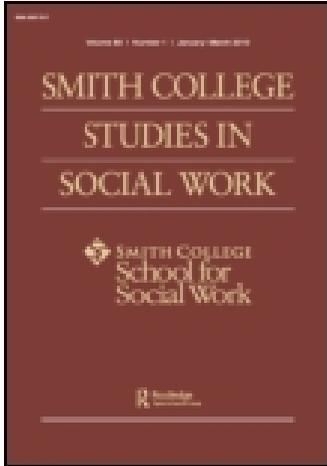


This article was downloaded by: [University of California, Los Angeles (UCLA)], [Terry Marks-Tarlow]

On: 08 August 2014, At: 14:53

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Smith College Studies in Social Work

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/wscs20>

The Interpersonal Neurobiology of Clinical Intuition

Terry Marks-Tarlow^a

^a Reiss Davis Child Study Center, Los Angeles, California, USA

Published online: 08 Aug 2014.

To cite this article: Terry Marks-Tarlow (2014) The Interpersonal Neurobiology of Clinical Intuition, *Smith College Studies in Social Work*, 84:2-3, 219-236, DOI: [10.1080/00377317.2014.923712](https://doi.org/10.1080/00377317.2014.923712)

To link to this article: <http://dx.doi.org/10.1080/00377317.2014.923712>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

The Interpersonal Neurobiology of Clinical Intuition

TERRY MARKS-TARLOW

Reiss Davis Child Study Center, Los Angeles, California, USA

This article addresses clinical intuition from the standpoint of interpersonal neurobiology, the study of how brains, minds, and bodies are shaped through relationship. First, clinical intuition is placed in a developmental framework consistent with nonlinear science. Then, the operation of intuition is described in terms of implicit processes, which operate automatically in bottom-up fashion, as guided by the right brain, under the radar of conscious awareness. A case example of intuition in action demonstrates the holistic potential of a single image to illuminate the nature of a problem plus point the way toward resolution. This article ends with a cautionary note about the limitations of clinical intuition.

KEYWORDS *clinical intuition, interpersonal neurobiology, implicit processes, nonlinear science, embodied metaphor, clinical imagination*

Not long ago, clinical social work journals and mainstream psychotherapy conferences rejected neurobiology. Psychoanalytically minded practitioners clung to a hermeneutic vantage point, claiming that intersubjective levels of meaning making trump all objective attempts to step outside the relationship. Meanwhile, postmodern theorists dismissed neurobiology as mere scientism, or just another language no more privileged than any other form of discourse. Practically minded clinicians expressed concerns about the dangers of biological reductionism—the tendency to reduce psychological phenomena to underlying neurochemistry or brain structures. Taken to extremes, biological reductionism threatens the “talking cure” altogether, if the value

Received 2 May 2014; accepted 2 May 2014.

Address correspondence to Terry Marks-Tarlow, 1460 7th Street, Suite 304, Santa Monica, CA 90401, USA. E-mail: markstarlow@hotmail.com

of the therapeutic bond is dismissed in favor of genetic explanations or pharmacological treatments.

Happily, there exists a way to inject brain science into the art of psychotherapy, while avoiding pitfalls of reductionism. To do so requires highlighting distinctions between linear and nonlinear approaches to science (Marks-Tarlow, 2008). The danger of reducing psychological, social, or cultural levels to underlying mechanical, electrical, or chemical events exists primarily from a linear perspective. Linear chains allow researchers to collapse complex phenomena into their component pieces, processes, or precursors. By contrast, nonlinear approaches preserve natural complexity, partly by incorporating circular models of causality that permit bidirectional loops of interaction. Minds can alter brains (through top-down mental dynamics) at the very same time that brains can alter minds (through bottom-up physiological processes). As an example, culture shapes emotional expression through accompanying brain changes (e.g., Markus & Kitayama, 1991); meanwhile changes in brain chemistry affect how we feel and, in turn, how we shape culture. Things get even more complex when circular models include multiple brain–mind–body systems. This is indispensable to modeling psychotherapeutic exchanges, where to preserve full complexity means to recognize the centrality of relationship.

Enter the nascent discipline of interpersonal neurobiology (Badenoch, 2008; Cozolino, 2002, 2006; Marks-Tarlow, 2012; Schore, 2003a, 2003b, 2012; Siegel, 1999), an interdisciplinary field that seeks to understand people's minds, brains, and relationships through multiple, convergent perspectives. From a linear point of view, people are separate beings who come together to form relationships, whereas a nonlinear point of view reverses this formulation. The individual is seen to “emerge out” of a relationship with a significant “other.” Considering that all babies begin life inside their mother's body, and at birth remain physically and emotionally dependent, a nonlinear formulation dovetails well with actual stages of development.

There is increasing recognition of the importance of a developmental framework to the clinician's eye (e.g., Seligman, 2012). Even when working with adults, clinical practice is best informed by understanding optimal growth patterns plus their potential derailments. Regulation theory as conceived by Allan Schore (2003a, 2003b) is especially important in this regard. Regulation theory marries Bowlby's (1969, 1973) attachment theory—where babies need the security of healthy bonds with critical caretakers—with underlying dynamics in the brain and nervous system. By underscoring the centrality of early attuned or misattuned caretaking to later healthy or unhealthy states of the brain–mind–body system, regulation theory affords a developmental perspective. Regulation theory also is intrinsically nonlinear, by emphasizing critical windows of development plus the disproportionate power of tiny relational traumas to wreak long-term devastation in brains, bodies, and nervous systems. Generally, the earlier an emotional

disruption occurs, the more serious, subcortical, far-reaching, and potentially irreversible the outcome. To adopt a developmental framework lends psychotherapists a more nuanced understanding of patient problems and constraints.

