

The Interface of Self Psychology, Infant Research, and Neuroscience in Clinical Practice

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This article focuses on the integration of self psychology with findings from infant research and neuroscience. While Kohut's psychology of the self provides a useful theoretical model for psychoanalytic practice, aspects of infant research and neuroscience offer specificity and nuance to basic self-psychological concepts. Kohut proposed that self-psychological psychoanalysis ameliorates derailed development through patient-analyst interaction, while a listening stance of empathic immersion begins the curative process of derailed development and sets the stage for reparative psychoanalytic work. Findings from infant research delineate much more specifically the nature of attunement both in early mother-infant and analyst-patient interactions. Findings from neuroscientific research delineate how early mother-infant experiences are encoded in implicit memory and explicates the emotional substrate of affects and feelings. This emotional substrate exists at birth and provides a means of communication both in infancy and adulthood. Additionally, infant research delineates the mutuality of the interactive process. Thus, both infant research and neuroscience add subtlety and nuance to basic self-psychological concepts. This subtlety opens up new ways of understanding patients and expands the clinical repertoire. Three clinical vignettes demonstrate how this nuance and expansion of self-psychological concepts are applied in the context of an ongoing psychoanalytic treatment.

Key words: self psychology; infant research; neuroscience; microanalysis; implicit memory; emotional substrate; bidirectionality; dyad

Introduction

I have expanded self psychology as a psychoanalytic model of practice by integrating it with findings from infant research and neuroscience. Whereas self psychology offers a psychoanalytic theory for clinical practice that is highly effective, concepts derived from infant research and neuroscience add nuance, subtlety, and specificity to some of Kohut's basic therapeutic principles. This enrichment of psy-

choanalytic theory offers additional avenues for clinical attention and intervention.

My personal psychoanalytic journey integrates infant research and neuroscience with self psychology. I will describe aspects of infant research and neuroscience that support, inform, and expand self-psychological concepts and practice. The scientific research is by no means limited to supporting self-psychological theory. Many relational theorists and Freudian theorists use infant research and neuroscience to support their theories as well. I will focus primarily on the aspects of neuroscience and infant research that delineate relational empathy and attunement, how these are played out in infancy, how they become encoded in

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implicit memory, and how they are communicated through bidirectional implicit processes. In addition, I will elaborate the neuroscience view of emotion, the substrate of affect. Finally, I will argue that these data, applied to the psychoanalytic dyad, open numerous avenues for understanding patients, attuning to them more specifically, and adding tools for clinical intervention.

The Context: Historical Background

Originally trained in a Freudian ego-psychology tradition, I discovered and developed my knowledge of self psychology and infant research in tandem. Intuitively they supported each other. In working from an ego-psychological perspective, I often felt uneasy with the ambiance created in the consulting room between myself and my patient; my attempts at resistance analysis created a disquieting adversarial tension between myself and the patient. And, I found my interpretations were experienced by the patient as somewhat removed from her experience.

But my shift away from ego psychology to self psychology was more personal than professional and quite serendipitous. Daniel Stern's *The Interpersonal World of the Infant* was published 3 months after the birth of my daughter. I was fortunate enough to read this book while caring for and watching an infant develop. Stern's ideas at that time were revolutionary within psychoanalysis. In his view, infant and mother are two separate individuals, each functioning as a self and a self-regulating other. Each brings separate capacities to the dyadic exchange. And, through their exchanges, the infant develops various senses of self. These senses of self are neither developmentally preprogrammed nor sequential. Each unfolds sequentially over time, but each continues to operate in tandem and influences the others while continuing its own path of development. The infant's senses of self all become organized within the first year of life, prior to

the development of symbolic thought and/or language. These early experiences encoded in nonsymbolic memory have an enduring influence on the developing child and subsequent adult. This briefly synthesized formulation of Stern's book runs counter to Freudian theory. In the latter theory the infant is viewed as an untamed bundle of drives. These drives become organized through the interplay and development of various intrapsychic structures (id, ego, and superego). In Freudian theory the development of these intrapsychic structures are informed by interaction with early caregivers, but the relational component takes a background position while the interplay of the intrapsychic structures (id, ego, superego) is privileged. For me, the process of watching my infant develop while reading Stern's book put the final nail in the proverbial coffin of the model of ego psychology theory and practice. I took up further psychoanalytic training in an institute that was self psychologically informed and one that taught and valued infant research.

My professional development has continued to blend these two bodies of knowledge. Over the last decade, I have added findings from neuroscience to my knowledge base of theory and clinical practice. There is considerable resistance in psychoanalysis to this latter integration. Nevertheless, I find that, like infant research, neuroscience has much to offer psychoanalytic theory and practice. While it is absurd to try and reduce mind to brain, it is equally absurd to ignore the brain and body wherein the mind resides! At a recent conference on affect regulation, Hill (Hill, 2007) spoke of a paradigm shift "... from an approach that privileges the mind and tacks on the brain and body when they fit, to one that begins with the understanding that the mind is a subsystem – part of a larger system that includes the brain and the body." In the coming decades, I believe neuroscience will slowly infiltrate psychoanalytic thinking as the research moves more steadily from animals to humans.

