

Two years after the tragedy of 9/11, officials at Dulles Airport conducted an experiment to improve security.¹ Borrowing techniques from the U.S. Customs Service and Israeli airports, they studied the nonverbal behavior of passengers as they entered the airport and stood in line at the security checkpoint. Scott McHugh, who directed the program at Dulles, had studied the videos of the 9/11 terrorists and noted a number of nonverbal signs that would have caused concern among

Unconscious Enactments in Psychotherapy

security officers at the airports used by the hijackers. They failed to make eye contact, hesitated to answer questions in a direct manner, and exhibited other physiological signs of stress.

This approach to airport security was based on time-honored principles that go back as far as Montaigne, the 16th century popularizer of the essay who once said, "There is no movement that does not speak both a language intelligible without instruction, and a public language."² Later, Freud³ commented on

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how nonverbal behaviors consistently betray what one is feeling, despite one's best intentions to conceal such feelings:

"When I set myself the task of bringing to light what human beings keep hidden within them, not by the compelling power of hypnosis, but by observing what they say and what they show, I felt the task was a harder one than it really is. He that has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his looks are silent, he chatters with his fingertips; betrayal oozes out of him in every pore. And thus the task of making conscious the most hidden recesses of the mind is one which it is quite possible to accomplish."³

The psychoanalytic/psychodynamic literature has historically placed a great deal of emphasis on dreams and parapraxes as the major avenues to the unconscious. In recent years, however, nonverbal behavior, procedural memory, and the burgeoning literature on the neurobiology of memory have restored nonverbal enactments to their rightful place as major means by which the unconscious communicates to us. Freud⁴ noted that what the patient does not remember

and verbalize will unconsciously be repeated in action in the clinical setting. Indeed, the original meaning of acting out was the patient's tendency to enact something meaningful right in front of the analyst's eyes instead of recalling and talking about it.

Unconscious enactments in psychotherapy occur from the moment therapists greet their patients in the waiting room and continue right on through the

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session until patients leave the consulting room with characteristic or uncharacteristic exit behavior.⁵ These enactments may involve gross motor behavior, like defensively crossing one's arms when the subject of one's mother comes up in a session. They may also appear as "habits," such as picking one's nails or swinging one's foot when one's legs are crossed. They can involve more subtle physiological changes, such as sweating or tensing one's muscles. They may even involve verbalizations — patients may increase their volume, change the rate of their speech, or stop talking altogether as a reflection of unconscious conflict. The action itself may be something of which the patient is aware, of course, but the unconscious motivation for the behavior may be quite hidden from the patient. Therefore, we might speak more precisely of unconsciously motivated enactments in psychotherapy. Moreover, the affect state (eg, anxiety) that motivates the enactment may itself be unconscious.

EMPIRICAL RESEARCH

In an era where there is skepticism about psychoanalytic constructs like unconscious motivation, it is important to have such notions supported by empirical research. Investigations of unconscious enactments go back several decades. Word et al⁶ documented the presence of unconscious racial discrimination among Caucasian students even when they consciously considered themselves to be free of racist attitudes. A group of white Princeton students interviewed both black and white interviewees. The researchers noted that the students sat further away, made more speech errors, and ended the interview earlier when they were interviewing blacks. When white interviewees were subjected to the same pattern of nonverbal behavior as the black interviewees, their performance suffered. The investigators concluded that blacks could be discriminated against in job interviews without the presence of consciously held discriminatory intent. In this case, the unconscious enactments included gross behavior, such as ending the interview early, as well as more subtle behaviors, like sitting slightly further away or making more speech errors that betrayed unconscious feelings that the interviewers themselves denied.

