

## **Thunder, Lightning and the Scientific Standing of Psychoanalysis<sup>i</sup>**

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My enduring interest in the scientific standing of psychoanalysis emerged out of childhood with a need to understand, “What makes sense?” I was zero for two with fathers; one abandoned us and the other was an odd duck who seemed strange to me. My mother was depressed and passive, looking for others to help her. Sorting out how to navigate the social world confounded me. I became a minister to please my mother, but I lacked the kind of religious experiences that John Wesley referred to when he said, “I felt my heart strangely warmed.” In the absence of such experiences, I found religion to be a closed system of limited value to me. Later, however, sitting in my first pastoral counseling course in seminary, I was fascinated by the question, “Why do people do what they do?” My professor and eventual colleague, Ronald Lee, had organized the counseling class around psychoanalytic concepts.

After four parish years of parish life, I returned to graduate school in a joint program between Northwestern University and Garrett-Evangelical Theological Seminar with Ron Lee as my advisor. Accordingly, my continued exposure to analytic ideas was primarily through my clinical work and through Ron’s classes and supervision.

I learned that Freud had begun his professional career as a neurologist, initially working under the famous Jean Charcot, whom he came to idealize, at Charcot’s Pathological Laboratory. But by the mid- to late 1880s, Freud was gradually becoming more interested in psychology and eventually abandoned neurology in frustration; the primitive field simply lacked the instruments

and tools to find useful data. Unable to study the brain as an organ, he turned to studying the mind, the product of the brain.

Since Freud's time, psychoanalysis has survived numerous disruptions and transformations. Early on, Freud's Wednesday night psychoanalytic study group was disrupted by palace intrigue with Jung, Adler and Ferenczi among those who were ejected or defected, depending on one's view. Ironically, their departure was about differences in theory rather than practice. World War II disrupted the entire continent of Europe and never more so than for the Jews. Those who could immigrated to the Americas, both north and south. Most Jewish analysts were able to connect with medical schools and were well accepted within the medical community. Like all immigrants, they brought their culture with them. They revived the spirit of the Wednesday night group; the sacred texts of Freud's writings were to be studied and debated. Freud was never wrong, but clearly, his writings were subject to multiple interpretations.

Freud's early work in neurology, however, was seldom mentioned or given much importance throughout my studies; for years, I found this lack of attention to also be true when I attended psychoanalytic conferences. One was always admonished to read Freud (and to read Freud again) to achieve clearest understanding. Strict adherence to analytic technique and theory was the rule of the day; the most scathing criticism one heard was that some individual or some idea was "nonanalytic." A good example of this drive for purity can be found in Eissler (1953). Here, he introduced the idea of the "parameter," the reluctant bending of the strict structural rules of analysis to accommodate a patient who is stuck or who might leave treatment without such accommodation. But one must go back and analyze the "parameter" for a true analytic treatment.

Such purity thrives in isolated communities. With the establishment of independent institutes unconnected to universities or medical schools, psychoanalysis drifted and became largely hermetically sealed from outside sources.

Throughout the '60s and '70s, the study and practice of psychoanalysis became more limited and more intellectually isolated. Self psychology was a creative contribution in the '80s and '90s, but after that, not much felt new or improved. Much later in my own career, I read Kate Schechter's ethnographic study of the Chicago Institute for Psychoanalysis (2014). She not only laid bare the Institute's history of corruption but also articulated misgivings at the core of psychoanalysis that I could feel — a kind of double bind or infinite regress, but could not clearly express. She quotes Derrida (1998):

“Invoking continuity with the tradition of analysis, Freud embedded in his *Psychoanalysis* multiple orders of resistance alongside the founding notion of analysis as, precisely, analysis of resistance (analysis of the resistance, that is analysis, to analysis). Psychoanalysis, being thus determined ‘only in adversity and in relation to what resists it,’ can never, Derrida wrote, ‘gather itself into the unity of a concept or a task.’” (p. 20)

Psychoanalysis was simply left to drift with little connection to any other science and no way to know what is true or, at least, more likely true and what is not.

