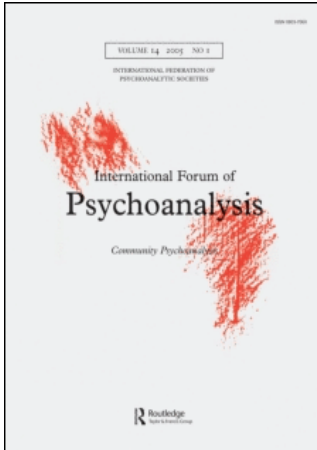


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New approaches to understanding unconscious processes: Implicit and explicit memory systems

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ORIGINAL ARTICLE

New approaches to understanding unconscious processes: Implicit and explicit memory systems

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Abstract

Freud viewed the unconscious as being roughly equivalent to dynamically repressed wishes, needs, and motivations. Findings from developmental psychology, cognitive psychology, psychoanalysis, and neuroscience over the past 40 years have dramatically changed our views of unconscious processes and the human mind. It is now clear that Freud's dynamic unconscious is only a minor segment of information that is processed at subsymbolic, implicit, and automatic levels. Only a fraction of this information is further processed at explicit conscious levels. Moreover, the vast majority of the information that remains nonconscious is adaptive and has major consequences for development. We examine some clinical implications of these views.

Key words: *Unconscious, implicit memory system, explicit memory system, attachment disorganization*

A revolution in the way we understand unconscious processes and memory systems

The main contribution of psychoanalysis to the Western intellectual tradition has been an appreciation of the enormous importance that unconscious motivation plays in human affairs. One hundred years later, two pillars of Freud's contribution—his view of the unconscious and his theory of motivation—have been completely revised by new advances coming from such diverse fields as developmental psychology, cognitive science, neuroscience, evolutionary theory, and of course psychoanalysis itself. These changing views have been part of a larger paradigm shift toward relational, cultural, and intersubjective views of human experience. In this article, we will not examine the multimotivational theories that have replaced Freud's dualistic model of human motivation (see Lichtenberg, 1989; Liotti & Cortina 2007), but will concentrate on showing how new views of unconscious processing, memory systems, and the human mind have changed significantly based on an appreciation of their deep social adaptive functions.

Freud viewed unconscious processes as prototypically based on repressed impulses or needs. For instance, in the *Ego and the Id*, Freud says, "Thus we obtain our concept of the unconscious from the theory of repression. The repressed is the prototype of the unconscious for us" (Freud, 1923, p. 15). Although Freud thought that some aspects of the unconscious *might* not be repressed, he was dissatisfied with the idea "when we find ourselves confronted by the necessity of postulating a third unconscious. Can which is not repressed we must admit that the characteristic of being unconscious begins to lose significance for us" (Freud, 1923, p. 18). Plainly, Freud did not give much importance to the part of the unconscious that was not repressed, *except* for the part of the ego that instigated repression—an insight based on the clinical discovery that patients were unaware of their defensive processes—which is what forced Freud to change from a topographical to a structural (id, ego, superego) model of the mind in the first place.

Contemporary views of the human mind and memory systems have greatly expanded our view of the unconscious. In the past few decades it has

become clear that defensively excluded experiences, needs, and impulses represent only a small fraction of the totality of unconscious processes. Most unconscious processes have an adaptive function, and it is only when these adaptive functions fail that defensive processes emerge. These views are being strongly influenced by contemporary distinctions between implicit/procedural and explicit/declarative modes of processing, coding, and storing information into different memory and representational formats (Bucci, 1997; Nelson 1983, 2005; Rubin, 1986; Schacter & Moscovitch, 1984; Schacter, Wagner & Buchner, 2000; Schank & Abelson, 1977; Tulving, 1972). These concept have been supported by infant research, particularly its focus on parent–infant interactions, whose timing, intensity, and turn-taking are automatic and presymbolic (Beebe & Lachmann, 2002; Beebe, Sorter, Rustin & Knoblauch, 2003; Fosshage, 2005; Stern, 1985, 2004; Trevarthen, 1979, 1980).

