The phenomena that have been characterized clinically as “unconscious communication” may be accounted for systematically as emotional communication, which occurs both within and outside of awareness. The new formulation is based on current work in cognitive science, extended to account for emotional information processing, not information processing alone, and emphasizes the structure and organization of the multiple modalities of mental processing, rather than the dimension of awareness. The process of emotional communication, as it takes place in treatment (as in all the interactions of life), is accounted for in terms of the referential process, defined within the theoretical context of the multiple code theory. The referential process operates in the patient attempting to express emotional experience, including warded off experience, in verbal form; in the analyst who listens, experiences, and generates an intervention; and in the interaction between the two.

The Process of “Unconscious Communication” is generally understood as the means by which the analyst “knows” what is in the patient's mind, while the patient may not know and cannot say. Freud

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(1912) saw this process as immediate and direct, similar to the mechanism of the telephone:

Just as the receiver converts back into sound waves the electric oscillations in the telephone lines which were set up by sound waves, so the doctor's unconscious is able, from the derivatives of the unconscious which are communicated to him, to reconstruct the unconscious, which has determined the patient's free associations [Freud, 1912, p. 115].

Reik, like Freud, saw the process of unconscious communication as straightforward and direct, but also recognized doubts concerning this process within the field of psychology, outside of psychoanalysis:

The individual inner life of a person cannot be read in the features that psychology has hitherto grasped…. It is the unconscious mind of the subject that is of decisive importance, and the analyst meets that with his own unconscious mind as the instrument of perception. That is easy to say but difficult to realize. Psychologists can hardly conceive the notion of unconscious perception. For psychoanalysis the notion presents no difficulty, but to understand the peculiar nature of unconscious perception and observation is not so easy [Reik, 1948, p. 133].

Reik drew on concepts of introjection, projection, and reprojection to account for the analyst's immediate understanding of the patient's experience: the analyst takes in the unconscious experience of the patient and then becomes conscious of the nature of this experience by seeing it as belonging to the other. Reik also attempted to place these processes within a scientific framework, as we shall see. In the intervening years, however, the psychoanalytic explanations of unconscious communication have grown increasingly abstruse. The emphasis on projective identification and related concepts has deepened the epistemological mystique surrounding the question of how the analyst can “know” the patient's experience and further widened the gap between psychoanalysis and scientific psychology.

Ironically, during the same period, the operation of unconscious processing has become widely recognized within psychology.
Psychologists today, in contrast to Reik's time, have no difficulty to “conceive the notion of unconscious perception,” as we shall see. From the current perspective of cognitive science, the issue is not to demonstrate the existence of unconscious processing, but to explore its complex and multifaceted nature. In fact, we may now see the tables of scientific doubt as turned. Cognitive psychologists now raise questions concerning the nature of processes within the focus of attention, and raise doubts concerning their psychological significance, just as they previously questioned the operation of processes outside of awareness.

At the same time, cognitive science has also opened a new understanding of the structure and function of mental processes and their multiple modalities of operation, within and outside of awareness. This paper will examine the processes that have been characterized clinically as unconscious communication from the dual perspectives of clinical observation and cognitive science and will develop a reformulation based on these perspectives. The reformulation resolves some of the apparent epistemological mysteries associated with analytic communication and also reveals new complexities and caveats to be addressed.

**Communication in the Clinical Context**

Nothing can be in our intellect which was not there before in our senses [Kant, cited by Reik, 1948, p. 135].

In his attempt to explicate the process of communication through introjection, Reik (1948) begins with Kant's premise, which, he says, “is also true for a psychologist who seeks to grasp the unconscious processes in others” (p. 135). As Reik argues, interactions that may appear supersensory or supernatural may be accounted for through observable sensory means. He identifies a wealth of cues that are transmitted, intentionally or unintentionally, by the patient and taken in, on some level, by the analyst and that carry information concerning the patient's inner state. One such type of data includes “the considerable portion that we seize upon through conscious hearing, sight, touch or smell” (p. 135). These cues are consciously experienced by the analyst, may be within the patient's awareness, but are not reflected in the patient's speech.
Another category of data occur and influence our opinions and responses without our focusing attention on them. They “appear as part of the total impression. They do not emerge separately in our perception.” (p. 137). They may include features such as bearing, gesture and body movements, nuances of odor and touch, muscular twitchings in face or hands, movements of the eyes, a special way of breathing, or special details and peculiarities of dress. Paralinguistic indicators accompanying speech, including vocal modulations; changes in pitch, timbre, and speech rhythms; and variations of emphasis and pausing carry information of their own, which may emphasize or contradict the verbal message.

An additional category of psychic cues identified by Reik consists of “impressions through senses that are in themselves beyond the reach of our consciousness … that have no place in human consciousness, or have lost their place in it” (p. 137-138). These include sense impressions that have “their origin in the animal past of the human race” (p. 138) such as the “sense of direction in bees, the capacity of birds of passage to find their way, the sense of light in insects' skin, the instinctive realization of approaching danger in various animals” (p. 138), as well as sensory functions that we possess in rudimentary and weak form compared to other animals, such as the sense of smell. Freud (cited by Reik) also noted such archaic means of communication, which have presumably “been replaced in the course of racial evolution by the superior method of communication by signs. But the older method may survive … in the background and human beings revert to it under certain conditions” (Reik, 1948, p. 139).

The sensory and behavioral cues provide a constant accompaniment to the patient's words, with their multiple levels of meaning, which reveal as they conceal. The language that is used has its own multileveled play of meaning. The manifest meaning of a verbalization may also contrast with other aspects of behavior and, by so doing, transmit information beyond what is intended.

Arlow (1979) also identified a variety of nonverbal and verbal cues, similar to those noted by Reik, that are transmitted by the patient, usually without intent:

The patient uses several modes of communication with the therapist. He expresses himself verbally and nonverbally. Mode
of behavior, facial expressions, body posture, different gestures, all transmit meaning which augments, elaborates, or sometimes even contradicts what the patient articulates verbally. The timbre of the voice, the rate of speech, the metaphoric expressions and the configuration of the material transmit meaning beyond that contained in verbal speech alone. All of these are perceived sometimes subliminally and are elaborated and conceptualized unconsciously, i.e., intuitively. There is something intensely aesthetic and creative about this mode of functioning. Scientific discoveries and artistic innovations of enormous complexity are known to have originated in precisely the same way [p. 285].