Self Psychology

In *How Does Analysis Cure* (Kohut, 1984: 4), Kohut summarizes one of the basic tenets of self psychology: “The essential therapeutic conclusion of all my contributions to the understanding of the self and its development can be formulated as follows: it is the defect in the self that brings about and maintains a patient’s selfobject (narcissistic) transference. The working through of this transference which via transmuting internalization . . . lays down the structures needed to fill the defect in the self.” Later on in this introduction, Kohut (1984: 5) suggests that the selfobject disturbance derives from early “layer of depression and diffuse narcissistic rage.”

Kohut’s view of derailed development was located in the early caregiver infant/child bond in which the child’s need for mirroring and attunement was thwarted, resulting in the aforementioned structural defects and underlying depression and narcissistic rage. Kohut located the therapeutic “cure,” not in the working through of the oedipal conflict as in earlier Freudian theory but rather in building new psychic structures and the consolidation of the self (increased coherence, positive self-esteem, and increased vitality) through interaction between patient and analyst (Lessem, 2005).

What is the nature of this interaction that creates the cure? Kohut proposed a listening stance of empathic immersion. He proposed entering into the patient’s inner world by understanding the intrapsychic emotional logic of the patient’s defenses, experiences, and behaviors (Lessem, 2005). This listening stance sets the stage for the beginning of a reparative emotional experience between patient and analyst as well as creating a climate for additional psychoanalytic work. The additional psychoanalytic work Kohut proposed includes the development and working through of different transferences (mirroring, idealizing, twinship). The working through of these transferences contributes to repairing the defects in the self and ameliorating the underlying depres-

sion and narcissistic rage. Infant research, using moment-to-moment microanalyses of mother–infant interactions, describes and defines far more precisely the nature of empathic immersion or, stated another way, the nature of attunement. In addition, infant research provides a framework for describing self-development more closely related to the actual phenomena as opposed to how it is conceived in a psychoanalytic theory. In this way it provides a more precise framework for describing development both in its healthy and derailed forms.

Infant Research

By now it is accepted in many psychoanalytic circles that early infant–mother interactions provide an important and enduring template for the experience of self with the other. The techniques of videotaping and microanalysis of mother–infant interactions reveal an infant with far more innate capacities than was previously ever thought imaginable. These innate capacities enable the infant to participate in and regulate the exchange between himself and his primary caregiver. Furthermore, microanalysis reveals that the communication process between infant and mother is a coregulated process in which the individual changes at the very moment he interacts with the other (Fogel, 1993: 61). The attribution to the infant of various capacities shifted the whole view of early interaction between mother and baby. The baby was no longer viewed as a tabula rasa waiting to be formed but rather an active participant in the interaction with its primary caregiver, with a far more sophisticated presymbolic intelligence than was ever imagined (Beebe *et al.*, 2005). This shift to a dialogic dyadic construction of mind has worked its way into psychoanalytic thinking. Early experiences of self with other serve as an enduring template that impacts and informs all ensuing interactions with others, including interactions in the psychoanalytic relationship, that is, transference.

Infants bring numerous innate capacities that help them to enter into an effective human interaction. As Stern (1977) noted, infant research was turned on its head when the question switched from “what does an infant think?” to “what can an infant do?” Suddenly, the infant’s capacity to suck, to turn its head toward or away, to gaze to show distress (e.g., crying, arching, losing tonus) provided the basis for researchers to ask simple questions and have the infants respond with behaviors they could do (turn their heads toward, suck on something that activated a mobile) that provide a window into what they “know,” “think,” or “feel.” Numerous studies document infant capacities that detect contingencies (DeCasper & Cartens, 1981), discern patterns, organize data (Stern, 1977, 1985; Lichtenberg, 1989; Sameroff & Emde, 1989; Beebe & Lachmann, 2002) and show aversion (Lichtenberg, 1989). With these capacities, the infant enters into and helps to organize and regulate the exchange between himself and mother.

During the course of the day there are many exchanges between infant and mother that revolve around basic physiological needs (i.e., eating, sleeping, changing of clothes and diapers). But one of the easiest ways to study infant–mother interaction is through face-to-face play that occurs in very short spurts throughout the course of the day (Stern, 1977). Even in adults, face processing is viewed by many researchers as a “special” perceptual ability that is mediated through its own separate neural system (Scott & Nelson, 2004).