Several current relational theories have embraced this broader understanding of the role of unconscious processes and have contributed to it, such as Donnel Stern's concept of unformulated experience (Stern, 1997), Christopher Bollas's concept of the unthought known (Bollas, 1987), the Boston's Process of Change Group's concept of implicit relational knowing (Lyons-Ruth, 1999a; Stern, 2004) and Wilma Bucci's concept of the "referential cycle," the transposing of information from implicit to explicit levels (Bucci, 1997). Within self-psychological and attachment-based approaches to psychoanalysis, other authors who have used implicit/procedural and explicit/declarative distinctions to understand clinical phenomena are Stern Sander, Nahum, Harrison, Lyons-Ruth et al. (1990), Siegel (1999), Lichtenberg, Lachmann, and Fosshage (2002), Cortina (2003), Knox (2003), and Fosshage (2005).

The terms "implicit" and "procedural," as well as the terms "explicit" and "declarative," are not completely overlapping, but for the sake of keeping things simple, we will consider them as being roughly equivalent. The major difference we want to focus on is between implicit/procedural and explicit/declarative types of information processing. The following is a brief summary.

Implicit/procedural systems

These memory systems are characterized by four main features. They are:

- *acquired slowly*: implicit knowledge builds up gradually and incrementally with learning and repeated practice; priming (subliminal cuing) is the exception to this rule;

- *reliable*: once a skill, habit or interpersonal pattern has been learned, it is not easily forgotten;
- *inflexible*: activated only when specific skills, habits or interpersonal patterns are being used—priming again being the exception;
- *inaccessible to consciousness*: learning from experience during infancy is carried forward as a series of implicit expectations that build up over time but cannot be consciously recalled. Nonetheless, this experience is not lost but is remembered as a series of unconscious expectations are processed at procedural, subsymbolic levels.

One example of the ways in which the significance of this form of implicit processing is being applied to clinical practice is the use of the concept of implicit relational knowing. This form of implicit knowledge can be expressed as enactments within psychotherapy (Stern, 2006). Lyons-Ruth's concept of "enactive relational representations" (Lyons-Ruth, 1999b) is an explicit application of this use principle (for an overview of the concept of enactment in psychotherapy see the symposium published in *Psychoanalytic Dialogues*, Vol. 13). Expectations and attributions that are based on implicit/procedural learning and are not directly accessible to conscious recall are sometimes played out (enacted) during clinical exchanges. It is only by beginning to notice how we get pulled into these interactions that are "unformulated" and unbidden that we can begin to understand their meaning (Stern, 1997).

Experiences coded implicitly are not lost but have powerful adaptive and non-adaptive consequences for development. These experiences are carried forward as a series of unconscious "procedural" expectations. A good example is the way 1-year-old babies behave in Ainsworth's Strange Situation. Infants with a history of secure attachment "expect well" and will seek the comfort they need after a brief separation from their attachment figures. Infants with an avoidant history expect to be rejected, and focus their attention away from attachment figures upon their return. Infants with a history of resistant attachment do not know what to expect, given a history of inconsistent care, and will exaggerate their distress in the hope that the inconsistent parent will respond to their needs (Ainsworth, Blehr, Waters & Wall, 1978).

Explicit/declarative systems

Four main features characterize the explicit memory systems. They are:

- *fast*: they can be learned in one trial;
- *fallible*: memory traces of an event can degrade and retrieval failures are common;
- *flexible*: not tied to a specific modality or context;
- *accessible to consciousness*: they can be consciously manipulated, either nonverbally or verbally.

With the emergence of symbols and language, *explicit* memory systems become more elaborate. Symbols and language co-evolved—phylogenetically and ontogenetically—with higher-order forms of consciousness and cultural evolution based on the accumulation of social and technical knowledge (Donald, 1991, 2001; Nelson, 2005).

Two forms of explicit memory

In a classic 1972 article, Tulving introduced another important distinction between two different types of explicit memory: semantic and episodic memory (Tulving, 1972). Semantic memory refers to a general, atemporal storage of facts, while episodic memory refers to memory of specific episodes, such as playing peek-a-boo with mommy or ordinary scenes like having family dinners. Tulving's semantic/episodic distinction can thus be seen as two different forms of explicit memory system. Nelson further elaborated Tulving's episodic memory by observing that young children have an excellent ability to remember these types of event (Nelson, 1983). As more events are experienced, these memories take the form of prototypical events or scripts (Schank & Abelson, 1977). Event or script knowledge permits young children to develop brief verbal or nonverbal prototypical "stories" that predict what will come next and how to interact with others during specific events.