In this context, one could understand the universities and medical schools eventually turning to medication as an alternative or adjunct for psychotherapy, but why were they looking to nonanalytic psychotherapists? Where was the connection between psychoanalysis and its

medical heritage? In grad school, I forced myself to plow through 536 pages of *The Treatment of Primitive Mental States* (Giovaccini, 1978). Little did I know that my most memorable takeaway from the book would be to read that Melanie Klein's theory is incompatible with what we know about infant brain development (p. 23). Some of her ideas may have some heuristic value in treatment, but as Giovacchini makes clear, the theory cannot be right. If psychoanalysis aspires to be a science, why does it cling to theories that are demonstrably impossible? Was I now repeating my experience with religion? Had I pursued yet another closed system with its own internal contradictions? I had been trying to move away from religion as a closed system but seemed to have simply found a secular one.

My introduction to psychology was behaviorism as an undergraduate. "Rat psych," as I called it, felt palpably shallow and was of no interest to me. With psychoanalysis, there were plenty of problems, and yet there was something far more human. Ron Lee introduced me to Kohut and self psychology; together we published *Psychotherapy after Kohut: A Textbook of Self Psychology* (1991). Self psychology was considered a breach in the orthodoxy of analytic theory at that time and, of course, branded by some with the epithet, "nonanalytic." But more importantly to me as a clinician, I found Kohut's ideas useful. His concept of a selfobject, by which he meant a function assigned by the patient to the therapist, not a thing or person in the real world, was observable. The functions Kohut identifies are narcissistic transferences of needs and are unlike the traditional usage of the term transference, meaning the projection of earlier object experiences onto the therapist. Another way of thinking about these narcissistic transferences is that they are not about experiences that the patient has had; rather, they are about the expression of a desire for experiences that they need but have not had. Kohut recognized

three narcissistic needs: idealizing, mirroring and twinship. I also found his bipolar continuum of cohesiveness and fragmentation was both observable and invariably clinically important.

Although these ideas were useful, they did little to establish psychoanalysis as a science. I took comfort from the expanding literature on the effectiveness of psychoanalytic therapy. Drew Westen and his colleagues from Emory University were publishing multiple papers that strongly supported psychoanalytic psychotherapy. In addition, Jonathan Shedler's research (2010) not only strongly supported psychoanalytic therapy's effectiveness but also highlighted two additional major findings. First, psychoanalytic psychotherapy had a significantly higher effect size than Cognitive Behavior Therapy (CBT), which was significantly better than antidepressant medication. Secondly, and more importantly, he also showed that CBT treatment gains tend to fade over time while psychoanalytic therapy patients not only maintain their gains but often make further gains at follow-up. For me, this was wonderful news. Psychoanalytic therapy works, and quite well at that. But even this finding still does not meet the standards of contemporary science as Freud envisioned. There were still very few connections and cross-fertilization between psychoanalysis and closely related fields of science. For example, Fred Pine, writing in *Psychoanalytic Psychology* (2020), addresses the scientific standing of psychoanalysis:

“Let me dwell for a moment on Freud's reference to observation as the foundation of 'science.' There is no simple answer to the question whether and in what ways psychoanalysis is a science. I would argue that psychoanalysis is certainly *sciencelike* [sic]. We base all our theoretical concepts, all of our technical guidelines, and all of our in-session interventions on observation. And, as in all scientific work, these observations

are subject to refinement over time and are reported in professional articles where they can be subject to scrutiny by others.” (p. 89)

A science is defined by its field of inquiry; it uses the tools and methods necessary to answer the questions it raises. I agree with Pine in that psychoanalysis as he describes it is sciencelike. It is the exclusion of other sources of information *tout court* that makes psychoanalysis sciencelike. From my reading of Pine’s work, it is very clear that he is an excellent scholar; I have quoted him here because he so clearly articulates a prevalent view. Although we all have learned a great deal within this closed system, we also are aware of the extensive literature about the effect of the observer’s person on what is observed, how it is reported and how is it understood. Our idiosyncratic, individual psychic structures shape our interpretations of what it really means. This bias has been well articulated in many places. For example, George Atwood’s and Robert Stolorow’s review of the writings of Freud, Carl Jung, Wilhelm Reich and Otto Rank (1993) illustrate the personal dynamics of each theorist and how these dynamics are woven into their theory. We have multiple theorists, multiple theories, multiple ways to organize the data presented. What is the winnowing process where we separate the wheat from the chaff?

The case method that Pine (2020) articulates is surely one of the major reasons that psychoanalytic therapy has become so robust and effective. Clearly, that training and educational method has been very effective. Having one’s colleagues critique one’s work is brave, and I admire the willingness to be so vulnerable. I certainly have learned much from such readings and presentations. But why abandon Freud’s original vision of a

scientific psychology and settle for sciencelike? My objection is the one I continue to raise; psychoanalysis is still a closed system as there are no significant inputs from any other science and very few references to any other data outside of psychoanalysis. Ironically, as with Freud, one of the few inputs one reads about outside psychoanalysis is literature. Good literature often reveals wonderful insights into *homo sapiens*, and Shakespeare is a treasure trove, but as rich as his writing is, Shakespeare's work is by no means science.

When first introduced to the literature on neuropsychology, I was underwhelmed; I could not imagine how it would be of much value to a clinician in the trenches. Most conferences I had attended over the years were, by and large, restating and recycling prior work. Mostly they were useful reminders and supportive of my clinical work but included very little from outside the analytic bubble. In October 2019, I attended a conference in Chicago given by Mark Solms. As I was leaving, I said to a couple of colleagues, "This is the most interesting and valuable conference that I have attended in 20 years."

Mark Solms has an interesting life story that provides context for his work. He was born on the Skeleton Coast of the former German colony of Namibia, where his father administered a diamond mining company that was owned by De Beers. He describes an idyllic childhood with his older brother and constant playmate, Lee. When Mark was four and Lee was six, they were playing at the yacht club with friends. Lee and two other boys climbed onto the roof. Mark was wading in the surf when he heard something that sounded like a watermelon cracking open. Lee had fallen on concrete pavement and suffered a serious traumatic brain injury. When Lee was

finally able to return home, he was not the same person. He could not engage in the same way; the games they had played were now empty, with none of their former imagination and creativity. Mark found him to be “eerie or uncanny.” Where had the earlier version of his brother gone?

At university, Mark trained as a neuropsychologist, hoping to understand what had happened to his brother. But, like Freud, he was ultimately disappointed to find that neurology provided little to answer his questions. He became depressed and in 1987 sought treatment in psychoanalysis. Not only did he find it helpful, but he also was very encouraged by its focus on the meaning and purpose of symptoms. His doctoral neuropsychological study of dreams included interest in the content of dreams, which traditional neuropsychology dismissed as unscientific. In the late ‘80s, he attended a lecture (from the humanities department at the University of Witwatersrand) on Freud’s *The Interpretation of Dreams* (1900). The professor, Jean-Pierre de la Porte, explained that one could not understand the theoretical conclusions Freud reached without first digesting an earlier manuscript of his, “Project for a Scientific Psychology” (1895), which was published posthumously in 1950. In this document, Freud attempted to place his earlier insights about the mind on a neuroscientific footing. In the opening lines, Freud wrote, “The intention is to furnish a psychology that shall be a natural science: that is, to represent psychical processes as quantitatively determinate states of specifiable material particles” (p. 282).

Solms was so impressed with Freud’s work that he did his own translation of Freud’s 20 volumes. Unlike James Strachey, German is his first language and Solms added his own take on some of the translations in the Standard Edition. He found Freud to be an excellent neurologist



and was puzzled as to why psychologists and psychiatry have dismissed him. From my perspective, that dismissal has a lot to do with the common perception of Freud's preoccupation with sex. Solms points out that both Newton and Einstein were wrong about things in physics yet retain the admiration of physicists and the public. Solms makes it clear, however, that his efforts are not to vindicate Freud or prove him right, but to simply "finish the job" (Solms, 2022, p. 10).

Freud's disappointment in neurology led to a reappraisal that proved to be brilliant. It forced him to look more closely at psychological phenomena in their own right, giving rise to the investigative method he called psychoanalysis. Freud realized that the erratic train of our conscious thoughts can be explained only if we assume implicit intervening links of which we are unaware. This gave rise to the notion of latent mental functions and, in turn, to Freud's famous conjecture of "unconscious" intentionality. Two further key pillars of psychoanalysis emerged: First, the invariable strong reluctance to be aware of these unconscious intentions which we now refer to as "resistance," "censorship," "defense" and "repression," etc. This finding, in turn, revealed the second pillar, the crucial role that emotions play in mental life and how they underpin all sorts of self-serving biases. Today, it is obvious and unquestioned that some of the major motivating forces in mental life are both entirely subjective and unconscious.

Freud (1920) wrote: "...all of our provisional ideas in psychology will presumably someday will be places on an organic foundation" (p. 83). He enthusiastically anticipated the day when psychoanalysis would again join with neuroscience: "Biology is truly a land of unlimited possibilities. We may expect it to give us the most surprising information, and we cannot guess

what answers it will return in a few dozen years. ... They may be of a kind which will blow away the whole of our artificial structure of hypothesis” (p. 83).