Infants come into the world with a preference for the human face and find the human face fascinating (Stern, 1977). During face-to-face interactions the infant regulates himself vis à vis mother through the variables of spatial closeness, orientation, level of arousal, and degree of engagement as evidenced by gaze and body tonus, followed by, for example, facial and head orientation, smiling, and flailing arms or legs in excitement. Through these rudimentary behaviors the infant regulates himself and the exchange with mother in order to elicit the be-

havior or interaction he needs and/or wants to regulate his own state.

The Dyadic Bond: Infant–Mother

Numerous researchers and/or writers (Stern, 1977; Sander, 1985; Fogel, 1993; Beebe, Jaffe & Lachmann, 2002; Beebe & Lachmann, 2002; Beebe *et al.*, 2005) have described in different ways the dyadic dialogic construction of mind. Others describe the development of a sense of self as context dependent (Zeanah *et al.*, 1989) or as the result of a series of interactions between self and self-regulating other (Emde, 1981, 1988; Stern, 1985). Lichtenberg (1989) describes the formation of scripts and schemata based on motivational systems. Sander (1977, 1985, 1991) defines the development of self-regulatory competence in its most abstract form as a systems competence.

As one example of how this mutual regulatory system works, I will draw on Sander’s research (Sander, 1977, 1985, 1991). He studied the 24-h sleep/wake cycle in newborns through noninvasive bassinet monitoring. Sander suggests that each partner in the exchange is internally organized and each is simultaneously influencing the other. Sander uses the infant’s own state as the variable that both guides the infant’s behavior and simultaneously is central to the mutually regulating system. Infant state is defined by where the infant is along the continuum of the sleep/wake cycle. The infant sends out signals about its state that are observable by the mother who then draws inferences about the infant’s state. The system’s competence is defined by the ongoing interplay among the degree of coherence (regularity of the infant’s state), clarity with which the infant sends out the signals about his state, and the accuracy with which the mother reads and responds to the state.

Whereas Sander describes the system’s competence around a physiological state, other infant researchers (Meltzoff, Trevarthan, and Stern in Beebe *et al.*, 2005) use face-to-face interaction between infant and mother as the

arena for organizing interaction and system's competence. The latter three theorists all believe that matching and correspondences between infant and mother in the moment-to-moment exchanges in face-to-face interaction are fundamental aspects of preverbal communication promoting the possibility for "shared mind." Through matching and correspondence each person not only sees the behavior of the other but also senses the inner state and moment-to-moment process of the other. Trevarthan stresses form, timing, and intensity between infant and mother as the conduits through which state sharing occurs, while Stern adds the concept of cross-modal matching as the way form, timing, and intensity are conveyed between the two partners of the dyad. Stern further emphasizes the micromomentary shifts as mother and infant each adjusts himself or herself to the other, thereby adding the concept of "changing with" the other. Correspondences, matching, and "changing with" are considered by infant researchers and many psychoanalysts as the fundamental components of interaction that constitute an experience of "you are on my wave length" or "we are in sync." Over time, these repetitive experiences become encoded in procedural and emotional memory, forming an enduring template that constitutes the fundamental grammar of self with other (Beebe *et al.*, 2005).

Neuroscience

A shift here from infant research to neuroscience delineates more precisely how these early experiences become enduring templates encoded in implicit memory systems. According to memory researchers (Schacter, 1996; Kandel *et al.*, 2000), there are two broad categories of memory: implicit and explicit. Implicit memory consists of things you know or do automatically without having the conscious experience of doing or remembering. Examples of this kind of memory include high-level skills, such as riding a bike, ice skating, driving a car, or the

recognition of everyday sensations, such as the appearance of cat fur and the feel of it on your skin (Fracowiack, 1997; Kandel *et al.*, 2000). Implicit memory includes learned motor patterns, conditioned reflexes, verbal priming, and innate reflexes, such as startle to a sudden loud sound. Our earliest memories are formed "implicitly" as the infant brain has the capability for motor and emotional memory (Pally, 1998) but lacks the capacity for higher level symbolic thinking. These early memories are not directly accessible to consciousness. At a time when the infant's cerebral cortex is still immature, implicit memories use subcortical areas, such as the limbic system and basal ganglia, and remain partially stored in these systems.

Over the last decade psychoanalytic writers (Lyons-Ruth, 1998; Stern *et al.*, 1998; Knoblauch, 2000; Beebe & Lachman, 2002; Beebe *et al.*, 2005; Jacobs, 2005; Pally, 2005) have acknowledged that implicit procedural memory and communication, simply defined as unspoken aspects of communication and interaction, are significant components of the psychoanalytic clinical process and are often major contributors to therapeutic action. Despite this acknowledgement, explicit memory and symbolic communication remain the privileged aspects of the psychoanalytic clinical endeavor. In looking at clinical examples in the literature, there is little procedural nonconscious aspects of experience in the actual clinical case material presented. Implicit memory is alluded to but rarely fully explicated. Yet, as clearly delineated in the neuroscience literature, early experiences of self with other are encoded in the lower parts of brain systems. And attention to various aspects of, for example, body posture and movements can provide relevant and important clues of the internalized patterns and procedures of self with other. Thus, implicit memory provides a powerful tool for elaborating and deconstructing the nature of the patient-analyst interaction and creates new pathways for clinical intervention. For a more detailed discussion of these clinical applications, see Rustin & Sekaer (2004).