ATTUNED RESPONSE AND IMPLICIT PROCESSES

From the perspective of Schore's regulation theory, regardless of orientation, all forms of psychotherapy inevitably deal with problems of emotional dysregulation. Clinical intuition is better suited to treat emotional dysregulation than a more cognitive focus on problem solving, changing thought processes or behavioral prescriptions. This is because clinical intuition draws upon the same natural faculties that evolved many millennia ago to maximize attuned responses to babies. In all mammals, a mother's attuned care is indispensable to self-care. This means that interactive regulation (the use of attuned relationship to down-regulate high arousal or negative emotion or up-regulate low arousal and positive emotion) precedes the capacity for self-regulation. Whether dealing with children or adults during psychotherapy, precisely because interactive regulation is instinctual, no preset formula or manualized approach can dictate the form each moment will take. Attuned response changes so rapidly, down to the microsecond, based on ever-shifting contours of emotion and arousal, as picked up unconsciously by body-to-body cues.

Within talk therapy, attunement relates less to the content of speech, or what we say, and more to the processes of speech, or how we say it—tone and rhythm of voice (prosody), posture, body movements, facial expression, and eye gaze. These paralinguistic vocal, visual, facial, and postural cues are all part of the implicit relational knowing (Lyons-Ruth, 1998; Seligman, 2012), the primary form of learning and memory a baby uses for the first 2 years of life. Implicit knowledge involves emotional, relational, and body-based experiences that draw upon different underlying brain areas than later developing, explicit, cognitive and verbal faculties. Implicit processes shape Bowlby's internal working models, by forming social expectations and coloring the emotional tone of ongoing experience. It is possible that the implicit level accounts for the quality and landscape of repetitive dreams.

Whether working with children or adults, to pick up on these tiny, multimodal, implicit cues, context is everything. During early development and in psychotherapy, the full context is always too complex for any complete verbal description or prescription. This is one reason why parental and clinical intuition take on such significance and how-to books pale by comparison. Only through intuitive channels can we register the full spectrum of interpersonal data by drawing upon immediate sensory, emotional, and imaginal cues. Because clinical intuition responds to nuance implicitly

and subcortically, this is a fully embodied mode of perceiving, relating, and responding. By contrast to explicit levels of processing (e.g., thinking, analyzing, deciding), implicit responses are fast acting and effortless; they operate automatically, in context, beneath the level of conscious awareness (Claxton, 1997). The importance of implicit relational learning to psychotherapy has been underscored by clinical theorists like Daniel Stern (1985, 2004), members of the Boston Change Process Study Group (2008), and infant researcher Beatrice Beebe (2010; Beebe, Lachmann, Markese, & Bahrlick, 2012). Beebe (2010) documented how tiny contingent moments of discordance or synchrony between caretakers and infants affect future attachment status.

During psychotherapy, when clinicians become immersed in flow states (Csikszentmihalyi, 1990, 1996) with patients, they get caught up in the throes of implicit processes as intuitively guided. Here, there may be emotional challenge, yet often little sense of effort. When therapists and patients ride the waves of interrelatedness, it becomes easy to find smooth rhythms of exchange. Time flies by. Psychotherapy can take on an all-enveloping quality of wholeness. This sometimes feels like a dance where exquisitely coordinated movements are choreographed by no one and both people at once. Or, it may feel like a song of syncopated call and response. When psychotherapists are lucky enough to spend long periods intuitively immersed, despite intense often negative emotional involvement, they can nonetheless leave work feeling energized and refreshed. Amid deep intuitive engagement, the relationship itself becomes vitalized, pulling each person along, ideally nudging both into spontaneous, unexpected places.

Due to the primacy of this mode during psychotherapy, I assert that clinical intuition is what fills the gap between theory and practice (Marks-Tarlow, 2012, 2014). Where theory is static, intuition is alive. Where theory exists outside of real time, intuition involves immersion within the lived moment. Where theory attends to similarities between groups of people, clinical intuition attends to the particulars of this person, in this room, during this moment, given this developmental history. Because of the implicit, exquisite attention to detail and distinctions, I believe clinical intuition is a necessary, though not sufficient, ingredient for deep change during psychotherapy.

Given such a central role proposed, it seems rather peculiar that clinical intuition has received so little attention in clinical theory and studies. When researching my book *Clinical Intuition in Psychotherapy*, I found only one other devoted to the topic (Charles, 2005). Its author was as surprised and dismayed as I at the dearth of empirical material. I speculate that this hole in the literature exists due to the easy association of intuition with that which is mystical, magical, paranormal, airy-fairy, and in short, nonscientific. Fortunately, these misconceptions largely dissipate when intuition is examined through lenses of interpersonal neurobiology as materially grounded in implicit faculties.

RADICAL UNIQUENESS

Whereas explicit learning can be had from books or classrooms, implicit learning cannot; it is too highly sensitive to the particulars of context. Instead, implicit learning requires direct experience. This is the point of practicums and internships during clinical training. Effective psychotherapy implicates implicit relational learning by requiring close attention to the particulars. As mentioned, we must notice what is unique about this person, involved in this conversation, during this moment. But it is not just psychotherapy patients who are unique; so is each practitioner. This lends an individualized “chemistry” to each therapeutic dyad. Indeed, the chemistry itself, that is, the quality of the relationship between any given patient and therapist dyad appears to be more important to the outcome of the therapy than either the orientation or training of the therapist (Geller & Greenberg, 2002; Messer, 2002).

Given that each practitioner’s genetics, history, and developmental experience are highly individualized, it is no surprise that each clinician sports his or her own highly individualized intuitive repertoire. Whether emerging in the form of flashes, hunches, or gut feelings, radical uniqueness holds true for ordinary levels of attuned response, as well as for more extraordinary forms of knowing (Mayer, 2007). An example of extraordinary knowing was relayed to me by a psychoanalyst at a conference several years ago (Marks-Tarlow, 2012). The female therapist had picked up her male patient in the waiting room. The man preceded the therapist down a long hall toward the office. He turned the corner and went out of sight. As he sat down, the patient let out a long sigh that sparked the therapist’s sudden concern, “Uh oh! I hope he doesn’t need CPR.” After the therapist rounded the corner to join him, the patient relayed his horrendous tale from that week. He had been playing basketball with his best friend, who suddenly fell to the floor unconscious. The friend needed CPR but wound up dying anyway.

The psychotherapist was astounded. How did she pick up ahead of time on such a central thread in the patient’s narrative? Although it may not be possible to know exactly how this happened, most psychotherapists have remarkable war stories like this one; yet many keep such stories private, if not secret, for fear of judgment or disbelief. The more seminal the moment, the higher the emotional intensity, and the greater our capacity to tune into invisible strings that continually interconnect the minds, brains, and bodies of people we love and care for. It is quite possible that dangerous, fearful circumstances heighten receptivity, perhaps communicated through body-to-body channels, amygdala to amygdala. For one psychotherapist, an intuitive moment might arrive as a flash of insight—an image or visual capacity to “see” an interpersonal pattern in a way that conveys new understanding or meaning. The clinical case described later involves a visual metaphor of this variety. For another practitioner, clinical intuition may take the form of a

hunch, that is, a cognitive sense of knowing that arrives fully fleshed out, as if out of nowhere. As in the example above, a sense of concern or certainty might surround information that is invisible to the naked eye or seemingly beyond the scope of our reach.

At times, our intuitive repertoire appears not only unique, but downright idiosyncratic. One clinical psychologist I know is also a musician. He reports hearing music as an ongoing, almost continuous backdrop during psychotherapy. Ominous music might signal a sense of emotional danger in the room, whereas joyful tones might signal an intimate moment or recognition of progress achieved.

CLINICAL INTUITION IS EMBODIED

In all forms of intuition, the body aspect is key. Because intuition is subcortically driven and originates in early developing, somatically based sensing and feeling, all kinds of intuition involve embodied perception and knowledge. Because intuition processes social and emotional cues below the threshold of awareness, its implicit operations tap into Freud's concept of the unconscious. The burgeoning field of neuropsychanalysis (e.g., Kaplan-Solms & Solms, 2000) translates classical psychoanalytic concepts into brain structures and circuitry, as grounded in empirical research and speculation. To articulate an underlying neurophysiology is to fulfill Freud's (1895/1953) dream as expressed in "Project for a Scientific Psychology," but for which the requisite technology did not yet exist during Freud's time.

Schore (2003b, 2010, 2011) offered the fascinating possibility that Freud's unconscious can be localized within the right-brain's early developing, implicit self. In a model that is inherently more relational than Freud's, Schore's deepest subcortical layer of processing social and emotional cues begins with the amygdala, which is functional at birth. Able to read primitive states of danger and safety while tracking negative and positive emotions, this bottom level corresponds to Freud's deep unconscious as well as to Jung's archetypes. The second level, which comes online around age 3 or 4 months, contains midlevel cortical structures of the anterior cingulate and insula that mediate attachment bonds plus process pain and social conflict. This middle level corresponds to Freud's preconscious level of processing. The third tier of the hierarchy enters in around age 12 months, when the orbital frontal cortex and other prefrontal areas loop into the limbic circuitry. This highest layer of implicit self carries conscious awareness. It also mediates humor and personality, imagery and metaphor, dreams and symbolism, while incorporating multimodal information to integrate inside and outside environments.

Because intuition is fully attuned to the body's autonomic nervous system (which regulates arousal) and to limbic structures like the insula

(which reads internal body states), it makes sense that clinical intuition can also arrive in the form of gut feelings. Sometimes called somatic countertransference (Lewis, 1986) or projective identification (Waska, 1999), psychotherapists can experience what amounts to minisymptoms in response to dysregulated states in patients. Somatic signals clue us into the deep unconscious of others. A knot in the stomach might signal dysregulated anger, an ache in the chest, dysregulated grief. Somatic symptoms such as these are particularly prevalent in cases of dissociated, unconscious emotion not yet accessible to patients (Marks-Tarlow, 2014; Schore, 2012). When dissociated emotions are experienced by sensitive therapists, our bodies function like resonant tuning forks (Stone, 2006).

The seemingly mysterious phenomenon of somatic countertransference is partly demystified by recent research into the neurobiology of empathy (e.g., Decety, 2011; Decety & Ickes, 2009). From the perspective of the brain, empathy has two aspects—one emotional, the other cognitive, each with different underlying neural correlates. The emotional aspect of empathy involves a contagion effect, that is, sharing an attenuated version of the feeling states of another. The cognitive dimension of empathy involves mentalizing (Fonagy, Gergely, Jurist, & Target, 2004), that is, cognitively understanding the mind of another, while registering differences between self and other. Decety (2011) emphasized the importance of balance. If emotional resonance runs too high, the resulting personal distress actually trumps the capacity for true empathy. Perhaps psychotherapist burnout and compassion fatigue represent the sort of imbalance where clinicians' bodies are too highly resonant for our own health.