By the age of 5 or 6, children are able to describe events or scripts verbally. This development allows events to be seen from multiple perspectives, while offering explanatory formulations linking past, present, and future in the form of an autobiographical memory that is accessible to consciousness. Lichtenberg et al.'s concept of "model scenes" is a clinically useful application of the concept of scripts. Model scenes are prototypical scripts that can become a productive focus of clinical inquiry (Lichtenberg, Lachmann & Fossage, 1992). In these narrations, the person emerges as an active protagonist of the narrative plot who, at the same time, can envision the creation of different stories and different outcomes. According to Bruner, the capacity to narrate

experience is the single most powerful way in which humans create meaning (Brunner, 1990).¹

The significance of having multiple forms in which information is processed, and different ways in which memory and representations are parsed, has important clinical implications. We will examine a few.

Clinical implications

Defensive processes and dissociation

Clinicians who treat patients with troubled histories know well that the dissociation between implicit and explicit (both episodic and semantic) memory systems can be a key feature of the clinical presentation. Traumatic experience, particularly when it occurs at the hands of caregivers, can become dissociated from the stream of consciousness and from event memories (autobiographical and episodic memory), leaving only atemporal traces of certain memories or "facts" (semantic memory) that can be highly confusing (Meares, 2000). As Bowlby (1980, p. 63) notes, one of the reasons for the discrepancies may be due to:

a difference in the source from which each derives the dominant portion of information. Whereas for information going into episodic storage the dominant part seems to be derived from the value the person himself perceives and a subordinate part only from what he has been told of the episode. For what goes into semantic storage the emphasis might well be reversed, and what he is told being dominant over what he himself might think.

A case in point is a young child who witnessed the suicide of a parent with a shotgun (episodic memory). The surviving parent insists that father died in a car accident (semantic meaning) and that the child's memory is false. The child grows up with two incompatible memories, the memory of what he

¹ We would like to draw attention to the similarities and differences between Nelson's and Schank's work on event and script knowledge, and Daniel Stern's concept of "now moments." Now moments are the basic fabric of lived experience and are created in continuous small packages of interaction with others. They are the smallest molar unit of lived interactive experience exhibiting temporal and rhythmic patterning, and operate at an implicit/procedural "core" level of consciousness (Stern, 2004). The type of consciousness associated with now moments is elegantly described by Edelman as "the present moment," a form of consciousness that only exists in the here and now (Edelman, 1989). Nelson's event episodes and Schank's scripts are also temporally sequenced and interpersonal, but these interactions are based on larger units of experience and operate at a higher level of consciousness. Moreover, event episodes or scripts are based in explicit memory systems, are potentially accessible to consciousness, and are not limited to the here and now.

experienced (an event memory) and a general semantic false memory instilled by the surviving parent (Cain & Fast, 1972).

Many survivors of sexual abuse, physical abuse or torture find themselves under similar irresolvable predicaments. The abuser will entice the victim into “keeping their secret” or even threaten their life if they divulge the secret. Subtler but no less coercive and destructive forms of psychological manipulation systematically undermine the child’s perceptions and sense of reality. Either way, episodic memories of the abuse might end up being seen entirely from the point of view of the abuser in global semantic terms, while the child’s episodic memories will remain unavailable for recall.

A secondary type of dissociative experience may take place during moments of abuse that will allow for recall but only from a distant third-person perspective. In this case, the victim enters into a trance-like state that helps create a distance between the immediate terrifying and degrading experience (a first-person perspective) by resorting to a dissociated third-person perspective. The trance-like state allows the abuse to be seen as taking place from a detached and depersonalized perspective—the only protective mechanism available for the victim in that moment. While this dissociative state protects the victim from the immediate terrifying and degrading experience, it also sets in motion a dissociative process that will be automatically triggered whenever circumstances remind the victim of the abuse or maltreatment. A common occurrence is to relapse into a dissociative state after watching a film or documentary that contains scenes of violence and abuse.