Another body of data emerging from neuroscience supports and expands the importance of affect as a central organizer of human experience. Psychoanalysis has always privileged affects and feelings as central aspects of human experience. But neuroscience adds the concepts of emotions, the bodily based substrate of what we as psychoanalysts call affects and feelings. A preponderance of neuroscience researchers and theorists (Damasio, 1994, 1999; LeDoux, 1996; Panskepp, 1998; Ekman, 2003; Tomkins) take the position that we are essentially embodied brains. Emotions begin as bodily based experiences operating prior to conscious awareness. Emotions are mediated through the limbic system, one of the three systems of the human brain (Lewis *et al.*, 2000). Each system has different functions, properties, and chemistries. The importance of this description from neuroscientists is that humans, like the rest of the mammalian kingdom, communicate with these emotional systems without the “knowledge” afforded by higher level neocortical function that allows humans to have consciousness and language about these emotions.

Bodily based feelings are used as a means of communication between people, especially in the highly attuned interactive process between infant and mother and patient and analyst. Ekman (2003), through interaction with and study of primitive tribes, contends that emotions are universally correlated with the underlying musculature of the human face. Thus, one can “read” another’s feelings by viewing the minutia of tiny facial muscles and, in this reading, respond specifically to a particular emotion. Ekman contends that we are implicitly wired to respond in particular ways to specific emotions. So, for example, the facial musculature of sadness or agony automatically elicits a desire to be comforted in the observer. All of this complex interactive behavior, as seen between infants and mothers in the micro-analysis of videotapes, is occurring with split-second speed on a nonconscious implicit basis between adults as well before words are ever exchanged.

The communication of affects through “the body” (i.e., facial muscles) is consistent with the recent discovery of mirror neurons. The original research on mirror neurons in macaque monkeys demonstrated that when a monkey watches another primate involved in an action, such as grasping a peanut or eating an apple, the motor neurons in the observing monkey fire as if he, the observer, is using the same neural pathways to perform the same action. Fadiga (1995) documented the same potential in humans by imaging “motor-evoked potential” (a signal that a muscle is ready to move) from research participants. Iacoboni (2005) at the University of California, Los Angeles, using functional MRI imaging techniques, showed that the same motor areas fire as viewers watch the experimenter grasp an object. Others (Carr *et al.*, 2003) are exploring the function of another set of mirror neurons, those that are implicated in emotions. Wicker and Keysers (2003) looked at the emotion of disgust. The subjects watched the face of someone smelling a rotten object. Imaging techniques, measuring the activity in the observers’ brains, revealed that the same olfactory areas that were activated in the person experiencing the “bad” smell were equally activated in the observer. Another study showed similar results for tactile empathy.

Although the work on mirror neurons is in its nascent stage, the research increasingly lends support to the importance of face-to-face play in infancy as an arena for the development of vital psychic structures in infants and children. And, it reinforces the idea of the existence of subtle communications between patient and analyst that occur outside of reflective awareness of both partners (Gallese *et al.*, 2004). An experiment described by Heller & Haynal (1997) supports those scientists who contend that so much of emotional communication exists between faces and bodies. These researchers looked at the videotapes of 59 patients who were interviewed by the same psychiatrist within 3 days of an attempted suicide; both patients and the psychiatrist were videotaped. One year later, 10 of those same

patients had reattempted suicide. Microanalysis of the tapes of the psychiatrist and the 10 reattempters revealed that 81% of those who had reattempted suicide might have been predicted from the psychiatrist's face. The psychiatrist frowned more, showed more head and eye orientation, more overall facial activation (concern), and increased speech. One can infer that the psychiatrist "knew more" as shown in her procedural emotional behavior. She was "picking up," outside of reflective awareness, a severity of depression or despair that was not being communicated in words (Beebe *et al.*, 2005).

This shift to both partners as equal but not necessarily symmetrical influences reinforces the current emphasis in psychoanalysis on mutual influence and the bidirectionality of the psychoanalytic process. Ekman's (1995) work on the subtle facial musculature specific to the eight basic affects suggests that, to varying degrees with differing capacities, patient and analyst each subliminally "reads" the underlying affect of the other. My own work with collaborators Beebe, Knoblauch, & Sorter (2005) compared five psychoanalytic theorists: Benjamin, Ehrenberg, Jacobs, Ogden, and Stolorow and collaborators. Although each privileged a slightly different aspect of patient-analyst interaction and communication, each subscribed to a dyadic model of interaction. In our comparison we used the concept of bidirectionality or mutual regulation to refer to a two-way mutual regulatory process in which each person's behavior is predictable and, therefore, influencing the other, even though these influences are occurring outside of awareness of both partners. Time and space does not permit a fuller description between the role of self and mutual regulation and the role of difference in the interaction. Moving into these latter areas shifts the dialogue from attunement and self psychology to bidirectionality and intersubjectivity.

