborator Katherine Weinberg thus used systems approaches to identify in detail the processes of mother-infant communication that put the system at risk.

Tronick's model also argues for a bidirectional, mutual regulation between partners. Early work debated whether mother-infant preverbal dialogues were truly bidirectional. Cohn and Tronick (1988) made a pivotal contribution in their empirical documentation, using time-series analysis, that coordination between mothers and infants is bidirectional. Stern's 1971 paper was an earlier landmark demonstration of bidirectional regulation in a case-study of one mother-infant pair. The notion of bidirectional exchange between partners resonates with current systems theories of development. It is an aspect of the more general idea that components of a system are in a continuous process of bidirectional exchange, resulting in increased complexity of the system and the elaboration of emergent properties.

In his work using the "still-face" perturbation, Tronick has made a central contribution to the understanding of processes of infant self-regulation when maternal scaffolding is temporarily abruptly absent. During this experiment, infants initially signal to the mother to get her to resume her normal behavior. When this fails, infants express negative emotion and use self-regulatory behaviors. When the experiment is over, for the next few minutes there is a continuation of the infant's negative mood and a reduction in visual regard of the mother (Tronick, 1989). This work demonstrated that events have lasting effects on infants, that is, that they are internally represented. It also set the stage for Tronick's interest in infant moods, developed further in his two mood papers in this collection.

Disruption and repair has also been a central theme in Tronick's work. Tronick and Cohn (1989) found that mothers and infants in face-to face play shifted back and forth between matched and nonmatched states. Nonmatched states were far more pervasive, occurring approximately two-thirds of the time. And nonmatched states quickly returned to matched ones within two seconds, a repair, contributing to infant effectiveness. Infants who experience more repairs of nonmatch in the normal ongoing play, and who use more adaptive methods of coping in the still-face experiment, are more likely to have secure attachments at one year (Tronick 1989; Cohn, Campbell & Ross, 1991). From this work Tronick has developed a central theme of his work, that repair predicts positive outcomes in development, and failure to repair predicts nonoptimal development, as we see developed in his two mood papers in this collection.

Both Stern and I (Beatrice Beebe) were influenced by Joseph Jaffe. Stern was Jaffe's postdoctoral Fellow in 1966; I was Stern's graduate student in 1969 and later became Jaffe's collaborator. Jaffe's dyadic systems view of communication (see Beebe, Jaffe & Lachmann, 1992) was being developed in the 1960's, at the same time as that of Sander, although neither met the other until about 1970. Jaffe's model of monologue was published in *Science* in 1964; his model of dialogue was published in *Nature* in 1967. Jaffe and Stanley Feldstein, a key collaborator of Jaffe and later of mine, published their pivotal work, *Rhythms of Dialogue*, in 1970 (still in print today). This book informed all our work on mother-infant communication.

In the 1960's Jaffe and Feldstein wanted to quantify timing disruptions in the psychotherapy process. Although voice recording of psychotherapy sessions easily yielded transcription of words, there was no easy way to measure nonverbal communication. But the words were not enough; they wanted the music. They developed an automated system to use conversational speech timing to quantify nonverbal behavior. Sound and silence durations were measured directly from each speaker's microphone. With this automated method they investigated the interpersonal and pragmatic features of dialogic timing relevant to the communication of mood, the phenomenon of empathy, interpersonal attraction, and the breakdown of effective dialogue.

Working at the William Alanson White Institute for psychoanalysis, Jaffe and Feldstein were influenced by Sullivan's interpersonal theory, particularly his view that "a personality can never be isolated from the complex of interpersonal relations in which the person lives and has his being" (Sullivan, 1940, p. 90). Arguing against the reigning psychological model in 1960's, stimulus-response theory, which viewed communication as a one-way process, they used an interpersonal feedback control model in which sending and receiving are reciprocally evoked and each can modify other's behavior simultaneously. Using the dyad as the unit of analysis, Jaffe and Feldstein viewed each partner's behavior as created in the process of joint coordination. They generated a system of coding relevant to both the dyad and the individuals within it. The Jaffe-Feldstein team has been a leader in translating systems approaches into data-analytic strategies, still a difficult task today.

In the 1970's Jaffe's lab, with Stern, Steven Bennett, and myself, turned from adult to mother-infant communication. We studied movie film frame-by-frame by numbering the frames sequentially (see Beebe & Stern, 1977; Beebe, Stern & Jaffe, 1979; Stern, 1971). Reel-to-reel videotape was available but difficult to code. Computers were still uncommon.

While working with Jaffe, Stern (1974) framed the study of mother-infant dialogue in the larger context of its importance for interpersonal object relations and attachment, still a central research issue today: "By providing a more fine-grained view of the instant-by-instant interactive events which make up the mother-infant relationship, we may be in a better position to modify and expand current working theories on the nature of developing object relations or attachments" (p. 402). Stern (1985) developed these ideas in his groundbreaking work, *The Interpersonal World of the Infant*, which had a transforming effect on psychoanalysis.