As these clinical observations indicate, nonverbal communication in the analytic context is solidly based on sensory information that can potentially be identified, that may be transmitted consciously as well as outside of awareness, but that is often neither intended nor explicitly noted at the time of the interaction. The patient may be aware on some level of how he feels, although he may not recognize its meaning and cannot verbalize it. The analyst will notice certain cues, although he also may not be able to say explicitly what they are or what they mean. Analysts take in a wide range of cues through conscious senses; these appear primarily as part of a total impression, rather than emerging separately in their perception. In the context of current work in cognitive science, we can develop a systematic understanding of such intuitive processing, without relying on supersensory perception or other abstruse explanations.

**Unconscious Processing: The Cognitive Perspective**

The pendulum of scientific views concerning the dimension of consciousness has swung widely during the past century. The research of Wundt and Titchener focused on conscious mental states studied through the method of introspection. The extreme backlash of behaviorism involved a full-scale dismissal of mental life, conscious or unconscious, as a suitable subject of scientific study. The study of mental life returned with the cognitive paradigm, but in a new form.

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1 Singular male and female pronouns are used interchangeably to represent indeterminate antecedents.

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Cognitive scientists study mental events as hypothetical constructs inferred from observable behavior, rather than as subjective experience. This is the approach of all modern science; unobservable events, from particles to the big bang and beyond, are studied as theoretical constructs, defined through extensive interconnections within theoretical networks, and inferred from multiple observable events. Cognitive and emotional events—within and outside of awareness—are studied in the same way; through this approach, meanings, including emotional meanings, can be brought into the focus of scientific observation (Bucci, 1993). Social scientists, in general, have a long way to go to create the sort of systematic networks of constructs multiply linked to observables that support work in the physical sciences—and psychoanalytic theorists and researchers have even farther to go—but the approach is the same.

The methodology of cognitive science is more compatible with psychoanalysis than may at first appear (Bucci, 1989, 1997). Each individual has immediate access only to one’s own inner experience, and only partially to that, as psychoanalysts know, perhaps best of all. The inner experiences of other people, conscious and unconscious, are intrinsically unobservable events that require some sort of theoretical network to be understood. All individuals constantly make inferences to the inner experience of other persons, within the frameworks of their largely implicit, working theories of emotion and mind, to enable their day-to-day interactions. Psychoanalysts—and cognitive scientists—have more formal theoretical frameworks that contribute to the inferences they make.

The cognitive paradigm brings a new perspective to the understanding of both conscious and unconscious processing. According to current models of the architecture of cognition, conscious processing is viewed as an activated component of long-term memory, sometimes associated with what is termed “working memory” (Anderson, 1983; Baddeley, 1990), with specific features and functions. Conscious processing is characterized by very rapid access (a few hundred milliseconds), limited capacity (more or less seven “chunks” or items, such as words or digits, as shown by Miller [1956], and short retention time. The functions of conscious processing include prioritizing of operations according to the current goals of the individual and appropriate organization of sensory and motoric mechanisms to meet these goals (Posner, 1988; Posner and

As we now also recognize, conscious processing is the tip of the psychic iceberg. Virtually all storage of information in long-term memory, and virtually all types of information may be stored and processed outside of the focus of awareness, in verbal and nonverbal modalities. Cognitive psychologists have developed a wide and varied range of experimental techniques for investigating unconscious processes and have distinguished a variety of different forms in which they may occur. Implicit memory (Schacter, 1987) is identified through changes in performance following experimental interventions characterized as “priming”, without explicit recollection of the intervention itself. Any type of information can in principle be represented in implicit memory, including numbers, words, and other types of representations. Procedural, or more generally non-declarative memory, as characterized by Squire, refers to skillful behaviors or habits, including motoric, perceptual, and cognitive skills; conditioning and emotional learning; and all other learning that “changes the facility for operating in the world” this contrasts with declarative memory, which affords “conscious access to specific past events” (Squire, 1992, p. 210). While conscious processing has previously been associated with intentional operations, and unconscious processing with automatic functions (Posner and Snyder, 1975), processing outside of awareness has been shown to include intentional and voluntary functions as well (Zbrodoff and Logan, 1986).

From this perspective, several major points need to be emphasized. All types of processing—verbal and nonverbal, intentional and unintentional, and all manner of motoric, perceptual and cognitive skills—may occur outside of or within awareness. Attention may be characterized as a searchlight that directs our focus and selects the components of the mental and somatic and sensory apparatus that will be activated in relation to particular goals; much of the processing, at all levels of complexity, is then carried on off-line, that is, outside of awareness. Once the concept of unconscious processing has been expanded in this way, its implications as a psychoanalytic construct need to be reconsidered. It is not the dimension of awareness or lack thereof that is crucial in understanding analytic communication, but the form and organization of thought.
What Does It Mean to “Know”? A Multiple Code Theory of Emotional Communication

Advances in cognitive science, both theoretical and methodological, have brought changing perspectives to the study of mental operations and have broadened our understanding of what it means to “know.” Classical information processing models were based on symbol systems (Simon and Kaplan, 1989). We now have additional models, characterized as connectionist or subsymbolic, that are built on a fundamentally different type of processing format and that account for the type of holistic and intuitive processing that lies at the heart of analytic communication, as described by Arlow and Reik.

The multiple code theory incorporates both subsymbolic and symbolic processing and expands the cognitive science perspective to account for emotional information processing, not information processing alone. The theory has been presented elsewhere (Bucci, 1997) and will be outlined only briefly here, focusing primarily on the modality of subsymbolic processing as it relates to analytic communication; this application has not previously been examined.