As the analyst, it is virtually impossible to fully know how our procedural emotional memory is affecting the dyad. One cannot be inside and outside at the same time. The best

we can hope for in ourselves as analysts is a crude approximation based on self-awareness and procedurally accepted commitment to self-discovery and introspection. Furthermore, our acceptance of implicit memory and embodied brain/minds should make us more open to our patients' view of us, as eloquently stated by Irwin Hoffman (1983) in "The Patient as Interpreter of the Analyst's Experience." As for the patient, reading his procedural and affective experiences can provide varied, enriched, and sometimes powerful opportunities for understanding and clinical intervention.

The following clinical vignettes show how I integrate some of this research into the clinical process. I do not advocate a one-to-one linear correlation between infant research, neuroscience, and self-psychological clinical practice. Rather, I find a heightened consciousness on my part to the issues delineated throughout this article sensitizes me to different aspects of procedural and emotional communication and is another way of "knowing" and more importantly "attuning" to both myself and the patient. I am far more sensitized to the use of the body, the meaning of eye contact, levels of arousal, the ebb and flow of tone, tempo, and rhythm in the verbal exchange. This heightened consciousness speeds up my ability to attune to patients more fully and provides additional foci for clinical intervention. For the most part, I rarely attempt to make the procedural aspects of memory explicit or translate them into a symbolic exchange. Rather, I rely heavily on the procedural aspects of communication to further my understanding of a particular aspect of a patient or a particular interactive moment. In other instances, I use bodily based emotional experiences (either the patient's or my own) as the pathway for unpacking complex intrapsychic themes. Sometimes I use all of the above. My attention to these areas does not replace the more usual tools of self-psychological clinical work. In the vignettes presented below, addressing the implicit procedural/nonconscious aspects of the interaction proved to be "the

royal road” to understanding complex clinical phenomena.

Clinical Vignettes

The first vignette demonstrates how attention to and analysis of body posture served as the pathway for delineating a highly verbal and intelligent man’s early relationship with his mother, his unmet needs, and longing for an affirming, noncritical, significant other and his defenses against these needs.

Mark

Mark, an affectively alive and engaged man in his early 30s, sat with his body facing me but held his head at a 45-degree angle. It was as if his right cheek was talking to me. I quickly learned that this body posture was prominent in most of his interactions, was a source of embarrassment and distress for him, but was something he felt powerless to change.

Mark’s mother suffered from bipolar illness. Her moods, anxiety, and depressions filled the house with noise, angst, and pressure. As I learned more about Mark’s mother, I imagined that his 45-degree head posture was his procedurally encoded way of being with her. By tilting his head away, he expressed his aversion to his mother’s intense feelings. He literally got them out of his face while trying to regulate his own arousal state.

Mark progressed significantly in treatment, but the head aversion and inability to look directly at someone remained an issue with friends, colleagues, supervisors, and me. I began to address the head posture by noticing it directly and questioning him about it. On the most conscious level, Mark believed that if he looked at me when he talked, it would interfere with his being able to “tell the story.” By not looking at me, Mark, a highly obsessive and ruminative man, was able to rely on his dissociative defenses and describe the facts and details

of an event. On a slightly deeper level, Mark was able to discuss his conviction that feelings were not to be expressed or revealed. This was related to his father’s mandate “never reveal your vulnerability,” which had been reinforced by a strict parochial school education. When I interpreted to him that by showing me only one side of his face he was also only showing me one side of him, namely the logical and rational side while forgoing the affective side; he smiled knowingly.

As these various themes were addressed in treatment, Mark was able to look at me for brief periods of time. During one of his face-to-face moments with me, he was relating an incident that had occurred with his mother. He noted that although she liked what he did, she verbalized her criticism of all the things he didn’t do. He gazed into my eyes as he reported that he had confronted his mother with this lifelong pattern, something he and I had discussed repeatedly in treatment. I said he seemed to need and want my affirmation for what he had done. He sheepishly agreed. I then went further and suggested that perhaps he couldn’t look at me or others while he spoke because he deeply wanted to be admired and affirmed while at the same time he expected that he would be negated and criticized. This intervention was the turning point in Mark’s use of his face aversion. From that day forward, he was able to look at me, full face, throughout each session. Once this happened we were able to begin talking about the interactive nature of the face aversion, namely that the other person’s thoughts and feelings about him, real or imagined, had a profound negative effect on him that he could not rationalize away. The 45-degree head avert was a creative compromise between engagement and disengagement.