An important reason to pay attention to gut feelings during psychotherapy is because the guts have a brain of their own, being part of the enteric nervous system (in charge of digesting food)—which is the third division of the autonomic nervous system that operates relatively autonomously alongside sympathetic and parasympathetic branches. The enteric nervous system is evolutionarily older than the central nervous system (brain and spinal cord). With respect to survival, this makes sense, for it is more important to eat than to register emotion, pain, or any other sensation. The enteric nervous system contains more than 100 million nerves that transmit messages through the spinal cord via all the major neurotransmitters: dopamine, serotonin, acetyl choline, nitric oxide, and norepinephrine.

Recent research (Welgan & Meshkinpour, 2000) reveals exquisite social sensitivities of the gut. When emotionally tinged words were presented to participants, increased intestinal contractions and changes in rectal tone were measured in response to angry, sad, or anxious words, especially for people with irritable bowel syndrome. It appears that the mind is embodied in the brain, though the brain is embedded in the body; and the embodied nature of clinical intuition is precisely how clinicians tune into nuance, variability, and the full complexity of relationship, as expressed moment to moment.

INTUITION IS A TWO-WAY STREET

Whatever form it may take, clinical intuition often runs in both directions during psychotherapy. The notion of all-knowing psychotherapists who deliver insight to patients dates back to classical psychoanalysis. At its inception, psychoanalysis was deeply influenced by the medical model in which it arose. The psychoanalyst (predominantly male) was imbued with power and authority to provide insight to his patients (often female). Insight took the form of interpretations designed to bring unconscious conflicts and motivations to conscious awareness. Interpretations regarding forbidden wishes and repressed fears frequently did prove therapeutic. Yet in hindsight, we see how historically insulated and culture-bound such transference-countertransference dynamics were, as derived from the Victorian era of suppressed sexuality and prefeminist thought.

Contemporary schools of psychoanalysis have altered the power structure of the therapist-patient dyad. In present day, more highly relational practice, the model is less hierarchical and nonauthoritative. Therapists and patients serve as copartners. Each is expected to bring authentic presence and full faculties to the enterprise of emotional healing. No matter what the intuitive prowess of the psychotherapist, patients retain final authority over the sovereignty of their subjectivity. Horizontal models of power enable clinical intuition to extend bidirectionally—not only from therapist to patient, but also from patient to therapist. Yet the issue is even subtler, especially when one takes into account the priming time and emotional preparation that so often precedes intuitively guided insights. From the truly intersubjective perspective of interpenetrating subjectivities, it may be wisest to consider all acts of intuition, no matter in whom they originate, as acts of cocreativity. Perhaps all intuitions emerge from the relational unconscious that is shared between therapists and patients (Gerson, 2004).

RIGHT- VERSUS LEFT-BRAIN MODES

Although implicit, intuitive learning and memory are guided by the early developing right brain, conscious deliberation is orchestrated by the later developing left brain. When looking at hemispheric differences, a popular misconception places particular activities like solving a math problem or playing the violin squarely inside one hemisphere or the other. The resulting controversy prompts some neuroscientists to refute the concept of hemispheric specialization altogether. For example, Kosslyn and Miller (2013) favored a horizontal division into “top brain” and “bottom brain.” Surely, as these researches suggest, cortical versus subcortical distinctions in brain function are significant. Nonetheless, all reptilian and mammalian brains are physically divided into left and right halves for important reasons, although a more nuanced view of brain lateralization is needed.

Psychiatrist Iain McGilchrist has devoted himself to the study and significance of hemispheric specialization. In his masterful, empirically grounded book on the topic, McGilchrist (2009) asserted that both sides of the human brain can approach just about any activity. Yet each hemisphere offers a different quality of subjectivity that brings into being a whole different world. The right brain specializes in the global picture, taking into account an overview of the world. By contrast, the left brain hones in on the details, often in service of exerting its will. This part/whole difference in how each hemisphere attends to the world is reflected perceptually in how each side regulates the visual field. The left hemisphere attends to the right side of space only. By contrast, the right hemisphere specializes not only in the left side of space, but also in combining visual information from both sides of space.

The right hemisphere's perspective is holistic, whereas that of the left hemisphere is piecemeal. Clinical intuition is a function of the right hemisphere precisely because its holistic operation preserves the entire, embodied context. Clinical intuition allows clinicians to take in the overview to hone in on what is most salient. Indeed, as McGilchrist (2009) emphasized, the right brain regulates what type of attention we are using, plus when and how we switch modes. The type most relevant to clinical intuition is open attention or broadband focus. This mode is reminiscent of Freud's (1912/1958) "evenly hovering attention" as well as Bion's (1967) suggestion that the most effective way to enter a session involves putting aside all memory and desire. Because broadband attention takes in the whole of things, it provides the widest lens for sensing and subsequently zooming closer in on what is most important at any given time. When we zoom in on a detail during psychotherapy, sometimes we remain close to a right-brain focus, such as when the object of our attention includes the body. For example, we may notice that a patient's facial expression reveals something that his words do not. But just as easily, we may shuttle over to a left-brain focus on a tiny detail or on explicit content, as when we get absorbed in a patient's narrative about a recent incident.

When the left brain is in the forefront of consciousness, its verbal and logical processes tend to operate in a vacuum, by removing its object of focus from context. This is easy to see with language. When I write the word *desk*, I strip out the entire sensory context of any particular desk. The more abstract the arena of reflection, the more important that left-brain analysis and deliberation be fully grounded by the right-brain's concrete and holistic sensibilities. Otherwise, it becomes all too easy for awareness to slip into delusion and falsity, including utter fabrication. Michael Gazzaniga was an early neuroscientist to study split-brain patients, whose corpus callosum (the huge brain tracts connecting right and left hemispheres) was severed to prevent the spread of grand mal seizures. Gazzaniga (2005) nicknamed the

left-brain as “the interpreter” due to its story telling capacities plus relentless quest for explanations and making sense of whatever it encounters.