Korsakoff syndrome is a striking example of how the implicit/procedural and explicit/declarative memory systems can become dissociated. In this syndrome, there is bilateral damage to parts of the temporal lobe and hippocampus. The main function of the hippocampus is to consolidate experience learned at an implicit/procedural level into long-term, explicit/declarative memory. Patients with this syndrome have complete amnesia of having met a person just a few minutes or hours after their encounter. This is because the capacity to encode and consolidate memories in long-term memory is destroyed by the lesions. Yet implicit/procedural memories are still present. For instance, depending on whether a person in a recent interaction was kind or mean, patients with this syndrome will, a few days or weeks later, have a strong positive or negative emotional response based on this experience, yet will be unable to account for these preferences (Damasio, 1999). Implicit memory is best modeled in terms of a massive parallel distributive process that involves all perceptual modalities and contains a massive amount

of information. Due to the destruction of the hippocampus, this massive implicit learning system cannot be consolidated into the explicit and declarative memory system. Long-term memory stored before the lesion, memory that is widely distributed throughout the neocortex, remains intact. Hence these patients have excellent long-term memories.

A certain degree of dissociation between the implicit and explicit systems is normal as long as there is a smooth transition from the experience encoded in these two memory systems and there are no striking contradictions between them. If early experience is benign, the positive expectations emanating from this experience do not have to become conscious in order to be adaptive.

Development is intimately tied to the ability to regulate and integrate levels of arousal, basic human needs, and emotions linked to these needs with growing cognitive complexity (Sroufe, 1996). When the capacity to regulate different aspects of development is taxed or exceeded, experience encoded in different memory systems may be defensively excluded or segregated (Bowlby, 1980; Cortina, 2003). For instance, if the experience with attachment figures has been rejecting or harsh, an avoidant strategy will develop whereby a defensive exclusion of these moments of need is achieved by focusing attention away from attachment figures towards other motivational systems such as exploration or play. If there is no change in the relational dynamics that lead to this defensive maneuver, this strategy might become a characteristic defensive style of relating in which the need for others is devalued or minimized and experience of the past is “normalized” and/or seen as unimportant (Main, 1995).

Nonetheless, experience encoded and stored in the implicit system is still alive and carried forward as negative expectations in regard to the availability and responsiveness of others, although this knowledge is unavailable for conscious recall. Concomitantly, there is an idealization or “normalization” of relational histories within the family and/or a need to dismiss the importance of intimate attachments under the guise of beliefs that emphasize “character-forming” attitudes based on compulsive self-reliance (Bowlby, 1980).

Even more problematic are cases in which there is a history of disorganized attachment. In these situations, children end up in a double-bind. The attachment figure they reach out for in moments of distress is the same attachment figure that is frightened (most of the time without realizing it) or frightens them with their harsh and punitive behavior. This leads to an approach-avoidance dilemma. The result is that young children’s behavior will temporarily disorganize and might be dazed or

confused, they may exhibit random, overly excited behaviors or hide in a corner, or they may mix avoidant with resistant strategies. It is important to note that all these behaviors only occur in the presence of the attachment figures that are frightened or are frightening (Main, 1995; Main & Hesse, 1990; Main & Solomon, 1986).

There is accumulating evidence supporting the hypothesis that formerly disorganized infants develop controlling strategies in order to maintain more organized and coherent interactions with their caregivers (Lyons-Ruth & Jacobvitz, 1999; Hesse, Main, Abrams & Rifkin, 2003). The controlling strategies can take two forms. They may be controlling-punitive, in which case the child becomes bossy and demanding toward a parent, or the strategy may become controlling-caregiving, in which case the child inverts roles with the parent and becomes a rescuer or helper of a helpless and insecure parent.

The ability to forestall disorganization through these controlling strategies comes, however, at a high price (Main, 1995). Many emotions and needs associated with the attachment system become defensively excluded. What takes over are emotions and needs associated with dominance-submission (controlling-punitive strategy) or with the caregiving systems (controlling-caregiving strategy). In either case, these controlling strategies can be fragile and may collapse if the dominating or caregiving strategy ceases to be effective and there is no other coping mechanism available to take its place (Hesse et al., 2003; Liotti, 2004).