Linda

The case of Linda demonstrates the value of paying close attention to strong bodily and emotional reactions as a pathway into implicit emotional connections. In this case, the bodily

emotional reaction was mine. In many ways the clinical work here may not appear to be particularly informed by infant research and neuroscience. But for me, these other disciplines heightened my awareness of patterns of interaction, such as bodily emotions, as important communicators of nonconscious, that is, unformulated or unspoken learning, and the importance of attending to implicit patterns of communication.

Linda, an attractive successful businesswoman in her early 40s entered treatment to understand the nature of her "intimacy issues." At the time her boyfriend of 2 years was having trouble committing to her. Linda wanted to extricate herself from the relationship and find someone she could marry.

I learned very little about Linda's family. She tolerated NO questions from me; she wanted to use HER time for HER agenda. Her agenda centered on the minutia and details of her current life. As we talked I learned that she was the middle of five children raised in an affluent, advantaged, and cultured family. Her mother, a full-time caregiver, seemed to "live in her own world" and periodically had outbursts of "craziness." During these episodes Mother would appear to be frantic, distressed, and "ran around in senseless circles." Her father, a more benign and respected figure, worked long hours and traveled a lot for business. Linda presented herself as if she had raised herself.

Linda filled the room with torrents of words delivered in pressured speech that revealed considerable anxiety; she appeared disconnected from her anxiety. The content focused on her current boyfriend. Linda seemed to look to me as someone who would simultaneously validate her perception of her boyfriend and provide her with hope that this relationship would work out. When she was finally able to extricate herself from this relationship, she used her sessions in exactly the same way to describe every man she dated. Any time I asked about her feelings or behavior, she looked at me puzzled and confused, took a deep breath, paused, and continued as if I hadn't spoken.

Linda was clearly interested in keeping me out of the interactive exchange. I felt inundated and drowned by the verbiage, its pace, its rhythm, and its unrelenting pressure. She did most of the talking and, by taking off on my few interventions, she did a good part of the analytic work as well. She played roles, hers and mine. She seemed to yearn for a relationship but simultaneously to hold others at bay. Her attachment capabilities had been seriously compromised. I believe she came to rely on her considerable intellect and obsessive thinking as the substitute for maternal care and nurturance.

Several years into the treatment, I became increasingly aware that I was feeling smaller and smaller in this treatment. I felt Linda wanted me to disappear. Yet she was getting something out of the treatment. She came regularly for appointments, and her symptoms were reduced in that her choice of men was improving. But the core relational issue remained, both in the transference and in her other relationships. There was a marked absence of mutuality in the interactive exchange. My attempts to bring this subtext into our clinical interaction were of no avail.

About 2 years into the treatment, the subtext did eventually find its way into the transference as my own unexpressed, perhaps, previously disavowed fury over the mandate to disappear boiled over. During one session, Linda was telling me about the newest man in her life. As usual, I listened patiently but felt increasingly irritated and somewhat bored. Triggered by my own irritation, I openly wondered whether she really wanted to meet someone, connect, and marry. She looked at me with puzzlement, mild disdain, and contempt and asked why I would ask such a question. I pointed out that she seemed to be finding fault with every man she dated. I openly wondered whether this criticism represented her own concerns about a committed relationship. Linda's response to my explanation was to repeat, in an increasingly pressured, perseverative, and desperate tone, all the details and deficiencies of the

latest man. Although we had been in this place many times before, I found I did not want to accept only her reality. Instead, internally, I felt a huge knot form in my stomach. Quickly the knot turned into a ball of contained blinding fury. I felt confused by the strength of my reaction because I had previously accepted this kind of interaction with, at the most, mild irritation or boredom. Thus, I remained relatively quiet throughout the remainder of the session, and Linda seemed unperturbed. I did ask a few questions, such as wondering if Linda felt angry with my questions. No, not really she answered. And, because I had challenged her reality, I inquired about that: Did she feel I was usurping her reality? Again, I got “No” as a response.

Following the session, I attempted to sort out the source of my fury during the session and what it meant. Given what I knew about Linda, I had come to believe that her perseverative pressured tone represented her desperate attempt to differentiate what “is real” from what “is not real.” For her, the solidity of her thinking and perceptions represented what she had come to rely on as aspects of herself that provided primary sources of care and strength. Thus my intervention threatened to separate her source of strength and well-being.

But what was operating for me? As I sorted through the meanings of my own reactions, what stood out was that I was tired of feeling smaller and smaller and disappearing in the exchange. This was not an ordinary power struggle; I was trying to avoid annihilation in this relationship while she was struggling to maintain her view of reality, essentially her source of strength and comfort. Although this subtext had been present since the beginning of treatment, it had never bothered me in such an extreme way. Something had shifted in our interaction that allowed space for me to have a reaction; although I did not verbalize my reaction, it was nevertheless powerful. I began to wonder whether the intensity of my fury toward Linda was in some way “permission” from her; that I was sensing through our implicit communication that it was now OK for me to have

some space in our previously one-way relationship. If so, how might I weave my insights into the clinical encounter to test them out?