Humans utilize three major systems of representing and processing information, including emotional information. The subsymbolic and symbolic nonverbal modes are shared with other species; the symbolic verbal mode is the human advance.

Symbolic Processing

From an information processing perspective, symbols are defined as discrete entities with properties of reference and generativity; that is, symbols are entities that refer to other entities and that may be combined to generate an infinite variety of new forms. Symbols may be words or images. Language is the quintessential symbolic mode. Words are discrete entities that refer to entities outside of themselves, including images and other words, and that are combined in rule-governed ways to generate the myriad varieties of linguistic forms that we speak or write. Images, like words, are discrete entities that refer to other entities and that may be combined to create new forms: the police put together combinations of features to construct a composite visual image that approximates a suspect's face; auditory images are combined in programmatic music such as “Peter and the
Wolf.” Unlike words, images are formed in specific sensory modalities; they are concrete in that special sense.

**The Subsymbolic Mode**

The concept of subsymbolic processing, also termed connectionist or parallel distributed processing (PDP), has permitted a systematic reformulation of the information processing system, particularly the emotional information processing with which we are concerned. Like imagery, subsymbolic processing occurs in the formats of specific modalities, including all sensory modalities, and visceral and motoric formats as well. In contrast to symbolic functions, however, subsymbolic processing is formally analogic and holistic, computed as variation on continuous dimensions, rather than generated from discrete elements.

Subsymbolic processing is understood scientifically through complex mathematical models (Smolensky, 1988; Rumelhart, 1989) but is experientially immediate and familiar to us in the actions and decisions of everyday life—from aiming a piece of paper at a wastebasket or entering a line of moving traffic to feeling that rain is coming, knowing when the pasta is almost done and must be drained to be “al dente,” and responding to facial expressions or gestures. Subsymbolic processing accounts for highly developed skills in athletics and the arts and sciences and is central to knowledge of one's body and to emotional experience. The type of processing to which Reik refers, which appears as part of a total impression rather than as discrete elements, the “archaic communication” outside the system of signs to which Freud refers, or the intuitive and passive-receptive modes described by Arlow are all examples of subsymbolic processing. In contrast to Freud's characterization of such processing as archaic, however, subsymbolic processing is now understood as systematic and organized, operating alongside symbolic systems throughout normal, rational adult life.

The format of the primary process may be understood as comprising aspects of symbolic nonverbal processing in the form of imagery, but as dominated by the subsymbolic mode. Unlike the psychoanalytic concept of the primary process, however, subsymbolic processing is not intrinsically primitive, or uniquely associated with forbidden desires or other conflictual material. It is information
processing of a specific sort, which may figure in representations of wishes and desires, but which also plays a central role in complex and goal-directed activities.2

While subsymbolic functions may be highly developed and organized and may occur within attentional focus, the special nature of the computation is such that it cannot be expressed fully in words. The view of such processes as primitive and archaic may derive largely from this lack of connection to the verbal mode. The great sculptor “knows” his craft in his tactile, motoric, and visual systems. Bernini had to “know” the multiple characteristics of each individual piece of marble and how eyes, muscles, and marble interact through those modalities. The computations occur without explicit metrics, without specified dimensions, and without discrete elements. The core of the sculptor's knowledge does not exist for him in symbolic form and cannot be communicated in words; in teaching he communicates his knowledge most effectively in the form in which it exists. The dancer's knowledge is stored in the format of feeling and movement and integration with music; Balanchine communicated to his dancers primarily through those modalities. His communication was intentional, conscious, systematic and complex—within the motoric mode. Like Bernini, or like a tennis coach, he did not resort to motoric or sensory modalities because the verbal representations were repressed, but because the information existed only in a form that could not be fully captured in words. Great composers and painters work primarily in the subsymbolic mode. The goal of the Stanislavsky technique may be seen as enabling the actor to enter and utilize his own subsymbolic experiential and expressive modes. Many aspects of emotional communication may be understood in the same way, as we shall see.

**Awareness and Intent in the Three Processing Modes**

All processing, symbolic and subsymbolic, can occur within or outside of awareness. Language is a central means of directing

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2 We should emphasize that the prefix “sub” here denotes the subsymbolic as underlying symbolic representation, not as an inferior or primitive processing mode. The continuous gradations of the underlying subsymbolic mode are divided or “chunked” into “functionally equivalent classes” (Kosslyn, 1987) to generate discrete symbolic imagery, as discussed in detail elsewhere (Bucci, 1997).
attention; images also function in this way. Linguistic and imagistic processing also occur “off-line,” as when we awaken in the morning with a word or solution to a problem that has eluded us the previous day. Implicit memory, as demonstrated through priming interventions (Schacter, 1987), includes symbolic elements such as imagery or words. Symbolic processing can be automatic as well as intentionally regulated. We all have the experience of images, lines of songs, or memories of words that come to us in unbidden and sometimes intrusive ways.

Subsymbolic processing often appears to operate automatically, outside of awareness, permitting us to carry out several functions simultaneously. What is harder to recognize is that subsymbolic processing may also be intentionally controlled and occur within the focus of attention. Bernini had to strike his piece of marble in a particular way to develop the form that he saw in his mind's eye. His placement of his tools and the force of his strikes were intentionally controlled and required the integrative and goal-directed functions of attention, while the realization of his image through motoric action in a particular medium involved complex subsymbolic computations. If he did not focus intently and directly on his actions, if his thoughts wandered off to last night's dinner or the coming night's pleasures, the direction of the cut might not be accurate. The tennis player needs to look at the ball to direct his actions; if he loses his intense focus, his shot will be less precise.

**Emotional Information Processing: The Emotion Schemas**

Emotion schemas are the organizers of our interpersonal worlds. They are particular types of memory schemas, built up on the basis of repeated interactions with other people, particularly the primary caretakers, from the beginning of life. They determine what we expect from others, how we perceive them, and how we act toward them; like all memory schemas they are in turn affected and altered by new events. While emotion schemas have the basic organizational features of all memory schemas, they differ from others in the dominance of the subsymbolic elements—actions and sensory and visceral reactions—that constitute the schema's “affective core.” The bodily components are represented in multiple subsymbolic formats; the objects of the schema—the people toward whom the actions and
reactions are directed—are represented in the nonverbal symbolic mode. The contents continue to be elaborated, in nonverbal and later in verbal form, throughout life. Later, language will be connected to the schemas, to a Limited degree.

**Connecting Subsymbolic Experience to Words: The Referential Process**

The poet cannot talk about what he already knows (Northrop Frye)\(^3\)

The referential process is the major integrative process of the multiple code system; it enables organization of the nonverbal system, connection of subsymbolic experience to nonverbal symbols, and connection of nonverbal symbols to words and underlies as well the reverse direction of understanding the words of others. It is not the formation of words per se, but the connection of verbal symbols to experience that is the great human advance. Yet the referential linking function is inherently limited and partial; the continuous, analogic processes of the subsymbolic system can be connected only partially to the discrete elements of the verbal code, as we have shown.

Images, with their transitional properties—modality specific, like subsymbolic representation; discrete and generative, like words—are pivots of the referential process, organizing the nonverbal system and facilitating connections to words. One cannot directly verbalize the subsymbolic components of the affective core; their nature, like the art of the sculptor or dancer, is such that they cannot be expressed directly in words. To describe a feeling in verbal form, one describes an image or tells a story that incorporates the contents of the schema, the events and objects and actions that may be known and shared with other people and that evoke the sensory experience and actions of the affective core. This communication may take place even where the emotional meaning of an image or event is not fully understood. The power of emotional expression is in the details, as poets know and as Freud also knew. The poet expresses emotional experience in concrete and specific metaphoric form—the manifestly trivial and

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irrelevant details of specific events—whose meaning sweeps and reverberates far beyond the event or image that is described. He seeks metaphors that open experiential doors beyond what he already knows or intends; what he knows explicitly or verbally is not the stuff of poetry, as Frye observes. The power of free association—talking about details whose meaning is not fully understood—is to turn the patient into a poet unaware.

**A Model of Pathology**

In adaptive functioning, the emotion schemas operate flexibly, in multiple parallel channels, largely outside the focus of attention, taking in new information and changing in response to it. Adaptive functioning depends on integration of the subsymbolic and symbolic components of the emotion schemas; pathology results primarily from dissociation within the schemas. We may succeed in turning attention away from the objects that cause the painful affect, that terrify or enrage us, or that arouse unbearable conflictual feelings. The activation of the affective core continues, however, but now in desymbolized form, dissociated from the symbolic objects that give it meaning. The person feels aroused, but does not know what he feels, or toward whom. It is not that the emotion is unconscious, but that it has been desymbolized. The patient is then also unable to take in and connect new symbolic information to the affective core. Thus the potential corrective of changed reality is not effective, and the schema continues to operate in a rigid and unregulated mode.

Specific forms of pathology result from dissociation among different components of the emotion schemas, as well as from attempts to repair the dissociation that may be maladaptive in themselves. A high level of arousal without meaning is itself an unbearable state; the person attempts to fill in meaning for the activated bodily and motoric experience and also to avoid the forbidden meanings and in so doing often makes his situation worse. He may express the schema through acting out, as in impulsive behavior, or acting in, as in somatization, or may associate the arousal with another object that is not so threatening and forbidden, as in displacement. A variety of different operations, some defensive and some expressive, may be distinguished on the basis of different levels of dissociation and forms of attempted repair (Bucci, 1997).

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The Circle of Emotional Communication

In treatment, we seek to bring about change in the maladaptive emotion schemas; that is what we mean, fundamentally, by structural change. To do this, the patient must communicate the contents of the emotion schema; the analyst must understand the communication and generate an intervention that connects back to the patient's schema. We can now restate the question of emotional communication in the terms of the referential process: how does the patient communicate experience that is associated with an emotion schema in which dissociation and displacement have occurred, in which subsymbolic experience is dominant and activated but dissociated from the discrete symbolic objects that can be represented in words and in which the patient has the intent, on some level, to avoid the emotional meanings that are expressed? How does the analyst understand this communication? Ultimately, how does the verbal interaction of the session operate to bring about change in the schema and its affective core?

The Referential Process in the Analytic Context

Three phases may be identified in the referential process as this applies specifically for the verbal communication of emotional experience in the analytic context (Bucci, 1997):

1. Arousal of experience dominated by subsymbolic elements, the sensory, somatic and motoric components of the affective core.
2. Representation of experience in symbolic form; first imagery, then words. The subsymbolic elements that have been activated connect to images of objects or memories of episodes that constitute the symbolic components of the emotion schema, still in nonverbal form. The objective contents of the schema can then be expressed in words. The narrative of a specific

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4 The terms “circle of communication” and “completing the circle” are used by Greenspan (Greenspan and Wieder, 1998) in his work with children with pervasive developmental disorders. The relationship between the processes that facilitate symbolizing in this population and in analytic patients remains to be explored.
episode, memory, or dream has the power to express the activated emotion schema in verbal form—what one wanted, how the other reacted, what one then did or felt. This expression occurs even—or especially—where the patient does not yet know the symbolic meaning of the episode and is not able to name the emotion schema as a whole. The telling of the concrete and specific details of an episode or image is an exploratory process in this sense.

(3) Reflection on the meaning of the imagery. The patient or patient and analyst together explicate the metaphor, connect the contents of the narrative to other events, including events within the therapeutic relationship. Logical processing and the shared communicative mode come into play, linked to the emotional experience that has been activated. The reflection and new meanings may then further open the emotion schema, leading to exploration on a deeper level, and a new cycle of communication may then be opened.

**Failure of the Referential Process**

Where the referential process proceeds optimally, the patient may be left to follow the associative path. For all patients at some time—and for some patients most of the time—the optimal progression through these phases does not occur. Ogden (1994) describes a patient who “explained to me again and again that he knew he must be feeling something, but he did not have a clue as to what it might be” (p. 67). The patient attempts to avoid and at the same time to express the activated schema. His dreams were:

- regularly filled with images of paralyzed people, prisoners, and mutes. In a recent dream he had succeeded, after expending enormous energy, in breaking open a stone only to find hieroglyphics carved into the interior surface.... His initial joy was extinguished by his recognition that he could not understand a single element of the meaning of the hieroglyphics. In the dream, his discovery was momentarily exciting, but ultimately an empty, painfully tantalizing experience that left him in thick despair [pp. 67-68].
This provides a beautiful metaphor of subsymbolic experience connected to symbols that express the dissociation of the emotion schema itself, rather than to symbols that would provide meaning for the schema. The patient urgently seeks such meaning, but what he finds is opaque. The absence or failure of meaning is unbearable in itself. The patient then returns to his customary state of extreme emotional detachment. “Even the feeling of despair was almost immediately obliterated upon awaking and became a lifeless set of dream images … a sterile memory” (p. 68).

**Phases of the Listening Process**

In terms of the referential process, we may ask how does the analyst listen to and work with a patient who is not able to move to the phase of retrieving derivative imagery that will enable him to communicate his experience in words; how does the analyst understand the patient's experience and eventually enable movement to a symbolizing mode; ultimately, how does she provide or facilitate verbalization that connects back to the affective core of the patient's emotion schema, where change must ultimately occur? Four phases may be identified in the analyst's listening process and in the process of generating an intervention that account for these functions:

1. the analyst's “knowing” of her own affective state;
2. translation of this experience to symbolic form;
3. use of her own inner representations as indicators of the patient's state;
4. decision as to therapeutic intervention.

The first two phases constitute the counterpart of the symbolizing process on the decoding side; phases three and four represent the extension of this in an interpersonal context. The four phases may be characterized in terms of both the psychological processes underlying them and their operation in the clinical setting.

**Arousal of Subsymbolic Experience in the Analyst: The Listener's “Knowing”**

Many of the forms of “unconscious” communication described by Reik and Arlow are essentially forms in which a patient communicates
subsymbolic experience that is intrinsically not able to be expressed directly in words. The affective communication of one individual—in sensory and motoric as well as verbal form—is received and known through the sensory systems of the other, as well as through feedback from the motoric systems that are activated in response. Thus the subsymbolic expressions of the patient, components of his dissociated or displaced emotion schemas, activate subsymbolic experiences in the analyst that are components of the analyst's own schemas. The analyst “knows” his own emotion by the activation of its affective core, by the sensations and visceral experience he feels, by the actions he feels drawn to carry out—as Bernini knows the characteristics of a piece of marble in his muscles and Balanchine knows the movements of a dance.

The transmission occurs in several possible ways, with several meanings. Many of the expressive aspects of the patient's schema are common to all humans and other species as well, in the specific forms of their own channels of processing and representation. Darwin (1889) showed the presence, across as well as within species, of characteristic patterns of facial expression and gesture associated with specific emotion states.

“What tells dog A., who has just met dog B., and prepares for a fight or a sexual interlude while B. circles round him, the secret intentions of his mate or adversary?” (Reik, 1948, p. 456). As Reik says, dog A responds to olfactory signals and other aspects of B's appearance and action; A also experiences internal reactions, such as muscle tension, changes in body temperature or heartbeat, hair standing on end, or alternatively, sexual arousal. A then knows B's experience in the terms of his or her own, knows as much as is necessary to know, knows with certainty and acts accordingly.

Humans have similar motoric and sensory ways of knowing directly in somatic and sensory and motoric systems. Characteristic facial expressions that seem to be universally associated with emotional states have been identified by Ekman (1984) and others. On the other hand, human reactions are more plastic, less driven by instinct, and more susceptible of intentional direction than is the case for other species. Each individual in the course of development acquires characteristic modes of emotional expression that are uniquely his. The special understanding of the analyst may include elaborated and intensified access to such affective knowledge, as embedded in each individual's personal history and also in the shared
expressive modes of the species. The clinical wisdom of the analyst will also include recognition of the possibility of multiple alternate interpretations of one's own response.

In the context of current focus on the countertransference, there is increased awareness of this nonverbal—we would also say subsymbolic—knowing. Bollas's description of “the most ordinary countertransference state” as “a not-knowing-yet-experiencing one” refers essentially to this phase. As Bollas (1987) describes this state: “I know I am in the process of experiencing something, but I do not as yet know what it is, and I may have to sustain this not knowing for a long time” (p. 203). What Bollas refers to here as “not knowing” or elsewhere as the “unthought known” is essentially what I have referred to as this phase of the listener's knowing, in his body, in sensory systems, often in incipient action, without symbolic interpretation. This experience occurs on a level that has been characterized as unconscious; the analyst knows, however, that he is “in the process of experiencing something”; the state that Bollas describes is not unconscious but involves consciousness—knowing and thinking—of a specific sort. James (1890) used the term co-conscious to refer to mental states of this nature, as did Gazzaniga (1985) about a century later and in a different context.

In the case of the patient referred to above, Ogden (1994) describes how “the intersubjective experience created by the analytic pair becomes accessible to the analyst in part through the analyst's experience of his own reveries, forms of mental activity that often appear to be nothing more than narcissistic self-absorption, distractedness, compulsive rumination, daydreaming, and the like” (pp. 94-95). Ogden also describes another case in which “the analyst's somatic delusion, in conjunction with the analysand's sensory experiences and body-related fantasies served as a principal medium through which the analyst experienced and came to understand the meaning of the leading anxieties that were being (intersubjectively) generated” (p. 95).

Arlow (1979) identifies a similar state in different terms. According to Arlow, the analyst begins by taking a passive receptive role, which facilitates identification with the patient material:

The shared intimacy of the psychoanalytic situation … intensifies the trend toward mutual identification … and … serves to stimulate in the mind of the analyst unconscious
fantasies either identical with or corresponding to those decisive in
the patient's conflicts and development. Analyst and analysand thus
become a group of two sharing an unconscious fantasy [p. 286].

