

Forms of Relational Meaning: Issues in the Relations Between the Implicit and Reflective-Verbal Domains

Boston Change Process Study Group

Introduction

This is largely because of the growing awareness of the large domain of implicit knowing, both in infant observations and in adult therapy, as well as new importance given to enactments, which are usually seen as implicit. To make the dialogue more productive between clinicians and theorists, it becomes necessary to delineate as clearly as possible the differences, similarities, connections, and boundaries between these two domains. Stated differently, we wish to examine whether the two domains are best

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seen as separate, interwoven, grounded one upon the other, or even fused. As is shown, we are comparing implicit with reflective-verbal rather than with explicit, as it is closer to what clinicians mean when they use the term *explicit*.

We examine the relevant issues that may help us think about the relations between these two domains. This is with the belief that greater clarity about the issues at stake is needed for the field of relational psychoanalysis to develop a coherent set of theoretical concepts. In addition, the issues raised here may be of interest to neuroscientists in planning research strategies that address the brain processes underlying the functioning of the mind.

Definitions

The first problem is, what do we mean by meaning or experiencing or thinking or reflecting or implicit? Because our main concern is on relational psychological events, we give working definitions for terms and concepts that we find useful or necessary in dealing with relational phenomena. These include, especially, *meaning, thinking, experiencing, reflecting,* and the *implicit*.

Meaning. We do not tackle the entire field of meaning. Rather we make some basic distinctions that permit us to think more clearly about meaning across the different relational domains of the implicit, and the reflective-verbal, including narrations. We start with dictionary definitions.

The first (and archaic) dictionary entry for *meaning* reads, "That which exists in the mind, view, or contemplation or settled aim or purpose; that which is meant or intended to be done" (Webster's New Twentieth Century Dictionary, 1979, p. 1115). In this version, although intention is crucial, the role of language is neither clear nor essential. The secondary entry for *meaning* adds language. The intention can remain unformed or amorphously latent "until it is retaken up" in the verbal domain where it acquires a meaning or signification. This sense of meaning is addressed in the section for *reflection*.

The Oxford English Dictionary (1991) presents us with the same dilemma. In the primary citation for meaning, a linguistic role is not essential, but more "to intend, to have in mind, to show forth." But again language seems to slip in secondarily: "to signify, to make known." Of note in these definitions, "contemplation" or "having in mind" are both present without necessary allusion to language or consciousness.

Thinking. Most dictionaries maintain a creative ambiguity about this key word, the meaning of which we all assume we know. Most dictionaries give as a primary meaning of thinking, "to form or hold in mind or to exercise the mental capacities so as to form ideas" (Webster's College, 1999, p. 930). This leads us to run up against the definitions of *ideas*. A quite unusual but very pertinent notion of *ideas* is presented by novelist Alessandro Barrico (2002):

Ideas are like galaxies of little intuitions, a confused thing ... which is continually changing ... they are beautiful. But they are a mess ... in their pure state they are a marvelous mess. They are provisional apparitions of infinity. Clear and distinct ideas are an invention of Descartes, are a fraud, clear ideas do not exist, ideas are obscure by definition, if you have a clear idea it is not an idea. ... Here's the trouble. ... When you express an idea you give it a coherence that it did not originally possess. Somehow you have to give it a form that is organized and concise, and comprehensible to others. As long as you limit yourself to thinking it, the idea can remain the marvelous mess that it is. But when you decide to express it (in words) you begin to discard one thing, to summarize something else, to simplify this and cut that, to put it in order by imposing a certain logic: you work on it a bit, and in the end you have something that people can understand. A "clear and distinct" idea. At first you try to do this in a responsible way: you try not to throw too much away, you'd like to preserve the whole infinity of the idea you had in your head. You try. But they don't give you time, they are on you, they want to know. (p. 202)

It is clear that thinking may or may not include verbal thought and linguistic manipulation, and it need not be conscious or reflective. But it can be all of these. Abstract reasoning is probably a special kind of thinking that need not concern us here.

Reflection. The dictionary definition of reflection is "to bring back an experience, to throw it back, to reproduce it, mirror it, or bend the experience back" (Webster's College, 1999, p. 1107). In a relational context, it means to re-experience a relational happening but in a different context and time such that the experience is reorganized. It is important to note that not every use of words includes reflection and not every reflection includes the use of words. The relations one is capable of reflecting on, as well as how one reflects, is a developmental issue. For example, there are many levels of

reflection in general and many increasingly abstract levels of reflection on the self that have been described developmentally. Delineating these levels is beyond the scope of this paper but is often a source of confusion in conversations between developmentalists and clinicians. In clinical discussions, use of words often gets equated with the most abstract level of reflection on the self's patterns of relations with others. However, much of therapy is conducted at rather noncomplex levels of reflection (BCPSG, 2005a). Much of what transpires in therapy involves the use of words in other pragmatic, narrative, or reflective ways that do not involve reflection on the relational patterns of the self.

Experience. The Oxford and Encarta dictionaries variously define experiencing as "involvement in an activity over time that leads to an increase in knowledge or skill" (Oxford, 1971, p. 930). From philosophy, experience involves knowledge from observation acquired through the senses and not through abstract reasoning.

The definition of relational experiencing that we use is involvement in relational transactions, real or imagined, lived through in time, informed by sensory/emotional processes as well as processes of thought (not including abstract reasoning) that builds to accumulate relational knowing.

Implicit relational knowing. In defining implicit relational knowing, we have drawn on distinctions made by Kihlstrom and Cantor (1983) and other cognitive psychologists, but we have adapted them to apply to the relational domain (Boston Change Process Study Group [BCPSG], 2002). We view implicit relational knowing as one variety of procedural representation. Procedural representations in cognitive psychology are representations of how to proceed, of how to do things. Such representations, like knowing how to ride a bicycle, for example, may never become symbolically coded. More pertinent here than bicycle riding, however, is the domain of knowing how to do things with others, how to be with them ("ways of being with"; D. N. Stern, 1985). Much of this relational knowing is also procedural, such as knowing how to joke around, express affection, and make friends. Knowing about how to be with another we have termed implicit relational knowing. In using the term, we wanted to differentiate implicit relational knowing from other forms of procedural knowledge and to emphasize that such "knowings" are as much affective and interactive as they are cognitive.