In the next session I began by sharing my frustration in the previous session and wondered if Linda had noticed. Not really, she said. But she had given some thought to my question. Perhaps, her “pickiness” with men deserved some consideration. I was more than surprised and pleased to hear such a reflective response, and I took her response as confirmation that my formulation regarding a shift in our relationship had occurred; she was indeed making space for me to exist, and I proceeded accordingly.

Over the next 6 months, we had a number of interactions of the kind described above. Linda’s character style did not change. However, when I found myself feeling frustrated and irritated by being “forced” to just accept her view of reality without questioning the underlying motivations, I nevertheless forged ahead in pursuing my agenda, that is, looking at some underlying motivation. At these moments, Linda continued to cling to her perception of reality but with less intensity and assurance. She was invariably able to reflect on my comments and integrate them into her thinking. In addition to all the dynamic formulations I had constructed (described above), I came to understand that Linda was exquisitely vulnerable to absorbing thoughts and feelings of others. Thus, her defensive reliance on her logic and thinking represented not only a relational defensiveness but also a way of regulating the exchange with others so that she did not drown in the other’s thoughts and feelings. Eventually, we were able to locate this dynamic in her relationship with her mother. Bright and precocious as a child, she discerned that Mother “was not quite” right. She gave up on her mother as someone to rely on. Nevertheless, she remained quite vulnerable to what she described as Mother’s unpredictable flights into “craziness.” During those moments she was literally overtaken by the torrent of words and affects emanating from Mother and couldn’t

distinguish her own perception of reality from Mother's crazy outpourings. Defensive avoidance became her character style.

Over time Linda and I moved increasingly toward a more mutual interaction. This mutuality was reflected in her real life. Eventually she was able to forge a modestly satisfying relationship and marry.

Jack

The final clinical vignette illustrates many of the ideas described in the body of the article. This was an unusually "quiet" and subdued treatment. In this lengthy treatment, I relied heavily on matching, correspondences, and "moving with" the patient as a way of conveying attunement and "being in sync." I also relied heavily on implicit procedural communication to convey understanding. In the termination process of this lengthy treatment, I became aware of the impact of this work on me. The patient's progress and my development as a particular kind of analyst were inextricably interwoven.

Jack, a 38-year-old brilliant academic, entered analysis with presenting symptoms of extreme isolation, a pervasive inner sense of emptiness, numerous somatic difficulties, a belief that he couldn't care for himself in the world, and conflict about engaging in any kind of mutual relationship; in all relationships he ended up feeling enslaved to the other, unable to say no, trapped, and endlessly imprisoned. In order to avoid this most terrible dilemma, Jack shunned relationships, but inevitably, with very little provocation, he found himself swept up in the desires of the others and inexorably trapped.

Jack's early history conveyed extreme neglect and some intermittent abuse. Jack's father harbored radical and bizarre political views, which he required everyone in the family to share. Failure to do so or to meet his perfectionist standards resulted in physical abuse. Jack's mother, a meek masochistic woman, responded to this tyranny with psychotic depres-

sion and withdrawal. Periodically, her psychotic rage erupted, taking the form of erratic, disorganized, physical abuse. Jack's adaptation to all of this irrationality and violence was to become the silent and "perfect" boy. By ceasing to exist, by psychically hiding, and doing everything that was expected of him, he felt he could avoid triggering the episodic eruptions of murderous rage. This strategy worked, but, given the chaotic and psychotic family system, the periodic eruptions were inevitable.

Jack's extraordinary intellectual gifts brought him some solace as he withdrew into the world of books. There he found both escape from his bleak and abusive reality and aliveness in the world of ideas. He did extraordinarily well in school, which provided him structure and a pathway to an academic career. The university and scholarship was the ideal fit for his schizoid adjustment.

Jack came regularly four sessions per week. For long periods of time he sat in stony silence, face averted from mine, eyes lowered, head tucked between his neck and shoulders. Questions I asked, in what was for me an unusually soft quiet voice, rarely if ever brought a verbal response. Instead, I felt him shrink even further into his distant shell. I experienced this non-verbal communication as his terror and viewed it as the adult form of his childhood adaptation of "disappearing." As I came to understand his history, which included a profound fear of people, I was able to tolerate the stony impassive silences, the quietness, the lack of response, and the affective deadness of this treatment. I matched Jack's dampened-down affect by dampening down my own responses. As inquiry seemed to push Jack further into his shell, rather than asking questions I tried to match my breathing and arousal state to Jack's. I, too, was silent for long periods of time, breathing, watching, thinking. I used these matching techniques in a conscious way; more than anything, I wanted to communicate that I was "in sync" with him.

