

THE MIND IN MODERN PSYCHOANALYSIS

ABSTRACT

This article provides a brief overview of how Modern Psychoanalytic practice connects to recent scientific evidence which has increased our understanding of the mind and the brain. The major question to be explored is: How well does Modern Psychoanalysis fit our current understanding of mind/brain phenomena? The author's approach to examining this question is to look at it through the lens provided by the founder of Modern Psychoanalysis, Dr. Hyman Spotnitz, in *Modern Psychoanalysis of the Schizophrenic Patient* (1985). Major areas covered in the article are emotions and the brain, the roles of memory and attachment, and the talking cure.

FIGURES AND CHARTS

Figure 1	View of the brain showing the amygdala
Figure 2	View of the brain showing the limbic system
Chart	Types of Memory

A. INTRODUCTION

This article is designed to provide a brief overview of how Modern Psychoanalytic practice connects to recent scientific evidence which has increased our understanding of the mind and the brain.

The major question to be explored is: How well does Modern Psychoanalysis fit our current understanding of mind/brain phenomena?

My approach to examining this question will be to look at it through the lens provided by the founder of Modern Psychoanalysis, Dr. Hyman Spotnitz, in *Modern Psychoanalysis of the Schizophrenic Patient* (1985), particularly the chapter entitled "A Neurobiological Approach to Communication."

According to Dr. Spotnitz (1985, pp. 288-89), "The patient who has successfully undergone modern psychoanalysis emerges in a state of emotional maturity." Emotional maturity is, therefore, properly seen as equal to "mental health;" and "mental illness" is correspondingly seen as equal to "emotional illness." (See Spotnitz, 1985, pp. 23, 82, 84 & 217)

This view is extraordinarily significant in light of current research indicating that the "connection between meaning and interpersonal experience occurs because these two processes appear to be mediated via the same neural circuits responsible for initiating emotional processes." (Siegel, 1999, p.6)

In other words, the way we create meaning in our lives and relate to others appears to be integrally and irrevocably linked to our emotions.

B. EMOTIONS AND THE BRAIN

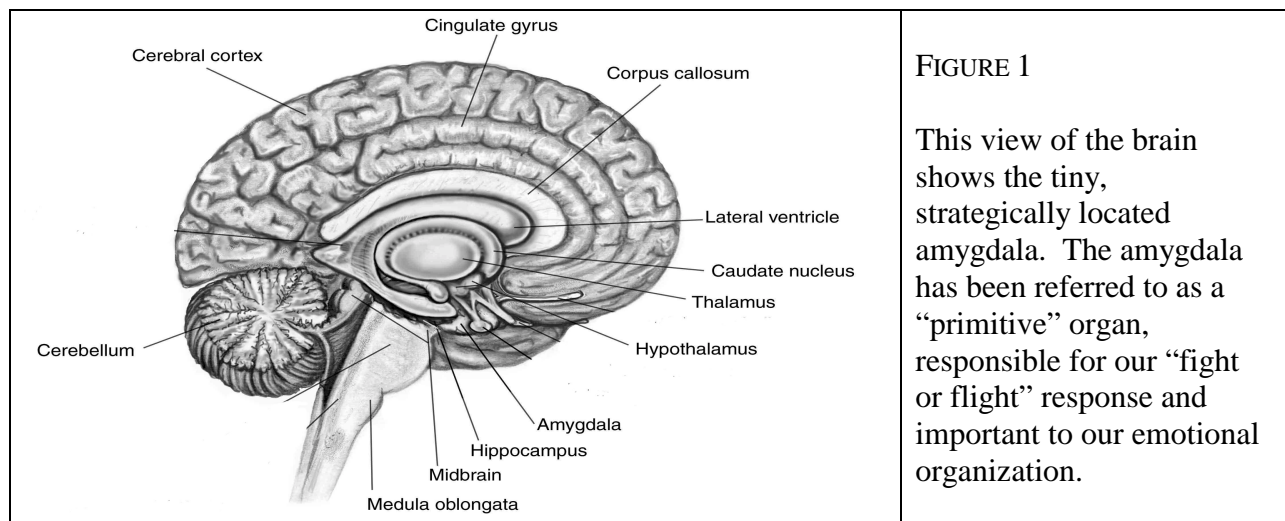
Not only that, but the areas of the brain which most seem to regulate and organize our behavior are not necessarily those areas we ordinary think of as responsible for complex thoughts or “higher reasoning.” On the contrary, the brain regions which relate to our emotions are believed to be vital in organizing our mental structure.

