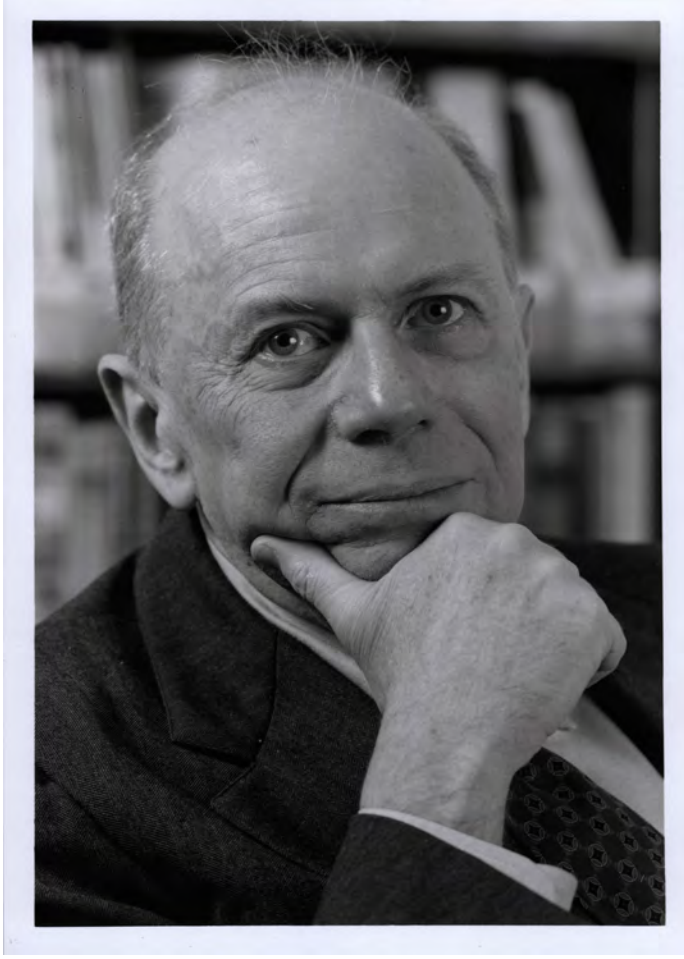
THE FACULTY OF MEDICINE
Harvard University

Joseph J. Schildkraut



For a period during the late 1950s and 1960s, psychiatry attracted some of the most capable graduates of US medical schools. Intrigued by the conceptual interest of psychoanalytic theory, and the possibility of treatment via the couch, these students chose for residency departments of psychiatry that featured grounding in psychoanalysis. One of these was Joe Schildkraut, a 1955 summa cum laude graduate of Harvard College, where he was elected to Phi Beta Kappa in his junior year, and a 1959 cum laude graduate of Harvard Medical School. Having selected the Massachusetts Mental Health Center because of its reputation as a program offering a psychoanalytic approach, he found himself as a trainee intrigued by the dramatic response of depressed patients to the administration of electroconvulsive therapy, and imipramine and phenelzine, then being used clinically for the first time. Although Joe continued to be respectful of psychoanalytic treatments, that revelation altered his academic trajectory, and stoked a career that soon played a major role in launching research into the biological mechanisms of depression.

Joe's interest in the biological components of depression was given shape and substance by work with Milton Greenblatt who had set up a research unit at Mass Mental Health Center allied with a research laboratory at the Peter Bent Brigham Hospital. The laboratory could measure in urine vanillylmandelic acid (VMA), the deaminated metabolite of norepinephrine. Joe observed that either Imipramine or phenelzine, two very different drugs, when given to depressed patients, led to an increase in VMA that was linked to clinical improvement. Having published this seminal finding, Joe went to the National Institute of Mental Health as a Clinical Associate and worked for four years with Seymour Kety, Irv Kopin, Jack Durrell, and Saul Schanberg. The result of this work was a paper, "The Catecholamine Hypothesis of Affective Disorders: A Review of Supporting Evidence" (1965). This paper, eventually the most frequently cited paper published in the American Journal of Psychiatry, launched 25 years of global research on the relationship between neurotransmitter function and affective disorders. Later versions of this hypothesis were published in Science with Seymour Kety as a co-

In tribute to their dedicated efforts to science and medicine, deceased members of the Harvard Faculty of Medicine (those at the rank of full or emeritus professor) receive a review of their life and contributions with a complete reflection, ***a Memorial Minute****.*

author, and in the New England Journal of Medicine.

Returning to Mass Mental Health Center in 1967, Joe set up the Neuropsychopharmacology Laboratory, which became the locus of his scientific work for the rest of his life. There he elaborated the concept presented in his seminal review article by defining subtypes of depression that could be identified by their biochemical "signature" based on measurement of norepinephrine metabolites in the urine. In retrospect, this work was a pioneering precursor of current research that seeks to replace diagnoses based on clinical signs and symptoms with a classification scheme grounded in biological markers that are much closer to actual disease processes. It also anticipated current efforts toward personalized medicine, to identify treatments that are tailored to attack disease subtypes defined by biological markers, including, now, allelic variants of DNA.

Another groundbreaking implication of Joe's work placed psychiatric disorders squarely in the realm of other medical conditions. For the first time it was possible to understand why depression is a frequent concomitant of disorders affecting metabolic processes in the liver. Rather than being viewed primarily as a psychological reaction to illness and disability, the depression associated with such disorders as infectious mononucleosis and hepatitis that affect liver function could now be understood as the result of disturbed norepinephrine metabolism. There was thus solid evidence that mental disorders were not simply manifestations of a set of psychological factors, but rather a clinical reaction to disturbed physical processes that could be understood by the same tools and the same conceptual framework as other illnesses.

Through the Neuropyschopharmacology Laboratory Joe became not only a productive researcher, but a dedicated mentor as well. A series of young investigators launched their careers with him. They included Daniel Weinberger, Carl Salzman, Jon Gudeman, Geraldine Cassens, Paul Orsulak, Carl Schwartz, John Mooney, Jacqueline Samson-Jain, Alan Schatzberg, and Alan Green. As his career ripened, he became an indispensable guru to the entire Mass Mental Health Center faculty. His loyalty to the institution was deeply felt by him and, in consequence, by all of the staff. When times were difficult, as they had always been at that unusual place, Joe's steadfast loyalty, and his helpful attitude assisted both trainees and staff to see a broader perspective in the value of public psychiatry at Harvard. In his later years, particularly, sequestered in his shadowy office, reclining on a Lazy Boy for his bad back, Joe was a steady presence, the "go-to" person for everyone. His commitment and his generosity with time and concern were legendary bedrocks of stability in an often-turbulent environment.

Although Mass Mental Health Center had been a staunch participant in psychiatric research since its founding in 1912, its core mission was the care of patients with profound mental disorders. That tenacious clinical imperative deeply affected Joe's research interests and the arc of his career. Before the term "translational research" had come into widespread use, Joe had oriented the Neuropsychopharmacology Laboratory in a clinical direction. Seeking to bring research findings to the bedside, Joe developed, in the 1970s and 1980s, a relationship with the New England Deaconess Hospital to offer clinicians laboratory studies of patients to refine treatment decisions in terms of subtypes of depression.

His scientific work, recorded in 245 publications, led to numerous honors including the first Anna Monika Foundation Prize, the McCurdy-Rinkel Prize for Research from the Massachusetts Psychiatric Society, the Hofheimer Prize for Research from the American Psychiatric Association, the William C. Menninger Award from the American College of Physicians, the Lifetime Achievement Award from the

Society of Biological Psychiatry, and the Award for Research in Mood Disorders from The American College of Psychiatrists. He was also a Fellow of the American College of Neuropsychopharmacology, the pre-eminent research organization advancing the neurobiological basis of psychiatric disorders. He was Editor-in-Chief of the Journal of Psychiatric Research from 1982-1992 and served on the editorial boards of numerous psychiatric and medical journals.

Like many creative people, Joe's talents were multi- faceted. Although personally precise, measured, and somewhat formal in demeanor, his avocation involved a lively interest in modern art, and particularly the works of the Catalan artist, Joan Miro. Not content to be simply an observer, Joe brought his clinical acumen and his intensity to understanding the source and the trajectory of Miro's creativity. His view was that the work was the product of a depressive nature and represented a creative outcome of Miro's emotional state. For Joe, the fanciful shapes in Miro's pictures represented a "direct and lonely confrontation with the ultimate existential questions, whether to live or to die." Thus depression for him was "one of the things that humans happen to be capable of experiencing," rather than only a disorder. This view of one source of the creativity of a great artist disturbed critics as well as Miro's relatives, and generated conflict that was eventually resolved by the acknowledgment of Miro's grandson that his grandfather had indeed suffered from depression. Joe's work on art resulted in a number of publications in scholarly journals on Miro, Rembrandt, and the Abstract Expressionists of the New York School. It led to his co-organizing with Aurora Otero in1993 a symposium at the Miro Foundation in Barcelona, titled "Depression and the Spiritual in Modern Art: Homage to Miro," which was later published in a book by the same name.

In 1965 in Washington while he was working at NIMH he met Betsy Beilenson. With uncharacteristic speed he decided on the first date that he must marry her; after another date or two, she agreed. Their two sons, Peter and Mike, along with Betsy made a family that for nearly 40 years occupied first place in his concerns, despite his commitment to science and long hours of work.

Joe died on June 26, 2006 after a year-long painful struggle with esophageal cancer. At a memorial service three months later at Memorial Church in Harvard Yard, yet another, largely unknown aspect of his passions was revealed when the Harvard Band played a medley of Harvard football songs as his family and devoted friends walked to the Harvard Faculty Club for a reception celebrating his exemplary life and a career in science that helped to change the world.

Respectfully Submitted,

Miles F. Shore, *Chairperson*
Joseph T. Coyle
Alan I. Green
John J. Mooney