As these strategies become consolidated in adulthood, the controlling caregiving strategy becomes part of a personality that Bowlby described as a compulsive caregiver (Bowlby, 1980). The controlling-punitive strategy in adulthood can be a feature of patients with personality disorders that fit the borderline disorder continuum. These patients can be very controlling and demanding in interpersonal situations. They can oppress and exhaust their romantic partners or attachment figures with conditional demands ("Either you do what I ask you or I will judge severely or threaten you"). They constantly need to be assured that they are wanted and loved and often test their partners, often without letting them know they are being put to a test. Simultaneously, they will do everything they can to accommodate to their romantic partners and often lose a sense of themselves as a person in the process.

When controlling strategies collapse, dissociative symptoms, linked to the re-emerging internal model of attachment disorganization, may emerge. The following clinical vignette illustrates this phenomenon well. Diana, a 33-year-old physician, grew up in a very unstable family. Her mother suffered from

bipolar disorder. Children of bipolar parents are at significant risk for developing disorganized attachment. This risk, when combined with traumatic or chaotic family backgrounds, puts individuals in a developmental pathway that may produce dissociative psychopathology (Carlson, Yates & Sroufe, et al., in press; Ogawa, Sroufe, Weinfield, Carlson & Egeland, 1997). Diana fits this developmental prototype. She was also the victim of incest by her father. In response to these traumatic events, Diane not only became very protective of her fragile mother (controlling-caregiving strategy), but also took it upon herself to watch over her younger sister with an eagle eye and make sure that her sister would not be victimized by her father.

Diana did well academically and her decision to enter medicine was partly influenced by the controlling-caregiving strategy she had developed in childhood (cf. the concept of "compulsive caregiving" personality in Bowlby, 1980). With the exception of recurrent depressive episodes that Diana self-medicated by using antidepressants, she functioned well. This changed rather abruptly when her younger sister asked her if she knew a therapist with whom she could work. When her sister revealed that her father had abused her sexually during her childhood, Diane began to have florid dissociative episodes. The compulsive caregiving-controlling strategy had "failed" Diane (her sister had been sexually abused despite Diana's watchful eye), and the collapse of this strategy ushered in the emergence of dissociative symptoms.

From the point of view of memory systems and mental representations, children and adults with a history of disorganized attachment followed by trauma or chaotic environments often develop multiple, unintegrated representations of self and others, particularly when distressing relational events activate their attachment system (Liotti, 1992, 1995, 2000). Liotti has noted that memory systems can become segregated along different emotional scripts or roles, that of the rescuer, the victim, and the persecutor. The re-enactment of these roles in interpersonal relations fits well with Karpman's description of the "drama triangle." Other roles such as the avenger or the seducer may also co-mingle with the drama triangle. Clinically, the re-enactment of these roles is a particularly prominent feature of patients with severe personality disorders. In moments of interpersonal distress when the attachment system is activated, the roles of the rescuer, the victim, and the persecutor may appear suddenly, and the patient often switches dramatically between these roles within the same session. Another clinical vignette will illustrate this phenomenon.

John is a married professional man in his 40s. He seeks psychotherapy having come from a background that included a mother with extreme narcissistic personality traits, who saw her children as an extension of herself and who could become physically and emotionally abusive when her children did not obey her. One particularly painful memory is of his mother putting him in diapers (at kindergarten age) over a minor incident of defiance and forcing him to go to school in diapers.