In all these examples, the analyst comes to know what he feels in multiple
subsymbolic modalities before the symbolic meaning has been found or
developed.

**Translation to Symbolic Form: Owning One's Own Experience**

The analyst then carries out the process of connecting the subsymbolic
experience that has been activated within himself to symbolic forms,
including both images and words. Ogden finds himself looking at particular
markings on an envelope that had been in view for over a week; he thinks
about a telephone call recorded by his answering machine earlier in the hour.
These ordinary objects in the analyst's surround become “analytic objects” (p.
75); they are symbols whose meanings are created in the matrix of a
developing intersubjective experience. The listening analyst, like the
associating patient, may be connecting to objects or events that are manifestly
irrelevant but that are, in fact, symbolic components of the emotion schema
that has been activated, whose meaning he does not yet know. Ogden (1994)
is then able to reflect on the emotional meaning of the metaphoric objects: “At
this point in the session I began to be able to describe for myself the feelings
of desperateness that I had been feeling in my own and the patient's frantic
search for something human and personal in our work together” (p. 70).

Arlow (1979) describes in detail the nature of the analyst's experience as
he develops his understanding of the patient's material:

> The change is not brought about by the intervention of another
> person, as in the case of the analysand; it is brought about by the
> analyst's awareness, through the process of introspection, of some
> mental process within himself that has intruded into his
> consciousness. The thought that first appears in the analyst's mind
> rarely comes in the form of a well-formulated, logically consistent,
> theoretically articulated interpretation. More often what the analyst
> experiences takes the shape of some random thought, the memory of
> a patient with a similar problem, a line
of poetry, the words of a song, some joke he heard, some witty
comment of his own, perhaps a paper he read the night before, or a
presentation at the local society meeting some weeks back. The
range of initial impressions or, more correctly, the analyst's
associations to his patient's material, is practically infinite, and it
may or may not seem to pertain directly to what the patient has been
saying [p. 284].

This is the second stage of the referential process, as played out in the
analyst's listening. The poetry or songs to which Arlow refers are metaphoric
objects, like the markings on an envelope that captured Ogden's attention. The
transformation from knowing in the bodily, sensory, motoric sense to knowing
in the symbolic mode, first images, then words, occurs within the analyst's
inner experience, in the context of the analyst's own emotion schemas, before
“emotional inference” to the patient's experience is made.

“Knowing” the Patient's State

The analyst then uses his own subsymbolic experience and imagery as
information concerning the patient's state. In Ogden's (1994) terms, the
analyst's experience in and of the “analytic third,” representing the
intersubjectivity of the dyad, “is (primarily) utilized as a vehicle for the
understanding of the conscious and unconscious experience of the analysand”
(p. 94). Ogden begins to feel that he “understood something of the panic,
despair and anger associated with the experience of colliding again and again
with something that appears to be human but feels mechanical and
impersonal” (pp. 70-71) The patient was “experiencing the rudiments of a
feeling that he and I were not talking to one another in a way that felt alive”
(p. 71).

Reik (1948) gives the example of a patient who, in his first analytic
session, frequently used expressions such as: “You follow me?” “Get me?”
“You see?” “Do you know what I mean?” or simply “Catch?” interspersed in
his report of family relationships and past events. Reik experiences his
feeling of annoyance with the patient “as if he had expressed disrespect or
contempt.” According to Reik: “This ‘as if’ translates really what the patient
unconsciously felt” (p. 453). Here is a patient whose behavior was manifestly
courteous, respectful, and appreciative but who spoke in a way to
communicate a view of the analyst as “either stupid, or an incompetent
psychologist” (p. 453).
Bollas (1987) describes a patient who would characteristically begin a narrative, then stop in mid-sentence, pause for as long as several minutes, then resume her narrative as if no interruption had occurred. As the treatment continued, Bollas found that he would “wander off” during these pauses, and when she would resume talking it might be a few seconds before he had returned to listen…. I did not think of her as helpful in the way that patients commonly assist the analyst to consider them. Instead, knowing in advance how the sessions would go, [began to feel bored and sleepy” [p. 212].

Bollas is aware of feeling irritated and confused by her and of a tendency toward withdrawal shown in his boredom and sleepiness. He then “entertained the idea that she might be transferring to the analytic situation the nature of her mother’s idiom of maternal care, and that I—the infant-object of such a care system—was an existential witness to a very strange and absent mother” (p. 212).

For Arlow (1979), as for the other authors cited here, “the analyst's free association, even when it seems random and remote from the theme of the patient's thoughts, represents his inner commentary and beginning perception of the patient's unconscious thought processes” (p. 285). “As the analyst grows in experience, he recognizes that in the wide range of his inner reactions, he is becoming aware of clues pointing to the unconscious meaning of the patient's communications” (p. 287).

**Use of the Inference in Analytic Technique**

The analyst's reliance on his own experience as an indicator of the patient's state appears to be widely shared across orientations. The differences among orientations emerge in the inferred source of the analyst's experience, in the contrasting theories within which the thematic contents are interpreted, and in the ways in which the analyst's experience is brought into the analytic work. Analysts may look within themselves for the source of the emotional reactions they are experiencing, as Ogden did in the case described above, or under some circumstances may experience the reaction as alien and attribute its source to the patient's projection in a more direct sense.

Some analysts may decide, under certain circumstances, to disclose their reactions directly to a patient. Several months into the analysis
of the patient described above, Bollas tells her that her long pauses leave him in a state in which he sometimes loses track of her, as if she were creating some kind of absence that he was meant to experience and as if she seemed to disappear and reappear. According to Bollas (1987), the patient—and analyst as well—were relieved at his disclosure:

No analyst should only interpret in order to relieve himself of the psychic pain he may be in, but equally neither should he be ignorant of those interpretations that cure him of the patient's effect. In making my experience available to the patient, I put in the clinical potential space a subjective scrap of material that was created by the patient [p. 213].