The notion of unconscious affect states continues to be somewhat controversial, especially given the long tradition stemming most notably from the work of William James that feelings are conscious. Berridge and Winkielman⁷ have pointed out that for an emotion to be truly unconscious, people would have to show clear evidence of emotional reaction in their behavior, physiological response, or subsequent subjective impressions of affect-laden events, even though they were unable to report an emotional reaction at the moment it was caused. These investigators designed an ingenious experiment that took these conditions into account. They

CE EDUCATIONAL OBJECTIVES

1. Relate the clinical significance of non-verbal communications in psychotherapy.
2. Assess the research that demonstrates how unconscious affect states influence motor behavior.
3. Describe the neurobiological underpinnings of unconscious enactments.

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demonstrated that drinking a fruit-flavored beverage could be influenced by unconscious emotional reactions. Their participants were exposed to eight subliminal exposures of happy, angry, or neutral facial expressions. The emotional expression was displayed only for 16 msec and was masked by an immediately following second picture of a neutral face, which was shown long enough to be consciously perceived.

Right after the subliminal exposure to the angry, happy, or neutral facial expressions, participants rated their own subjective emotion on a 10-point scale, from very unpleasant to very pleasant. Following their ratings, they were presented with a pitcher of a fruit-flavored beverage and asked to pour themselves as much as they wanted, to drink it, and to evaluate it. Among thirsty participants, subliminal exposure to the happy facial expression caused the participants to both pour and drink 50% more of the fruit-flavored drink than if they'd seen only the neutral facial expression. Those thirsty participants who saw a subliminal angry expression both poured less and drank less of the beverage than participants who were primed with a subliminal neutral expression. This behavior occurred even though the participants reported no conscious awareness of any change in their subjective emotion before pouring and drinking. Therefore, the investigators concluded that this pattern of findings demonstrated unconscious affective reactions that influenced behavior.

Although this pouring and drinking experiment occurred in a nonclinical setting, the implications are clear for clinical work. Patients can show behavioral manifestations of unconscious feelings that are not apparent to them or even to the therapist who is listening to the patient's verbal narrative. This disconnection between conscious and unconscious affective states suggests that different parts of the brain are at work. Both cortical and subcortical structures

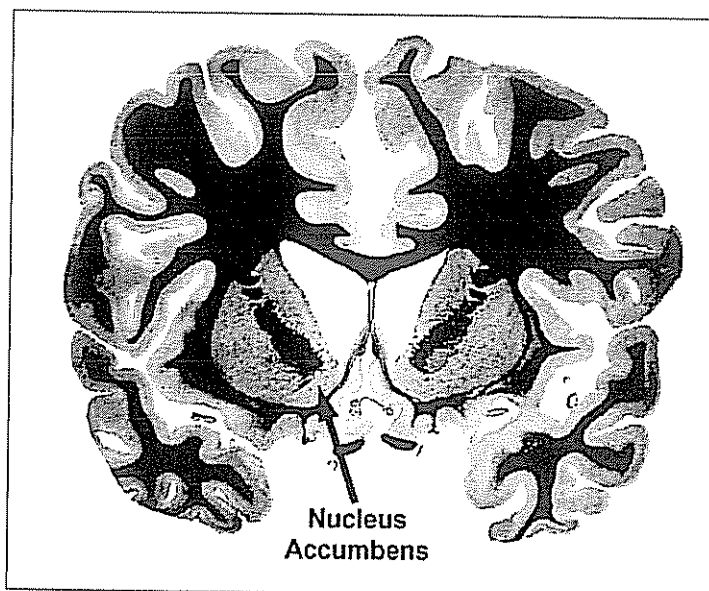


Figure 1. The nucleus accumbens in a coronal slice of the human brain. This section is part of the Yakovlev-Haleem collection, and appears courtesy of the University of Wisconsin and Michigan State University Comparative Mammalian Brain Collections, <http://brainmuseum.org>. Specimen and image preparation funded by the National Science Foundation and the National Institutes of Health. Digitally enhanced by Dr. G. Vlamontes.

are probably involved in emotional processes, but they appear to play different roles.⁷⁻¹⁰ We can experience conscious feeling states that are based in our cortical structures, but those structures are unimportant in causing the feelings. The cortex probably mediates the conscious experience of emotion by re-representing subcortical processes.