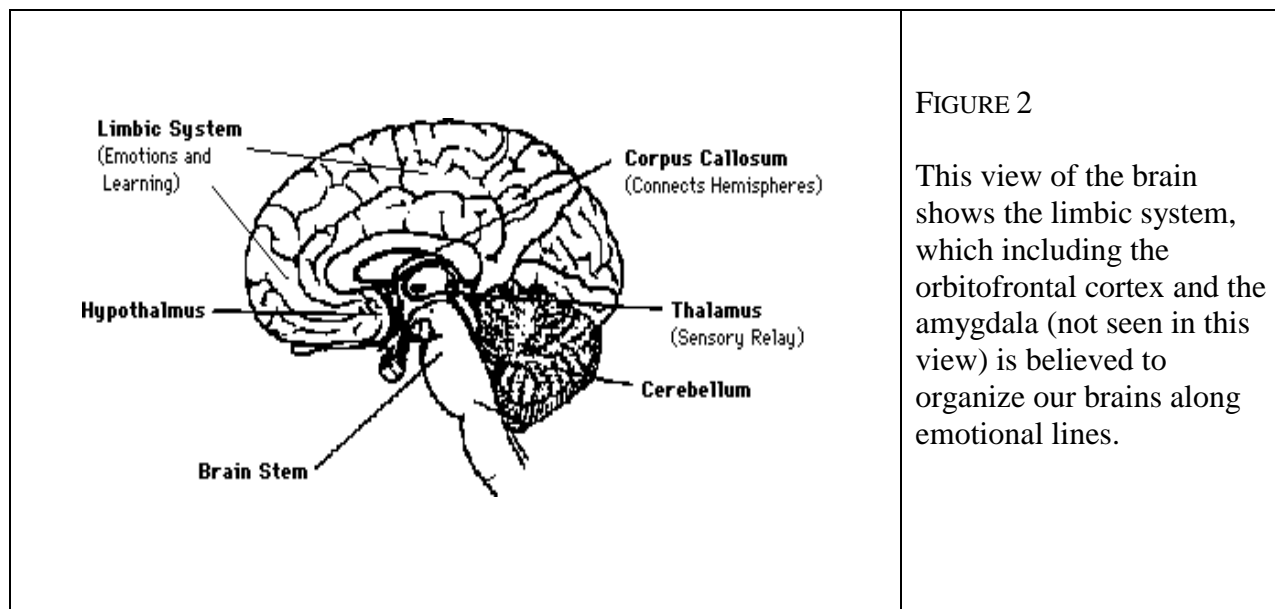
Daniel Siegel (1999, p. 10) states that “(t)he centrally located ‘limbic system’ – including the regions called the orbitofrontal cortex, anterior cingulate, and amygdala – plays a central role in coordinating the activity of higher and lower brain structures. The limbic regions are thought to mediate emotion, motivation, and goal-directed behavior.”

The orbitofrontal cortex actually sits at the top of the limbic region and is anatomically connected to a wide array of areas in the neo-cortex and the deeper structures of the brain; carrying out a vital role in coordination of the activity from all the regions of the brain.

These limbic regions are additionally thought to permit the integration of many basic mental processes, such as appraisal of meaning, the regulation of emotion and “social cognition.”

The drawings that follow show the locations of these structures within the brain.





A further contention by Dr. Spotnitz (1985, p.84) is that “(p)sychosis is connected with disruptions of the maturational sequences that unfold during the first two years of life;” and that (1985, p. 37) “(t)he operational theory is empirically applied to take account of the initial unresponsiveness of the preverbal personality to interpretive procedures and to the patient’s oscillating transference states.”

Thus, modern analysts often find themselves most concerned with the pre-verbal (or pre-oedipal) communications of their patients – with those communications which the patient uses to represent patterns of interaction or difficulties that may have arisen before the patient could talk.

Spotnitz specifically states (1985, p. 37) that “... modern psychoanalysis amplifies the basic theory of psychoanalytic technique. The main departure from the classical method... is the extensive range of interventions sanctioned – ego-reinforcing, emotional and symbolic.”