Jack's response to almost every comment I made was "no"; he then withdrew into an

impassive stony silence. I uniformly responded to Jack's "no" with an affirming nod of the head and no further comment. I viewed his "no" as beginning communication and a desire to have his own thoughts, separate from mine, far from his tyrannical opinionated father, and avoidant of his depressed, psychotic, and sometimes abusive mother. The first 4 years of treatment were qualitatively similar, with increased periods of mutual gaze, increased verbalizations, and decreased reflexive "no's." Despite the long and sometimes awkward silences, these minute indications of progress spurred me on.

The fifth year of treatment marked a qualitative difference in the interaction. Jack revealed that he was aware that we were in a relationship. He told me he had taken up poetry writing and, much to my pleasant surprise, he brought in a poem that he had written for me. The poem was about a convoluted twisted piece of weatherworn brushwood, missing all of its greenery, standing alone on an empty, desolate, monochromatic stretch of beach sand. Jack spoke of the poem as an image of himself, twisted and gnarled trying to survive in a bleak, harsh, hostile, threatening environment.

The interchange, depicted in the poem, about his self-experience marked both the beginning of the acknowledgment of our relationship and the beginning of more verbal communication between us. The range of therapeutic activity expanded so that we could talk about his fragility, his vulnerability to psychic disorganization, the difficulty he experienced in regulating his distressing affect, his hiding and playing dead as a way of feeling safe. As these issues were articulated with me, he began to develop relationships with others in which he felt less enslaved. His circle of friends grew; he felt less like a "loser" and more like an adult in the world. Most importantly, he felt increasingly able to take care of himself.

Periodically, Jack would bring in a new poem for me to read and comment on. From the monochromatic twisted piece of brush struggling to survive on the bleak and stormy beach, his poetry took on an increasing order, organi-

zation, and cohesion. I viewed these changes as concretizations of his increased psychic structure. I felt he was communicating with me through his poetry rather than in words. He knew he was growing. Eventually, his poetry contained descriptions of vibrant, brilliant, colorful descriptions of flowers and other things. I viewed the advent of color as the integration of affect into his psychic landscape. All these developments, expressed through the form and content of his poetry, were apparent in the consulting room. Jack appeared much less disassociated, much more enlivened, and far more capable of expressing nuanced affect; the poems seemed to sum up his psychic changes.

As Jack and I planned the termination of his treatment, I noticed that in my spare time I had taken up an old hobby. I had begun sketching with either pastels or colorful crayons, and the content of the drawings often included some abstraction or concretization of love: a heart, two love birds eyeing each other, cupid flying with bow and arrow. These idle doodlings did not seem to have much focused interest to me. They just "happened." Eventually, I noticed that I often thought of Jack as I was doodling and I began to wonder about this connection. One day the insight hit me. This doodling, and specifically the doodles creating the symbols of love, crystallized my feelings of love for Jack, which surfaced as we were talking about the termination of this very lengthy treatment. I also realized that in this treatment I had experimented working clinically, more completely, and fully on the procedural nonconscious level of communication; in other words applying many of the things I had learned from infant research. Jack, with his progress rewarded my experiment in this different kind of clinical endeavor in which I had become highly invested. Through our work together, Jack moved from a highly schizoid adjustment into the world of feeling, people, and relationships, and I consolidated my identity as a self-psychological psychoanalyst who integrates infant research and neuroscience. My doodlings expressed in concrete form the bond of love that had grown

between us as we each developed aspects of ourselves that had previously been missing. For Jack the self-deficit was repaired, and for me I had added to my psychoanalytic identity the words and concept “clinical work informed by infant research.” In our last session, I gave Jack one of my framed “love” doodlings. In presenting the gift, I told him I wanted him to have a gift from me to celebrate his considerable growth and progress and noted that both of us were quite awed by the progress and achievements he had made in this treatment. I did not verbalize it, but I believe it was implicitly understood by him that, in addition to all the steady and decent clinical work I had done, the love I had developed for him as he affirmed and rewarded my growth had been a primary component in his growth and development; the gift in nonsymbolic form carried the message.

Conclusion

In describing my expansion of Kohut’s self psychology, I have advocated using the findings from infant research and neuroscience as they add nuance and specificity to the concepts of empathic immersion, attunement, mirroring, and relational repair. In advocating for bringing the procedural and emotional aspects of memory and communication, the bidirectionality of the patient–analyst dyadic interaction, and the synergistic mind/brain/body connection into the forefront of mind, I am not reducing mind to the functioning of its neurons nor clinical interaction to a linear one-to-one correlation similar to the interaction between infants and mothers. Rather, I believe infant research and neuroscience add additional ways to understand and interact with patients in the clinical encounter. The challenge for psychoanalysts in the 21st century is to find ways to continue integrating these areas of research into basic psychoanalytic theory and practice toward the goal of reaching an ever expanding and sometimes difficult patient population.

Conflicts of Interest

The author declares no conflicts of interest.

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