In the 1980's the Jaffe team began translating the adult vocal dialogue approach into mother-infant communication (Beebe, Jaffe, Feldstein, Mays & Alson, 1985; Feldstein, Jaffe, Beebe, Crown, Jasnow & Fox, 1993). We demonstrated that 4- and 12-month mother-infant and stranger-infant vocal dialogues predict 12-month attachment and cognition, and 4-year attachment representations (Jaffe et al, 2001; Beebe, Feldstein, Hane, Jaffe, Markese, Crown & Moore, 2007; Markese, Beebe, Feldstein & Jaffe, 2007). Whereas microanalysis of film or videotape is very labor-intensive, the Jaffe-Feldstein vocal dialogue method is still the only automated microanalysis of nonverbal communication (although automated face analysis is imminent: see Cohn & Kanade, 2007).

The Beebe, Lachmann and Jaffe team, influenced by Stern's work, articulated the relevance of empirical studies of mother-infant interaction for the presymbolic origins of self and object representations, translating among infant research, psychoanalytic developmental theory, and adult treatment (Beebe & Stern, 1977; Beebe & Lachmann, 1988, 1994, 2002; Beebe, Lachmann & Jaffe, 1997).

The dyadic systems view of communication developed with Jaffe and Lachmann then became the lens through which we conducted our comparative analyses of theories of intersubjectivity in the 4-part series reprinted here. The Beebe, Knoblauch, Rustin and Sorter team emerged from working together at the Institute for the Psychoanalytic Study of Subjectivity (begun by Robert Stolorow, Frank Lachmann, James Fosshage, George Atwood, and Beatrice Beebe). This intersubjectivity series, originally published in *Psychoanalytic Dialogues* (with commentaries by Carolyn Clement, Michael Heller and Judith Edwards), was also published as a book, *Forms of Intersubjectivity in Infant Research and Adult Treatment* (Other Press, 2005), with commentaries by Ted Jacobs and Regina Pally. Using our dyadic systems view of communication as a framework, and influenced by discussions of implicit and explicit knowing (Grigsby & Hartlaub, 1994; Emde, Birengen, Clyman & Oppenheim, 1991; Lyons-Ruth, 1998, 1999) we compared adult (Jacobs, Ogden, Stolorow, Ehrenberg and Benjamin) and infant (Meltzoff, Trevarthen and Stern) theorists of intersubjectivity.

Because the term intersubjectivity was used differently by every author we reviewed, we recommended the term *forms of intersubjectivity*. Whereas infant research has explicated implicit views of intersubjectivity, and adult treatment explicit views, we argued that an integration of implicit and explicit forms of intersubjectivity is essential to a deeper understand of therapeutic action in adult treatment. This view has much in common with the Boston Change Process Study Group and the papers by Stern et al (1998) and Lyons-Ruth (1998) reprinted in this volume.

Influenced by Trevarthen (1993, 1998), Ryan (1974) and Habermas (1979), we also argued that intersubjectivity is preverbal and dialogic, and that adult forms of intersubjectivity are built on infant forms. One implication of this view for adult treatment is that when language fails, as it often does in the treatment of adult trauma, the psychoanalytic dyad can still have access to paralinguistic and implicit forms of communicative competence and intersubjectivity, as illustrated in the treatment case by Beebe, *Faces-in-Relation*, reprinted in Part 3.

In the third paper, *An expanded view of intersubjectivity in infancy and its application to psychoanalysis*, we explicated the contributions and limitations of the concept of nonverbal correspondence as a core organizing principle of intersubjectivity in infancy. We argued that correspondence is only one of many critical patterns. In addition we discussed the place of interactive regulation, problems with the concept of matching, the role of self-regulation, a full dialectic between similarity and difference, and the balance model of self- and interactive regulation. We suggested that a broadened understanding of intersubjectivity in infancy will set the stage for a more fruitful exchange between infant researchers and psychoanalysts.

Lyons-Ruth's (1998) work on implicit relational knowing raised the awareness of both infant researchers and adult clinicians. Her work is a cornerstone of the Boston Change Process Study Group (BCPSG), who published their first set of papers in 1998 in the *Infant Mental Health Journal*. Working with the assumption that something more than interpretation is needed to bring about change in adult treatment, the BCPSG have developed an implicit theory of therapeutic action. This theory is organized around the concepts of a "moment of meeting, and "matched specificities" (noted above), originally formulated by Sander. In a "moment of meeting," two states of consciousness are "matched," in the sense that the way one knows oneself is matched by the way one is known by another. Stern (1998), in the first set of BCPSG papers (not reprinted here), elaborated the moment of meeting into an elegant theory of change, explicating the micro-processes which lead up to and follow from this moment. He also placed the moment of meeting into a perturbation theory of change, based on nonlinear dynamic systems theory.

Lyons-Ruth's (1998) paper reprinted here, *Implicit relational knowing: Its role in development and psychoanalytic treatment*, placed the moment of meeting within the context of procedural or implicit knowledge, a different mode of organizing experience. She defined implicit relational knowing as "rule-based representations of how to proceed,

of how to do things with others, such as knowing how to joke around, express affection, or get attention...as much affective and interactive as ...cognitive...(it) begins to be represented long before the availability of language and continues to operate implicitly throughout life” (p. 284-5). It operates out of awareness, outside of verbal consciousness and the dynamic unconscious. The moment of meeting occurs in the implicit mode, reorganizing the patient’s (and possibly the therapist’s) implicit relational knowing. In arguing that only a small area of the patient’s implicit knowing will ever be verbally articulated or interpreted, she opens the door to the question of the relationship between the verbalizable narrative and implicit knowing in therapeutic action (see also Bucci, 1985; Clyman, 1991; Grigsby & Hartlaub, 1994; Knoblauch, 2000; Schore, 1994). By implication, the implicit mode is far more organizing. Although Tronick’s (1998) paper is not represented in this volume, both he and Lyons-Ruth substantially deepen the concept of implicit relational knowing by placing it in the context of nonlinear dynamic systems theory, using the concept of self-organizing processes and emergent properties of systems.

The BCPSG elaborated their implicit theory of therapeutic action in the Stern et al. (1998) paper reprinted here, *Noninterpretive mechanisms in psychoanalytic therapy*, further exploring the “something more” than interpretation which is necessary to bring about therapeutic change. They built on their proposal that a moment of meeting rearranges implicit relational knowing for both patient and therapist. They elaborated on the micro-processes from “moving along,” to the “now moment,” which if seized can become a “moment of meeting,” followed by an “open space,” where the moment of meeting can be assimilated. In this process, a new context is generated. Drawing on nonlinear dynamic systems theory, sensitivity to new contexts allows behavior its enormous flexibility and allows for the possibility of change. In this change process, a “dyadic expansion of consciousness” occurs, a concept developed by Tronick (1998), whereby a state emerges that is more inclusive than what either system alone could generate.

In a sequel to the 1998 paper, Lyons-Ruth (1999/2005) wrote, *The two-person unconscious: Intersubjective dialogue, enactive relational representation, and the emergence of new forms of relational organization*, reprinted here. She called for greater attention in psychoanalysis to how implicit and nonverbal modes of intimate relating are transformed, and the analyst’s specific, collaborative participation in the process as a “new kind of relational partner.” Key to her argument, we gain more access to the patient’s implicit relational knowing through collaborative participation in the procedural action-dialogue. And the nature of the organization of implicit relational knowing is “particularly dependent on the quality of participation by the relational partner” (p. 595). She holds that the creation of new ways of “being with” must be done at the enactive, procedural level as well as the symbolic, narrative level. In fact, “knowing how to proceed in intimate relationships may be another domain in which complex knowledge is constructed outside a predominantly verbal mechanism” (p. 599). The building blocks for transformations of the system occur in micro-moments, in small mutually constructed “collaborative dialogues,” largely out of awareness, over an extended period of time. In an important challenge to more traditional interpretation-based theories of therapeutic

action, Lyons-Ruth argued that, although translating experiences into words may be an important therapeutic tool, “development does not proceed only or primarily by moving from procedural coding to symbolic coding” (1999, p. 579). Instead, the two forms of knowing develop in parallel, as separate organizing principles, which can nevertheless influence each other (see also Bucci, 1985, 1997).

Lyons-Ruth influenced the Beebe et al. intersubjectivity series. My case reprinted here in Part 3, *Faces-in-relation: Forms of intersubjectivity in an adult treatment of early trauma*, was written in part inspired by Lyons-Ruth’s call for greater attention in psychoanalysis to how implicit and nonverbal modes of intimate relating are transformed, and the analyst’s specific, collaborative participation in this process as a new kind of relational partner. Because of the unusual nature of the treatment, I happened to have both verbatim verbal material as well as videotaped footage of my own face interacting with my patient (but not the patient’s face). I found that Lyons-Ruth was right: much of what I knew was never put into words or even explicitly conceptualized by me. My examination of the videotaped footage was essential to identify the kinds of collaborative action dialogues, the small mutually constructed sequences, that Lyons-Ruth describes in her paper, *The two-person unconscious*. On the other hand, analysis of the verbal material allowed me to see the critical contributions of the explicit, narrative level of the treatment as well. The analysis of my patient’s wish to remain waiting for the first mother to return, and her difficulty in using our relationship to become alive because it was not “the real thing,” required the verbal mode of psychoanalytic interpretation.

Finally, two papers in this volume, by Sander and Beebe, represent a large body of work showing that mother-infant research has influenced mother-infant treatment. The specificity of self- and interactive regulation identified by microanalysis of videotape can be integrated into psychodynamic mother-infant treatment. The video feedback method, a therapeutic viewing of the videotape with the mother, can in some cases stimulate a rapid integration of explicit and implicit modes of information-processing. Stern (1995), Cramer and Stern (1988), and Lebovici (1983) are outstanding figures among many that have contributed to this work. The fruits of the work described above, such as nonlinear and emergent features of interactions emphasized by systems theories, the importance of the implicit as well as the explicit layers of experience, empirical documentation of bi-directional effects between parent and infant, and the roles of self- as well as interactive regulation, have become essential tools in treating parents and infants at risk.

I congratulate Carli and Rodini for bringing together this group of papers. By doing so, they not only help us to define a field, but they also help us look back over almost four decades of work to place it in historical perspective.

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