C. THE ROLE OF MEMORY

Symbolic and emotional communications are used to reach patients on a pre-verbal level in modern psychoanalysis. According to Spotnitz, (1985, p. 23, emphasis added) “(w)e now recognize and know how to exploit narcissistic transference phenomena to revive symbolically very early clusters of experience...”

Looking at these ideas of modern analysis in terms of brain research and our current thinking about memory, we see the following picture:

TYPES OF MEMORY		
IMPLICIT MEMORY	EXPLICIT MEMORY	
<ul style="list-style-type: none"> ◆ Present at birth ◆ Does not rely on specific “recalling” or on sense of self or time ◆ Includes behavioral, perceptual, somatosensory & emotional information ◆ Focal attention not required for encoding ◆ Independent of the hippocampus 	1). <u>Semantic</u>	2). <u>Autobiographical</u>
	<ul style="list-style-type: none"> ◆ Develops initially at around 2 years of age 	<ul style="list-style-type: none"> ◆ Progressive development after second year of life
	<ul style="list-style-type: none"> ◆ Has the subjective sense of recollection (& if autobiographical, includes a sense of self & time) ◆ May include factual (semantic) & autobiographical (episodic) memory ◆ Focal attention required for encoding through hippocampal processing & cortical consolidation 	

It should be clear from this chart that the type of memory being addressed by modern psychoanalysis is exactly that type of memory now understood to exist since birth – implicit memory. Implicit memory is “non-verbal,” and according to Susan Vaughan (1997, p. 169):

... modern memory research suggests that children do not even have intact explicit memory until the third to fourth year of life, because the pathways involved in the hippocampus are not yet fully developed. This fits with my clinical observations about the memories of events that patients bring to psychotherapy; despite Freud’s interest in early life, specific memories from the first three to four years are usually few and far between. Yet clearly things that matter happen in relationships in the first four years of life.

The hippocampus (See Figure 1) is located in the medial temporal lobe (towards the middle, just to the sides of the temples) and is believed to play a central role in consciously accessible forms of memory.

The hippocampus also seems to require focal, conscious, directed attention for “activation” so that it can encode information into “working memory;” and thus make the information available for consolidation in the cortex; thereby enabling future retrieval from long-term memory (by the hippocampus). This complicated process may be referred to as hippocampal/cortical consolidation.

However, without focal attention, items are not encoded into explicit memory; whereas implicit memory does not appear to require any such complicated process and remains intact, with or without conscious encoding.

D. ATTACHMENT

It could be said that we rely almost exclusively on implicit memory in our first years of life. Spontnitz (1985, p.82, emphasis original) also examines the importance of the early years of human interactions:

The first environmental agent with whom the infant teams up is the mother, or the maternal environment. The early sensoriperceptive interchange between mother and infant seems to be a *sine qua non* of the infant's 'earliest sense of the body self as entity... the condition on which the feeling of 'being alive' rests (*quoting* Mahler & McDevitt, Thoughts on the Emergence of the Sense of Self, Journal of the American Psychoanalytic Association, 1982, vol. 30, p.833). There is overwhelming evidence of the crucial importance of their collaborative functioning for personality patterning.

In fact, our earliest "attachment" may be described as an inborn system in the brain that evolves in ways that influence and organize emotional and memory processes with respect to significant caregiving figures. (See Bowlby, 1969). Our early parent-child interactions have, thus, been understood to lead to specific organizational changes in the infant's behavior (and, therefore, brain function). (Main, 1995)

Dr. Vaughan (1997, pp. 105-106) says that:

There is new and exciting evidence to suggest that the capacity to experience a broad range of affects, as well as the ability to self-regulate affect, has its origins in the interactions of caretaker and infant and arises directly from the maturation of neurons in the cortico- limbic areas of the brain in the first three years of life.

Spontnitz (1985, p.96, emphasis original) recognized that "(a)n *excessive tie-up of neurons in fixed and pathological patterns and overactivity or underactivity of certain neuronal systems* are generally associated with mental illness."

E. THE TALKING CURE

Dr. Spontnitz (1985, p. 101) correctly assessed the importance of our communications for repairing this damage:

... the foci of... emotional deficits might be looked for in the right hemisphere... In this context, psychoanalysis may be viewed as the process of making it possible for the...cerebral hemispheres to express themselves through verbal communication and to work together in an integrated way. That notion would appear to be consistent with the latest findings in neurophysiology and the principles of modern psychoanalysis...

Based upon his extensive research and work on “right brain” phenomena, Allan Schore (1999b, p. 125) speculates that “the emotion-processing right mind is the neurobiological substrate of Freud’s dynamic unconscious.”

Schore says in an interview (Carroll, 2001, emphasis original):

...my interest in the first two years of life is not generally how social experience in an abstract way impacts the brain but *very specifically* how it impacts the emotion generating limbic system and the right hemisphere of the brain which connects into the body. The left hemisphere does not come on line into a growth spurt until a year and a half... all of these early experiences, I’m suggesting, are specifically impacting the non-verbal right brain. In the last two years only, because of the neuroimaging, the amount of research on the right brain finally is now picking up steam...

Q. Much of your work has focussed on elucidating the functions of the right brain – and the orbitofrontal cortex – with other parts of the brain...

A. The right brain stores internal working models of the attachment relationship. It processes emotional social information...

Modern psychoanalysis utilizes a wide range of interventions involving emotional communication; including techniques which help facilitate emotional communication (such as joining - where the analyst aligns himself with the patient’s resistance).

According to current brain research, the significance of these emotional and symbolic communications cannot be overlooked due to a phenomenon known as “neuroplasticity.”

Spotnitz (1985, p.99, emphasis original) was basically describing the phenomenon of neuroplasticity when he said:

What frees the neurons – that is, permits them to be activated in new, more desirable pathways – is a redirection of the *old pathways*. Redirection entails the deactivation of previously used pathways, their reactivation in a new way, and the activation of other pathways.

In fact, our neurons are always working to provide us with a “continual flow of conscious experience.” They do this through a constant “thalamo-cortical sweep;” (going from the deeper areas of the brain, such as the thalamus, up toward the higher cortical regions) in which the neurons fire in what is called a “40-HZ (forty-hertz) pattern” – (A forty-cycle-per-second pattern “sweeping” through both halves of the brain from back to front).

An important term to remember in regard to this neuronal firing sequence is Hebb’s Axiom. Hebb’s Axiom is that Neurons which fire together wire together; i.e., Neurons which fire together at one time will tend to fire together in the future. (Hebb, 1949)

The significance of Hebb’s Axiom to our memory processes is that whenever we retrieve memories we simultaneously retrieve an entire set of neural connections. Additionally, each

time we retrieve a memory a new memory is created with parts of the old experience and parts of the new experience.

Dr. Siegel (1999, p. 295) suggests that "... the limbic regions of the brain (especially the orbitofrontal cortex) may continue to be open to future development throughout the lifespan, and thus remain open to experience-dependent maturational processes. Psychotherapy can utilize this potential in helping facilitate the further development of the mind." (See also Siegel, 1999, p.48)

Siegel (1999, p.298) explains how psychotherapy accomplishes its curative function:

Psychotherapy establishes a safe environment in which present and past experiences can be explored. A therapist and patient enter into a resonance of states of mind, which allows for the creation of a co-regulating dyadic system. This system is able to emerge in increasingly complex dyadic states by means of attunement between the two individuals. The patient's subtle nonverbal expressions of her state of mind are perceived by the therapist and responded to with a shift in the therapist's own state, not just with words. In this way, there is a direct resonance between the primary emotional, psychobiological state of the patient and that of the therapist. These nonverbal expressions are mediated by the right hemisphere of one person and then perceived by the right hemisphere of the other. In this way, the essential nonverbal aspect of psychotherapy, and perhaps all emotional relationships, can be conceived as a right-hemisphere-to-right-hemisphere resonance between two individuals.

Spotnitz (1997, p. 36) more succinctly stated "(m)ost of the work in the analysis consists in asking question after question, following the patient's unconscious as closely as a shadow in the exploration that will lead to the uncovering of layer after layer, until the point is reached when the patient discovers a truth about himself through his own voice."

In this writer's opinion, the most current brain research tends to support what modern analysts already know – that when a patient can get in touch with and express all of his or her feelings, good and bad, emotional healing can take place.

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