In addition, we view implicit relational knowing as typically operating outside focal attention and conscious experience, without translation into language. Language is certainly used in the service of relational knowing,

but the implicit knowings governing intimate interactions are not primarily language based and are not routinely translated into symbolic form (BCPSG, 2005b). Implicit relational knowing is also not necessarily dynamically unconscious in the sense of being defensively excluded from awareness, that is to say, split-off, or repressed (BCPSG, 2007). Instead, it is part of our nonconscious processing, including "unformulated experience" (D. B. Stern, 1997) that has never been put into words, has never had to be, or never could be,

Non-language-based knowing is the only form of knowing in infancy by developmental default. But even after the acquisition of language, this implicit domain continues to grow, as does the verbal domain. Each domain enlarges, elaborates, and creates associations within itself. The two domains grow and coexist throughout the life span.

Commonalities Between the Implicit and Reflective-Verbal Domains

Commonality 1: Intentions as the Basic Unit of Psychological Meaning

We assume that to intend is to mean (see the dictionary definition listed earlier). Further, we assume that the intention is the fundamental psychological meaning. Sequences of intentions give motivated human behavior its psychological existence, coherence, and finally its meaning (Sander, 1995a, 1995b). This sense of intention is broader than is commonly used. Intentions fit into the larger movements of orientation and directionality given by motivational systems, or the long-term goals of a psychotherapy. Our use of intention is coextensive with many notions of idea units, or motives or wishes. It is also meant to include all the phases of an intention: its pre-execution phase while it is forming, its execution, and its aim. Taken together, we call this the "intention unfolding process." The intention unfolding process arises from a fundamental psychological process that chunks the flow of motivated human behavior into intentions. The mental process of parsing human behavior into intentions and motives is considered a mental primitive, in the sense that it appears to be an innate mental tendency necessary for adaptation in a social world of other motivated beings. This chunking occurs when intentional behavior is perceived in others or felt in oneself. The intention unfolding process is a nonsymbolic process-representation of motivated experience that is grasped implicitly. Studies of preverbal infants—cited next—(or higher animals) support this idea. Accordingly, this foundational process belongs to both the small-grained, nonverbal, implicit, local level, and to the level of language. It arises in both because they share the same grasp of intentionality.

We propose that the intention unfolding process acts as the referent to identify and give meaning to intentions whether they are encountered in actions or presented in linguistic or narrative form, creating a common coinage across levels. One way to think about an intention unfolding process is to ask, how can we know, or (even more difficult) how can we infer the presence of an intention? How would we pluck it out of the flow of behavior, in all its variability, if there were no process by which to detect it? It is relevant that brain imaging observations have identified "intention detection centers" in the brain, which get activated in a person when he or she observes behaviors that lead him or her to infer an intention in another person (Ruby & Decety, 2001).

The intention unfolding process is the form that permits intentions and motives to emerge into awareness and take on meaning. The foundational role for this process makes it possible for intentions, regardless of their presentation, to flow from the same source and be comprehensible. Accordingly, some continuity of meaning from one level to another is not simply facilitated but is assured. What observations and ideas exist to support this view?

We need to deepen the definition of intention just given. Intentionality refers to the subjective sense of pulling or being pulled, or pushing or being pushed toward a goal or end state—or inferring another being so pulled or pushed. It is coextensive with Freud's notion of the wish or the desire; with the ethologists' notion of motivational activation and goal states; with the cognitive science view of value; and with the lay, legal notion of a motive. All of these provide the engine, direction, means, and goals for motivated behavior, thus making it coherent. It also includes the mental "reaching" for an image or idea to bring it onto the mental stage (Brentano, 1874/1973).

The basic idea of an intention unfolding process is not new. Most phenomenological philosophers agree that even prereflective or lived experience is structured around intentions. Further, this (implicit) experience is made of differentiated parts and has a temporal architecture (e.g., Husserl, 1962, 1989). In other words, some fundamental (nonverbal) process-structure, like an intention that unfolds in real time, must exist.

In the same light, current psychologists, like Bruner (1986, 1990, 2002) have suggested that motives (the why of a story) are the basic mental units we use to parse human behavior. It is a universal tendency to search for in-

tentions and motives in human behavior resulting in intention driven narratives for understanding the social world.

Recent developmental observations suggest that even for preverbal infants (until approximately 18 months) where experience is, by default, implicit and not conscious or reflected upon, the primary task when watching human behavior is to grasp the intention ("behind" the acts). The intention makes the seen acts coherent and meaningful. For instance, a preverbal infant watches an experimenter try to drop an object into a bowl, but he misses the bowl. The object and bowl are both novel. At first, the object is dropped as it is approaching vet before it is above the bowl. Then it is dropped after it has passed beyond the lip of the bowl. The infant never sees it being dropped into the bowl. Later, when the infant is given the bowl and object to manipulate by himself, he immediately drops the object directly into the bowl and seems contented with himself. The infant grasps the intention and then imitates it, even though he has never seen it successfully realized. He gives priority to the intention he has inferred over an action he has seen (Meltzoff, 1995; Meltzoff & Gopnik, 1993).

In another experiment, the infant watches an experimenter try to pull the spheres off the ends of a dumbbell-like object. The experimenter tries but fails. Later when the infant is given the dumbbell-like object, she immediately pulls the spheres off and seems contented. The control experiment, with different infants, consists of a robot that, like the experimenter, tries to pull the ball-like ends off and also fails. However, when these infants are given the dumbbell-like object after they watched the robot fail, they do not try to pull off the ends. For the infant, robots do not have intentions (Gopnik & Meltzoff, 1998; Meltzoff, 1995). There are many other observations bearing out this general priority of the inferred intention over the seen action (Gergely & Csibra, 1997; Gergely, Nadsasdy, Csibra, & Biro, 1995; Rochat, 1999).

Subjectively, intentions are felt to have a thrust or a leaning forward toward their goal. There is an implicit agent. There is a line of dramatic tension as the intention fulfills or fails to fulfill its destiny as it becomes revealed. All of this occurs in a span of time with a temporal architecture that accommodates this unfolding process. From events of short to long duration, the temporal parameters of the intention unfolding process are scaled. It is crucial to appreciate that it is temporally dynamic. It is these features that permit us to call it an "intention unfolding process."

In short, the intention unfolding process underlies the formation of all presentations of intention, whether in action, words, or stories. The do-

mains have in common the sharing of the same intuitive grasp of the intention that makes behavior coherent and meaningful.

Commonality 2: Sharing the Same Microforms Across Domains

The implicit and reflective-verbal domains share a similar microstructure. It has been suggested that the basic microunit underlying subjective experience is the "present moment" (D. N. Stern, 2004). This is the moment of "now" when an experience is lived, in any of the domains. Stern suggested that the subjective present moment is also organized around intentions and is embedded in an emotional, lived story with a narrativelike format that is grasped intuitively while it is unfolding, even though it lasts only between 1 and 10 sec. The experience of "now" is thus structured in form and temporal profile. He saw this as a fundamental process in our comprehending human behavior as coherent at all scales of its presentation: from the seconds during which an implicit experience endures, to the temporal unfolding of a spoken phrase, to the building blocks of a narrative. Across all domains the currency of temporally dynamic experience does not change.

Commonality 3: Mirror Neurons and the Parallel Activation of the Language Centers Along With Separate Motor and Perceptual Centers

Recent experiments suggest that concepts with verbal labels are processed not only in the language center but also in motor and perceptual areas related to the modality of the concept. For example, the words *digs*, *climbs*, and *walks* are stored in speech centers but also in specific regions of the brain where such motor operations usually originate. Similarly, words like *squeals*, *howls*, and *sings* are stored in specific auditory regions of the brain as well as in the speech center (James & Gautier, 2003). It appears that the word and the perceptual/motor experience are both being activated in parallel to create a whole experience.

This way of linking language to physical experience, action, and feeling may be explained by recent findings on "mirror neurons," which provide possible neurobiological mechanisms for understanding the following phenomena: reading other people's states of mind, especially intentions; resonating with another's emotion; experiencing what someone else is experi-

encing; and capturing an observed action (vocal as well as visible) so one can imitate it—in short, sympathizing with another and establishing intersubjective contact (Gallese, 2001; Rizzolatti, Fogassi, & Gallese, 2001).

Mirror neurons sit adjacent to motor neurons. They fire in an observer who is doing nothing but watching another person behave (e.g., reaching for a glass). The pattern of firing in the observer mimics the exact pattern that the observer would use if he were reaching for that glass himself. In brief, the visual information received when watching another act gets mapped onto equivalent representation in our own brain by the activity of these mirror neurons. It permits us to directly participate, virtually, in another's actions without having to imitate them. We experience the other as if we were executing the same action, or feeling the same emotion. These "as if" mechanisms have been described by Damasio (1999) and Gallese (2001). Braten (1998) described this as "altero-centric participation." This "participation" in another's mental life creates a sense of feeling/sharing with/understanding them and in particular their intentions and feelings. We are purposely using the term feelings instead of affects so as to include sentiments, internal sensory sensations, motor sensations, "background feelings" (Damasio, 1999), and "vitality affects" (D. N. Stern, 1985; D. N. Stern, Hofer, Haft, & Dore, 1984), along with classical Darwinian affects.

What is true for visible movements, like reaching for a glass, is also true for vocalizations including words. Mirror neurons, presumably representing vocal chord, mouth, and tongue action, fire centrally when we hear someone speak. We know what the experience of making that kind of sound is like. (This is one of the reasons someone's act of clearing his or her throat can evoke a throat sensation in us. It is also probably why neonates can imitate a tongue protrusion.) The elements of spoken sounds that are transmitted in this way include the tension, effort, intensity, restraint, melody, rhythm, and other paralinguistic features of the sound, all that is the essential audible feeling-context for the heard word.

It has recently been suggested (V. Gallese, personal communication, November, 2004) that the mirror neuron system ties the word to the movement. That is, when words are being spoken, they may trigger the mirror neurons appropriate to the actions and movements verbally described. Whether or not they do this directly remains to be seen. However, words can discharge motor or visual areas. The suggestion is that mirror neurons may provide a different neural pathway for linking word and motor experience with different psychological implications. In these senses words are not disincarnated symbols but are also pathways into direct embodied expe-

rience that function implicitly, and vice versa. This may help explain the evocative power of words and stories. We live them virtually.

The Reflective-Verbal Domain Emerges from the Implicit Domain

Foundational to the ideas in this section are two concepts. The first is the notion of the embodied mind. The second concept is dynamic systems theory. In the past 30 years a radically new point of view has arisen. It is captured by the notion of an "Embodied Mind." The prevailing Cartesian view is being replaced by this new view (Damasio, 1999; McNeill, 2005; Merleau-Ponty, 1945/1962, 1964/2000; Sheets-Johnstone, 1999; Thelen & Smith, 1994; Tomasello, 1999; Varela, Lachaux, Rodrigues, & Martinerie, 2001; Varela, Thompson & Rosch, 1993, among many others). This implies that movement and language (although different modes) are largely integrated during evolution and ontogeny. One cannot think or feel or imagine or have sensations without the direct participation of one's body. Conversely, to move or to act is inherently an expression of a mental intention.

Some thinkers of the past century, even those working in a Cartesian tradition, were aware of the need for an embodied mind. Heidegger believed lived experience is structured around intentionality and that this organization is intuited. It is this structuring that makes primary experience ultimately interpretable at the reflective and linguistic level. Husserl (1962, 1989) assumed that primary experience has a morphological form with internal differentiations and a temporal structure. Reflection can only accentuate or intensify the lived experience. Sartre (1943/1976) concurred with this in saying that reflection does not reveal anything new. It only discloses and thematizes what is already familiar in the originary, prereflective, lived experience. The presence of an embodied mind is implicit in these reflections, as is the notion of an emergent grafting of the reflective-verbal onto implicit knowing.

The aspect of dynamic systems theory that interests us most is the fact that in complex systems with multiple variables (such as human interaction) new properties emerge that were neither predicted nor expected. A new and qualitatively different system emerges (the reflective-verbal process) from the encounter of implicit knowing with other minds (which includes language and culture).

In this section we discuss four ways that the reflective-verbal emerges from the implicit.

"The Primary Metaphor"

Recent work from the perspective of the embodied mind suggests that a large number of the ideas we use in thinking and speaking spring from the fundamental sensorimotor experiences of our own bodies, acting in the world, and being acted upon, to generate "primary metaphors" (Lakoff & Johnson, 1999). These primary metaphors are fundamental implicit notions about ourselves, others, and the world. Primary metaphors are seen as basic sensorimotor ways of experiencing the world and conceptualizing it, in the form of nonverbal mental models. Primary metaphor in this perspective is not a "figure of speech," it is a nonverbal, implicit concept. For instance, Lakoff and Johnson suggested that the concept of "more" is related to the body position of "up." A subjective judgment of quantity is conceptualized in terms of the sensorimotor experience of verticality, that is, of having to raise your eyes or head to see something really big (p. 47). "More is up" is a primary metaphor that springs from sensorimotor experience. The basic body concept can be used in language as in "prices rose" or "stocks plummeted." Although language uses the primary metaphor, it is not linguistically based. Furthermore, the bodily experience that underlies the linguistic usage is neither arbitrary nor a dead metaphor (where the link from experience to word is only historical). The link still exists. The bodily concept is activated when words are used, or words can be activated when the sensory motor schemas are experienced. Any use of a primary metaphor in the domain of speech will carry with it an activation of the sensorimotor system that constitutes the primary nonverbal experience. Therefore, our experience when we talk with primary metaphors is a bodily event as well as a verbal one. (For a psychoanalytic perspective on metaphor, see Modell, 2003).

Lakoff and Johnson provided a panorama of such primary metaphors (embodied mental models), each derived from sensorimotor experience of being in a real world, with real people with inferable intentions. The following are examples from Lakoff and Johnson (1999, pp. 52–53):

- Relationships are journeys. Primary experience: moving through space. Example: "Our relationship only went so far, then it stopped advancing and we went our separate ways."
- *Help is physical support*. Primary experience: observing that some entities and people require physical support to continue standing and functioning. Example: "Support your local charities."
- *Time is motion*. Primary experience: experiencing the passage of time as one moves in space or observes motion. Example: Time *flies*. Time *stopped dead in its tracks*.

- States are locations. Primary experience: being in a bounded region of space and experiencing a certain state as correlated with a certain location (e.g., being cool under a tree, feeling secure in bed.) Example: "I'm close to being in a depression and the next thing that goes wrong will send me over the edge."
- Actions are self-propelled motions. Primary experience: the common action of moving your body through space (even in the early years). Example: "I'm moving right along on the project."
- *Purposes are destinations*. Primary experience: physically reaching a destination. Example: "He'll ultimately be successful, but he isn't *there* yet."
- Causes are physical forces. Primary experience: Achieving results by exerting forces on physical objects to move or change them. Example: "They pushed the bill through Congress."

These primary metaphors permeate our thinking and language extensively. Their use in normal, nontechnical discourse, especially about ourselves and others and our relationships, is ubiquitous. Although usually nonconscious, primary metaphors give rise to the verbal concepts, they also remain the activated substrate from which many of our thoughts and language springs. Viewed this way, the obvious descriptive boundaries between presymbolic and symbolic, between nonverbal and verbal, between implicit and explicit do not exactly fade away. But it becomes clearer that they share the same root origins in common body experience, that is, the same embodied mental model.

In any event, although the actual form/sound of the word may be arbitrary (as a symbolic system requires), the embodied concepts that entwine experience with words are not at all arbitrary. They are determined by our morphology, our innate movement patterns, and the real external world of people and things.

Kinesthetic Concepts

Sheets-Johnstone (1999) took this line of thought further. In arguing for the "primacy of movement," she suggested that we discover ourselves and the world via our own movement. She proposed that the "foundational phenomenon of animation" implies a corporeal consciousness and leads to corporeal concepts and representations as well as kinesthetic concepts. She documented Husserl's statement that "movement is the mother of all cog-

nition" (Husserl, 1962, 1989, p. xxi). The list of corporeal concepts is vast, such as inside/outside, heavy/light, open/closed, up/down, sequencing, contingency, agency, and so on.

Here again we are confronted with a view of experience that sheds a different light on of some of our basic categories. The work of Lakoff and Johnson as well of that of Sheets-Johnstone is in the current tradition of repairing the Cartesian split between mind and body and binding them together again with the idea of "embodied cognition." This means that the corporeal, or kinesthetic concepts, or primary metaphor is activated as we speak. Thus, we are doing much more than just making words. We are embodying our words and mentally inhabiting our spatio-temporal movements. A dialogue between body and mind is in process, and it is this that carries the full message to others and ourselves.