Research suggests that basic emotional reactions are caused by changes of activity in subcortical structures. If one has a brain injury to the cortical regions, one does not abolish the ability to feel strong emotions. When one manipulates subcortical brain structures, one can cause strong emotional reactions. For example, Le Douarin⁹ has demonstrated that the unconscious component of a fear reaction is mediated by the amygdala. Although more research has been generated on negative emotions, recent investigations indicate that pleasant emotional states are also caused by subcortical brain structures.⁷ More specifi-

cally, the shell of the nucleus accumbens at the front base of the brain, just below the prefrontal cortex, appears to be instrumental in the positive affective experience of "liking."¹⁷ The nucleus accumbens is at the interface between inputs from deep subcortical systems and the prefrontal cortex involving more conscious cognitive emotional appraisals. The nucleus accumbens is intimately connected to other structures extending deep into the brain stem, and sensory pleasure should not be viewed as contained in only one brain structure but as distributed by a network throughout the subcortical brain (see Figure 1 and Figure 2, page 272).

Berridge and Winkielman⁷ emphasized that unconscious emotional processes cannot by themselves produce conscious feelings. Indeed, such unconscious emotional states may not even be directly accessible to conscious introspection. One commonly sees this phenomenon in clinical work, where

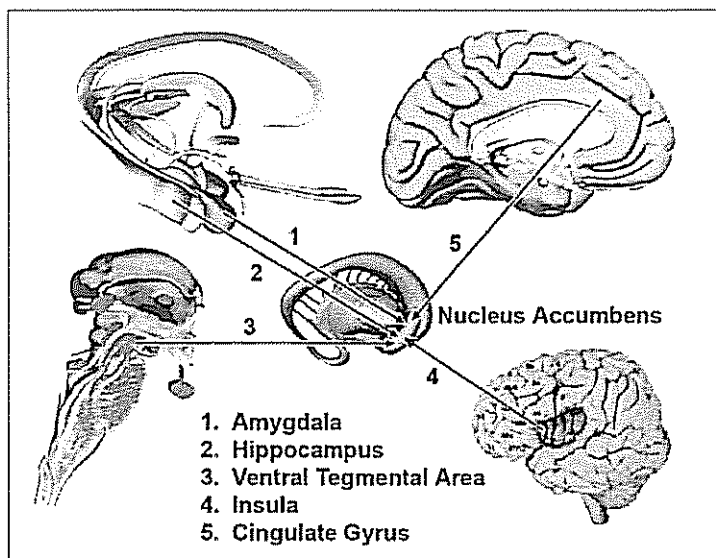


Figure 2 Key afferent connections to the nucleus accumbens. Accumbens spiny neurons are bistable, with both active and inactive states. Activated accumbens neurons integrate afferent inputs and fire when the sum of the inputs exceed a certain threshold. All images except the insula appear courtesy of 3B Scientific®, Hamburg, Germany. www.3Bscientific.com. Based on NEUROteacher™ LT-51000-1. © 3B Scientific®. Used with permission. Insula image courtesy of Dr G Viamontes, © 2007. Used with permission.

the therapist observes to the patient that something in the patient's demeanor appears to be sad, angry, or distressed, but the patient completely denies any such feelings.

If we translate this information into the clinical setting of psychotherapy, we can understand the phenomena of transference more fully. Learning how to categorize objects requires both recognition of a general set of features that defines the category and exclusion of irrelevant details. The unconscious world of a patient who experienced childhood neglect contains well-defined categories, shaped by early experience with caregivers, which are utilized to recognize new examples of neglectful individuals. A quietly listening therapist may activate these categorical representations at subcortical levels and generate an emotional response. In keeping with the principles of categorical recognition, the only information about the therapist that reaches the patient's conscious, cortical processing is an edited representation that

has been forced into pre-existing categories, and that lacks specific details. As a result, the patient is not able to fully explain the nonverbal behavior observed by the therapist.¹¹

At a primitive subcortical level, without the editing of the conscious rational cortical brain, the patient experiences the silent, listening therapist as a neglectful parent who is doing nothing to help her and begins to have unconscious anxiety regarding abandonment or neglect. These affect states are not conscious, and therefore she finds it difficult to respond to the therapist's observations about her fidgeting and her frequent glances at the clock.

These affect-laden transferences reflect the fact that specific unconscious self-representations within the patient are activated. The overarching self that we experience as our ongoing sense of who we are is composed of a myriad largely unconscious self-representations. When conscious circuits are activated, all aspects of the self can assess the situ-

ation, and one emerges with a balanced evaluation of the other person. However, under the power of intense feelings, one unconscious circuit (related to an unconscious representation of self) becomes powerful enough to lead to behavior that bypasses the rational processing of the cortex and the more global self of the patient (see Figure 3, page 273). Therefore, some patients will comment on impulsive or emotional behavior retrospectively by saying, "That's not me. I'm not like that." This observing or reflective self can weigh far more variables and view the impulse-ridden fragment of self as though it is a foreign body.

CONCEPTUAL UNDERSTANDING

Psychoanalytic/psychodynamic therapy has been affected by a recent paradigm shift in the cognitive sciences. The mind is no longer viewed as an independent, disembodied entity.¹² The process of thinking itself is now regarded as dependent on affect states embedded in the body and is linked to movements and actions as well. Similarly, the term "dynamic unconscious" once referred to the dynamically repressed contents stored in an ill-defined location in the darkest recesses of the psyche. Increasingly, the unconscious is viewed as all aspects of early internalized object relationships that become re-enacted in treatment, some of which are non-conscious but not repressed. Within this conceptual model, the "deeply unconscious" aspects of the psyche are seen as on the surface of moment-to-moment interactions between therapist and patient — visible in the implicit procedural behavior of the patient, particularly in response to the therapist. Just as the neglected patient begins to fidget and look at the clock, many patients resort to their characteristic defenses to distance themselves from threatening affective involvement with the therapist. They may avoid eye contact, lean back in their chair, or fall silent. The meaning of this behavior might

be outside of awareness, but mutual reflection on what is being enacted can be a good source of understanding

Lecours¹³ notes that the action-based modes of expression in the therapeutic situation have a strongly interpersonal pull embedded in them. The concreteness of the nonsymbolized contents, when actualized in relationships, tends to elicit an equally concrete mode of responding in the other party. Therefore, the phenomenon of projective identifica-

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tion proceeds in an automatic procedural manner, generally before the therapist can process what is happening. A patient walks in and falsely accuses the therapist of being late, and the therapist immediately becomes defensive and tense. From the therapist's perspective, the patient is mistaken about the time of the session and is making a false accusation against the therapist. So there is a knee-jerk response in a concrete, nonsymbolized mode to declare that the patient is wrong and the therapist is right. This response merely escalates the enactment of an aggrieved victim role on the part of the patient (see Figure 4, page 274).

Inherent in the understanding of unconscious enactments is that there is a repetition of the past in the present situation of psychotherapy based on a predict-

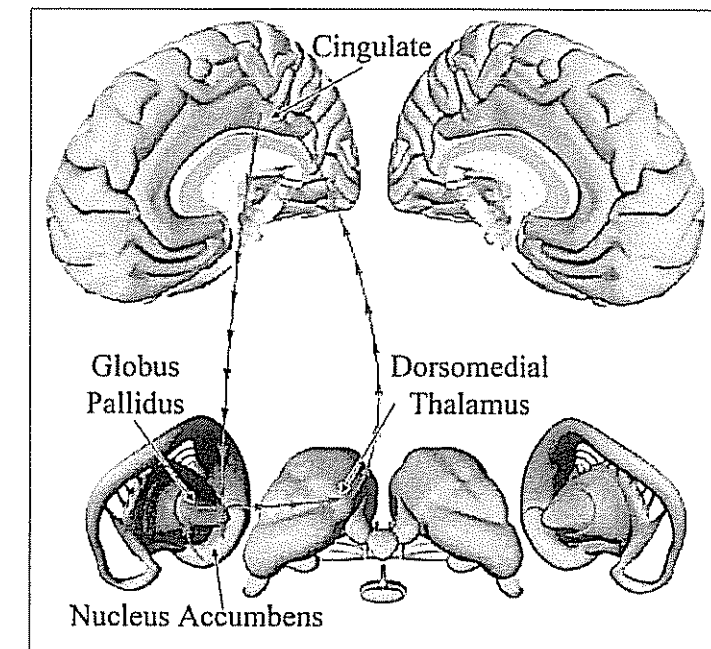


Figure 3 Thalamocortico-striatopallidal loop through the nucleus accumbens and cingulate gyrus. Excitatory projections from the cingulate and other afferently projecting regions reach the nucleus accumbens. The nucleus accumbens then sends inhibitory signals to the internal globus pallidus. This inhibition disrupts the tonic inhibition that the globus pallidus normally exerts on the thalamus, enhancing thalamo-cortical transmission. This circuit can generate a sustained representation that focuses motivation and attention on the represented object. Images appear courtesy of 3B Scientific®, Hamburg, Germany. www.3Bscientific.com Based on NEUROteacher™ LT-51000-1.0 3B Scientific® Used with permission

ing brain.¹⁴ These repetitions are based on deeply encoded predictions stemming from childhood attachment relationships. They tenaciously resist change or reflection because the brain is predicting that such behavior is necessary to deal with a therapist in the present. A patient with borderline personality disorder, for example, may present with a history of chronic childhood abuse associated with a hyperreactive amygdala.¹⁵ The early childhood attachment relationships have contributed to this neurobiological alteration, leaving the patient to be in a perpetually hypervigilant state that allows her to see trouble coming and protect herself. So she may view her therapist as secretly malevolent behind her neutral or professional demeanor. She predicts danger in the setting of being in a room alone with a caretaking older person. A

seemingly trivial comment or behavior by the therapist can activate the amygdalar response, which leads to protective defensive maneuvers, such as leaving the room, angry accusations, or paralyzing fear.

IMPLICATIONS FOR PSYCHOTHERAPY

The conditional learning that takes place in early attachment relationships is nonconscious and procedural, but the technique to "unlearn" what has been encoded requires consciousness.¹⁴ The growth of new brain connections in the prefrontal cortex results from the process of "unlearning" what has been "in one's bones." The psychotherapeutic process does not eradicate the old conditional learning or the neural networks containing the old transferences. Rather,

they are inhibited in the context of the development of new neural networks that are more adaptive than the old maladaptive ones.¹⁶

The increasingly sophisticated understanding of the neurobiology of memory and the mechanism of enactments allows us to begin to understand therapeutic change in greater detail. Intrapsychic conflicts that are the property of explicit/declarative memory involve hippocampal learning. Insight derived from the therapist's observations based on hippocampal learning may provide new ways of looking at information and adapting to new situations that can be rapidly assimilated by the patient. However, neuronal connections based on implicit, nonhippocampal learning stored in the basal ganglia as nonconscious procedural memory will not readily change even when brilliant interpretations offer profound insights that are relevant to the origins of the difficulties. Most neuronal associations that develop through intense repeated experiences will remain strong, despite attempts by the therapist to explain their origins.¹⁷ Traumatic emotional memories, for example, may have deactivated the hippocampus because of the high level of distress associated with the trauma. These implicit procedural memories require multiple repetitions in order for change to occur.

