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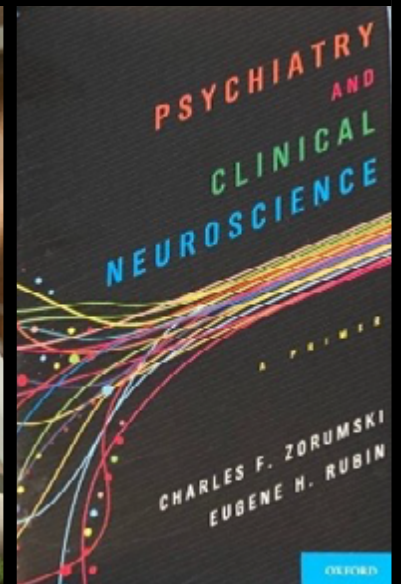
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A History of the Department of Psychiatry at Washington University in St. Louis School of Medicine.

Eugene Rubin MD, PhD

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A History of the Department of Psychiatry at Washington University in St. Louis School of Medicine



Eugene H. Rubin, M.D., Ph.D.

A History of the Department of Psychiatry at Washington University in St. Louis School of Medicine
by Eugene H. Rubin M.D., PhD.

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Preface and Acknowledgements

This work is both a selective review of pivotal events that shaped the Department of Psychiatry at Washington University in St. Louis and a discussion about some of the individuals who were instrumental in the growth of the department's reputation. Facts about the department are informative, but learning more about the personalities of the people who shaped the department enhances the facts and gives life to the past.

One reason for writing this manuscript is that I am old enough to have had the good fortune of knowing many of the individuals who joined the department in the 1950s. For example, Eli Robins was still teaching weekly resident rounds when I was a resident in the late 1970s. I am concerned that if this story is not told by someone of my generation, knowledge and impressions based on firsthand interactions will be lost.

Another reason for writing this manuscript is that it gives me the opportunity to integrate aspects of the general history of American psychiatry with the history of the department. As our department was evolving, so was American psychiatry. Many factors were in play that allowed the work of the department to be influential in redirecting American psychiatry.

I would not have attempted to write this manuscript if it had not been for Dr. Richard Hudgens. Richard was passionate about the history of the department. Over his career, he interviewed a number of individuals about the department and its history, and many of these interviews were transcribed. Richard also published an article in *Missouri Medicine* about a select time in the department's history. He had intended to write a more comprehensive history of the department, but he was unable to find the time to do so before he retired. Richard let me read the transcripts of his interviews when I was developing a historical timeline pertaining to the department. (This timeline is currently posted on our departmental website.) I found these interviews critical in augmenting my understanding of departmental events. I am indebted to Richard for his work on the department's history and for his enthusiasm about the importance of the department to the history of American psychiatry.

I also am indebted to Dr. Charles Zorumski, department head from 1997 until the present. Chuck and I have been friends and colleagues since July 1978 when we began our psychiatry residency together. We have influenced each other's thinking, and he has been strongly supportive of my decision to spend time working on this project.

The archivists at Bernard Becker Medical Library, including Philip Skroska, Paul Anderson, and Stephen Logsdon, have been generous with their time and expertise. In particular, I want to extend special thanks to Stephen Logsdon who has been involved from the beginning of this project and has helped me reach the finish line. I would also like to thank Lindsey Scales for her expertise with Digital Commons and Christy Matteuzzi, executive coordinator for institutional research and support in the Office of the Dean, for her assistance.

A shout out goes to Marcy Mammoth who turned my Word document into this book.

Finally, I am indebted to my spouse and work partner Dottie Kinscherf. Dottie and I have worked together on many departmental projects. She has been a colleague in both research and administration. She has been my right and my left arm (yes, I am a southpaw). She has been a tremendous help with this project.

Although I have tried to be as accurate as possible with the details described in this book, as is true with all types of work like this, there may be some inaccuracies. If so, I apologize.

Gene Rubin
March 2022

SECTION 1

Historical Context

CHAPTER 1

A Brief Overview of the History of Psychiatry

Members of the Department of Psychiatry at Washington University in St. Louis School of Medicine influenced the direction and evolution of American psychiatry. Although faculty from all great departments of psychiatry help to advance the field through research and teaching, members of the department at Washington University played a unique role during the 1950s–1970s by leading the charge away from a psychoanalytic emphasis and towards an evidence-based, medical model approach.

This manuscript details the history of the Washington University Department of Psychiatry from the early 1900s through 2021. The department's history is better appreciated when it is considered in the context of the history of the field during the same period. Similarly, the history of the field during this interval is better appreciated when examined in the context of the long-term evolution of the field of psychiatry.

In this chapter, I will provide an overview of the history of the treatment of people with mental illness. Key books that were particularly helpful in writing this chapter are listed at the end.

400 BCE until the 1700s

From about 400 BCE through the 1700s, the field of medicine was strongly influenced by the writings of Hippocrates (460-370 BCE). Illnesses were thought to result from imbalances in four bodily fluids called humors: blood, phlegm, yellow bile, and black bile. These humors were further characterized as being hot, dry, cold, or wet. Treatments for illnesses were based on attempts to rebalance these humors and included bloodletting as well as medicines that induced vomiting and/or diarrhea. Medications included plant roots such as hellebore (a strong emetic), various anticholinergic agents, and opium. These methods were utilized to treat all kinds of maladies, including “madness.” (Terms such as “madness” and “lunatic” were commonly used to refer to the mentally ill during this time.)

Hippocrates considered the brain to be the seat of emotions. However, others such as Aristotle (384-322 BCE) considered emotions to be centered in the heart. About 500 years later, Galen (129-210 AD) examined

the brains of various animals and concluded that the brain, not the heart, was involved in the regulation of emotions. The Church would not allow anatomic studies of people; therefore, Galen did not examine the brain and nerves of humans. During this time, higher cognitive functions in humans, including intellectual functions, were thought to originate in the rational soul. People believed that there were different forms of the soul and that some forms were part of all living creatures and died when the organism died. The rational soul, however, was considered unique to humans, divinely provided, and immortal.

A thousand years later, Thomas Aquinas (1225-1274) unified various Christian views by describing three forms of the soul: a nutritive soul, an appetitive soul, and a rational soul. The rational soul was considered exclusively human, immortal, and responsible for memory and reason. The influence of religion on medicine and science was dominant and powerful until the 1700s.

Disagreeing with the views of the Church could be dangerous to one's reputation and one's life.

Because the soul was thought to be responsible for reason and behavior, priests were involved in the treatment of the mentally ill. The Church encouraged the belief that “mad” individuals were possessed by evil spirits or the devil. For instance, from the 1500s through the early 1700s, many individuals in Europe were accused of witchcraft and executed. In this country, the Salem witch trials occurred during the 1690s.

The Church considered suicide to be a sin. Those who committed self-murder were denied a Christian burial, and their property was confiscated. During the early 1700s, physicians became increasingly influential, and they believed that many individuals who killed themselves were mentally ill. Secular courts increasingly were willing to acquit a person of the crime of suicide (self-murder) if a physician testified that the person was mad. Acquittals were rare in the 1500s; however, by the early 1700s about 40% of individuals who committed suicide were acquitted of the crime of self-murder.

During the 1600s, a group of philosophers had profound influence on how persons with mental illness were viewed. Thomas Hobbes (1588-1679) rejected the concept of witches and possession by the devil. He was considered a threat to Christianity. John Locke (1632–1704), a philosopher and physician, thought that parents, not God or the Church, influenced how a person responds to reward and punishment. This was important because if a person was mentally ill due to environmental influences, then medical treatment might be possible. Locke was a student of Thomas Sydenham (1624-1689), an influential physician referred to as the English Hippocrates, who believed that nervous disorders were common.

During this same era, another physician, Thomas Willis (1621-1675), advanced the understanding of the nervous system and behavior. He is considered by some to be the father of neuroscience. Willis studied physiology and anatomy and wrote on the structure of the brain and nerves. He updated Galen's anatomic work by studying humans instead of primates. He suggested that functions such as memory and cognition involved the cerebral cortex whereas functions related to respiration and heart

rate involved the brainstem. He also described mania and melancholia. However, he believed in the immaterial soul and thought that reason and intelligence resided in the soul and could not be localized in the brain.

Mid 1700s–mid 1800s

During the 1700s, the roles of physicians became better defined. Herman Boerhaave (1668–1738) was a famous physician and professor of botany and medicine at Leiden University. Leaders from around Europe referred patients to him and sent their physicians to study with him. Boerhaave was interested in nervous and mental diseases and lectured widely on these topics, thus reinforcing that mental illnesses were medical disorders.

As European cities grew in size, the need to provide housing for individuals with severe disruptive behaviors grew. Bethlem Hospital (aka Bethlehem Hospital and Bedlam) had been founded in England in the 1200s to help homeless individuals, but over time, care became focused on those considered mad. In the 1700s at Bethlem, madness was thought to be a problem related to the soul, and thus symptoms were considered to be untreatable. Another hospital, St. Luke's Hospital for Lunatics, opened in 1751. Its chief physician, William Battie (1703–1776), believed that some forms of madness were inherited and incurable, but that other forms were related to nervous substances and thus treatable. He tried to decrease the use of restraints and utilized various “medical” treatments based on rebalancing the humors or regulating body temperature. Battie authored *A Treatise on Madness*, which is considered one of the first psychiatric textbooks.

A different approach towards treatment was introduced by William Tuke (1732–1822), an English businessman and Quaker. Tuke raised funds and opened an asylum called The York Retreat in 1796. His approach was based on humane, paternalistic treatment. This was labeled “moral therapy” in contrast to medical therapies such as bleedings and purges. Moral therapies were also championed by Philippe Pinel (1745–1826) and his student Jean-Étienne Dominique Esquirol (1772–1840).

In the latter part of the 1700s, physicians were

increasingly recognized as the most appropriate professionals to take care of insane individuals. In 1774, the Madhouse Act was passed in England. This law required that the Royal College of Physicians inspect and license businesses taking care of the mentally ill. The role of physicians in treating the insane was greatly enhanced by the successful treatment of King George III by Francis Willis in 1788. The beloved King of England had developed symptoms consistent with a severe manic episode, and the doctors of the Royal College were unable to help him. In desperation, and not without controversy, Willis, a 70-year-old asylum doctor (and very distant relative of Thomas Willis), was asked to treat the king. Willis and his sons utilized various behavioral techniques (including rigorous discipline). Time-linked to these treatments, King George's symptoms remitted. Years later, he had several other episodes that Willis treated. Willis' success enhanced the reputation of asylum physicians.

The number and size of asylums started to grow in the early 1800s. Johann Christian Reil (1759–1813) coined the term psychiatry in 1808 to refer to the field of medicine that treated conditions related to the soul. Earlier terms for physicians or psychologists who treated the insane were medico-psychologists and alienists.

Psychiatry in the United States

Benjamin Rush (1746–1813) is considered the father of American psychiatry. As described in the biography of Rush by Stephen Fried, Rush was a colorful physician, statesman, and social reformer. One of his numerous accomplishments as a physician at Pennsylvania Hospital and professor at the University of Pennsylvania was to raise money for a separate mental ward at Pennsylvania Hospital. His son John was hospitalized long term at Pennsylvania Hospital after developing a syndrome consistent with what we now might diagnose as mania. In 1812, Rush published *Medical Inquiries and Observations upon Diseases of the Mind*, the first American textbook on psychiatry. When the Association of Medical Superintendents of American Institutions for the Insane changed its name to the American Medico-Psychological Association in 1893, a sketch of Rush with thirteen stars

over his head became the organization's logo.

The growth of asylums in the United States was closely related to the growth of cities. In smaller towns, the number of individuals with disruptive behaviors was not large enough to justify building an asylum. According to historian Gerald Grob, there were only eight cities in the U.S. with populations over 8,000 in 1790. By 1850, this number had grown to 85. In the early 1800s, Mclean Asylum in Charlestown MA and Friends Asylum in Philadelphia were private mental hospitals utilizing moral therapy. In Massachusetts, the need for a public lunatic asylum became evident and a state asylum opened in Worcester in 1833.

Legislatures throughout the U.S. increasingly realized the need for asylums. Dorothea Dix was a strong advocate for "lunacy" reform and was directly responsible for convincing legislatures to fund over 30 such hospitals. Lawmakers wanted these buildings to reflect positively on their states, and some of these structures were architecturally impressive. By the mid-1800s, the job of being a physician/asylum superintendent was considered prestigious.

In 1844, all asylum superintendents in the U.S. were invited to a meeting in Philadelphia and about half (13)

attended. This group established an organization named the Association of Medical Superintendents of American Institutions for the Insane. This association was renamed the American Medico-Psychological Association in 1893 and the American Psychiatric Association (APA) in 1921. The American Journal of Insanity was also started in



Picture of the original 13 members of the Association of Medical Superintendents of American Institutions for the Insane

July 1844. The journal was renamed The American Journal of Psychiatry in July 1943 (volume 100, issue 1).

From 1844 through the early 1900s, psychiatrists in the U.S. were asylum doctors. Unfortunately, the size and number of asylums grew much more rapidly than their funding. The ability to treat patients gradually diminished due to lack of staff and resources. Over time, the field of psychiatry expanded from being solely an inpatient (asylum) discipline to include academic psychiatry and outpatient psychiatry.

Academic psychiatry and neurosciences in the mid-1800s

In the late 1700s, physicians became the dominant profession treating the insane, and those who specialized in doing this worked in asylums. Academic psychiatry did not exist. However, during the mid and late 1800s, academic medicine and academic neuropsychiatry started to grow.

Wilhelm Griesinger (1817–1868) is considered the father of biologically-oriented psychiatry. He was a German-trained physician and professor who served in leadership positions in Switzerland, Egypt, and Germany. He published the first edition of his book *Mental Pathology and Therapeutics* in 1843. The second edition was published in 1861 and strongly influenced the development of the field. Griesinger encouraged shorter hospital stays and reintegration of patients back into society. He considered



Wilhelm Griesinger

mental illnesses to be diseases of the brain and nerves. He established a journal, the *European Archives of Psychiatry and Clinical Neurosciences*. In 1865, he became head of the Department of Nervous Disease and the psychiatry clinic at the Charité in Berlin. Within 15 years of Griesinger's appointment at the Charité, chairs in neuropsychiatry were

appointed in 75% of universities in German speaking countries.

During this era, the discipline of neurology began to develop. Studies of behavior following brain injuries led

to improved understanding of brain function. In 1848, a man by the name of Phineus Gage had an accident in which an iron rod penetrated his frontal lobes, leading to dramatic behavioral changes. In 1861, Paul Broca reported that a specific cortical brain region was necessary to express speech. Persons with lesions in this area of the frontal lobe can comprehend words, but cannot produce speech. This discovery was followed by Carl Wernicke's finding of a specific region of the temporal lobe that, when damaged, results in the inability to comprehend speech.

In the U.S., physicians treating individuals wounded in the Civil War were learning about nervous system function following brain and nerve damage, which led to increased interest in the field of neurology. The American Neurological Association was formed in 1875. Neurologists practiced medicine in a manner consistent with other non-psychiatric physicians in that they gathered and reviewed data in order to advance knowledge about illnesses and develop new treatments. Jean-Martin Charcot (1825–1893) was a renowned French neurologist who advanced the understanding of many neurological conditions, including multiple sclerosis, Parkinson's disease, amyotrophic lateral sclerosis, and, perhaps most famously, hysteria.

Although some neurologists worked in private asylums caring for patients whose families could afford the costs, many worked in outpatient settings. Their approach to treating outpatients was consistent with the approach used by internists. The field of psychiatry, however, consisted of physicians who managed rapidly growing asylums. As asylum superintendents, they were both administrators and doctors. In 1894, a prominent neurologist, S. Weir Mitchell, was invited to critique the field of psychiatry in an address to the American Medico-Psychological Association. He was strongly critical of the fact that asylum doctors were not practicing medicine in a manner consistent with other physicians. Instead, they were spending much of their time on administrative matters like building repairs. Furthermore, asylum doctors were not involved in gathering research data to advance understanding of mental illnesses. Asylums were located far from where most doctors practiced; therefore,

asylum doctors were isolated. The audience appreciated Mitchell's critique.

During the late 1800s, major scientific advances influenced the fields of psychiatry and neurology. Among the most important was the development of a silver stain by Camillo Golgi (1843–1926) that led to studies of the cellular structure of the brain. Santiago Ramón y Cajal (1852–1934) modified the technique to catalogue cellular structures throughout various regions of the human brain. The Nobel Prize was awarded to these two individuals in 1906 for their remarkable contributions. These techniques permitted Emil Kraepelin and his colleagues to investigate the neuropathology underlying a variety of neuropsychiatric disorders.

1890s–current: asylums, academic psychiatry, and the birth of outpatient psychiatry

Emil Kraepelin (1856–1926) was a German psychiatrist and one of the most influential individuals in advancing biologically-oriented psychiatry. He studied the longitudinal course of signs and symptoms of his patients and carefully characterized the evolution of their disorders.



Emil Kraepelin

Using this data, he described and classified psychiatric disorders. A number of physicians who utilized the newly available silver stains to study the neuropathology of psychopathology joined Kraepelin.

Famed physicians such as Franz Nissl and Alois Alzheimer worked with him. Kraepelin was a prolific

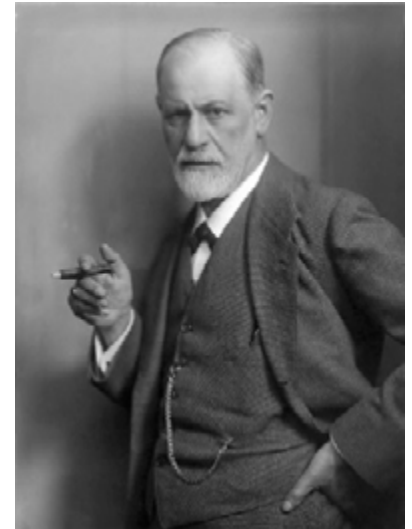
writer. His book *Compendium*

of Psychiatry: For the Use of Students and Physicians was first published as a short book in 1883 and grew into a multivolume classic in later editions.

During the same time that Kraepelin was advancing the understanding of severe mental illnesses by studying institutionalized patients, Sigmund Freud (1856–1939)

was introducing new concepts related to understanding symptoms in individuals with less severe behavioral disorders. Freud was a neurologist who developed an interest in individuals with disorders that interfered with function but were not so severe as to lead to institutionalization. He studied with Charcot and became interested in hysteria. Freud's ideas led him to develop psychotherapeutic approaches to treatment, including psychoanalysis, that were used to treat outpatients with a variety of conditions, including personality disorders, depression, and anxiety disorders. His work led to the growth of outpatient psychiatry, and he and his followers attracted patients that had been seeing general practitioners or neurologists.

As described in Susan Lamb's book *Pathologist of the Mind*, Adolf Meyer (1866–1950) was instrumental



Sigmund Freud

in advancing asylum psychiatry, outpatient psychiatry, and academic psychiatry in the United States. Meyer strongly supported research. He studied Kraepelin's approaches as well as Freud's psychoanalytic therapies. He eventually rejected some of Freud's dogmatic beliefs and developed his own approach labelled psychobiology. He served as an asylum pathologist in Kankakee, Illinois, and Worcester, Massachusetts, before becoming director of the New York Pathologic Institute. He became professor of psychiatry at Johns Hopkins University in 1910 and the director of the Henry Phipps Psychiatry Clinic when it opened in 1913 at Johns Hopkins. His department became the model of an academic department.

The three branches of psychiatry

ASYLUM PSYCHIATRY

In the U.S., the number of patients being treated in asylums grew dramatically during the first half of the twentieth century. In 1910, about 188,000 patients were being treated in asylums; this number grew to 425,000 by 1939. About a third of admitted patients had somatic conditions such as tertiary syphilis, cerebral arteriosclerosis, pellagra, brain tumors, Huntington's disease, and dementias. In fact, elderly patients made up an increasing percentage of admissions. By 1958, nearly a third of patients in asylums were 65 and older. The establishment of Medicare in the mid-1960s led to a dramatic shift in the location of care for seniors. Admissions to asylums decreased dramatically, and nursing home admissions increased in parallel.

Funding for asylums did not keep up with the growth in the number of patients, and asylums became tremendously overcrowded. The ability to provide good care deteriorated. The Great Depression made funding issues worse, and physical plants declined.

Several concurrent movements began in the 1950s and 1960s that led to decreases in the patient population in asylums. The Community Mental Health Act in 1963 encouraged treatment of mentally ill individuals in community settings. Although the intentions of this act were good, funding for community mental health facilities was limited. A second major development influencing the care of psychiatric patients occurred during the 1950s: the birth of modern psychopharmacology. Antipsychotic and antidepressant drugs were discovered. Antianxiety drugs soon followed, and lithium, the first drug to treat bipolar disorder, was approved in the late 1960s. The census in asylums decreased from 559,000 to 475,000 between 1955 and 1965. From 1970 to 1986, the census decreased from about 413,000 to 119,000. With the help of pharmacotherapy, supportive therapy, and community support, some patients were able to adjust to an outpatient setting. Funding for community services continued to be inadequate, however. Although the census of inpatient psychiatry units in general hospitals grew, these facilities were not able to provide long-

term care. Due to the lack of facilities for chronically mentally ill patients, the streets and jails became homes for many of these individuals.

OUTPATIENT PSYCHIATRY

From the early 1900s through the 1970s, the field of outpatient psychiatry grew dramatically. In fact, psychiatry changed from a primarily inpatient discipline to a field with both outpatient and inpatient psychiatrists. Some of the psychiatrists who previously worked in asylums became outpatient physicians treating individuals with severe illnesses such as schizophrenia. As time progressed, the number of outpatient psychiatrists became substantially larger than the number of inpatient psychiatrists.

This growth resulted from the development of psychotherapies, including psychoanalytic therapies. Freud lectured at Clark University in Worcester, Massachusetts, in 1909. Following these lectures, the number of physicians who specialized in Freudian-based treatments gradually grew. The American Psychoanalytic Association was founded in 1911. Analysts became increasingly politically powerful within established psychiatric organizations. By the 1950s, analysts or psychiatrists who were strong supporters of analysts controlled many academic departments of psychiatry by becoming department heads and residency directors.

The psychoanalytic movement enjoyed remarkable popularity from the 1940s through the 1970s. For individuals with depressive disorders, anxiety disorders, and personality disorders, psychoanalytically-oriented treatments became a commonly used psychotherapeutic approach employed by outpatient psychiatrists. Psychological approaches were implemented successfully in treating soldiers suffering from various anxiety and stress disorders during World War II. Following the war, William Menninger (1899–1966) developed outpatient and inpatient treatment centers. He also oversaw a military psychiatric hospital. Menninger became president of the APA in 1948 and helped to energize the field. Membership of the APA grew from 5,000 in 1948 to 27,000 in 1976. Psychoanalytically-oriented psychiatrists wanted to

address poverty, unemployment, and other social issues.

Psychoanalysis was not an evidence-based discipline. It was driven by dogma, not evidence. Various leaders of psychoanalysis had beliefs that were different from Freud's, which led to factions within the psychoanalytic community. For example, those who followed the ideas of Carl Jung were often not accepting of Freud's theories. Analysts believed that specific techniques were needed to unmask psychological issues that arose during development and that individuals could be cured of their neuroses by understanding and dealing with these early issues.

The control that analysts exerted over the field of psychiatry began to change in the 1970s in large part due to the influence of the psychiatry faculty from Washington University and a few other institutions. By the 1990s, psychoanalysis no longer dominated American psychiatry. Psychoanalytic therapies have evolved since the 1950s, and brief psychodynamic-oriented therapeutic approaches have been developed. The effectiveness of these approaches can be studied. Today's psychodynamic techniques are distant relatives to the approaches utilized in the mid-1900s.

University was formed in 1938 thanks to funding from the Rockefeller Foundation.

From 1938 to 2022, the field of psychiatry continued its remarkable evolution. The era of asylums ended. Dogmatic psychotherapeutic approaches such as classical psychoanalysis diminished in importance and were replaced by a variety of evidence-based psychotherapies. Neuroscience as a discipline expanded dramatically, and scientific advances skyrocketed. More reliable classification systems were developed. Somatic treatments, including pharmacotherapy, electroconvulsive therapy, and other interventional approaches, increased. All of these trends contributed to the transition of the field away from dogmatic methods of the psychoanalysts and towards evidence-based, research-oriented approaches. The Department of Psychiatry at Washington University has played a major role in these events. This manuscript aims to highlight some of the historical milestones of the Washington University in St. Louis School of Medicine's Department of Psychiatry.

ACADEMIC MEDICINE

After Abraham Flexner's evaluation of American medical schools in 1910, academic medicine in the United States grew. Medical schools increasingly adopted the model of hiring full-time academic physicians who were involved in teaching, research, and clinical care. Prior to Flexner's influence, physicians volunteered to teach, but they earned their incomes from private practice. A few schools, including Washington University, were able to adopt an academic model quickly; others needed more time to make the transition. Medical schools in the early to mid-1900s started out with a small number of core departments. Over time, the number of specialty areas grew. The specialty board related to psychiatry and neurology—The American Board of Psychiatry and Neurology—was founded in 1934. Philanthropic organizations influenced the development of specialty areas at various medical schools by providing grants for the development of specialty departments. The Department of Neuropsychiatry at Washington

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SECTION 2

The Department | 1906–2022

CHAPTER 2

Prior to 1938 | The Early Days

In 1906, the American Medical Association's Council of Medical Education asked Henry Pritchett of the Carnegie Foundation to organize an independent survey of medical schools. The goal of this survey was to gather information that would lead to reform of medical centers and medical education. Pritchett hired Abraham Flexner, an educator with previous experience surveying colleges, to conduct this review. Flexner's visit to Washington University School of Medicine in April 1909 led to dramatic changes at the medical school.

Pritchett had been a professor of astronomy at Washington University before becoming president of the Massachusetts Institute of Technology (MIT). He later assumed a leadership position at the Carnegie Foundation. During this time, Robert Brookings was the president of Washington University's Board of Trustees. He and Pritchett were friends. Before Flexner's visit, Brookings had devoted time and money toward improving the medical school and its affiliated hospitals. However, Flexner's evaluation clearly indicated that Washington University School of Medicine (WUSM), like most medical schools, was in desperate need of major improvements. Brookings was surprised by this assessment, and Flexner returned to St. Louis for a second visit to show Brookings the reasons for his negative evaluation. Brookings took this feedback seriously and initiated dramatic changes, including a total reorganization of school leadership. He also sought out financial commitments to build new facilities. Much of the initial funding for these upgrades came from Brookings' personal fortune.

Medical educators (as well as leaders of educational foundations that helped fund institutions) wanted to create medical schools that would advance medical education, clinical care, and, importantly, research. In order for these goals to be accomplished, schools were strongly encouraged to develop a full-time faculty system. Up until that time, most clinical faculty members were physicians who earned income from clinical care. It was unusual for clinical faculty to be involved in research. They participated in teaching because they wanted to, but such activities were unfunded or greatly underfunded.

The medical school at Johns Hopkins was considered to be the model academic center in that research and education were central to its mission. Ideally, faculty at true academic centers would be hired to work full time at the school. The difficulty in establishing a full-time faculty system was that physicians were able to earn substantially more income in private practice and had little incentive to accept lower paying, full-time academic appointments.

Following Flexner's report, there were only a handful of universities that were able to make the transition to a full-time faculty model emphasizing research, education, and clinical care. Thanks to Brookings' commitment, Washington University became one of these institutions.



Robert Brookings



Abraham Flexner

A new group of leaders were recruited to WUSM. Members of the newly formed executive faculty included prominent individuals such as George Dock in medicine, Joseph Erlanger in physiology, John Howland in pediatrics, Eugene Opie in pathology, Philip Shaffer in biochemistry, Fred Murphy in surgery, David Edsell in preventative medicine, and Robert Terry in anatomy.

This group of leaders believed that the Board of Trustees had given them the authority to oversee the dean of the medical school. This authority was tested by George Dock who, while he was dean, thought he had authority over the executive faculty. Dock lost both this battle and his deanship. This organizational structure where the dean reports to the executive faculty was, and remains, unusual in American academia.

The executive faculty consisted of individuals who strongly believed in the importance of research and the application of the scientific method to all clinical arenas. This emphasis was important to the development of a scientifically strong department of neuropsychiatry and, later, to a scientifically strong department of psychiatry.

Subsequent to the birth of the newly organized medical school, psychiatry and neurology faculty were members of the Department of Medicine. Eventually, the neurology and psychiatry faculty were listed in the WUSM Bulletin as separate groups within the Department of Medicine.

At this time, there were several important individuals involved in the early days of psychiatry at WUSM. Two stand out.

MALCOLM BLISS

Malcolm Bliss was an instructor in psychiatry and a member of the Department of Medicine from 1898 to 1915. He graduated from dental school in 1884



Malcolm Bliss

and practiced dentistry for several years. He then decided to become a physician and graduated from Chicago Medical College in 1890. He was an advocate for people with mental illness with a special focus on the well-being of children.

Only one course was listed in the 1913 WUSM Bulletin pertaining to psychiatry. This course consisted of five 2-hour sessions described as “demonstrations of selective cases of mental

disease.” It was taught by Bliss.

Bliss was actively involved in a number of medical and psychiatric organizations. He served as the director of the Child Guidance Clinic without pay. He was a member of the staff of several psychiatric and medical hospitals in St. Louis, including the City Sanitarium. (This facility was originally called the St. Louis County Insane Asylum and eventually became St. Louis State Hospital.) He was instrumental in launching another facility that helped children, the St. Louis Training School for the Feeble-minded. He also had an interest in nutritional deficiencies in mental diseases.

In 1934, a special bond issue provided funding for building a new public psychiatric facility. This building opened in 1938 and was named the Malcolm A. Bliss Psychopathic Institute in honor of Bliss.

SIDNEY SCHWAB

Although several physicians were involved in teaching psychiatry at WUSM during the early twentieth century, Sidney Schwab may have been the most influential. Schwab became professor of clinical neurology at Washington University in 1913. Prior to this, he held teaching appointments at St. Louis University and the University of Missouri. Along with many other Washington University physicians, he helped staff a hospital in France during World War I where he developed an expertise in war neurosis and shell shock syndromes. In 1921, he served as president of the American Neurological Association.

Schwab was head of the neurology and psychiatry group within the Department of Medicine during the 1920s and 1930s. He was interested in both neurology and psychiatry and was a great believer in the application of the scientific method to the field of psychiatry. In his presidential address to the American Neurological Association in 1921, he reviewed his opinions about the relationship between neurology and psychiatry: “I desire to accentuate the conclusion that there is no psychiatric point of view, that there is no such thing as a psychiatric method of thinking or approach which logically can be divorced from the neurologic one.” Thus, he suggested



Sidney Schwab

that the separation of psychiatry and neurology is artificial. He strongly encouraged neurologists to develop more interest in topics dealing with consciousness and psychosis.

Schwab remained active at WUSM for over 30 years and was involved in all aspects of teaching psychiatry throughout this time. In 1942, he

became an emeritus professor due to an age requirement. However, he continued teaching and remained on salary. In 1943, two book prizes, one for neurology and one for psychiatry, were established in his honor. He died in November 1947.

During the 1920s, didactics in psychiatry increased at WUSM, reflecting the growth of the field both locally and nationally. Schwab was responsible for a 22-hour combined neurology and psychiatry lecture series during the third year of medical school. An additional 22 hours during that year were devoted to clinical experiences involving neurologically or psychiatrically ill patients. During the fourth year, there were 33 hours of neurology conferences that included discussions of interesting neurology and psychiatry topics. There was also a 28-hour fourth year elective at the City Sanitarium.

In addition to increased didactics related to clinical psychiatry and neurology, WUSM also was becoming well known for excellent neuroscience research. This was exemplified by electrophysiological studies by Erlanger, Herbert Gasser, and George Bishop that led to the awarding of a Nobel Prize to Erlanger and Gasser.

National psychiatric organizations

Locally, the Central Neuropsychiatric Association was established in May 1922. The purpose of this organization was to promote the study and practice of neuropsychiatry through annual meetings. The location of these meetings rotated to various cities in the central region of the United States. Membership was initially restricted to 225 and dues were \$5.00. Over time, this

group opened its membership and grew substantially.

As psychiatry was developing at WUSM during the early twentieth century, psychiatry in the United States was in the midst of substantial changes. By 1921, membership in the American Psychiatric Association had grown from the original 13 asylum superintendents to nearly 1,000 physicians. The number of asylums in the U.S. had expanded to over 500. The number of patients being treated in these asylums had risen from 3,000 to 235,000, and annual admissions to asylums had increased from 2,000 in the mid-1800s to 75,000.

Other new organizations related to psychiatry developed. The American Psychopathological Association (APPA) was established in 1910. The purpose of this organization was to advance research by sharing knowledge at an annual meeting. Shortly after the formation of the APPA, clinicians interested in the newly developing field of psychoanalysis also organized an association. The American Psychoanalytic Association held its first meeting in 1911.

Both asylum psychiatry and outpatient psychiatry were growing. Although there were psychiatrists within departments of medicine, academic departments of psychiatry with full-time faculty were still rare.

Similarly, there were individuals with neurological expertise in departments of medicine; however, departments of neurology were rare. At this time, neurology was a field more closely aligned with brain research than psychiatry.

Treatments

During the first few decades of the twentieth century, psychotherapy was growing in importance as an outpatient treatment. Sigmund Freud's Clark University lectures in 1909 attracted significant attention. The influence of psychotherapeutic approaches grew substantially during World War II as psychiatrists evaluated and treated soldiers. Psychoanalysis became a major force in the field of psychiatry following the end of the war. This influence dominated American psychiatry until the 1980s.

Somatic therapies for treating severely ill psychiatric patients started to gain attention during the same time.

In 1917, Julius Wagner-Jauregg demonstrated that fever therapy could cure psychosis caused by an illness known as general paresis of the insane (GPI), a common condition resulting from longstanding syphilis. Wagner-Jauregg observed that some patients with GPI improved following infectious illnesses that led to high fevers. That observation led him to test whether GPI could be cured by the high fevers accompanying malaria. He thought that once the psychiatric symptoms were alleviated successfully, the malaria could be treated with quinine. It turns out that the bacteria that cause syphilis are sensitive to heat. Although this therapy was dangerous and potentially lethal, some patients fully responded. His work demonstrated that symptoms that some had assumed were psychological in origin could be cured by a physical procedure. For this work, Wagner-Jauregg won the Nobel Prize in 1927, becoming the first psychiatrist to win this prestigious award.

During the 1930s, insulin coma therapy became a commonly used treatment for patients with active psychotic symptoms associated with schizophrenia. Insulin coma wards became commonplace. This treatment required the assistance of several personnel for long periods and, therefore, was quite expensive.

Electroconvulsive therapy (ECT) also was introduced in the 1930s and was shown to be an extremely effective treatment for severe depression. However, it was not until the late 1940s that better methods of muscle relaxation and sedation allowed ECT to be administered in a manner that eliminated the potential for broken bones resulting from peripheral manifestations of severe seizures.

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CHAPTER 3

Establishment of the Department of Neuropsychiatry 1938–1942

The Rockefeller Foundation's generous support enabled WUSM to grow into a leading academic medical school. In 1937, Dean Philip Shaffer consulted with Alan Gregg of the Rockefeller Foundation about future directions for the medical school. At that time, school leadership was considering expansion in two areas: neuropsychiatry and public health. Such growth would require financial assistance, however. Following a visit to the medical school, Gregg indicated that the foundation would consider supporting neuropsychiatry. With the possibility of financial support, Dean Shaffer asked David Barr, head of the Department of Medicine, to chair a committee to formulate a specific plan for an independent department of neuropsychiatry. This led to a formal proposal to the Rockefeller Foundation. In June 1938, the foundation approved funding consisting of \$50,000 a year for three years with the possibility of continued support following a review of progress in 1940. Some in the psychoanalytic community questioned the Rockefeller Foundation's decision to support a medical school that was not psychoanalytically oriented, but the leadership of the Rockefeller Foundation was sympathetic to the research-oriented academic approach that they knew existed at WUSM.

As reported in the Washington University Medical Alumni Quarterly in October 1938, two principles formed the basis of the newly created department:

First, the activities of the department will be related as closely as possible to the other departments of the School. Psychiatry will not be something separate and different from the rest of medicine. The second principle is that the new department will attempt to spread its influence throughout the School, among undergraduates and staffs of all departments with the object of impressing upon every medical student and practitioner due consideration of the psychological reactions of every patient.

A search for the leadership of this new department led to the recruitment of three professors: David Rioch as professor of neurology and administrative head of the department, John Whitehorn as professor of psychiatry, and Carlyle Jacobsen as professor of medical psychology.

Rioch was a graduate of Johns Hopkins Medical School. He trained in surgery with Harvey Cushing at



Carlyle Jacobsen, John Whitehorn, and David Rioch

Peter Bent Brigham Hospital in Boston and received further training in medicine at the University of Rochester. He gained experience in both research and clinical neurology at several institutions, including the University of Michigan, Oxford University, and Johns Hopkins. He was recruited to WUSM from Boston where he had been

a faculty member in the anatomy department at Harvard and active at Massachusetts General Hospital with interests in medical psychology and psychiatry.

Whitehorn received his M.D. from Harvard University in 1921. His interest in biochemistry led him to the directorship of the laboratories at McLean Hospital. During his time at McLean, he gained investigative and clinical experience in psychiatry.

Jacobsen received a Ph.D. from the University of Minnesota in 1924. He continued to gain research expertise at the University of Chicago and Yale University. He was a faculty member at Yale when he was recruited to WUSM. At Yale, he conducted animal research in addition to studies with humans. He was interested in a variety of topics, including learning and memory as well as personality disorders.

The birth of the new Department of Neuropsychiatry led to a significantly expanded neuropsychiatry curriculum. As documented in the 1939 Bulletin, training in neurology and psychiatry occurred over the entire four years of medical school:

Year 1: “Introduction to Medical Psychology” and “Integrative Neuroanatomy and Neurophysiology”

Year 2: “Psychiatry, Psychobiology” and “Neurology, Neurological Examination in Physical Diagnosis”

Year 3: “Psychopathology and Psychotherapy,” “Psychiatric Interviewing,” “Clinical Demonstrations” (psychiatry), “Clinical Neurology,” “Neuropathology,” and “Clinical Demonstrations” (neurology)

Year 4: psychiatric clinical clerkship in the university clinics, clinical clerkship at the Bliss Psychopathic Institute, psychosomatic medicine seminar, neurological clerkship in the university clinics, clinical clerkship in the neurological wards at City Hospital, neurology ward rounds at Barnes Hospital and City Hospital, and a variety of electives.

With the growth of the department came the need for space. At that time, academic space for neuropsychiatry included a floor in the Oscar Johnson Institute and the seventh floor of McMillan Hospital. Patients with psychiatric illnesses were scattered throughout Barnes

Hospital since there was no dedicated clinical space for these patients.

Psychiatrically ill patients were also admitted to City Hospital. Prior to 1938, City Hospital had a psychiatric ward in an abandoned jail that some people referred to as the Black Hole of Calcutta. When possible, psychotic patients were transferred to the City Sanitarium. In 1938, Malcolm Bliss Psychopathic Institute opened. Later, George Ulett described this facility as consisting “of a five-story building complete with auditorium, a wing to house research, and a potential patient capacity of upwards of 200 beds.” Patients requiring long-term treatment were supposed to be transferred to the City Sanitarium, but because of inadequate funding, the City Sanitarium had more patients than could be managed there and Bliss became overcrowded.

From its beginning, Malcolm Bliss Psychopathic Institute served as a training site for Washington University medical students. Several WUSM faculty had appoint-



Malcolm Bliss Psychopathic Institute



City Sanitarium - later renamed St. Louis State Hospital

ments at this city-run hospital. In 1964, Malcolm Bliss Psychopathic Institute became part of the state hospital system and was renamed Malcolm Bliss Mental Health Center.

While the Department of Neuropsychiatry was being established, psychoanalysis was becoming increasingly influential in the United States. In order to provide psychoanalytic training in the new department, Felix Deutsch, a psychoanalyst from Boston, joined the faculty in 1939 as associate professor of clinical psychosomatic medicine. His appointment was initially half time but increased to full time during the 1940–1941 academic year. Deutsch resigned in May 1941, reportedly because his spouse decided not to relocate to St. Louis.

When Adolf Meyer, one of the most prominent leaders of American psychiatry, retired from Johns Hopkins University School of Medicine in 1941, Whitehorn was recruited to fill Meyer's prestigious professorship. With the loss of Whitehorn, Rioch decided to step down from his administrative position as head of the department. A search for a new psychiatrist and department head was initiated. Gregg at the Rockefeller Foundation was knowledgeable about qualified candidates around the country, and he assisted school leadership in the search. The Rockefeller Foundation remained interested in the success of neuropsychiatry at WUSM and agreed to continue its financial support of the department.

The support of the Rockefeller Foundation was influential in Wallace and Lucille Renard's decision to invest in the department. Their pledge of \$250,000 to endow the department was announced in December 1941. Part of this money eventually was used to establish the Wallace and Lucille Renard Professorship in Psychiatry.



Wallace Renard



Lucille Renard

During that same month, plans were announced to dedicate two floors of McMillan Hospital for the treatment of psychiatrically ill patients. Partial funding for this new unit came from federal grants. The difficulty of treating psychotic patients on general medicine units had been increasingly appreciated. Although neurologically ill patients could be managed in a manner similar to other general medicine patients, psychiatrically ill patients needed special attention and facilities.



McMillan Hospital

The financial support of the Rockefeller Foundation and the Renard family together with dedicated space for psychiatric patients were helpful in recruiting a new head for the department. In May 1942, a recommendation was made to appoint Edwin Gildea as professor of psychiatry and head of the Department of Neuropsychiatry. Gildea transitioned from Yale to WUSM during that summer.

Rioch resigned from WUSM in September 1943 to become Director of Research at Chestnut Lodge in Rockville, Maryland, and Executive Director of the Washington School of Psychiatry. In 1951, he became the founding director of the division of neuropsychiatry at Walter Reed Army Medical Center where he remained until his retirement in 1970.

Jacobsen remained professor of psychology and assistant dean at WUSM from 1942 until 1946. He then joined the University of Iowa as dean of the Graduate College and later became executive dean. In 1957, he became president and dean of the College of Medicine at the State University of New York Upstate Medical Center.

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CHAPTER 4

Edwin Gildea as Department Head

1942–1963

The inaugural leadership of the newly created Department of Neuropsychiatry had lasted four years. Whitehorn's decision to leave in 1941 to chair the psychiatry department at Johns Hopkins University together with Rioch's decision to surrender his administrative duties as department head triggered a search for a new leader of the young department. Edwin Gildea was recruited from Yale to be the new department head, and he remained in that position for almost 21 years. He recruited remarkable faculty and provided a departmental atmosphere that encouraged talented, creative people to make major contributions locally, nationally, and internationally.

Gildea grew up in Colorado Springs and attended Colorado College. After obtaining his medical degree from Harvard Medical School in 1924, he continued training in medicine, neurology, and psychiatry at Boston City Hospital and Boston Psychopathic Hospital. Following a year as a visiting junior neurologist at Boston



Edwin Gildea

City Hospital and an assistant in neuropathology at Harvard, Gildea moved to Yale where he remained for 12 years. His research focused on lipids as well as neuroendocrine studies involving thyroid function.

In 1942, Dean Shaffer and leaders from the Rockefeller Foundation talked with Gildea about

the position at WUSM. Gildea became convinced that he would be able to contribute more to the field of psychiatry by being the head of the Department of Neuropsychiatry at WUSM than by continuing to pursue his research interests at Yale. Financial support from the Rockefeller Foundation and the Renard family helped make the offer from WUSM enticing.

During the years of Gildea's leadership, the Department of Neuropsychiatry received substantial financial

support from the Rockefeller Foundation, the Renard family, and a variety of grants. In addition, the Commonwealth Foundation provided five years of funding to help develop a division of psychosomatic medicine.

The Renard family's generous financial support to the department began before Gildea was recruited and was responsible for major developments during his tenure. In addition to helping establish the Wallace and Lucille K. Renard Professorship in Psychiatry, gifts from the Renards helped finance a new psychiatric hospital, which opened in 1955 and was named in their honor.

In the mid-1940s, there were eight full-time psychiatry faculty and one full-time neurology faculty in the



Renard Hospital

Department of Neuropsychiatry. Gildea was the only full professor. James O'Leary, an associate professor, was the one full-time faculty in neurology. There were also four part-time psychiatry faculty and five part-time neurology faculty. The psychology group within the department consisted of one full-time professor, one full-time instructor, and two part-time instructors.

Faculty members covered psychiatric services in various locations. The psychiatry units in McMillan Hospital opened in January 1943 and were quickly functioning at full capacity. Thirty of the 54 beds were on a locked ward that included an 8-bed isolation section. There were 544 psychiatric admissions in 1944. Length of stay averaged 33 days. Neurologically ill patients were treated on a general 12-bed ward in Barnes Hospital.

Department faculty also provided consultation services to Barnes Hospital. There were about 500 psychiatric consultations a year. The faculty also provided outpatient services for psychiatrically and neurologically ill patients. There were about 1,300 new patient visits and about 3,160 return visits annually. In addition to providing clinical care at Barnes and McMillan Hospitals, psychiatry faculty were involved as visiting staff at Bliss Psychopathic Institute, City Hospital, and Homer G. Phillips Hospital.

During this time, residency training in psychiatry became officially recognized. The Council on Medical Education and Hospitals of the American Medical Association approved the WUSM psychiatry residency program in 1944. The American Board of Psychiatry and Neurology concurred with this action of the Council.



Gildea teaching medical students

Gildea tried to include members from the psychoanalytic community in departmental teaching programs. In addition, he was instrumental in the development

of the Psychoanalytic Foundation and the St. Louis Psychoanalytic Institute, and he was involved in the growth of the analytically-oriented Child Guidance Clinic. Nevertheless, the psychoanalytic community was not supportive of Gildea. This may have been because Gildea was not an analyst and analysts were not in control of the department. Interestingly, Gildea's spouse, Margaret Gildea, M.D., was a prominent Jungian therapist who was an active educator in the department and had a busy

private practice. Of course, Freudians and Jungians did not see eye to eye. The relationships among the Psychoanalytic Institute, the Child Guidance Clinic, and the department are discussed in Chapter 12.

Gildea was responsible for recruiting several outstanding faculty members during his tenure. George Saslow (who helped develop psychosomatic medicine at WUSM) and George Ulett (who became a leader in public psychiatry) joined the department in the mid-1940s. Later, Gildea recruited three remarkable physicians who were instrumental in changing the direction of the entire field of psychiatry in the United States: Eli Robins, George Winokur, and Samuel Guze. Lee Robins also joined the department and became a central figure in the development of the discipline of psychiatric epidemiology. The careers of these and several other individuals are discussed in later chapters.

During this time, there were some exceptional neuroscience-oriented researchers at the university. In order to facilitate communication among faculty from various departments, O'Leary, Henry Schwartz, a neurosurgeon, and George Bishop, a prominent researcher, created a teaching and research division called the Institute of Neurology. Despite being unfunded, this institute was listed in the WUSM Bulletin for several years (1948–1950). With the support of donors, it resurfaced in 1955 as the Beaumont-May Institute of Neurology.

Although Gildea was known for his ability to get along with most individuals and create an atmosphere that allowed a diverse group of thinkers to function well together, one conflict persisted throughout much of his tenure as department head. The discord between Gildea and O'Leary, a gifted neuroanatomist and neurologist, was rooted in the fact that Gildea was a psychiatrist who controlled the development of both psychiatry and neurology at the medical center.

O'Leary joined the Department of Anatomy at WUSM in 1928. He had obtained his Ph.D. in anatomy from the University of Chicago. During his first three years at WUSM, he took medical school classes in Chicago during the summers and earned an M.D. degree in 1931. Although he was a physician, he had limited training in clinical neurology. During the transition from Rioch

to Gildea as department head, Rioch requested that O'Leary be given a faculty appointment in the Department of Neuropsychiatry. Gildea supported this request. Because of his limited clinical credentials, O'Leary was not initially given the rank of associate professor despite the fact that he already was an associate professor of anatomy. Clinicians in the department assisted O'Leary in gaining clinical skills. In 1945, during the time that he was in the military, he was promoted to associate professor of neurology.

O'Leary was interested in expanding the neurology faculty and believed that Gildea was more focused on supporting psychiatry than neurology. The ability of these two individuals to work together deteriorated to the point that various deans tried to intervene. Compromises were made such that the executive faculty approved Gildea's request in 1955 to change the name of the department to the Department of Psychiatry and Neurology. In order to further decrease the tension between these two individuals, the deans tried to assist with budget considerations. This was apparently a delicate situation since Gildea was the ultimate authority as head of the department.

When Gildea stepped down as head of the combined department in 1963, the Department of Psychiatry and Neurology was renamed the Department of Psychiatry and a new Department of Neurology was created. Eli Robins became head of the Department of Psychiatry, and O'Leary became the head of the new Department of Neurology.

What was Ed Gildea like? In the late 1980s and early 1990s, Richard Hudgens interviewed several individuals who knew Gildea personally. From those interviews, it is apparent that Gildea was an outgoing individual who was able to get along well with people of diverse backgrounds and opinions. He was a strong administrator. He provided a departmental climate in which faculty could pursue their interests with minimal administrative interference. He was well read and was known for his encyclopedic knowledge. He enjoyed parties, and he and his spouse enjoyed entertaining. It was no secret that he liked to drink. Some parties were apparently quite wild.

Following Gildea's death in 1977, George Winokur

wrote an "In Memoriam" article in the American Journal of Psychiatry. Part of that tribute reads:

Ed himself was a large man, with the pinkish complexion that one often sees on the streets of Dublin. He smoked huge pipes that he stuffed with heavily aromatic tobacco. He had originally come from Colorado and still liked the western way of life. It was rumored that frequently when he had to take a train trip he would settle down in the club car with a wide-brimmed hat and pass himself off as a cattle rancher. ... Dr. Ed had a quiet, sandy voice and a "homey" attitude, which, however, masked considerable sophistication and erudition.

The growth of American psychiatry during the Gildea era

During the two decades of Gildea's tenure as department head, remarkable developments were occurring in American psychiatry. The American Board of Psychiatry and Neurology (ABPN) came into existence in 1934. Adolf Meyer was instrumental in its formation, serving as chair of the organizing committee. After leaving Washington University, John Whitehorn served as president of the ABPN for three terms in 1946, 1948, and 1949. When the Board started issuing certification certificates in 1935, 62 certificates were issued in neuropsychiatry, 42 in psychiatry, and 3 in neurology. In 1942, 125 physicians were certified in neuropsychiatry, 133 in psychiatry, and 5 in neurology. Eventually, the ABPN decided that individuals interested in certification in neuropsychiatry would need to pass the examinations in both psychiatry and neurology. This decision had predictable consequences, and in 1950, only 16 physicians gained certification in neuropsychiatry, 330 in psychiatry, and 22 in neurology. By 1963, only one physician became certified in neuropsychiatry while 309 became certified in psychiatry and 35 in neurology.

Following World War II, psychoanalytic approaches dominated the field of psychiatry. In fact, psychoanalytic explanations captured the imagination of leaders of many disciplines. The American Psychoanalytic Associa-

tion was formed in 1911 and by 1965, membership had grown to 1300. In 1946, the Group for the Advancement of Psychiatry was organized under the leadership of William Menninger. Dominated by psychoanalysts, this organization wanted to spread the influence of psychoanalysis throughout the entire field of psychiatry. In 1948, 52 of its 177 members were involved in committees of the American Psychiatric Association (APA), and this group was quite successful at influencing the field. Although fewer than 10% of psychiatrists were analysts at the time, many general psychiatrists were supportive of this movement. Leaders of most psychiatry departments and psychiatry residency programs were either analysts or supportive of analysts. It was difficult to obtain a leadership role in a department of psychiatry unless an individual was favorably inclined towards psychoanalysis.

The influence of psychoanalysis on American psychiatry is reflected in the relationship between the psychoanalytic community and the ABPN, which is well documented by Marc Hollender in *The American Board of Psychiatry and Neurology: The First Fifty Years*. When the ABPN was willing to consider a subspecialty of psychoanalysis, the American Psychoanalytic Association voted against the proposal. They wanted equal status, not subspecialty status, within the ABPN. This was unacceptable to the ABPN. There were on-again off-again interactions between the ABPN and leaders of the psychoanalytic community for about 35 years. These discussions ended in the mid-1970s.

The Association of Medical Superintendents of American Institutions for the Insane formed in 1844 with membership consisting of about half of the medical superintendents of asylums in the United States. With the rise of outpatient psychiatry and outpatient psychotherapies, this organization increasingly reflected the interests of both inpatient and outpatient psychiatrists. In 1917, what was now the American Medico-Psychological Association (and would become the American Psychiatric Association in 1921) began gathering statistical information about psychiatrically ill patients. Over time, there were eight editions of a statistical manual. In 1952, the APA published the first formal Diagnostic and Statistical Manual—DSM-I. This manual represented an attempt

to standardize psychiatric classification systems. Both the first edition and the second edition published in 1968 were strongly influenced by psychoanalytic thinking. DSM-III, published in 1980, was a very different document, however, and it had a major influence in shifting the emphasis of the field towards a scientific, medical model orientation. The involvement of the WUSM Department of Psychiatry in the development of DSM-III is discussed in Chapter 7.

Other important national organizations relevant to psychiatry developed during the Gildea years. In 1946, President Harry Truman signed the National Mental Health Act, which authorized the creation of the National Institute of Mental Health (NIMH). This organization was established formally in 1949. Toward the end of the Gildea era, the American College of Neuropsychopharmacology (ACNP) was formed. This group was created in response to the growth of psychopharmacology that occurred during the 1950s.

During the first decade of Gildea's leadership, the number of people "hospitalized" in asylums continued to grow. Psychiatrically ill patients were also hospitalized in general hospitals, including Barnes Hospital. The need for specific psychiatric units at Barnes became evident. When the psychiatry wards in McMillan Hospital opened in 1943, treatment approaches included insulin therapy and electroconvulsive therapy (ECT). Medications included the older opiates and barbiturates. Malaria fever therapy was reportedly used to treat those with general paresis of the insane caused by tertiary syphilis.

Insulin wards were common in hospitals, and patients might receive insulin coma therapy six days a week for extended periods. ECT was also available during the early 1940s, although muscle relaxants that prevented patients from experiencing physical injury from severe peripheral seizures were not part of ECT protocols until the late 1940s. As ECT became safer, it displaced the use of insulin coma therapy.

During the 1950s, remarkable discoveries were made that led to substantial changes in the field. The finding that chlorpromazine, a drug developed from dyes, not only was a powerful antihistamine but also had dramatic behavioral properties, revolutionized care in psychiatric

asylums. Chlorpromazine's ability to lessen psychotic symptoms led to changes in treatment and in the way psychiatric illnesses were conceptualized. During this decade, imipramine was synthesized and was shown to be an effective treatment for severe depression. Monoamine oxidase inhibitors also were found to be effective antidepressants during this period, and meprobamate (Miltown; aka "mother's little helper") was developed as an antianxiety agent. Eventually, benzodiazepines replaced meprobamate as medications to treat anxiety.

The one group of drugs that had not yet been developed was mood stabilizers. It was not until the end of the 1960s that lithium became accepted as an effective treatment for bipolar disorder.

Exciting discoveries pertaining to neurotransmitters were also occurring during this time. Acetylcholine had been discovered in the 1920s in the peripheral nervous system. Norepinephrine and serotonin were shown to be neurotransmitters in the 1950s. Enzyme systems responsible for the synthesis and metabolism of these neurotransmitters were being characterized. During the late 1950s and early 1960s, Julius Axelrod and colleagues elucidated the process of neurotransmitter recycling by means of re-uptake pumps. The demonstration in the late 1950s that dopamine was a neurotransmitter, independent of norepinephrine, opened up new areas of research that had a dramatic influence on the understanding of psychotic illnesses and Parkinson's disease.

Inpatient psychiatrists throughout Europe and the United States were interested in this new world of psychopharmacology, and antipsychotic medications were rapidly utilized by physicians treating the severely ill. However, in the 1950s, an increasing number of psychiatric patients received treatment as outpatients, and psychoanalytically-oriented psychiatrists dominated outpatient psychiatry. Psychiatric illnesses such as anxiety disorders and personality disorders were thought by many of these psychiatrists to be caused by processes that could only be corrected by insight-oriented therapy.

During the 1950s and 1960s, psychopharmacology was not a major threat to analysts. It was initially believed that drugs would be used primarily to treat very ill individuals as inpatients. During the 1970s, evidence

accumulated indicating that patients with depressive and anxiety disorders could be treated successfully with medications as outpatients, and the field of psychopharmacology started to become a threat to psychoanalysts. The pharmaceutical industry grew dramatically during this time, and as it became evident that many outpatients could be treated with medications, the pharmaceutical industry increasingly interacted with psychiatrists. Thus, psychopharmacological approaches began to compete with psychoanalytic approaches during the 1970s and 1980s, and a schism between psychopharmacology and psychoanalytic therapy developed.

While the psychopharmacological revolution was occurring, members of Gildea's Department of Neuropsychiatry were initiating studies aimed at carefully defining psychiatric illnesses and elucidating the natural history and epidemiology of these illnesses. Interestingly, psychopharmacologic studies were not dominant in the Department of Psychiatry at WUSM. The diagnostic and epidemiologic research that originated from the WUSM Department of Psychiatry coupled with the growing influence of the field of psychopharmacology provided the necessary ingredients to initiate a major paradigm shift that moved the field of psychiatry away from a psychoanalytically dominant approach and toward an empirical, scientifically based, research oriented approach.

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CHAPTER 5

Faculty in the Early Gildea Years

Edwin Gildea recruited truly remarkable faculty members to the Department of Neuropsychiatry. Many significantly influenced the fields of psychiatry and psychology both locally and nationally. In this chapter, I will highlight two physicians, George Saslow and George Ulett, and three psychologists, Saul Rosenzweig, John Stern, and Joe Matarazzo.

GEORGE SASLOW

George Saslow received a Ph.D. in physiology from New York University in 1931. Before his graduate training, he had completed two years of medical school at the University of Rochester. He left medical school to pursue a Ph.D. partially in response to financial issues during the Great Depression. After obtaining his Ph.D., he became a research associate at Harvard. While there, Cecil Drinker, the dean of the Harvard School of Public Health, encouraged Saslow to return to medical school. Saslow followed Drinker's advice and obtained his M.D. from Harvard in 1940.

Following medical school, Saslow wanted to do research that involved human volunteers. In order to do that, he realized that he needed further clinical training. Drinker encouraged Saslow to investigate the field of psychiatry since Saslow was a trained physiologist and some departments of psychiatry might be interested in someone with that background. Saslow subsequently completed his residency training from 1940 to 1943 at Boston City Hospital, Worcester State Hospital, and Massachusetts General Hospital (MGH).

Several individuals in Boston strongly influenced Saslow, including Stanley Cobb, the new head of psychiatry at MGH; Erich Lindemann, who would later recruit Saslow back to Harvard; Eliot Chapple, an anthropologist who introduced Saslow to a device used to monitor interviews called an interaction chromograph; and Mandel Cohen. Cohen was one of the few non-psychoanalytically oriented psychiatrists at Harvard. Saslow worked on the consult service at MGH under Cohen's supervision.

In 1942, Gildea was about to become head of the

Department of Neuropsychiatry at WUSM. He had contacts at Harvard, including Cohen, and became aware that Saslow was looking for an academic position. Gildea offered Saslow an assistant professorship at WUSM, and Saslow accepted.

As a physiologist, Saslow had published a number of studies involving red blood cells. During his clinical training, his research interests shifted toward studying human interactions. His expertise included psychotherapeutic approaches in medically ill patients, studies of personality, and studies of human interactions using the interaction chronograph. This device measured basic characteristics of interviews, such as pauses, latencies, and interruptions.

Saslow provided psychiatric consultations to patients throughout Barnes Hospital. He was

well liked by the leadership of the Department of Medicine, including its new head, Barry Wood. Saslow and Wood were interested in developing a psychosomatic clinic. A five-year grant from the Commonwealth Fund made this possible, and Medicine Clinic D opened in 1946. All psychiatry and medicine residents at WUSM/Barnes Hospital were required to rotate through this clinic. In addition, many psychiatry residents from Malcolm Bliss Psychopathic Institute, senior WUSM medical students, social workers from the George Warren Brown School of Social Work, and psychology graduate students



George Saslow

rotated through this service.

Saslow was known to be a charismatic teacher and superb interviewer. He had a profound influence on the professional development of many faculty members at WUSM, including Samuel Guze, George Murphy, and Richard Hudgens. Saslow was not a fan of psychoanalysis, but he was a strong supporter of using psychotherapies in treating patients with medical and psychiatric illnesses.

In 1955, Lindemann recruited Saslow back to Harvard. Two years later, Saslow became the first full-time chair of the Department of Psychiatry at Oregon Health and Science University. He remained in that position until 1973. Following his retirement, he accepted a position at the VA Hospital in Sepulveda, California. In 1978, he returned to Oregon Health and Science University to teach and take care of patients. Saslow died in 2006 at the age of 99. Among his many contributions, he served on the task force that developed DSM-III.

GEORGE ULETT

George Ulett was an individual with strong research interests. He received a master's degree and Ph.D. in neuroanatomy and his M.D. from Oregon Health and Science University. He gained experience working with psychiatrically ill patients while serving in the armed forces and started attending Grand Rounds at WUSM while stationed in Belleville, Illinois. He met Gildea at Grand Rounds and mentioned that he was planning to return to the West Coast for residency training in psychiatry. Gildea offered him a residency position at WUSM with an early start date and told him that he would have the opportunity to do research with well-known electrophysiologists and anatomists like George Bishop and James O'Leary.

Ulett accepted this offer and was a resident and fellow at WUSM from 1948 to 1950. He then became an assistant professor in the department. Ulett was an energetic investigator, clinician, and administrator. In 1953, Gildea arranged for Ulett to remain full-time faculty in the department while assuming the directorship of Malcolm Bliss Psychopathic Institute. At that time, Malcolm Bliss

was a city hospital, and medical students and residents from WUSM rotated there. Ulett initiated research programs at Bliss. He authored *A Synopsis of Contemporary Psychiatry* in 1956, and the sixth edition of this textbook was published in 1979.

Ulett became a leader in the field of public psychiatry. In 1961, the governor asked him to become director of the Missouri Division of Mental Diseases (later called the Missouri Department of Mental Health). Ulett decided to accept an acting directorship and was granted a 6-month leave of absence from WUSM. When the six months were over, WUSM leadership asked Ulett to choose between his tenured professorship and the full-time directorship of the Division of Mental Diseases. He gave up his faculty position in order to accept the position with the State.

Ulett was responsible for establishing the Missouri Institute of Psychiatry (later known as the Missouri Institute of Mental Health) in 1962. The institute was the research and educational arm of the Division of Mental Diseases. In 1965, it became affiliated with the University of Missouri in Columbia, and Ulett became a full professor at the University of Missouri.

During his time as director of the Missouri Division of Mental Diseases, Ulett convinced state leaders to assume management of Malcolm Bliss Psychopathic Institute (subsequently renamed Malcolm Bliss Mental Health Center) and similar facilities in Columbia and Kansas City. These public psychiatric facilities had a great need for psychiatrists. Ulett wanted to create state-supported residency programs in order to train psychiatrists who would later stay and work in the state system. Ulett reasoned that residency programs would be competitive if they were affiliated with academic centers.

Ulett facilitated the development of residency training programs at Malcolm Bliss and at Missouri Institute of Psychiatry (MIP)-State Hospital. During the 1960s and 1970s, many residents trained in these two programs. These training programs were in addition to those at WUSM and St. Louis University. Many graduates of the state-supported programs stayed in Missouri and worked in the public sector. The residency programs at Malcolm Bliss and MIP were phased out between 1977 and 1980.

Ulett stepped down from his position as mental health director for Missouri in 1971. During his time with the state, he reorganized hospitals and developed psychiatric training programs. He helped establish a specialized alcohol treatment unit at Malcolm Bliss. He developed psychopharmacological research programs at both Malcolm Bliss and MIP. