The Application of Infant Research to Psychoanalytic Theory and Therapy

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First, five areas of influence of infant research on psychoanalytic therapy are outlined: (a) the interpersonal competency of newborns, (b) the progressive organization of development without points of fixation, (c) the nonpejorative conceptualization of dependency, (d) the potential for explaining psychic structure as interrelations of systems, and (e) the explanatory benefit of using state regulation, rather than drives, as motivation for behavior. Then, clinical vignettes demonstrate the applicability of infant research to work via a focus on the inner states of the participants and the development of a “recognition process” by which the specifics of a sense of self are developed. In addition, the applicability of this research is reviewed in three more circumscribed areas: the interactive nature of psychotherapy, the application of studies of attunement and “open space” in mother-infant interactions, and the usefulness of experimental paradigms for generation of clinical hypotheses.

As therapists sit in their offices with a patient, what do they use to try to understand the process in which they are involved? What ideas guide them as they experience the shifts in affective tone, the changes in a sense of connectedness, the alterations in the depth of introspection, and so on? What do they tell themselves when, after what seemed like a wonderful session, the next session turns stale and dull? This situation occurred several years ago between me and a 35-year-old woman in intensive psychotherapy who had experienced childhood sibling and parental sexual abuse. On this day she dealt with one of the major themes in her treatment: whether she felt safe in directly expressing negative thoughts and questions she had about me. She wondered whether, as her therapist, I cared enough to really try to help her instead of attending to my own needs for praise, gratitude, money, or whatever other motives I might have for being a therapist. Without directly reassuring her, I encouraged her to continue to speak about her concerns. Eventually, it became clear that, because of her background of familial neglect, she worried whether “I really can
evoke what I need from you.” The session ended with the feeling that she had genuinely shared her concerns and a mutual sense that I accepted her need for me.

The next session was the one in which the stale, dull feeling developed. She entered and, after a moment, gave me a brief smile that made her look both embarrassed and somehow overly friendly—at least it seemed that way to me, remembering how difficult it had been for her in the previous session to express her negative thoughts. Out of my own uncertainty as to the meaning of her smile, I responded with what felt to me like a look of inquiring interest, but I did not return her quickly fading smile. In fact, I momentarily felt like I had rebuffed her, but I said nothing, thinking it more important to see where she took us. She then related to me some problems she was having with her professional life, but after a while I found myself, despite the importance of what she was saying, feeling out of contact with her. After the apparent matching of our feelings at the end of the previous meeting, I felt surprised at this turn of events, and I sought to understand it.

Returning to my opening question, what model might I best use to understand the therapeutic process with this woman? Should I try to determine if she felt guilt over libidinous wishes aroused by our closeness? Or should I search for defensive resistance to some affect that had arisen in connection with the previous session? Or should I simply permit the distance to remain between us because, perhaps, she was defending against a Mahlerian symbiotic or merger fantasy triggered by that session? As the title of this article makes clear, the model that has usefulness I wish to advance here comes from the findings of infant research. These findings show the baby to be an active participant in a highly interactive process with his or her caretaker, both of them shaping and being shaped by each other; the model of therapy informed by infant research is of course an interactive one. Interactive models of therapy have moved to the center of our field through the writings first of Winnicott (1971) and later Kohut (1971); Modell (1973); Hoffman (1979); Stolorow, Brandchaft, and Atwood (1987); Bollas (1987); Mitchell (1988); and Schwaber (1990), to name only a few. The data coming from research on infants and mothers provide both a validation of such interactive work and an increased specificity as to how these interactions occur. In this example, I turned to the emphasis in infant research on the strongly interactive nature of the child—parent experience.

As I waited, feeling the session becoming drier and cooler by the minute, I remembered the beginning of our meeting. I had a faint sense that she might have felt uneasy with my failure to give more of a response to her entering smile, and I remembered that I had felt awkward myself at that moment. At that point a specific piece of data from the research on infants and mothers came to my mind. It was the well-known visual cliff experiment that is related to what Klinnert (Klinnert, Campos, Sorce, Emde, & Svejda, 1983) called social referencing (Emde, 1988b; Seligman, 1989). In this experiment, infants are placed on one side of a platform, half of which is solid and half transparent, permitting the floor below to be seen. The baby is near one side of the platform, on the solid portion, and at the far edge of the other side of the platform (i.e., across the transparent portion of the platform) is a toy or something similar known to induce the baby to crawl toward it. The mother is also across the platform from the baby with her face visible in a
window slightly to the side of the object of interest. For babies under 10 months, the factor that
determines whether or not they go for the toy and cross over the transparent portion of the
platform (i.e., over the visual cliff) is whether the mother smiles encouragingly or, instead, looks
back with a blank or a fearful face. In my thoughts about my patient, it occurred to me that I had
failed to give her the response that would allow her to cross the visual cliff at the hour's
beginning.

Eventually I asked her whether she felt, as I did, that there was a distance in the way we were
talking. She said, “Yes, I did, but I felt that was just the way it was going to be this session.” I
then asked her about her experience at the hour's start and specifically about her sense of my
response to her smile. With animation for the first time in the hour she said, “Yes, I noticed that
you didn't smile, but I just thought there he goes again. All that stuff I told him yesterday made
no difference!” Getting back on track that way, in effect via a delayed reciprocation of her initial
smile, permitted her to express herself more openly with me. It allowed us to explore in depth the
way we had reenacted the feared experience of her being unable to evoke care from those who
should provide her with it. This vignette is explored in more detail later in this article, but my
point here is that this is the kind of experience with patients that has left me impressed with the
utility of applying infant observation to work with adults.

Obviously adults are different in many ways from infants, and therapists are different from
mothers. Thus, it is necessary to be cautious about drawing one-to-one relationships between
infant development and developmental changes we undertake via psychotherapy with adults
(Fajardo, 1993). At the same time I argue, along with others (Dowling & Rothstein, 1989; Emde,
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Osofsky, 1992, in press; Sander, 1980; Seligman, 1989; Soref, 1992, 1993; Stern, 1985; Trad,
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the therapist can be made between infant development and adult therapy. It is these linkages that
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Infant Research and Psychoanalytic Theory

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**Infant Research and Psychoanalytic Theory**

It is not entirely accurate to call the studies under discussion infant research because these data always include the caregiver and some of the observations include children beyond infancy. The subject is, then, the whole body of observational findings having to do with early human development. This article is a cursory look at the immense richness of this work, and the reader is referred elsewhere for more extensive reviews of the topic of infant research itself (Emde, 1981; Lichtenberg, 1983, 1989; Stern, 1985).

What then are the ways these observations have impacted psychoanalytic theory? For purposes of this article I group the findings of infant research into five areas that have each had effects on theory: (a) the picture of the baby as active and interpersonally involved from the start; (b) the idea that development is a progressive continuum of increasing complexity of organization, as distinct from developmental stages in which fixation occurs; (c) the conceptualization of reliance on relationships, modifying the often pejorative meaning attributed to dependency itself; (d) the use of systems and their interrelation with each other to explain psychic structure; and (e) the emphasis on the regulation of affects and other inner states as the motivation for behavior rather than reliance on the postulation of drives as the primary motivators.
Beginning with the first issue, it has been convincingly demonstrated that the baby is active and interpersonally involved from the beginning and clearly not in some autistic state simply awaiting the mother to act on it. Overall the baby is engaged in an immense learning effort, and babies are superb learning machines. Within the first hour a baby can imitate tongue protrusion and mouth opening (Field, Woodson, Greenberg, & Cohen, 1982; Trevarthen, 1987, 1989), and within 1 day or so, when breast pads soaked with milk from two different mothers are placed next to a neonate, the baby will turn its head toward its own mother's milk (MacFarlane, 1975). Their learning crosses different sensory modes, shown by experiments with babies who have bottle-nursed on but never seen a rubber nipple of a particular shape (e.g., one with ridges). By several days old, the baby will be able to select visually the one he or she has been using when that nipple is compared to one of a different shape (e.g., one with little bumps on it; Stern, 1985). There is even evidence that learning about sounds (e.g., becoming familiar with the mother's reading of a Dr. Seuss story) can occur in utero (Stern, 1985).

The human neonate is preprogrammed (i.e., “hardwired”) to respond preferentially to oblong shapes, like the human face, as distinct from other round or square shapes (Stern, 1985). Newborns slow down their movements—that is, have a stilling response—to persons more than to moving objects (Trevarthen, 1984). By 10 weeks old, they are able to appreciate different affective states of the mother—for instance, averting their gaze when confronted by an angry look on the mother's face. By 8 months, they have gone far in emotional communication, well before they achieve mastery of physical objects. Essentially, when it comes to interpersonal activities, human newborns, from their first moments, are quite well prepared to actively involve their mothers. The mother clearly is motivated to attend to her baby, but the baby also has a variety of ways to elicit and maintain the mother's involvement.

Mahler's characterization (Mahler, Pine, & Bergman, 1975) of the infant as first autistic and then symbiotically merged with the mother has little confirmation in this research (Lyons-Ruth, 1991). In fact, from early on the infant is differentiated and is quite individually competent in a number of ways. There is evidence from work of Stern (1985), Stechler (1982), Stechler and Kaplan (1980), and others that the infant has developed a sense of self at least by 10 months, though some researchers, such as Trevarthen (1987), place it even earlier. For all of these writers, this is a developmentally earlier sense of self than what Spitz (1957) described in the second year when the baby's head shaking “no” is first seen. This later sense of self relates to the baby's expressing autonomy, separateness, and independence, as distinct from the earlier sense of self in which the emphasis is more on self-definition (e.g., agency, coherence, affectivity, and
intersubjectivity) than on independence, though of course the processes are quite related. As
testimony to the early developmental aspects of the sense of self, Stechler and Kaplan observed a
7–month-old girl at home engage in a series of elaborate efforts to play on the piano despite her
sister's unwillingness to share it and her mother's quite unsuccessful efforts to distract her with a
xylophone. During the sequence, the infant falls from the piano bench, with the help of a none
too gentle nudge from her sister, and her mother ends up intervening directly. It is easy to
imagine the scene, and the language to describe the scene—“She must really want to play that
piano!”—demonstrates how clearly the behaviors of this little girl attest to her having a sense of
her self at 7 months.

Turning now from discussing the developing sense of self, a second area in which infant research
brings new light to theory is the way one sees the nature of the process of developmental change.
It has become increasingly clear that the process of development is a continuum of progressively
increasing organization. Development is additive, or epigenetic, rather than necessarily linear or
rigidly divided into sequential states. In fact, there has been some success in using the recently
evolved chaos theory to describe the nonlinear way development proceeds in childhood (Sander,
1992). The baby is seen as moving toward increasingly organized ways of functioning within his
or her world (Sander, 1987). For instance, in the first 8 months, the baby moves initially from
physiologic regulation of sleep, then subsequently to the establishment of reciprocity, or give and
take, with the mother, and next to an ability to regulate his or her own initiative for having
preferences met, as shown in the vignette with the 7–month-old piano player. As time passes, the
baby becomes an increasingly highly organized individual, and this sequence

of increasing organization occurs in a seamless fashion such that each of these functions
becomes added to what has already developed.

There is no evidence that derailment of one developmental task, such as the development of
reciprocity with the mother, will lead to a fixation that will set the stage for later regression to
that point. Instead, we see that the way the earlier issue is handled will influence later issues but
not necessarily totally determine their outcome. For instance, one could imagine that the piano
player's way of establishing give-and-take with her mother contained considerable permission for
her to lead the dance in developing their reciprocity and that this was behind her persistence of
initiative in attempting to play the piano. If, on the other hand, her mother had been less willing
to allow for her to lead the way in reciprocity, the outcome would surely have been different. In
that case, the 7–month-old's development of initiative would have been more governed by the
response of another person, perhaps with more checking with the mother before proceeding with
her attempts to play the piano. There would be a coloring of the development of initiative by the
earlier problems of uncertainty about the give-and-take of reciprocity, but there would not be a
fixation or stall in the development of initiative. A clinically relevant corollary from this view of
development is that what may be seen as regression in a patient can now be seen as that person's
best adaptive response to life experience. Change in therapy then can be seen as a freeing up of a
person caught in a neurotic web by helping him or her to reexperience the conflictual issues in
the context of both a new relationship and a cognitive, interpretive stance. In a somewhat
simplified exposition of this process, affect and cognition are brought together to permit the person to change.

A third arena for the influence of infant research on this theory is toward the deepening of our understanding of the interactive nature of development. If one speaks of the developing infant as described by Anna Freud as driven, or the Kleinian infant as rageful and paranoid, or the Kohutian baby as ambitious but also seeking mirroring, the baby of infant research is seen as a relatively more active part of a relational interpersonal system (Cooper, 1989). Infant research gives credence to Winnicott's (1962/1965c) emphasis that there is no such thing as a baby—that is, without a mother. The studies of research on attachment from the beginnings with Bowlby (1969/1992, 1973, 1980) and carried on further by Ainsworth, Blehar, Waters, and Wall (1978); Main, Kaplan, and Cassidy (1985); Main and Solomon (1986); Lyons-Ruth (1991); and others have shown the limitations of some of Mahler's concepts of separation—differentiation in toddlers (Mahler et al., 1975). For instance, Mahler saw the child's resistance to the mother's soothing after a separation as a normative type of development and an indication of a developmentally appropriate breaking away from relatedness. Instead, as is detailed next, the research on attachment shows that this is not the pattern of separation with the majority of babies, and in fact most babies are less often resistant and more often eager for soothing after a separation.

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The emphasis on the interactional nature of development allows an understanding of dependency less as a stage that must be outgrown and more as a natural aspect of the way humans achieve and maintain secure selfhood. One of the ways to study these facets of human attachment is a paradigm called the Strange Situation. In these studies, toddler—mother pairs enter an unfamiliar playroom monitored by a camera, and after a few minutes they are joined by a second and unfamiliar adult. The baby's behavior is observed during a series of separations and reunions with each adult (the mother and the stranger) with a few minutes for stabilization between each change. These shifts of the adults essentially consist of two departures and reunions with the mother and one departure and return by the stranger, with some overlapping of the comings and goings. When the behaviors of the baby are categorized in these various states of separation and reunion, four attachment patterns are seen. The first is a secure mode of attachment, and the others are insecure attachment modes:

1. A secure attachment pattern: The baby protests the mother's departure, rejects the unfamiliar adult's comforting, and uses the mother on her return to calm quickly.

2. An avoidant pattern: The baby shows little distress on the mother's departure, is friendly to the researcher, and fails to immediately acknowledge the mother's return but continues to play.

3. A resistant or ambivalent pattern: The baby shows distress on separation, a mixture of direct and displaced anger upon the mother's return, and a failure to be fully comforted by her, instead alternately demanding contact and then resisting it.
4. A disorganized or disoriented pattern: There is no consistent management of the distress; instead, there is an unpredictable alternation of approach and avoidance behaviors toward the mother as well as other conflict behaviors, such as prolonged freezing or stilling of movements.

The important finding is that the secure mode of attachment is the most common pattern by a two-thirds majority in samples in this country. The other three, which correspond more closely to Mahler's descriptions, are found primarily in less healthy infants. One can see that the more normative mode of attachment contains considerably more reliance on the mother. This motivation for affiliation is in fact one of the prime determinants underlying the consistency of our personalities and allows one to conceive of reliance on others in a way that is not necessarily pejorative.

Lichtenberg (1989) discussed the usefulness of viewing the infant as being motivated by a variety of factors, such as affiliation, and I use this motivation for affiliation to demonstrate the fourth area of input from infant research into our psychoanalytic theory of development: the use of systems as the basis for the building of psychic structure (Beebe & Lachmann, 1988; Stechler, 1985). Tronick (1989) posited that children utilize their repetitive interactions with others to develop a system of internal representations of interpersonal interactions. This system of representations (i.e., the way the child sees how he or she relates to others and vice versa) then forms a basis for the building of relationships. These systems are not visual but are more like models of interactive patterns. Bowlby's (1973) idea of a "working model of attachment" and Stern's (1985) RIGs (Representations of Interactions that become Generalized) are concepts that contain some of these systemic aspects of development. Essentially what occurs is that, via a process of recognition of familiar interactional patterns, the child attempts to construct new relationships similar to his or her old ones. What follows is that these patterns, or systems, of interaction become a part of the child's psychic structure, determining, at least in part, the way the child pursues his or her interpersonal objectives (i.e., relationships with others). The phenomenon of repetition and reenactment that we all notice in our patients can now be seen to derive in part from a familiar system of human relationships and not in a more experience-distant arena of drives and their reduction. It is this system of relationship building that underlies, as a piece of the child's psychic structure, the patterns of these petitions and reenactments.

The question of what happens to the concept of drives in psychoanalytic theory leads us to the fifth and last area for review of the influence of infant research on this theory. In many ways, what one sees when one watches babies is that a variety of factors become the motivators for infant behavior and the importance of drives becomes dramatically reduced. In language emphasizing the interactional nature of development, what was previously viewed as the infant's drives might now more clearly be seen as being the infant's "wished-for response of the object" (Lichtenberg, 1989). As mentioned, Lichtenberg (1989) postulated motivational systems operating in the infant, based on the infant's needs, listing five: the needs for physiologic regulation, intimacy and affiliation, exploration and assertion, aversive reactions to noxious elements, and sensual enjoyment and sexual excitement. Some of the most cogent explanations for infant motivation come from those working with the affects of infants and the states
associated with them (Demos, 1983, 1984, 1989; Demos & Kaplan, 1986; Emde, 1988a, 1988b; Malatesta, 1981; Tompkins, 1962, 1963, 1981; Tronick, Als, & Adamson, 1979; Tronick & Cohn, 1989). Mothers are observed to be differentially influenced by the emotional expression of their infants, and infants are in turn influenced by their mothers' expressions—for instance, averting their gaze in the face of an appearance of anger on the part of the mothers. These affective states can be seen a central motivators of the infant in a similar way that drives and the pleasure—unpleasure principle were seen as central in classical analytic theory. The infant is trying (i.e., is motivated) to reproduce behavioral sequences that lead to positive affective states and to avoid scenarios that lead to states of negative affect. In such a scenario, affect has become as important a developmental organizer as were drives in the energetic model of early psychoanalysis.

Clinical Applications of Infant Research

In turning to clinical work, it is important to note that these ideas are based on the premise that the psychopathology treated with psychotherapy is primarily a pathology deriving from development that has become skewed. Admittedly a variety of factors can affect developmental movement, such as temperament, physical illness, sociological factors, or the social supports and stresses of the caretaker, but what we focus on with our patients is primarily their interpersonal world. I view psychoanalytic and psychotherapeutic work with patients as an attempt to mobilize and reactivate the previously thwarted processes of development (Emde, 1990). A therapeutic stance based on observational research provides more than a corrective emotional experience for patients in that it also gives interpretive tools that arise from the observed experiences of developing children. The modifications of theory previously mentioned can influence our work in a number of ways. Most recently, Lichtenberg et al. (1992) used the idea of model scenes to try to correlate a person's experiences in development with that person's experiences in the therapy setting. Leightman (1990), Lachmann and Beebe (1996), Osofsky (in press), and a number of other writers have also addressed the variety of ways technique can be shaped by infant observational data.

For purpose of illustration, I utilize the perspective of Sander's (1997) focus on the inner states of the baby and mother and the “recognition process” that comes out of their interaction, without implying that is the only or even the preferred way of relating infant development to therapy. My wish is to demonstrate the way infant research data can be used to generate clinical hypotheses that one then utilizes in working with the patient. For Sander, the mother and baby each go through a series of inner states, defined according to the parameters of alertness, affectivity, direction of attention, motor activity, and so forth, and the focus is on the interactional meaning of the shifts of the states in which the mother and child find themselves. The inner states of the baby and mother will vary in their congruity, allowing the baby to identify ways that it is experiencing something different from the mother, and via these shifts of inner state the baby is able to develop a sense of recognition of the specific qualities of itself and the similarly specific qualities of the other.
There are moments of meeting, and not meeting, each other's expectations of the other's behavior, and thereby there will be similar or different states for the two participants. For example, in concrete terms, will the baby smile when the mother makes her usual clown-like face? Via these moments (i.e., negotiations of interactions), the baby develops an expectation of continuity that permits the baby to gain a sense of himself or herself as an active agent in the interaction. It is a working out of the polar opposites of being with the mother and being one's own self, and the process adds specificity to the baby's already developing sense of self. It is the way the baby gains a sense of himself or herself, as to how he or she is different from the mother, not just that he or she is different. Sander's idea begins with a focus on the inner states in which the baby and mother find themselves in these interactions, and it is the state within the context of the interaction that permits the baby to develop about himself or herself. In the previous example, the question of whether the baby smiles in response to the mother's clowning, the baby's state within the context of the giving or not giving to the mother the smile becomes a means of recognizing himself or herself in a specific way as an agent in its own right, and distinct, in a specific way, from the mother.

The clinical application of these particular ideas from infant observation lies in being aware of the importance of the inner states of the two participants in the therapeutic process. For this model, the therapeutic interaction between therapist and patient becomes a recognition process by which the patient becomes more him- or herself in specific ways, free of the sense of being governed by the previously skewed development that left a legacy of self-defeating patterns. I have chosen three clinical vignettes in which this recognition process can be identified and an analogy can be made between observations of infant researchers and a clinical process with a patient. The three examples also illustrate in turn three more circumscribed areas for the application of this research: The first vignette, with which the article began, aims to show the importance of the interactive nature of therapy and the related issue of therapeutic neutrality. The second example addresses the applicability of studies of attunement and intersubjectivity as well as the role of what Sander, Stechler, Burns, and Lee (1979) called “open space” in the developmental process. The third example demonstrates the usefulness of having in mind a visual metaphor derived from infant observation that we can translate concretely to the experience of the patient (similar to the way remembering Harlow's monkeys has served to remind us of the importance of softness in human contact; Sander, 1987).

Turning to the first clinical example, which was mentioned in the beginning of this article, the key intervention was addressing the impact of my failure to return her smile. The first lesson from infant research in this example relates to what neutrality may mean in the moment-to-moment work with patients. Therapy can sometimes be viewed as helping people to negotiate frightening areas in their own psyches, something akin to the visual cliff experiment that occurred to me in that session. The work of infant research confirms what we therapists have been learning for some time: Confronting patients with a totally blank visage is no more helpful for their self-exploration than it is for the babies trying to get across the visual cliff. Clearly I had first thought that returning my patient's smile would inhibit her ability to confront me—a capacity on which we had been working in the previous session. However, the seeming neutrality
of my “still-face” look, as the infant observers call it, was not helpful to her. What she needed was a neutrality that did not intrude but was more reciprocating. A neutrality that permitted me to smile (i.e., to be “engaged”) does not necessarily interfere with being neutral. What had happened with my patient and me was a derailment of the attunement between us, and such clinical disjoining required me to give input into our interaction to bring us back into some kind of meaningful interaction.

The derailment of our previously good coordination reinforces the point that therapy, like development, is an interactive process. Bollas (1987) wrote of the importance of such nonverbal interchanges as occurred between my patient and me, and he showed the way that things that may not necessarily be clearly represented in language or even consciousness are nevertheless central in communication. In fact, what put us on the way toward establishing that interaction was my awareness of my own state of awkwardness in the initial failure to return her smile, an awareness of inner state in the context of our relatedness without any verbal interchange. Research on infants and mothers provides reinforcing data that show some of the ways these communications occur and that have implications for these communications in therapy.

One can demonstrate, for example, the way a kind of baby-mother communication can go on that on the surface appears engaged but, on another level, is not central to the baby's deeper internal needs. For instance, the coordination of the behavior between mothers and babies has been studied to look at the issue of such problematic communication (Cohn & Tronick, 1989; Stern, 1971; Tronick & Gianino, 1986). In these experiments, the mother and her 6–month-old baby sit facing each other a couple of feet apart, and the movements of their heads, eyes, and limbs are tallied. This is done first in unstructured interactive talking and play and later with the mother having been instructed to remain immobile and still-faced. The behaviors are monitored to score how much the pair is in or out of coordination (i.e., whether they are looking at or touching either each other or the same object, such as a ball, rattle, etc.). With all of the pairs, there is a recurring sequence of coordination or matching, then normally occurring miscoordination, and then “repair” with reestablishment of coordination.

The interactional style of each pair is categorized during the sessions of unstructured play by comparing the manner and frequency with which the baby and mother repair the normal miscoordinations and reestablish their previous coordination. Examining the unstructured play—essentially a normal control phase—shows differences between the different baby-mother pairs, with some of them having more rapid repairs to the normal miscoordination and some of them having less rapid repairs. The data from the still-face portion of the session (the second part) are then examined to compare the patterns of differences seen in the different baby-mother pairs. The findings are reviewed with those infants who, during the unstructured play session, attempt and achieve more frequent and more rapid repairs of uncoordinated moments with their mother. When a mother of one of these babies is unresponsive in the still-faced phase, that baby directs more signals toward his or her mother and persists longer than the other babies.
To underline the contrast, when the data are reviewed for those babies who showed fewer repairs of the miscoordination with their mothers during the unstructured play sessions, these babies during the still-faced phase showed fewer signals toward the mother and a large number of behaviors aimed at regulating themselves without their mothers, such as finger-sucking, attention to other objects in the room, and so on (Beebe & Lachmann, 1988). It could be said that in these infants we are seeing a turning to themselves for self-care that would result in the kind of interaction that my patient and I had. In spite of the distress my patient felt from our lack of coordination, she took care of herself by talking about her professional career and leaving me out of her more centrally felt experience of our interaction. With infants, this sort of interaction throws the infant aback on his or her own repertoire, which may not yet be sufficiently developed.

In fact, my patient's history of abusive relationships with the men in her family was intermixed with experiences with her mother that left her feeling, as she put it, “invisible.” She felt unable to affect her mother's response to her—a function that infant researchers term effectance. Her history contained a number of episodes of turning to her mother for assistance, only to have her mother fail to attend to her cues for the help she wanted. On one occasion as a teenager, after reading a psychology article in a popular magazine, she confided to her mother that she felt she had an inferiority complex. Her mother grew very angry and severely scolded her for talking about herself “that way.” The patient then made her first suicide attempt, a minor aspirin overdose, which she kept secret from everyone.

The lessons for this woman's therapy are obvious. Therapy that fails to notice and repair interactive failures can reinforce that kind of experience of turning to one's self and excluding the therapist—in this case, with the patient relinquishing her state of need in the face of my lack of response. In other words, had my patient and I not repaired our miscoordination, we could have further reinforced her sense of needing to hold back from being the person she really felt herself to be, the issue which we had successfully confronted the previous session. In the face of the derailment of the coordination between us, something more than passive waiting was required of me to bring us back into attunement. It was necessary for me to be aware of both of our states, eventually in the shift that occurred from the rich preceding hour to the dryness of the current one, but first in that state I felt when I was only dimly aware that I had rebuffed her at the hour's beginning.

Other aspects of these studies on mother-infant pairs are applicable to the second clinical vignette I provide. This should further illustrate the importance of the process of restoration of attunement. Of course the primary goal of therapy is not some ideal of perfect attunement but rather an awareness of the importance of the way attunement occurs in the context of misattunement and its correction. In the language of the experiment just mentioned, mothers' and babies' repairs of miscoordination are as important as the times of coordination. In fact, in those studies (Tronick et al., 1979), normal infant-mother pairs spend less than half their time simultaneously looking at or in contact with the same thing (i.e., in a state of “matching”). When looking at each other, the match was about 30% of the time.
They are out of sync two thirds of the time, so it is the process of repair of the lack of synchronization that becomes important.

In similar studies by Stern (1971) and Brazelton, Koslowski, and Main (1974), the cyclical nature of the matching was studied and revealed, in a very simplified description, to be a kind of baby-mother dance. The dance was characterized by the baby breaking off contact with the mother and only reestablishing it when the mother ceased her pursuit, or “chasing” (Beebe & Stern, 1977), of the baby's gaze and instead looked away herself. The infant would then return and lock back in with the mother. These interactions suggest that it is in fact the baby who leads the dance.

The second clinical example should demonstrate the importance of understanding the manner by which attunement and misattunement occur in the psychotherapeutic setting. I had been seeing a woman in her 30s for some time, and I found myself talking with her about a very problematic schedule change, which we had both felt substantial relief in resolving. Still experiencing my own relief on getting the matter settled, I said something like, “It's an issue of how we can be together on things like this.” She responded with anger, saying, “I think that's too mechanical a comment and it feels seductive to me. I'm not sure I like the idea of ‘being together' with you.” Feeling substantially taken aback, I asked her more about what bothered her about my remark, and she said it made her afraid that I was too involved with her. Without further reference to the relationships between the two of us, she gradually began to talk about what felt familiar in this interchange. Her associations led to thoughts of her mother, whom she felt would use their close involvement during her childhood to coerce her to perform in a certain manner, leaving her feeling harmed. As she spoke of this, we experienced a reconnection, ending with her feeling that we were allied. Undoubtedly, my patient and I had reenacted some of the early mother—child interaction of rupture of attunement, but she and I had engaged in a different mode of repair. In contrast to her view of her mother, I had not “chased” her but instead had permitted her to return on her own to some sort of attunement with me.

On a later occasion I had the opportunity to review further what had so disturbed her about my remark about “being together.” At the time of the remark, I had viewed myself as intruding on her and invading her mental space, and when we were reviewing it at this later date I told her I had seen it that way. She then further corrected my view of the interaction by saying that she had not felt I had intruded on her but more that I had simply been on my own agenda and had ignored her with my statement. By way of illustration, she said that her mother's involvement in the details of her school and other life felt more like her mother was trying to achieve something for herself, for the mother's own purposes, and was primarily involved with the patient out of the mother's own motivation. From my perspective, I could easily remember that what had prompted my remark came more from my own need to cement the contact between my patient and me than it did from any concern she expressed.
To further make her point, this woman, who had read a good amount about infant research and also knew of my interest in the field, recounted to me a clinical example from Daniel Stern's (1985) book, The Interpersonal World of the Infant—an example she had previously related to me to explain herself. She reminded me of the account of a schizophrenic mother who had been described by clinicians as being intensely active and overinvolved with her infant. However, when infant researchers actually observed the mother—baby interaction, her intense activity was seen in fact to be a lack of involvement with the baby's needs and an excessive focus on her own internal state. The mother did not need to back off from her baby but instead she needed to be more focused on what her baby was going through. My patient rather jokingly apologized for comparing me to a schizophrenic mother, but it was clear how important she felt it was that I accurately understand her. She wanted me to know for sure that I had not intruded on her, which would have required me to back up and give her space. Instead, what she needed from me was to be more attentive to her experience of our relationship without trying to bend it to fit my own idea.

Sander's focus on inner state finds usefulness here also because the patient was emphasizing to me the importance of my being aware of her state rather than my own. Sander's (1983, 1988) ideas come from research looking at the establishment of regularity and rhythmicity in the family system of newborns. These studies show that by 3 weeks of age, the competent infant-caregiver system has established enough internal synchrony (e.g., mother and baby on something of the same sleeping and feeding schedule) to allow times when a loosening of their coupling is possible. There is now a time when the baby is not in need of regulatory input for activities such as feeding, elimination, or sleeping but instead is in a state of equilibrium, simply awake and looking around. Sander (1983) called this the open space, and she demonstrated that in this state, the baby can express volitional choices as to whether to explore his or her own self, external stimuli, or other aspects of the environment.

This open space can be thought of (Nahum, 1994) as a beginning of Winnicott's (1958, 1960/1965b) “intermediate area,” in which integration of the infant's “private core” can begin. These open spaces or intermediate areas are progressively developed over time so that the infant comes to have more and more a sense of his or her own continuity, something closely akin to a sense of his- or herself. That is, in the periods of looking around on his or her own, the infant begins to learn independence from the variabilities in his or her environment. It is as if the infant gets to decide whether to tune into this stimulus or that one, whether to watch mother or something more interesting, like the family dog sniffing its way around the room. Leaving aside the issue of awareness of selfhood, as the infant makes more and more of these “decisions,” the infant becomes more and more himself or herself. From an outsider's viewpoint, it would appear as if the infant were saying, “Yeah, I'm me, and I'm deciding to do this, instead of that.” The baby is not independent of the caregiver because the two of them must work together continually to get to the place where the infant has equilibrium and open space. It is reminiscent of Winnicott's (1958/1965a) saying, “It is only when alone, in the presence of someone, that the infant can discover his own personal life” (p. 34).
It is that statement from which we can draw the clinical relevance of Sander's idea of open space. With the woman who responded so negatively to my remark about “being with” her, it was only after she gained some room for herself by telling me that I had misstepped, and after I had in fact stepped back from her, that she could explore her own thoughts. Her later key addendum to this description was that, although open space was important, it was just as important in that period of open space that I be attentive to her needs and not to my own. We could both then clearly see her experience with me in the context of her experience with her mother. In effect, we mutually generated an interpretation of the transference phenomenon we had experienced. In so doing, it could be said we negotiated something like Sander's recognition process by which the patient became more her own agent and less governed by feeling trapped in old patterns. When studying the actual verbal process of therapy hours, it appears to me that patients make their therapeutic advances only infrequently in direct response to something I have said. More often, the patient moves forward following the two of us, having set the stage for working something out in his or her own mind (i.e., the patient recognizes something that is very much his or her own after we have established the open space necessary for that process).

A confirmatory finding is the number of times patients speak of important introspective moments they have when alone. It is common to have patients say they had a self-revelation “on the way to the store,” or “this morning in the shower,” or “on my way home last night.” Infant research into the importance of open space thus gives us data that indicate that much of what we have to do as therapists is to help our patients establish an equilibrium that will permit them to explore for themselves.

The final clinical example comes from a man in his 30s who I had seen for some time but who, in spite of impressive competence and at times excessive self-assertiveness, would have episodes of feeling helpless and in desperate need of someone to take care of him. He had been his mother's favorite and treated specially by her. However, his privileged status existed around the mother's needs in such a way that if he failed to follow her wishes, she would refuse to speak to him for days at a time until he admitted to her that he had done wrong and asked to be included back in her life. In fact, he entered therapy at the time his mother became ill with the cancer that eventually took her life.

When as an adult in psychotherapy, he would describe the helpless feelings he currently experienced; one interpretation that had been used with him in the past was that, because of his experience with his mother, he was uncertain about asking for what he wanted. Instead he felt he had to become totally helpless to permit himself justification for his wants. The idea was that unless he put himself in this helpless state he could have no expectation of having his therapist attend to his wants. His associations to historical antecedents (i.e., his feelings with his mother) confirmed this hypothesis, but the interpretation had never had much utility for him. His having this insight from the interpretation seemed to do nothing to alter his recurring states of feeling helpless. In fact when anyone, including me, tried to help him in these states, there was often a sense that, no matter what was given, it failed to do anything except make him frustrated and irritated at the helper. Over time, I
also felt a kind of helplessness when working with him in this state, and I repeatedly tried to clarify for myself what the nature of his, and consequently my, experience was in these states of helplessness.

On one occasion, however, a new picture of this man's state of helplessness occurred to me, and it was an image lifted straight out of infant research observations about attachment. When he came in 2 days after his elderly father had been hospitalized in a small local hospital following a bad fall, my patient was in quite a state of helplessness, saying he felt totally unsure what to do. His usual competence was gone, and he was not sure whether to insist that his father's doctors look for a head injury, whether to simply ignore them and move his father to a larger hospital, whether to stay at the hospital all day, whether to cancel an upcoming vacation, and so on. He said he simply felt helpless. He even had felt unsure whether he could drive his car. In fact, on the previous day he had not driven but had stayed frozen at home, doing little until he eventually found someone to drive him to the hospital.

I was not only struck by the pain of his state, but I also saw how clearly he seemed to be going back and forth from one path of behavior to another, to such an extent that he was frozen at home. There was something immensely disorganized about this man who was usually so highly organized. The image from infant research that occurred to me came from the attachment research experiments utilizing the Strange Situation, in which toddlers are separated and then reunited with their mothers (Ainsworth et al., 1978; Bowlby, 1980; Main et al., 1985; Main & Solomon, 1986). It was a picture from the observations of that group of babies whose behavior fits the category termed the disorganized pattern, the one in which the baby shows extreme conflict between approach and avoidance that is a sort of stilling, a freezing of movements. It was the picture of a little boy in one of these slowed-down states of disorganization that came to my mind as I heard my patient talk of his feelings the day after his father was hospitalized. With that picture in mind, I did not use the interpretation familiar to both of us (i.e., to ask him if he thought his helpless state was an invitation to get me to help him make decisions). However, this time I said I wondered if in fact his helpless feeling was less that he felt like he wanted someone to help him and more that he did not know what he wanted. I said it sounded like he felt totally disorganized in the face of the threat of losing his father.

His response was to look almost startled and say, “Yes, that's it exactly!” with all the excitement of someone who has just had the proverbial light bulb go off in his head. He went on to describe how the day after his father's accident, he had felt very much alone, feeling that his older brothers would be of no help. He thought back to his mother's death and the confusion he had felt, and memories returned of the times he would feel this kind of confused disorganization in his dealings with his mother when he was young. He felt “special and attached” but then somehow “not cared for” by her at other times, and he remembered experiencing this state of disorganization during those times. As he talked of the way these helpless and disorganized feelings came from his childhood and outside of his current experience, he began to gain some perspective about his capacities to do something regarding his father's situation. He began to move out of the state of felt helplessness in a way that seemed novel to him.
In fact, this new paradigm in which I now saw my patient and myself during these states of helplessness had further application as time passed. From the attachment research, I was aware that the children displaying this disorganized attachment pattern often were children whose mothers had experienced substantial loss. I began inquiring more specifically about the possibility of my patient's experience of loss, and I gained confirmation of loss in the life of his mother, as well as a sense of recurrent losses that punctuated his own childhood. At a later point, the patient's wife was suddenly endangered by a life-threatening disease, and he temporarily experienced the helpless feelings again. In a disorganized angry episode at that time, he nearly destroyed a vital business relationship, and the following day he felt he could not wait for our next meeting and telephoned me for help with his terribly distressed state.

Again I addressed his state as being one of disorganization, this time brought on by the fear of losing his wife, and in the next session we reviewed the way he had experienced my intervention. I describe this session in some detail, including his own wording: My patient said he felt like he was in “free fall” as he dealt with the news of his wife. Although his wife's ultimate recovery was still uncertain, he said that “when you said I was disorganized, I felt better, because I knew you were right. I saw I wasn't incompetent, although in that business deal, it had seemed like I really had lost all my skill, and that my worst fears were coming true.” He remembered feelings of needing his mother in times like this and of her “not being there even when she looked like she was.” It felt, then and now, “like I didn't own my feeling that I was OK but instead I was just renting it and I would get it taken away from me.” I asked him who he felt owned that feeling of being okay, and he responded, “I'm not always sure, but I'm now beginning to think that it really is me who owns it, and not my mother, you, or anyone else.”

He then associated to the Stephen King (1991) book and movie Needful Things, in which, he explained to me, the Devil opens a store in a small town and havoc ensues because he sells people things for which they dearly yearn via some unclear Faustian bargain. The bargain is for a terrible price about which the townspeople only learn later. My patient said that when he got scared about his wife, he felt his needs were so great that his feelings “took away from who I really was,” as if he had lost his soul. He again remembered his mother and the way he would sometimes feel “a wall go up” when his requests to her failed to coincide with what she wished him to do, saying, “It was like she always had all the cards, and she didn't want me to grow up and be on my own. With her, it was like she said, ‘My way or the highway,' and her silences felt like I'd totally lost her.”

In giving this example I do not mean to say that my patient and I discovered the etiological basis for his moments of feeling helpless or that he would never feel them again. Instead I am trying to show that my focus on my own state of helplessness in connection to the patient's helpless state was the entering point to the process of his change. My awareness of my inner state brought me in touch with the experience-near data from the Strange Situation observational research, and I was then able to word my interventions according to a hypothesis based on the patient's response to being alone. This generated a recognition process such that he gained insight into his lost sense of agency and thereby regained his sense of himself. He could now see himself as someone
distinct from the important people in his life, even if their existences were threatened, as were those of his father and his wife.

In addition to illustrating the recognition process, this vignette also demonstrates that familiarity with a visual model from infant research allowed me to think of this man's state in a fresh way that reached him at a point closer to his own experience than had previous interpretations. It is an example of the way the observational basis of infant research can help us by making the psychology of development a more direct and experience-near source for the generation of clinical hypotheses. As did the pictures of Harlow's monkeys clinging to that terry cloth piece of wood, infant observational research permits a more experience-near way of conceptualizing our patients than some of our other more abstract models of development.

Conclusion

The findings of infant research have been applied to psychoanalytic theory and to clinical work with adults. Regarding the theory, five areas of influence from this research are outlined: (a) The baby is competent and active from the start, (b) development is a progressive continuum with increasingly more complex organization and without points of definitive fixation, (c) relationships involving dependency can be conceptualized in such a way as to decrease the often pejorative meaning attributed to dependency itself, (d) systems and their interrelation can provide us with an explanation of internal psychic structure, and (e) the regulation of affects and other states can more accurately explain the motivation of human behavior than can the idea of drives and their discharge. From this broad field of theory, three clinical vignettes demonstrate in an overall way the importance of the patient's and therapist's inner states in the context of their interaction. Via the awareness of such states, the therapy allows for the patient to recognize himself or herself as distinct in specific ways from the other and to be less trapped by former, pathological patterns. The vignettes also illustrate several more circumscribed areas for the application of infant observation to clinical work with adults: (a) the importance of the interactive nature of psychotherapy, in particular in relation to the issue of therapeutic neutrality; (b) the clinical utility of the application of studies of attunement, as well as the role of what Sander called open space in the infant-mother interaction; and (c) the usefulness of having an experimental paradigm that is a visual metaphor can become an experience-near source for the generation of hypotheses in clinical practice.

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