Translated into clinical terms, the left brain’s need for a complete and coherent story easily becomes the stuff of higher order defenses, like intellectualization, rationalization, and denial. This is why effective therapy requires that left-brain, detailed focus and narratives be grounded in the right-brain intuition plus fully embodied context. As alluded to by McGilchrist’s (2009) eloquent title (*The Master and His Emissary*), the right brain (including clinical intuition) is the master, whereas the left brain (including clinical deliberation) is its emissary. Proper whole-brain functioning requires close communication between the two sides.

McGilchrist (2009) identified a natural hierarchy of attention that moves right-left-right. First, the primacy of the right brain capitalizes on open, global attention. Then, as something strikes our interest, clinicians may shuttle to the left for a more detailed zoom, only to return to the right to free associate, find a metaphor, let an image emerge, or return to an open view. As clinicians, we use this order of attention naturally and intuitively, as I demonstrate shortly with a case example.

IN PURSUIT OF NOVELTY

When examining the role of right-brain intuition versus left-brain deliberation during psychotherapy, it helps to understand the conditions under which clinical intuition functions better than clinical deliberation. These include uncertain or ambiguous circumstances; when there is incomplete information; situations of emergency or urgency; when time is of the essence; or in situations of intense arousal and high emotionality. By contrast, deliberate reasoning is more useful when full information is available, under emotionally neutral circumstances, and when no urgency or time pressure exists.

This understanding emerged partly from research in critical care nursing (e.g., King & Appleton, 1997). Clearly, the emergency room is a place of great urgency and intense pressure. Life and death matters are common, requiring immediate response, with little time for research or questions. To complicate matters, emergency room patients may be unconscious or unable to respond verbally for other reasons. In the context of critical care nursing, remarkable stories of clinical intuition abound.

Psychotherapy usually presents less drama than the emergency room. Yet, in attenuated form, conditions in our offices can be quite similar. This especially holds true if we work with highly traumatized individuals, at the edges of regulatory boundaries. All factors considered, clinical intuition is the primary mode of response in psychotherapy for multiple reasons. Because clinical work deals with high levels of complexity, it is important to consider

the full context. It is better for ideas to emerge from observations and direct experience, rather than to walk into the room with a preset theory or set of ideas, in search of supporting evidence. Despite operating with ambiguous information, conditions of uncertainty, and emotional urgency, we must detect what is most salient in hopes of stimulating and exploring novel territory. And with respect to novelty, the right brain is again foundational.

Because division of labor across the two sides of the brain is quite ancient, an evolutionary perspective is useful. Brain lateralization extends back more than 500 million years to early vertebrate development, long before the appearance of warm-blooded animals (MacNeilage, Rogers, & Vallortigara, 2009). In reptiles and birds, the left side of the brain became specialized for tasks that are routine, such as eating a meal or building a nest. By contrast, the right side of the brain became specialized for tasks that involve novelty, such as detecting danger or seeking shelter. We easily detect this difference in predator/prey relationships. Predators stalk their prey using the right visual field (as mediated by the left hemisphere), which allows them to zoom in on potential food sources. By contrast, prey perceive predators most easily through the left visual field (as mediated by the right hemisphere). The ease of detecting danger on the left undoubtedly has led to widespread prejudice against left-handed people. For example, words like “sinister,” which translates in Latin to mean left-handed, associates the left side with things that are evil or threatening, like the devil.

With respect to clinical concerns, this distinction between hemispheres based on novel versus routine concerns broadens our context for understanding why intuition is so important during psychotherapy. To effect deep change, therapists and patients must be open to what is new, which is inherently the domain of the right brain. Although the left brain can help people analyze problems, spell out choices, or make conscious predictions about what might come next, only the right side carries the creative capacity for something entirely novel, spontaneous, or unpredictable to emerge.

CLINICAL EXAMPLE

I choose this clinical example in order to describe a right-left-right-left clinical sequence. I begin with an open stance (right); from there, I zoom in on a significant detail (left); out of the ensuing exploration came a useful image (right), that provided a core metaphor to be fleshed out again and again in future sessions.

In a recent session, a patient I'll call Greta¹ doubted her capacities to be creative at work the way she perceived her colleagues to be. As my patient got more and more caught up in comparisons to her coworkers, she started slumping further and further down on my couch. Greta appeared to be in the throes of the same kind of “sinking” feeling she was describing at work.

My attention intuitively shifted from what Greta was saying to what was happening in her body. Drawn to Greta's rather collapsed posture, I seized the opportunity to work holistically and somatically by asking where and how Greta experienced that sinking feeling in her body, in real time.

Greta responded, "I feel as if I'm standing in quicksand. The more I struggle to get out, the deeper I sink in." This image of standing in quicksand was brief and simple, yet over the ensuing weeks, Greta and I came to appreciate how brilliant this image was as an embodied metaphor that allowed us to unpack more and more from within it.

Here is some background. My patient worked in a hypercompetitive, hypermale, highly alpha, professional environment. In response to these conditions, Greta's initial instinct was to compete like the others. Although this strategy is easy to understand, unfortunately this mode of relating to others did not suit Greta at all. Instead of thriving on the competition, as many of her colleagues appeared to do, Greta became ever more fearful of being less than others and left only in a one-down position. Greta responded to ongoing work pressures and deadlines with a kind of internal running. Because there was no resolution to be had, the faster Greta moved on the inside, the more she scrambled on the outside. She became defensively aggressive, and in turn more impatient and impulsive with others. Greta started barking out orders and spitting out criticisms to colleagues. After each episode of loss of self-control, Greta would grow horrified and regretful at her own outburst. She would then dissolve into a fit of fear that no one liked her or wanted to work with her. This culminated in Greta's self-proclaimed "paranoia," an obsessive worry about being publicly shamed and fired.

Translated into neurobiological terms, Greta's amygdala was chronically signaling emotional danger, to which the sympathetic branch of her autonomic nervous system responded with a perpetual state of hyperarousal. Feeling like prey among predators, Greta became hypervigilant. Her attention was turned outwards, often riveted on the facial expressions and vocal prosody of her colleagues, especially the partners in her firm. Greta began having trouble sleeping. She suffered from headaches, stomach aches, and started catching colds more often. These stress symptoms are common when the body is flooded by cortisol, the major stress hormone. High sympathetic arousal diverts circulation away from inner organs and functions, including digestion and immune response. Rather than attend to the inner viscera, blood is sent instead to the outer limbs to ready the organism for fight/flight responses. But in this modern era, there is often no one to fight and nowhere to flee. When stress floods the body but cannot be alleviated, this leads to allostatic load (McEwen, 2002), making it impossible to clear out problems, rest up, or restore balance.

Physiologically and emotionally, Greta was caught in a negative loop from which she could not exit. The more fearful and "paranoid" she became, the more out of control Greta acted. The harder Greta tried to get out of her

plight, the deeper she sank in. Greta was trapped in a vicious cycle that indeed bore an uncanny resemblance to quicksand!

Whether originating in patients or psychotherapists, there is often great beauty and paradox to be found within intuitive flashes. Although it seems perverse to find aesthetic pleasure surrounding “ugly” truths, the recognition of deep pattern is vital to therapists and patients alike. Because intuition recognizes the whole in the part, intuition is particularly adept at uncovering deep pattern. Precisely because imagistic products of the right brain are holistic, they point toward an overview, often by linking inner conditions with outer circumstances. When we attend carefully enough to spontaneously produced images such as the quicksand image, we can seek broader wisdom, and sometimes solutions emerge naturalistically.

By meditating on Greta’s dilemma of sinking in quicksand, the natural response of stillness and reflection was obvious. This is exactly what Greta lacked in her sense of urgency and impulsive responses. Instead of her hypervigilant, hyperactive external focus on the deeds of other, which further triggered her reactivity, Greta would benefit from pulling her attention back into her own body and her own psyche. She needed to prioritize calming down above all else. Only by stilling Greta’s impulse to run could she ground herself sufficiently to find her own inner authority and bring the whole of who she is into work. To truly shine Greta needed to pay attention to her own sources of integrity and to her priority of relating well to others, even if this meant countering the predominant culture of her firm. By gathering her wits in stillness, Greta could maximize her chances to utilize all of her resources, inner and outer, to step out of the quicksand of fear, frustration, and impulsivity.

FLASHES IN THE DARK

Part of the utility of intuitive flashes like Greta’s is an opportunity to revisit them again and again in psychotherapy. Images like the quicksand serve as through lines for tying together broad themes and key moments from the past. A session or two after her quicksand image emerged, Greta spontaneously recalled a memory. As a rebellious teenager, Greta’s parents sent her to psychotherapy, hoping for a quick fix to the problem of Greta’s relentless anger. During an early session, the therapist asked Greta to draw a picture of a man and a woman. When Greta completed the drawing, the therapist noted an absence of feet in both figures. Looking back, Greta mused, “Perhaps those figures *did* have feet after all, but they were hidden under the quicksand.” At this point of self-reflection, it became clear to Greta and myself that sinking feelings of being stuck and immobilized had a long history.

In this session and in many more to follow, psychotherapy took on a different feel. Our conversations sunk deeper, further under the surface. A year and a half into the work, Greta now focused less on recalling and rehashing events of the week and more on unearthing her dark, shadowy side that had been living for decades under the mud. Greta slowed down her frantic efforts to purge this side of herself. She even allowed me to stand alongside her in the muck. Instead of fighting this unpleasant side while sinking ever deeper into it, Greta began confronting the inner perfectionist who was too intolerant to face her own blemishes. As Greta's interest in her internal world increased, her outer drama decreased. Greta's fear lessened significantly that anyone would discover, skewer, or fire her for her defects.

As Greta's clinical imagination opened up, it allowed her to face and synthesize internal truths. All of this occurred in tiny shifts. Meanwhile, I was acutely aware of an irony at the heart of Greta's potent image. At the very same instant that she had protested her lack of creativity, Greta's unconscious had been wonderfully clever. Greta's symbolic, "high right" had delivered the perfect image in response. Not only did it capture the problem, but it also offered the solution in a single flash. Although this sequence of events felt amazing to me, they did not to Greta. Instead, the original image and its capacity to cohere previous feelings, knowledge, and experiences felt mundane, like the mud itself. When I inquired if anything felt more magical to Greta, she noted some previous occasions when I had delivered interpretations offering insights she had never before considered. I suppose at those times, my intuitions helped Greta to feel lifted out of the mud. By contrast, Greta's own vision delivered both of us into the mud. But so be it. Such was the difference in our perspectives.

THERAPIST BEWARE

After touting the benefits of clinical intuition and providing a clinical example, a word of caution is now in order. Within psychotherapy, it is always important to hold intuitive sensibilities lightly and with humility. Just as left-brain, conscious thought can bleed into delusional thought and lies without the grounding of right-brain intuition, so too can clinical intuition infuse wrong information and misguided impulses into psychotherapy, if its operations proceed unchecked, without supporting evidence provided by careful deliberation.

The line between helpful intuition and harmful countertransference is thin and ever shifting. Intuitions should always be scrutinized for projections, impulsive actions, or toxic instincts. Never assume an intuition is correct without seeking corroboration, either by checking in with patients or by seeking other sources of observation or reflection. The dangers of the intuitive mode are brought home by Daniel Kahneman, the only psychologist

who has ever won a Nobel Prize (for economics, as there are no prizes for psychologists). Kahneman (2002) detailed risks of overconfidence surrounding intuition's felt-sense of certainty. In Kahneman's experiments, in response to math questions, people easily go astray by answering impulsively and prematurely, without taking the time to cross-check validity.

During psychotherapy, it would be wise to slow things down and think things through if any of the following experiences occur: great urgency to respond; frequent feelings of defensiveness; unrelenting repetition in patient/therapist dynamics; long trajectories of deterioration, either in the patient's condition or the therapeutic bond; chronic feelings of fatigue or being drained. Should any of these conditions hold, especially over a long period of time, it is vital to step out of intuitive mode and use conscious deliberation instead. Relentlessly seek feedback, within yourself and from your patient; and if doubts persist, be sure to seek supervision or consultation.

Here is some advice for the prudent clinician. Always watch to see how your intuitions fold into the clinical dialogue. Ask patients whether they feel a resonance with what you are saying. Especially when speculating about unconscious feelings or motives, patients cannot always attain certainty about unconscious truths. Often they have to look at the issue sideways, as if gazing with peripheral vision or through opaque lenses. With respect to clinical intuitions concerning the deep unconscious, keep in mind that by definition patients cannot have full access. The best that can be expected is a fuzzy feeling of resonance, a "sort-of-knowing" (Petrucci, 2010). Most importantly—if a patient insists something is off or holds no resonance at all, then let it go—at least for now.

Remember that deliberation and intuition are dual aspects of psychotherapy that work hand in hand. Both are important, and we continually shuttle back and forth between these two modes. Where clinical intuition facilitates the art of psychotherapy, conscious deliberation facilitates a more scientific, empirical approach. We use intuition to take leaps into the unknown and deliberation to check their impact and relevance. To shuttle back and forth between modes requires looking and asking for feedback to check the accuracy or utility of all intuitive leaps. The more we use our skills of observation and inquiry in service of gathering feedback and checking accuracy rather than assuming we are correct, the more sensitively honed we will be as therapeutic instruments.

CONCLUSION

This article illuminates the utility and power of clinical intuition as a primary mode during psychotherapy. The topic deserves much more attention in clinical research and writing than it has gotten to date. Clinical intuition is

an embodied, holistic faculty of perception and response during psychotherapy. Intuition is a right-brain mode that both attends to the big picture, as well as sticks to the tiny details of emotion and its relational fluctuations. Clinical intuition operates by tapping into implicit learning and memory, while drawing upon the full embodied context, as it shifts from microsecond to microsecond.

An intuitive mode of perception and response operates automatically and effortlessly under the surface of awareness, lending ease, achieving flow, making connections, and finding interpersonal pattern. In contrast to left-brain, clinical deliberation, right-brain clinical intuition guides attention to what is most salient, thereby expanding our potential for entering novel territory. Whether an image or other intuitive production arises initially in the therapist or patient is of little importance. Given its priming time and context-dependent nature, it may be most useful to view all intuitive products as intersubjective products of the relational unconscious. No matter how it arises or in whom, intuition should be cherished as necessary, though not sufficient, to deep change within psychotherapy.

NOTE

1. Patient permission obtained; all identifying data disguised.

REFERENCES

- Badenoch, B. (2008). *Being a brain-wise therapist: A practical guide to interpersonal neurobiology*. New York, NY: W.W. Norton.
- Beebe, B. (2010). The origins of 12-month attachment: A microanalysis of 4-month mother-infant attachment. *Attachment & Human Development, 12*(1/2), 3–141.
- Beebe, B., Lachmann, F., Markese, S., & Bahrack, L. (2012). On the origins of disorganized attachment and internal working models: Paper I. A dyadic systems approach. *Psychoanalytic Dialogues, 22*, 253–272.
- Bion, W. R. (1967). *Second thoughts*. London, UK: William Heinemann.
- Boston Change Process Study Group. (2008). Forms of relational meaning: Issues in the relations between the implicit and reflective-verbal domains. *Psychoanalytic Dialogues, 18*, 125–148.
- Bowlby, J. (1969). *Attachment (volume 1)*. New York, NY: Basic Books.
- Bowlby, J. (1973). *Separation: Anxiety & anger (Vol. 2: Attachment and loss)* (International Psycho-Analytical Library No. 95). London, UK: Hogarth Press.
- Charles, R. (2005). *Intuition, counseling and psychotherapy*. New York, NY: Wiley.
- Claxton, G. (1997). *Hare brain, tortoise mind: How intelligence increases when you think less*. New York, NY: Ecco Press.
- Cozolino, L. (2002). *The neuroscience of psychotherapy: Building & re-building the human brain*. New York, NY: W.W. Norton.