Image/Gesture as an Embodied Mental Model

Why does spontaneous spoken language sound human compared to a robot? First, there are the paralinguistics (melody, stress, volume, etc.), which is the most common explanation. Second, there is the motive to talk. The listener feels the ongoing action of the motivation. Third, and related to the second, there is a kind of sloppy work to find the "right" words to communicate what one wishes. This sloppy work is visible or hearable by the listener

In spontaneous speech, there is something in mind that wants expressing. Let us call this "something in mind" an image, in the broadest sense of the term. The image can be an idea, a movement, a gesture, an affect, a vitality affect, a background feeling. None of these are presently in verbal form. Now comes the messy work, especially in spontaneous dialogue. There is an intention (with its goal and structure) to link the image to words. For almost each phrase, the intention enters into a dynamic process with the existent repertoire of pieces of language to find the best fits. This is the "intention unfolding process." Emergent properties form. New linkages are created, tentatively accepted, revised, rejected, reintroduced in a different form, and mixed with all the other creative products of the intention unfolding process. This process, which usually takes several seconds, is dynamic, unpredictable, very messy, and widely distributed in the body; it usually involves all analogous conscious and unconscious bodily happenings. This nonlinear dynamic process is perhaps what makes us most human. It would include how the word search gets performed, with what deliberation or rising excitement, and with what burst of enthusiasm or calm when it "catches" a word. It is a process that can rush forward, hesitate, stop, restart gently, and so on; even after the word is chosen and out there in public space, it can be partially taken back and be revised or deleted as the talker stumbles forward with more or less grace, fluidity, and coherence. (Note that it doesn't matter if there is a "right" fit. None such exists. It only has to be good enough for effective communication.) These dynamic qualities give the impression of an "inhabited body"—that is alive, now. Without these features of the intention unfolding process we would not experience a human being behind the words.

This body/mind dialogue of implicit experiencing and reflective-verbal processing makes it possible for a psychoanalyst and patient on the couch, not seeing each other, to know so much of the implicit and to share an intersubjective space.

It is in this light that McNeill (2005) suggested that Johnson and Lakoff's (1999) model of "primary metaphors" be extended further. To evaluate how much further, recall that Johnson and Lakoff's basic idea of a primary metaphor concerned sensory-motor-kinetic experiences (such as walking, or looking up, or being held, i.e., things that normally are experienced when development encounters the world). These nonlinguistic primary metaphors provide the foundation (the nonverbal concepts) for aspects of language. In this view, movement is the mother of language. Indeed, movement is the source of many linguistic concepts (Golden Meadow, 2003).

McNeill introduced the concept of the image/gesture to refer to all the bodily shapings of spoken thought. He sees spoken language as consisting of two components of equal generativity and importance. First, there is language that is usually conceived of as a more or less static structure. Second, there is a dynamic process that he calls the image-gesture process. Superficially, this dynamic process consists of the gesticulations that are synchronous with speech. He pointed out that spoken speech is inhabited by the body moving in time, including facial expressions. Similarly, although gestures have their own isolated morphology, in real speech they become shaped by imagery and intention. Live speech and movement/gesture are forcibly synchronous. Even conditions such as stuttering or delayed auditory feedback do not break apart their synchronicity.

McNeill further elaborated "image/gesture" to include nonconscious, short-lived processes that emerge during the formation and execution of a thought or a phrase (the intentional unfolding process). If you are not reading a text, or have not memorized it but are in the process of spontaneous

discourse, each idea and spoken phrase is formed as it, or just before it comes out. You don't know exactly what you are going to say until it you say it. During this intention unfolding process, the idea is still being worked on and aligned with pieces of language, well before the word(s) pop out or the idea takes on its final form.

McNeill garnered much evidence to call it image/gesture. However, he was fully aware that gesture and imagery are not the only artisans of thought and language while it is being fashioned. All that is nonverbal plays this role—the affects, "the background feelings" from the body, the "vitality affects," physical discomfort, mood, the state of subconscious motivational systems (hunger, sleep, sex), ambient sensations, immediate past history, and so on. All of these are meant to be assumed under the term <code>image/gesture</code>.

How do the forming ideas and the more or less right words find each other? After all, the intention unfolding process takes only seconds. It is a short and fast journey to tie the needed pieces of language to the image/gesture. McNeill, in Yvgotski's (1986) tradition, had the interesting suggestion that the dynamic, analogical image/gesture is paired with its opposite—the categorical, static word. The two are thrown together in a classical dialectic process where opposites are resolved and brought together through fusion. The verbal and nonverbal not only have been brought together but have become one thing.

Without recourse to a dialectical theory, it seems simpler to imagine that as the dynamic intentional process works its way along, it is encountering words, phrases, and sounds. From these encounters unexpected emergent properties pop up, joining the intention to communicate, the image/gesture, and language. Thus the forming idea links with language as an emergent property. Here a dynamic systems theory description seems more commodious than a dialectical one. The idea of bringing together intentions and language in a dynamic system makes a particularly rich mix for emergent properties. The dynamic interplay of intention and word has similarities to choreography or music where inchoate intentions meet concrete positions, steps, and notes.

Nonverbal Contexts for Language

Words take their meaning in context (e.g., "I am content" vs. "the content of the package" or "I'm sorry, it was an oversight" vs. the oversight committee or "I cleave to you" vs. "I cleave the meat"). There is the context of the

previously uttered words and phrases and there is the context of what is happening in the relationship at the moment of utterance. This is especially true for unscripted dialogue. What is happening importantly includes the implicit relatedness as well as the implicit knowledge between speaker and listener at the moment of speaking (2005a). In therapy this would include the moment-to-moment microshifts in the transference—countertransference relationship. There is most often a fluctuating context that determines what can be said, when, and how. In this sense, the ongoing language flow is sculpted moment by moment by implicit relational knowing, which provides a large part of the meaning.

Disjunctions Introduced when the Reflective-Verbal Emerges from the Implicit

Overview of Previous Points of Views

Until recently our worldview in the psychologies remained Cartesian. Descartes's notion that the psychic and somatic were separate and of different natures held sway. These domains were perhaps partially relatable but not integratable. The basic Cartesian view holds that language and nonverbal experience are quite distinct. They may act together so as to be complementary, or correlated, or scaffolding one another, but they always remain separate and independent phenomena. This position is a continuation of the long tradition of a mind/body split.

This presumed "gap" (Knoblauch, 2005) between implicit and reflective-verbal has presented two central questions for psychology and philosophy. First, does implicitly grasped, lived experience have any "meaning" in itself, as it is happening, or is all meaning given after the experience in the act of reflection and verbalization? Second, to what extent does the act of reflection and verbalization distort experience that is implicitly lived?