A particularly dramatic session takes place immediately following a couples session with his wife (conducted by another psychotherapist). During the couples session, John's wife lays down an ultimatum: either he changes his verbally abusive behavior toward her and their daughter or she will leave him. John comes into the individual session in a state of panic. During the session, he quickly oscillates between feeling victimized by his wife's ultimatum (the victim role), followed by a pang of guilt, remorse, and shame over his abusive behavior (the persecutor/abusive role that he is now being forced to confront by his wife). He also expresses a deeper sense of remorse and pain when he thinks about his daughter. As he is thinking about her, he doubles up in pain as if he has received a blow to the abdomen. This pain is accompanied by wishes of wanting to do anything he can to make up for his verbal abuse toward his daughter. John expresses the desire of wanting to rescue her (the rescuer role) from the traits of defiance and helplessness that he sees in her. He is beginning to see that his rage at her is a projection of the powerlessness and rage he feels for being humiliated as a child. In this session, the previously defensively segregated roles of the victim, persecutor, and rescuer are breaking down, and feelings of shame, remorse, and guilt that had been mostly absent are emerging in full force. His feeling stunned by his wife's ultimatum and his panic is accompanied by dramatic psychosomatic symptoms that represent a re-enactment of painful experiences from his childhood—the breakdown of the controlling strategy.

Childhood amnesia

Childhood amnesia of the first 3 or 4 years of life is based on the fact that interactions and events experienced with others during the first years of life are encoded and stored at implicit/procedural levels that are not accessible to conscious recall—although, as mentioned before, these memories are expressed as unconscious expectations towards others. Declarative memories and symbolic capacities begin to emerge during the second year of life, but are primarily nonverbal and imagistic in form. Language

begins to take off by the end of the second year of life and re-transcribes some of this preverbal experience into a propositional (sentence structured) format. This development, however, is relatively slow, and it takes several more years before language is sufficiently consolidated for preverbal experience to be expressed in narrative form that incorporates the past, present, and future. After the second year of life—and before autobiographical memories appears during the fourth or fifth year—memories are encoded and stored in explicit/nonverbal (imagistic) forms that are available for recall in formats such as mimetic interactions, dreams, and reveries (Liotti & Cortina, 2007). In either case, memories of the first 4 years of life are not usually available for recall in the verbal narrative form that is the hallmark of autobiographical memory.

Early, implicit, preverbal experience is important for several reasons. It forms the basis for prototypes or models of interpersonal relating. When early experience is relatively benign and positive, and future development follows this benign course, it will have profound positive effects on the quality of interpersonal and romantic relations later in life, such as the ability to cooperate and compete with others adaptively and flexibly, and the ability to parent effectively. While these predictions from attachment theory have face value and intuitive appeal, there are now robust longitudinal data to support these claims (Sroufe, Egeland, Carlson & Collins, 2005).

Early positive or negative experiences, by themselves, do not necessarily determine outcomes. Outcomes are the result of cumulative experience *plus* current context—rather than the result of single developmental issues playing out over time (Sroufe et al., 2005). Nonetheless, the effects of early experience continue to live with us for better or for worse. For instance, if, following a history of early secure attachment, further experience brings adversity and leads to psychopathology, the effects of early positive experiences are not lost. Often they emerge when clinical interventions begin to bear fruit. This is what Hoffman refers to as a “weak precursor” (Hoffman, 1983). By this he means the emergence in clinical work of memories of supportive figure(s) from the past in what otherwise appears to be a bleak childhood. (See Sroufe, 2003, for a well-illustrated clinical example².) Conversely, intrusive, rejecting, and/or harsh care early in development will set negative prototypes of relating and adversely affect

² See Sroufe and Sroufe (2005) for longitudinal research supporting the existence of positive figures from the past that serve as beacons of hope and as templates for healthy relating in the midst of chaotic and traumatic backgrounds.

the quality of romantic relations, peer relations, and the ability to parent affectively (Sroufe et al., 2005). Again, these early negative effects *do not* necessarily determine outcomes, and can be offset when primary caregivers find support in their parenting—the support can be clinical and/or be the result of stable relationships that develop around the primary caregiver (Suess & Sroufe, 2005).

A note on transference and countertransference

Transference is primarily based on expectations and attributions that originate in childhood and are carried forward during development as relational templates and interactions that are part of the normal events of daily living. Expectations and attributions are encoded primarily at an implicit/procedural level that is not accessible to consciousness. Some of these expectations may also become preconscious or conscious, but, generally speaking, most people will take for granted their way of relating to others unless it becomes highlighted or problematic because of clinical issues, cultural differences or social class differences. Transference can therefore be described as “habitual patterns of interpersonal relating” that are typical for each person (Schacter, 2002). The advantage of viewing transference from this perspective is that it is a parsimonious way of understanding its power without having to assume that transference is limited to the repression of unconscious material from the past (Cortina, 2003; Cortina & Marrone, 2003; Knox, 2003). In reality, past and present are always mixed together, whether experience has been negative or positive.