According to Arlow (1979), the phase of the interpretive process that is based on transitory identification, in which the analyst comes to an understanding of the patient through identification and shared fantasy, gives way to a phase “based on cognition and the exercise of reason. In order to validate his intuitive understanding of what the patient has been saying, the analyst must now turn to the data of the analytic situation” (p. 286). “The analyst's inner experience has to be made consonant with the patient's material according to disciplined, cognitive criteria before being transformed into an interpretation” (p. 288).

A Model of Emotional Communication

The model of emotional communication that has been presented here is outlined schematically in Figure 1. The patient's emotion schema is activated in the session; this is one in which dissociation or displacement has occurred. The affective core of subsymbolic processes is aroused but is not connected to the representations of objects and images that would give it meaning. The patient has contracted to go on speaking but his verbal utterances are dissociated from the affective core of the schema. At the same time, he expresses the affective core of the schema directly in subsymbolic formats, in myriad ways such as those catalogued by Reik.

The patient's words and multiple parallel channels of subsymbolic expressions together directly activate sensory and somatic experience in the analyst. To the extent that the connections within the analyst's
own emotion schemas are intact and operative, she will generate imagery, reflect on this, and eventually come to some emotional understanding of the state that has been activated in her. The analyst infers an understanding of the patient's state—as yet opaque to the patient—on the basis of these inner transformations of her own experience.

The analyst's goal may now be stated specifically: to intervene in such a way as to *activate the imagery that is missing for the patient*, to enable the referential process to proceed. Imagery is the pivot of the referential process, symbolizing the subsymbolic contents and enabling connections to words. If the words are effective, they will...
evoke imagery for the patient that connects to his own somatic and sensory experience. The imagery may be shared between analyst and patient to some extent but must be generated by the patient. Emotional communication evolves from the interaction of two separate referential processes operating in two representational systems. When the patient has generated the imagery that connects to and symbolizes the processes of his own affective core, he will then be able to generate his own narratives on the basis of this. Whatever the nature of the technical means, the pathway of emotional information processing that is sought is the same—to enable the patient to connect subsymbolic experience to symbolic representations that may then be spoken in words.

At the same time, extending the “circle” on a different level, the analyst will also be continually expressing her own experience in subsymbolic format in the session, as the patient does and as we all do, in all interactions—in tone of voice, pausing, gesture, body movement, and in her varying degrees of attentiveness and attunement. She may also experience a variety of reactions after the session, in thinking or dreaming about the patient, and all of this enters into the analytic work. The effects of the analyst's subsymbolic expressions on the patient are potentially powerful, for good but also for ill, and need to be addressed. Optimally, the analyst's subsymbolic and verbal interventions operate together to facilitate the integration of the patient's emotion schema, the development of emotional meaning, that is the goal of psychoanalytic treatment.

If the therapeutic work is successful—the specific interventions in the context of the continuing transmission of subsymbolic information—the patient will respond in such a way as to indicate that a circle of emotional communication has been successfully completed. The indicators may be both in symbolic form, in the stories or images that emerge, and in subsymbolic form, represented by movement, tone of voice, or inner state, indicating that a change has taken place in the schema's affective core.

The Need for Verification

Each analyst makes two crucial sets of inferences in understanding the patient's state, and these must be seen as points of opportunity—and by the same token points of informational uncertainty. We are
talking in both cases primarily about emotional inferences or connections—what we sometimes refer to as intuition—not inferences in a logical sense.

The analyst first connects her own inner subsymbolic experience to its symbolic meaning—images and words. While the analyst's subsymbolic knowing of her own experience is direct, the symbolic interpretation and derived meanings are variable; the first stage of uncertainty occurs here. The analyst also makes inferences from her experience to the patient's; the possibility of variable interpretation is significantly broader for this inferential leap from one's own experience to the subjectivity of another person. The analyst must understand the patient in the context of the analyst's own unique emotion schemas. Ogden (1994) also emphasizes this point; as he notes, the analytic third “is experienced by analyst and analysand in the context of his or her own personality system, personal history, psychosomatic make-up,” and thus “is not identical for each participant” (p. 93). The crucial question is the degree to which the analyst is able to extricate or distinguish the patient's signals from the experiential context in which they are received—the analyst's own inner state. The analyst's experience will be some function of the patient's schema and her own, determined by a wide range of factors including each individual's personal history, the schemas developed in the analyst's training, her theoretical orientation, her relationship to her supervisors, and the particular history of each patient—analyst dyad.

Reik's Dog A knows the state of Dog B in large part through his own sensations, bodily changes, and behaviors, as we have discussed. He experiences no apparent doubt concerning this process; the inference is immediate and certain. This immediacy is necessary for animals, and particularly for animals in the wild; there is generally no time for doubt if the animal is to survive. Yet even animals may be “wrong” about others who do not share their particular inner structures: a dog tied to a tree savagely attacked a 3-year-old girl who wandered into his range to retrieve a ball; another attacked children who reached out to pet him, perhaps in an abrupt way. Given the plasticity and complexity of human expression, the inference from one's own experience to the inner state of another person must always be open to doubt.

Arlow notes that the “situation of an extreme countertransference reaction” would constitute an exception to the use of the analyst's
associations and responses as a source of data. Similarly, Reik (1948) points out that precautions and guarantees are required in using one's own experience as the pathway to another person's:

The science of analysis professes to be able to offer a certain guarantee that the mirror in which the processes in the other mind are reflected is not dimmed. It requires the analyst himself to be analyzed, so that his psychological comprehension may not be hindered or distorted by his own repressions. In addition it calls for a strict examination of his own impressions and his own psychological judgment of the data [p. 448].

I believe that many analysts from all orientations are likely to agree with these caveats, although there would not be agreement as to what constitutes a countertransference reaction that is “extreme.” I also believe that Reik's statement that the analyst's analysis safeguards him from being “hindered or distorted by his own repressions” may be seen as sanguine to the point of naivete today. Perception and memory are always active processes, determined not only by the stimulus input, but by what the subject brings, as the English psychologist Bartlett (1932) demonstrated over 60 years ago. The role of the subject in organizing imagery and memory must be recognized even for fantasies that may be experienced as ego-alien in form.