What happens during the passage from implicit to explicit is the subject of a long-standing debate in phenomenological philosophy over the past century. Zahavi (1999, 2003) discussed the essence of these debates. To summarize, at one pole of the classical view are those who think that the act of reflection distorts the implicit prereflective experience. They argue that the act of reflection turns implicit self-experience into an object and in so doing acts as a falsefying mirror of something that was originally subjective (Natorp, 1912). Heidegger (1982) agreed, to the extent that when lived experience is looked at during reflection it is no longer "lived-through" and is

no longer subjective. Sartre (1943/1976) distinguished a disrupted transformation that occurs when going from primary experience to reflection. Derrida (1972) went further and argued that there is an inherent fracture that creates a distortion between primary experience and reflected experience. He also tied reflection to language, as do many psychoanalysts. Some go further and suggest that (clinically speaking) there is no originary experience (implicit meaning) until it is given existence (psychological meaning) via reflection and verbalization, as if verbalizing creates our only experiential reality.

Knoblauch (2005) drew attention to the "gap" between words and the experiences that the words are meant to represent, as seen in the writings of Lacan (1977) and one of us, D. N. Stern, in an earlier writing. Knoblauch cited Stern (1985) in stating

Language (for a child who is just learning it) is a double-edged sword. It ... makes some part of our experience less shareable with ourselves and others. It drives a wedge between two simultaneous forms of interpersonal experience: as it is lived and as it is verbally represented. ... Language causes a split in the experience of the self. (pp. 162–163)

Note that Stern's position has evolved since 1985.

Lacan (1977) saw the same gap from a more dire perspective: "The symbol manifests in itself first of all as the murder of the thing" (p. 104).

Knoblauch and others, while assuming that the gap can never be fully bridged, have taken a more positive view. Rather than letting the word and the direct experience undermine one another or just live their separate lives, Knoblauch (2000) pointed out that in clinical practice each creates the immediate context for the other such that a duet, in two different voices, interact to help make meanings of clinical pertinence more whole. He proposed an interrelationship between language and implicit experience that is rich and nuanced, where they interact in a continuous dialogue and create a duet. Still, they are viewed as two separate players in distinct domains but together producing a whole (Knoblauch, 2000).

Recently, Knoblauch (2005) presented a most sensitive look at how language and nonlanguage play with each other in speech and music—how they can compliment, trick, modulate, augment, and recall each other. Each can select parts of the other for emphasis, or augmentation or irony or

surprise or memory. His material is invaluable, yet it is written with a lingering whiff of Descartes in the air. Language and gesture do these wonderful things together but remain separate voices, two unintegratable modes.

Our Position on Disjunctions Between the Implicit and Reflective-Verbal Domains

In contradistinction to these views, our position is informed by a dynamic systems model that provides a description that goes beyond the paradox of two separate instruments (voices) that together can make music. First, the verbal is grounded in the implicit and has to be "familiar." It has to refer to and play off the implicit intentional state. This is clear from our previous discussions of the embodied mind, primary metaphor, and the fact that language is rooted in the conveying of bodily experience developmentally and phenomenologically. A quote from Merleau-Ponty aptly states the case for the embodied mind:

The meaning is not on the phrase like the butter on the bread, like a second layer of "psychic reality" spread over the sound; it is the totality of what is said, the integral of all the differentiations of the verbal chain; it is given with the words for those who have ears to hear. And conversely the whole landscape is overrun with words. (Merleau-Ponty, 1964/2000, p. 155)¹

In this sense then, it is not a duet of separate instruments. Instead one voice emerges from and is derivative of the other. Both are anchored in the same mental material and ambient culture. If one speaks in terms of a gap, why is it that the gap is not a chasm? Why are the two meanings (verbal and implicit) known and recognizable to each other while divergent? Why cannot the two drift or be driven too far apart?

The familiarity resides in the fact that the words and lived experience are inherently related. This relatedness is achieved in development and in cultural usage. Thus the introduction of the verbal dimension adds not simply another strand to the symphony but another element that is interpreted by each in relation to the intrinsic connection that is directly experienced between mind and body.

¹We thank Bruce Reis for calling this quote to our attention.

Second, although closely related developmentally, the implicit and the reflective-verbal are not isomorphic. We agree with previous writers that there is an inherent, inevitable disjunction between the lived and verbalized. This disjunction is the "gap." These are two different modes of expression not translatable one into the other. They are also generated from different perspectives. The implicit is direct, subjective, and "lived through," whereas the verbal is a delayed view from outside the original implicit experience. This is the "gap" between word and experience that philosophers have pointed to as an inevitable product of translating lived experience into verbal expression.

Third (and here our position differs markedly from the others), disjunction, in itself, between the implicit and reflective-verbal should be viewed as an emergent property of the arising of the verbal from the implicit and viewed in its own terms. It need not be conceptualized as a "gap" or distortion or fracture. There is not a problem or lack or loss in the process of emergence. In fact, it is because of the relatedness between word and experience that disjunctions, contradictions, and breaches in coherence, as well as complements and elaborations and harmonies, are created during the emergence of the reflective-verbal from the implicit. In this view, grasping the relations between the implicit and reflective-verbal—that is, the nature of the disjunction—is an additional and crucial property of the emergence. These three—the reflective, the implicit, and the disjunction between the two—make up one intuitively grasped package. That is where the music is.

In most cases, there is a high degree of coherence between implicit experience and its reflective-verbalization. Indeed we expect and rely on such coherence in conducting relationships within ourselves as well as with others. We are aware that some kind of a "coherence detector" will be needed to register the discrepancy between the implicit and verbal and to assign a value to the discrepancy (e.g., conflicting, harmonizing, etc.).

Fourth, there are various forms of disjunction that must be separately conceptualized. In addition to the inherent disjunction that we have already described as discussed by the philosophers, there is a second kind, which occurs when there is a more dramatic disruption and breach of harmony and coherence. It is these disjunctions that are of most interest to the clinician.