This way of viewing transference is similar to, yet different from, Freud’s. The similarity is based on the fact that Freud distinguished between negative transferences that are usually manifested as a resistance in therapy, and “unobjectionable positive transferences” that are accessible to consciousness and are based on positive experiences with parents. According to Freud, a positive transference is the main basis for establishing a therapeutic alliance with the patient (Freud, 1912). The main difference with Freud is that he encumbered his view of transference with libido theory that conflated attachment with sexuality. He assumed incorrectly that eventually even a positive transference would sooner or later become libidinal/erotic and a source of resistance (Freud, 1912).

Our perspective contrasts with Freud’s in two ways. First, we do not conflate positive parental expectations (based on a history of secure attachment) with sexuality. These are two different motivational systems that develop separately during childhood and gradually start to become integrated during adolescence in romantic relations. Therefore,

unless the attachment relationship with parents was seductive and erotized (in which case you do not have a positive transference to begin with), we do not expect positive transferences to become a source of resistance. Second, positive expectations, as noted earlier, are for the most part nonconscious and procedural. Hence, they are taken for granted.

People with a history of secure attachment “expect well” based on these experiences (Sroufe et al., 2005). Only when this expectation is violated does a misplaced positive transference become the focus of attention and become potentially conscious. This view turns Freud on its head, who thought positive transferences were conscious and negative transferences unconscious.

Similarly, countertransference can be defined as responses to other people’s habitual patterns of relating. In general, these responses will not be noticed or become conscious unless they are unusual. Assuming a psychotherapist is experienced and has a reasonably good capacity for relating to others, unusual responses such as being unduly alarmed or anxious, bored, and dreading an appointment with a given patient often turn out to be extremely useful indicators that these interactions are skewed in ways that need to be explored.

These unusual responses have been extensively and productively conceptualized using the language of intersubjectivity and co-constructed enactments (Aron, 1996; Hoffman, 1983; Mitchell, 1997). There is a vast literature on countertransference. Here, we just want to limit ourselves to emphasizing that the encoding of habitual patterns of relating (contained in the concepts of transference and countertransference) at implicit and subsymbolic levels is a normal part of development and is adaptive. Problems arise when these habitual patterns of relating become defensively excluded under the pressure of adverse relationships and circumstances.

We also think that *which* habitual patterns of relating are used will depend on which motivational system is activated at any given moment (Lichtenberg et al., 1992; Liotti & Cortina, 2006). If the attachment system is active and there is a history of a secure attachment, there will be a positive expectation in regard to the availability of attachment figures. If the caregiving system is active, there will be a desire to help others. If the ranking system is active, the relationship will be seen as competitive, and if the cooperative/play system is active, relations will be seen as being collaborative (Liotti & Cortina, 2007). Needless to say, which motivational system tends to be primarily activated and in what circumstances will vary from person to person and to a large extent define their personality. This view of transference expands the concept beyond the clinical

setting and makes it useful for social scientists who examine work relations, social change, the role of leadership, and the ability to attract followers (Maccoby, 2004).

Conclusion

In this paper, we explore a paradigm shift that has been developing in psychoanalysis within the past few decades. This shift is from conceptualizing the unconscious as serving primarily a defensive and repressive function, to seeing unconscious processes as serving much broader adaptive functions. Unlike the older model that sees the unconscious as primitive and inchoate, the adaptive model sees the unconscious as quite sophisticated. In a recent best seller, Malcolm Gladwell gives many striking examples of the power of nonconscious "thinking" that takes place without the types of mental process that we usually associate with "thinking" (Gladwell, 2005). This paradigm shift has very important clinical implications that are just beginning to be explored from a psychoanalytic perspective (Fosshage, 2005; Lyons-Ruth, 1999b; Stern, 2004). We hope this article will stimulate further clinical and theoretical exploration of these concepts.

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