Old patterns of interaction occur that as unconscious enactments are repeated again and again with the therapist. However, over time the patient experiences the therapist in new ways. As Freud¹⁸ once noted, "The course the analyst must pursue . . . is one for which there is no model in real life." In other words, the therapist does not react in the way other people do. The therapist collaborates with the patient in reflecting upon the enactments and then understanding them in great detail. However, the understanding itself may not be as important for this component of therapeutic change as the repetition over time. The

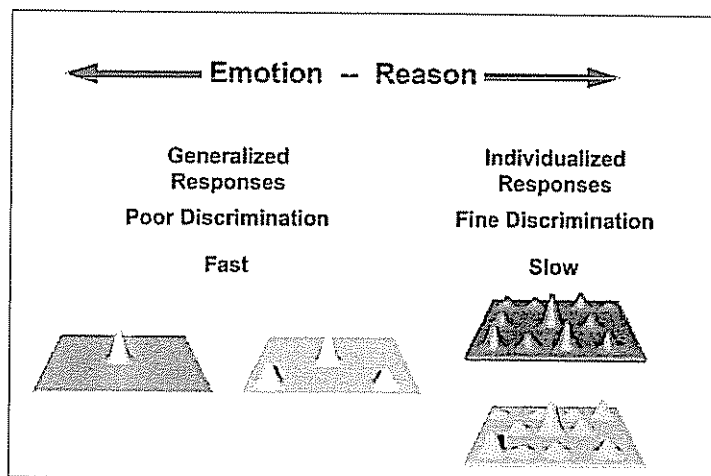


Figure 4. Objects with high emotional content (current or remembered) elicit rapid responses that are strictly directed at general features of the perceived objects (left side of figure). Objects with less emotional content can elicit slower, but highly individualized responses generated by the higher cortices.

knowledge of the different pathways leading to therapeutic change may be important to the patient; thus this knowledge can be shared with the patient as a

ory systems may take many repetitions within the therapy and outside the therapy. A great deal of working through is necessary before new neural networks of self and object representations are sufficiently strengthened to overshadow the old neural networks.¹⁶

Psychotherapists can help patients by explaining to them that some pathways and some neural networks are conscious, although others are subcortical. The motor system that carries out a behavior includes some inputs to which the individual could never obtain conscious access. The answer to the question, "Why did you do it?" will account for only a small part of the neural inputs to the motor system that produced the behavior.¹⁷

Psychotherapists must keep in mind that the initial learning of a new routine requires conscious attention and effort, and this will involve the prefrontal cortex. After many repetitions, the behavioral routine is stored as procedural memories subcortically in the basal ganglia that operate automatically and entirely nonconsciously. The working-through phase of a psychotherapeutic treatment is aimed at modifying repetitive transference patterns. This work requires not

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psychoeducational intervention. Patients can be told that change occurs in multiple levels of awareness and multiple levels of brain function. Repetitive patterns of object relatedness seen in the unconscious enactments that occur in psychotherapy will respond on a different timetable than explicit/declarative psychological conflicts that have been in the patient's conscious awareness. When these declarative conflicts are explored and insight is offered, they may change rapidly. On the other hand, unconscious patterns in the procedural/implicit mem-

only conscious reflection and insight but the use of conscious effort and practice to change how one responds in the present and to gain a sense of mastery over what has been out of one's control in the past. Research¹⁹ has confirmed the necessity of consciousness in situations where an automatic response must be inhibited so that a novel one can be executed.

Therapists may need to focus a great deal on observations regarding unconscious enactments before one reaches the level of providing interpretive insight. Comments such as, "Have you noticed that you don't look me in the eye when you come into the room?" or "I have noticed that you don't ever use your wife's name, and you tend to cover your face when you speak of her" may be examples of useful comments to help the patient begin to reflect on these nonverbal and unconscious enactments.

CONCLUSIONS

Unconscious enactments in psychotherapy are rich with meaning. They convey affect states that may be outside of the patient's awareness and repetitive patterns of internal object relations that reflect fundamental themes in the patient's life. Subcortical brain

structures appear to be responsible for unconscious affective experiences. The cortical versions of these phenomena may be "edited" in such a way as to diminish the emotional intensity. Implicit procedural memories of early childhood attachment relationships may not respond to insight. Multiple repetitions in the interaction with the therapist and outside the therapy may be necessary to make changes in these patterns of enactments.

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