This position is not only consistent with a dynamic systems model, it is closer to a phenonenological description of what happens. During the emergence of the reflective-verbal (and its telling), we first receive/construct the intuition of a whole entity, a gestalt. It is this that is "experience near." We do not immediately divide up the gestalt of implicit/verbal/disjunction into its "separate" parts and analyze each in relative isolation,

academic style. It is this gestalt intuition that directs the second-by-second clinical inquiry.

We can now specify what we consider "meaning" to be: the gestalt of implicit experience, emergent reflective-verbalization, and the relation between these two that, all three taken together, make up meaning. Ultimately the meaning is captured in an intuitive grasp.

A View of Meaning From the Two-Person Interactive Perspective

So far, our discussion largely concerns the coherence of the implicit and reflective-verbal as it occurs in one person's mind and experience. We now enlarge the discussion to bring in communication between two people. This is what the clinic is about.

The basic problem of the relation of the implicit and reflective-verbal is paralleled in the two-person situation in terms of what is spoken and what is reflectively heard. We consider the spoken to constitute an implicit experience for the listener for the following reasons. The listener hears the spoken message, infers the underlying implicit experience that gave rise to the words, and feels the difference between the two. He or she receives a "gestalt." The listener must then, in an act of reflection, make a whole meaning of this gestalt. Again in this act, a disjunction/coherence is introduced between the implicit experience of hearing/seeing/experiencing the speaker's performance and the listener's reflected meaning. When the listener then becomes the speaker, the process continues, only in the opposite direction.

The meanings (i.e., packages of implicit, reflective-verbal, and their disjunctions) build on each other and reorient the direction as the dialogue advances, resulting in more global or summarizing intuitive grasps. In other words the meaning evolves in the course of the interaction. Clinically speaking, during the session, the patient reflects on the interaction with the therapist and intuits a meaning he or she has of the interaction (and vice versa). The meaning is never totally implicit, or totally reflective-verbal, or totally about their discrepancies. The gestalt that gives rise to this meaning is a result of all three taken together captured in an intuitive grasp.

Conclusion

We start with the assumption that mind and body evolved and developed together, deeply entwined within each individual. Spoken language is not possible without the experience of movement and gesture (Lakoff & Johnson, 1999; McNeill, 2005; Sheets-Johnstone, 1999). Equally, gesture reguires language behind/within it.

We have explored how and why implicit and reflective-verbal are entwined and suffused with similar meaning. The distinction between linguistic and nonlinguistic is necessary for academic and philosophical reasons, but subjectively the basic units of human communication are lived intentions (BCPSG, 2007). We assume and act as if the other is an embodied mind, like us, with intentions that can be multiply expressed and read. The exact form of expression is secondary to the intention.

We have mentioned several intertwinings between implicit experience and reflective-verbal that integrate the two. We note this integration is a precondition of potential and inevitable disjunctions between the two domains. Continuity of meaning across the implicit and explicit domains is discussed in this light. The reflective-verbal and implicit are not isomorphic but are necessarily deeply familiar to each other.

In the clinical situation, there will always be multiple intentions and meanings within any one act to communicate. We view such unscripted communications as emergent properties of a dynamic process comprised of three components that create a gestalt:

- 1. The intention is implicitly experienced.
- A reflective-verbal version of this implicit experience is grounded in the nonverbal mental/body concepts contained in the implicit domain. The grounding is based on phylogeny, ontogeny and culture.
- 3. There is an inevitable disjunction between the implicit and the reflective-verbal. This is not a lack or a problem, it is just another property of the emerging gestalt.

All three come together during a process we have called the intention unfolding process. During this process, a gestalt of all three, taken together, emerges and is captured in one intuitive grasp. It is this gestalt that gives out the multiple intentions and meanings that can shift and change over ongoing and repeated contemplation.

In the real world of dialogic communication, one does not pay focal attention to the words that pass or to the conventional gestures that are not mentally inhabited or to the disjunction between them. Instead, one is focused on the meaning of the total communication and its intention. That is the phenomenological center.

REFERENCES

- Baricco, A. (2002). Lands of glass (A. Goldstein, Trans.). London: Penguin.
- Boston Change Process Study Group. (2002). Explicating the implicit: The local level and the microprocess of change in the analytic situation. *International Journal of Psychoanalysis*, 83, 1051–1062.
- Boston Change Process Study Group. (2005a). Response to commentaries. *Journal of the American Psychoanalytic Association*, 53, 761–769.
- Boston Change Process Study Group. (2005b). The Something more than interpretation revisited: Sloppiness and co-creativity in the psychoanalytic encounter. *Journal of the American Psychoanalytic Association*, 53, 693–729.
- Boston Change Process Study Group. (2007). The foundational level of psychodynamic meaning: Implicit process in relation to conflict, defense, and the dynamic unconscious. *International Journal of Psychoanalysis*, 88, 843–860.
- Braten, S. (1998). Infant learning by altero-centric participation: the reverse of egocentric observation in autism. In S. Braten (Ed.), *Intersubjective communication and emotion in early ontogeny* (pp. 105–124). Cambridge, UK: Cambridge University Press.
- Brentano, F. (1973). Psychology from an empirical standpoint. London: Routledge & KegenPaul. (Original work published 1874)
- Bruner, J. S. (1986). Actual minds, possible worlds. Cambridge MA: Harvard University Press.
- Bruner, J. (1990). Acts of meaning. New York: Basic Books.
- Bruner, J. (2002). Making stories, law, literature, life. New York: Farrar Strauss.
- Damasio, A. (1999). The feeling of what happens: Body and emotion in the making of consciousness. San Diego, CA: Harcourt.
- Derrida, J. (1972). Marges de la philosophie. Collection "Critique". Paris: Minuit.
- Gallese, V. (2001). The "Shared Manifold" hypothesis. From mirror neurons to empathy. *Journal of Consciousness Studies*, 8(5–7), 33–50.
- Gergely, G., & Csibra, G. (1997). Teleological reasoning in infancy: The infant's naive theory of rational action. A reply to Premack and Premack. *Cognition*, 63, 227–233.
- Gergely, G., Nadsasdy, Z., Csibra, G., & Biro, S. (1995). Taking the intentional stance at 12 months of age. *Cognition*, 56, 165–193.
- Goldin Meadow, S. (2003). Hearing gesture: How our hands help us think. Cambridge, MA: Harvard University Press.
- Gopnik, A., & Meltzoff, A. N. (1998). Words, thoughts and theories. Cambridge, MA: MIT Press
- Heidegger, M. (1982). On the way to language. New York: Harper & Row.
- Husserl, E. (1962). Ideas pertaining to a pure phenomenology and to a phenomenological philosophy. First book, general introduction to pure phenomenology (B. Gibson, Trans.). New York: Collier.
- Husserl, E. (1989). Ideas pertaining to a pure phenomenology and to a phenomenological philosophy, Second book (R. Rojcewicz & A. Schuwer, Trans.). Dordrecht, The Netherlands: Kluwer Academic.
- James, T. W., & Gautier, I. (2003). Auditory and action semantic features activate sensory-specific perceptual brain regions. Current Biology, 13, 1792–1796.
- Kihlstrom, J., & Cantor, N. (1983). Mental representations of the self. In L. Berkowitz (Ed), Advances in experimental social psychology (Vol. 17, pp. 1–47). San Diego, CA: Academic.