- Cozolino, L. (2006). *The neuroscience of human relationships: Attachment and the developing social brain*. New York, NY: W.W. Norton.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper and Row.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York, NY: HarperCollins.
- Decety, J. (2011). The neuroevolution of empathy. *Annals of the New York Academy of Sciences*, 1231, 35–45.
- Decety, J., & Ickes, W. (2009). *The social neuroscience of empathy*. Cambridge, MA: MIT Press.
- Fonagy, P., Gergely, G., Jurist, E., & Target, M. (2004). *Affect regulation, mentalization, and the development of the self*. London, UK: Karnac Books.
- Freud, S. (1953). Project for a scientific psychology. In J. Strachey (Ed. & Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 1, pp. 283–397). London, UK: Hogarth Press. (Original work published 1895)
- Freud, S. (1958). Recommendation to physicians practicing psychoanalysis. In J. Strachey (Ed. & Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 7, pp. 109–120). London, UK: Hogarth Press. (Original work published 1912)
- Gazzaniga, M. (2005). Forty-five years of split-brain research and still going strong. *Nature Reviews Neuroscience*, 6, 653–659.
- Geller, S., & Greenberg, L. (2002). Therapeutic presence: Therapists experience of presence in the psychotherapy encounter in psychotherapy. *Person Centered & Experiential Psychotherapies*, 1, 71–86.
- Gerson, S. (2004). The relational unconscious: A core element of intersubjectivity, thirdness, and clinical process. *Psychoanalytic Quarterly*, 73(1), 63–98.
- Kahneman, D. (2002, December 8). *Maps of bounded rationality: A perspective on intuitive judgment and choice* (Nobel Prize Lecture, Aula Magna, Stockholm University). Retrieved from http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2002/kahnemann-lecture.pdf
- Kaplan-Solms, K., & Solms, M. (2000). *Clinical studies in neuro-psychoanalysis*. London, UK: Karnac Books.
- King, L., & Appleton, J. (1997). Intuition: A critical review of the research and rhetoric. *Journal of Advanced Nursing*, 26, 194–202.
- Kosslyn, S., & Miller, G. (2013). *Top brain, bottom brain: Surprising insights into how you think*. New York, NY: Simon & Schuster.
- Lewis, P. (1986). *The somatic countertransference*. Chicago, IL: American Dance Therapy Association Conference.
- Lyons-Ruth, K. (1998). Implicit relational knowing: Its role in development and psychoanalytic treatment. *Infant Mental Health Journal*, 19(3), 282–289.
- MacNeilage, P., Rogers, L., & Vallortigara, G. (2009). Origins of the left and right brain. *Scientific American*, 301(1), 60–67.
- Marks-Tarlow, T. (2008). *Psyche's veil: Psychotherapy, fractals and complexity*. London, UK: Routledge.
- Marks-Tarlow, T. (2012). *Clinical intuition in psychotherapy: The neurobiology of embodied response*. New York, NY: W.W. Norton.

- Marks-Tarlow, T. (2014). *Awakening clinical intuition: An experiential workbook*. New York, NY: W.W. Norton.
- Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 242–253.
- Mayer, E. (2007). *Extraordinary knowing: Science, skepticism, and the inexplicable powers of the human mind*. New York, NY: Bantam.
- McEwen, B. (2002). Sex, stress and the hippocampus: allostasis, allostatic load and the aging process. *Neurobiology of Aging*, 23(5), 921–939.
- McGilchrist, I. (2009). *The master and his emissary: The divided brain and the making of the western world*. New Haven, CT: Yale University Press.
- Messer, S. (2002). Let's face facts: Common factors are more potent than specific therapy ingredients. *American Psychologist*, 9(1), 21–25.
- Petrucci, J. (Ed). (2010). *Knowing, not-knowing and sort-of-knowing: Psychoanalysis and the experience of uncertainty*. London, UK: Routledge.
- Schore, A. (2003a). *Affect dysregulation & disorders of the self*. New York, NY: W.W. Norton.
- Schore, A. (2003b). *Affect regulation & the repair of the self*. New York, NY: W.W. Norton.
- Schore, A. (2010). The right-brain implicit self: A central mechanism of the psychotherapy change process. In J. Petrucci (Ed.), *Knowing, not-knowing and sort of knowing: Psychoanalysis and the experience of uncertainty* (pp. 177–202). London, UK: Karnac.
- Schore, A. (2011). The right brain implicit self lies at the core of psychoanalytic psychotherapy. *Psychoanalytic Dialogues*, 21, 75–100.
- Schore, A. (2012). *The science of the art of psychotherapy*. New York, NY: W.W. Norton.
- Seligman, S. (2012). The baby out of the bathwater: Microseconds, psychic structure, and psychotherapy. *Psychoanalytic Dialogues*, 22, 499–509.
- Siegel, D. (1999). *The developing mind*. New York, NY: Guilford Press.
- Stern, D. (1985). *The interpersonal world of the infant*. New York, NY: Basic Books.
- Stern, D. (2004). *The present moment in psychotherapy and everyday life*. New York, NY: W.W. Norton.
- Stone, M. (2006). The analyst's body as tuning fork: Embodied resonance in countertransference, *Journal of Analytical Psychology*, 51(1), 109–124.
- Waska, R. (1999). Projective identification, countertransference, and the struggle for understanding over acting out. *Journal of Psychotherapy Practice and Research*, 8(2), 155–161.
- Welgan, P., & Meshkinpour, H. (2000). Role of anger in antral motor activity in irritable bowel syndrome. *Digestive Diseases and Sciences*, 45(2), 248–251.

Terry Marks-Tarlow, PhD, is a clinical psychologist in private practice in Santa Monica, California, who teaches affective neuroscience at Reiss Davis Child Study Center and is author most recently of *Clinical Intuition in Psychotherapy* (2012, Norton) and *Awakening Clinical Intuition* (2014, Norton).