It is important here to underscore that this approach is not reductionism, i.e., to reduce psychic phenomena to their neurological correlates. Solms (2015) states:

“...what is unique about the part of nature that we are concerned with in psychoanalysis is that it is both an object and a subject. This simple fact is the starting point of all neuropsychanalysis. On this basis, neuropsychanalysis seeks to link the findings of the science of the mind as an object with those of the science of the mind as a subject” (p. 3).

What unites these two approaches is that they are attempts to do neuropsychanalytic research.

The interface between psychoanalysis and neuroscience is a dialectical one, a conversation between fields where they intersect. Neither view is privileged over the other; neither is more real than the other. These views are ontologically equivalent.

It can be difficult for most of us to intuitively grasp the truth of this assertion. Our day-to-day human experience sees neurology as having epistemic priority because neurons (i.e., the brain) are physical constructs in the world we inhabit every day. Psychoanalysis, however, seems less real and often can feel like speculations about the mind and how it might work. Recalling Pines’ description of psychoanalysis as sciencelike, the focus on observation and peer review (as what scientists do) is a means of testing and refining the data of psychoanalysis. Neuropsychanalysis is an effort to expand testing and refining to include information from related fields in science.

The equivalence of these two perspectives is more easily understood if one recognizes that thunder and lightning are simply two different aspects of the same event. In the same way,

psychoanalysis and neurology are two different aspects of mental events. The intersection of these two perspectives is the way normal science works.

Physicist George Musser (2019) articulates many of the difficulties scientists are having at the edge of physics because of the limitations of technology and human understanding. He describes how physics has been traditionally understood:

“Physics seems to be one of the only domains of human life where truth is clearcut [sic]. The laws of physics describe hard reality. They are grounded in mathematical rigor and experimental proof. They give answers, not endless muddle. There is not one physics for you and one for me but a single physics for everyone everywhere. ... Physics is the bedrock of the larger search for truth. If you follow the chains of explanation in other sciences, you eventually wind up in physics.” (p. 37)

If psychoanalysis is to fulfill Freud’s vision of a scientific psychology, the chains of explanation must inevitably lead to a foundation based on physics. At this point, neurology is an exciting and promising entrée into the world of physics and enhanced scientific standing. As described earlier, Melanie Klein’s theories are rejected because they so clearly conflict with what we know about the biology of the infant brain. For this reason, psychoanalysis must find its connections with what we know about the biology of the developed brain. With this in mind, we turn to a sampling of Solms’ work to appreciate the emergence of a scientific psychology.

Solms (2018) first identifies three core claims which enjoy strong empirical support and enable a defense against the prejudice that psychoanalysis is not evidence-based. These core claims about

the emotional mind, once controversial, are now widely accepted in neighboring disciplines; the clinical methods of psychoanalysis to relieve emotional suffering flow directly from these core claims and are consistent with current scientific understanding of how the brain changes. And no surprise here, psychoanalytic therapy achieves good outcomes. The three core claims about the mind are: 1) the human infant is not a blank slate and like all other species, we are born with a set of innate needs; 2) the main task of mental development is to learn how to meet these needs in the world, which implies that mental disorders arise from failures to achieve this task; and 3) most of our ways of meeting our needs are executed unconsciously, which requires us to bring them to consciousness again in order to change them. These core claims are foundational premises, but it is essential to recognize that they are scientific premises which are both testable and falsifiable. It is important to distinguish these core premises from the details which elaborate them. The details are empirical contents and whether they are ultimately upheld or not, do not affect the core claims. The three claims are foundational and if they are disproven, the core scientific presuppositions upon which psychoanalysis as we know it will have been rejected.

We now turn our focus from a general description of neuropsychanalysis to look at an example of the dialogue between psychoanalysis and neurology. Those familiar with the field know Freud made the oedipal conflict the foundation of psychopathology, and Solms (2022) comments thus on this dialogue:

“Since the theory of the Oedipus complex may be described as the holy cow of psychoanalysis, as its totem, and since the slaughter of this animal is our cardinal taboo, I will begin my paper with a disclaimer: I do not doubt the existence of the Oedipus complex. However, the classical theory of its origins and nature requires fundamental

revision. As will become clear the theory is a biological theory. My aim in this paper, therefore, is to place the psychological phenomena of the Oedipus complex (which I am not disputing) on firmer biological ground.” (p.1)

For the sake of brevity, the Readers Digest version of Freud’s Oedipus complex (1912-13) can be stated as follows: The typical male child is sexually attracted to his mother, which conflicts with two innate dispositions: castration anxiety and the horror of incest. Freud explains the origin of these dispositions in evolutionary terms: to protect his status as alpha male, the father castrated or threatened to castrate his male offspring, typically when they reach puberty. They therefore fled the clan and sought exogamous sexual unions. The expelled boys then banded together and murdered the oppressive father, which resulted in conflict over the alpha role and especially guilt, as the father also was revered.