Knoblauch, S. H. (2000). The musical edge of therapeutic dialogue. Hillsdale, NJ: The Analytic Press. Knoblauch, S. H. (2005). Body rhythms and the unconscious. Psychoanalytic Dialogues, 15(6), 807–827.

Lacan, J. (1977). Ecrits, a selection. New York: Norton.

Lakoff, G., & Johnson, M. (1999). Philosophy in the flesh. New York: Basic.

Lyons-Ruth, K., Bruschweiler-Stern, N., Harrison, A. M., Nahum, J. P., Sander, L., Stern, D. N., et al. (1998). Implicit relational knowing: Its role in development and psychoanalytic treatment. *Infant Mental Health Journal*, 19, 282–289.

McKechnie (ed.). (1979). Webster's New Twentieth Century Dictionary. New York: William Collins and World Publishing, Inc.

McNeill, D. (2005). Gesture and thought. Chicago: University of Chicago Press.

Meltzoff, A. N. (1995). Understanding the intentions of others: Re-enactment of intended acts by eighteen month-old children. *Developmental Psychology*, 3, 838–850.

Meltzoff, A. N., & Gopnik, A. (1993). The role of imitation in understanding persons and developing a theory of mind. In S. Baron-Cohen, H. Tager-Flusberg & D. J. Cohen (Eds.), *Understanding other minds: Perspectives from autism* (pp. 335–366). New York: Oxford University Press.

Merleau-Ponty, M. (1962). *Phénoménologie de la perception* [Phenomenology of perception]. Paris: Librarie Gallimard. (Original work published 1945).

Merleau-Ponty, M. (2000). The visible and the invisible. Northwestern University Press. (Original work published 1964)

Modell, A. (2003). Imagination and the meaningful brain. MIT Press: Cambridge.

Natorp, P. (1912). Allgemeine psychologie [General psychology]. Tubingen, Germany: J. C. B. Mohr.

Nichols, W. R. (ed.). (1999). Random House Webster's College Dictionary. New York: Random House

Oxford English Dictionary, Compact Edition. (1971). New York: Oxford University Press.

Rizzolatti, G., Fogassi, L., & Gallese, V. (2001). Neurophysiological mechanisms underlying the understanding and imitation of action. *Nature Reviews, Neuroscience*, 2(9), 661–670.

Rochat, P. (Ed.). (1999). Early social cognition. Mahwah, NJ: Lawrence Erlbaum Associates.

Ruby, P., & Decety, J. (2001). Effect of subjective perspective taking during simulation of action: A PET investigation of agency. *Nature Neuroscience*, 4(5), 546–550.

Sander, L. (1995a). Identity and the experience of specificity in a process of recognition. *Psychoanalytic Dialogues*, *5*, 579–593.

Sander, L. (1995b). Thinking about developmental process: wholeness, specificity, and the organization of conscious experiencing. Paper presented at the annual meeting of the Division of Psychoanalysis, American Psychological Association, Santa Monica, CA.

Sartre, J.P. (1976). L'être et le néant [Being and nothingness]. Paris: Tel Gallimard. (Original work published 1943)

Sheets-Johnstone, M. (1999). The primacy of movement. Amsterdam: Benjamins.

Stern, D. B. (1997). Unformulated experience. Hillsdale, NJ: The Analytic Press.

Stern, D. N. (1985). The interpersonal world of the infant. New York: Basic Books.

Stern, D. N. (2004). The present moment in psychotherapy and everyday life. New York: Norton.

Stern, D. N., Hofer, L., Haft, W., & Dore, J. (1984). Affect attunement. In T. Field & N. Fox (Eds.), Social perception in infants. (pp. 249–268). Norwood, NJ: Ablex.

Thelen, E., & Smith, L. (1994). A dynamic systems approach to the development of cognition and action. Cambridge, MA: MIT Press.

- Tomasello, M. (1999). The cultural origins of human cognition. Cambridge, MA: Harvard University Press.
- Varela, F., Lachaux, J. P., Rodrigues, E., & Martinerie, J. (2001). The brainweb: Phases synchronization and large scale integration. *Nature Reviews. Neuroscience*, 2(4), 229–239.
- Varela, F. J., Thompson, E., & Rosch, E. (1993). The embodied mind: Cognitive science and human experience. Cambridge, MA:MIT Press.
- Vygotsky, L. S. (1986). Thought and language (E. Hanfmann & G. Vakar, Eds. & Trans.; A. Kosulin, Rev.). Cambridge, MA: MIT Press.
- Zahavi, D. (1999). Self-awareness and alterity: A phenomenological investigation. Evanston IL: Northwestern University Press.
- Zahavi, D. (2003). How to investigate subjectivity: Natorp and Heidegger on reflection. Continental Philosophy Review, 36, 155–176.

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