What Kind of Verification Is Required? A New Approach

Validation of the analyst's inferences to the patient's experience is required; on the other hand, the nature of the validation that is sought should be informed by the nature of the inferences that are made. The type of validation that Arlow (1979) outlined, in which “disciplined cognitive criteria” are applied before an interpretation is generated, may now be seen as problematic in the context of much day-to-day clinical work.

A new approach to the issue of verification is required that provides a better fit for the characterization of clinical work outlined here—the complex movement back and forth between subsymbolic and symbolic systems that is necessary for clinical understanding. Such a program of verification is a topic in itself, to be left for another paper, but may be introduced briefly here:
The analyst who responds on the basis of his subsymbolic computation, without as yet formulating this in symbolic terms, is nevertheless working with systematic knowledge—subsymbolic “knowing”—not in some magical or primitive mode. There are bases for his inferences that may eventually be identified, although he may not do this in the immediacy of the interaction.

The analyst, nevertheless, needs to recognize, on some level, that he is working in a tentative manner; although his subsymbolic knowing may be experienced directly and with certainty, verification of the inference to symbolic meanings—his own and the patient's—is nevertheless required.

Verification of these inferences is difficult but possible. For such verification, we would look, as all clinicians do, to the patient's responses to an intervention, both the immediate response and the longer term effects. Since much of the knowledge that constitutes the analyst's—and the patient's—understanding is itself subsymbolic, verification that involves processing in the subsymbolic mode may be required. Ogden (1994) writes that his patient's voice following an intervention, “became louder and full in a way that I had not heard before.” The patient was then “silent for the remaining 15 minutes of the session. A silence of that length had not previously occurred in the analysis” (p. 72). At the next session, the patient reports having been awakened by a dream in which he was feeling profound sadness. “He said that he got out of bed because he just wanted to feel what he was feeling although he did not know what he was sad about” (p. 73). Subsymbolic indicators, such as vocal tone or body movement or reports of intense feelings provide evidence that an intervention has connected to an emotion schema, in addition to the indicators that we customarily seek in the emergence of new symbolic material such as dreams, memories, or insightful reflection. At some point, the analyst will call on verbal formulation and logical evaluation to expand and test her understanding. The phase of reflection that we have identified in our outline of the listening process would be likely to include such formal evaluation.

The type of verification we have been discussing concerns the analyst's own reflection on her therapeutic work. Ultimately,
for scientific purposes in building the theory and the techniques (not for the day-to-day work), the basic caveats and constraints of the psychotherapy research paradigm must also apply. As for any verification of analytic inference, the perception of a single intensely involved individual is not enough. Shared observations are required, using data provided by tape recordings and other sources; process notes may be used for some purposes as well. Such procedures need be no more intrusive than many clinical procedures that are already widely accepted; the supervisory process brings a third person into the dyadic interaction in at least as profound a way as the tape recorder does. Observations such as those made by Ogden, for example, based on cues such as vocal tone and pausing, could be verified using tape recordings alone.

The analyst functions as a cognitive scientist in several respects: in looking at the material of the patient's associations as data from which inferences are made to the patient's inner state, rather than as veridical reports of experience as in the introspectionist approach; and in using observable behavioral data as a basis for inference, within a particular nomological network based on the analyst's version of psychoanalytic theory. The analyst's emphasis on emotional information and emotional inference and his use of his own inner experience as a source of data go well beyond the standard practices of cognitive science and might serve to enrich these practices. On the other hand, the analyst may tend to make inferences from his own experience without recognizing the various sources of informational uncertainty that apply; this represents a problem for clinical work as well as for the development of psychoanalytic theory. Each field may benefit from the advances of the other.

Conclusions: Structure Redux—And in a New Key

On the basis of the theory of multiple coding and the bidirectional referential process, the phenomena that have been characterized as “unconscious communication” can now be differently understood. We are concerned with a systematic process of emotional communication, which has many modes, which may be conscious or unconscious, and which operates continuously, in all our interpersonal
communication as well as in pathological states. The basic forms of emotional communication that operate in the analytic context also underlie all interpersonal interaction. In normal functioning as in pathology, we are constantly sending out and receiving subsymbolic signals; these often occur without accompanying verbal messages and are difficult to make explicit. A fundamental difference between normal and pathological functioning is that in the former the subsymbolic communication is connected, or readily connectable, to the symbolic components of the schema. The individual who is experiencing elements of the affective core of a schema of anger will presumably recognize that he is angry, at whom and why, whereas in pathology the subsymbolic representations are largely dissociated from the symbolic modes that would provide meaning for them.

In Freud's time the notion of unconscious processing was radical and new. We now recognize that virtually all forms of mental processing may go on outside of awareness. The notion of unconscious processing has expanded far beyond the place that Freud envisioned but, at the same time, has lost its special theoretical force.

In his movement from the topographic to the structural theory, Freud explicitly turned away from level of awareness as a systematic factor determining mental processing. In this respect, the structural model is compatible with modern scientific views. Throughout the manifest theoretical shift from the topographic to the structural model, however, Freud retained the view of unconscious thought as determined by repression of forbidden and conflictual material, and as having the structure and contents associated with the primary process. In his final summary formulation, Freud (1940) explicitly equated the unconscious with id functions and consciousness with the ego. The correspondence reflected his de facto retention of the systemic unconscious as determining motivation and behavior. This premise never disappeared from psychoanalysis and is widely—although sometimes implicitly—accepted today.

As I have argued, it is the format of emotional information processing that is crucial rather than the state of awareness associated with it. What clinicians have called "unconscious communication" actually occurs on myriad conscious as well as unconscious levels, in a variety of forms, as Reik outlined half a century ago and as many clinicians have described since then. We can now return to the intent of the structural model in a new light, in the context of recent
advances in cognitive science. The multiple code theory provides a 
 systematic account of emotional communication, as it occurs in treatment, and 
 for all people throughout life, in conscious and nonconscious modes, in 
 nonverbal and nonsymbolic forms.

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