Most importantly, Freud believed that these innate dispositions — castration anxiety, the horror of incest and guilt — arose through what biologists call the inheritance of acquired adaptive characteristics, a mechanism central to Lamarckian evolution (Solms, 2022, p. 3). But, for Freud, this drama was an inherited unconscious memory. Although he was aware that Darwin considered the inheritance of acquired characteristics to be biologically impossible, Freud believed, until his death, that the universality of these phantasies is explained by the fact that they constitute a phylogenetically transmitted inheritance (Jones, 1957, p. 333).

Solms (2022) puts on his neuroscientist’s hat and explains that the memories of the type Freud calls “primal phantasies” (which include those that constitute the Oedipus complex, “his nuclear

complex of the neurosis”) are memory events. Such memories can only be encoded in the cortex. This is important because the cortex does not contain inherited memories. All innate response patterns are encoded subcortically.

Having driven a stake into the heart of Freud’s Lamarckian delusion, we turn to Solms’ explanation of the Oedipus complex (2022). Based on Jaak Panksepp’s taxonomy (1998), Solms identifies seven basic emotional drives in the human brain. He emphasizes that the brain circuits for all seven basic emotions (which are present in all mammals) are entirely subcortical; they are located in the limbic system and the brain stem. Accordingly, they do not and cannot contain episodic or semantic representations. But emotions do play a crucial role in postnatal learning, including declarative learning, by orchestrating cortical development.

Solms goes to great lengths to place his work on a Darwinian evolutionary foundation — random variation and selective retention — illustrating how it functions neurologically. What is important for our purposes is to understand that these emotions often conflict with each other. As he (2022) writes: “The relevance of the Oedipal complex comes into view. My father is frustrating me, so I feel impelled to attack. But he is bigger than me, so I am afraid of him” (p. 6). Such conflicts are ubiquitous and represent demands for mental work, for learning from experience. And he adds:

“If the constellation of compromises that were achieved by a child is insecure, the new demands that come with the surge of Lust at puberty frequently represents the straw that breaks the camel’s back. The relevance of the Oedipal complex, and its pivotal role in mental development becomes clear. Not only must the child

reconcile its Lust with its attachment bonds, but it must also do so in the context of the Rage that is aroused by the frustrations of these needs, and the Panic that is evoked in relation to Fears of loss of the caregiver (and hence the guilt), but also the Fear that is aroused by the Rage that is felt towards the frustrating parent. All of these competing, heartfelt emotions – which are inevitably felt towards the child’s primary objects – must somehow be reconciled with each other. **This is the Oedipus complex.**” (p.10)

The Oedipus complex is not an inherited memory, but it represents (however strong or fragile) a developmental achievement. The relentless pursuit of a nonexistent memory leads to a dead end and futility; listening as carefully as we can to our patients to understand their own idiosyncratic compromises and constructions is our task. For me, neuropsychanalysis pulls together many valuable ideas from psychoanalysis into a simpler, more parsimonious frame. There is much more to neuropsychanalysis, but I will conclude by returning to Fred Pine (2020) and this wonderful sentence about the working clinician: “In the background, concepts of conflict, compromise formation, over determination and multiple function, etc. stand ready to help us understand and cope with the unending variation of mental life.” (p. 89)

The work of treatment remains the same: What we observe and the concepts we use to discuss them, i.e., conflict, compromise formation, overdetermination, etc., remain much the same.

What is different is our understanding of how these constellations come together, and perhaps a more accurate and empathic understanding of their meaning for patients. As Solms reminds us, feelings always have meaning, and this is a scientifically sound way to understand and respond

to them. At least for me, this understanding represents a transformation that returns psychoanalysis to Freud's vision of a natural science. I am very optimistic that this next transformation will continue to herald wonderful research and new knowledge in our profession.



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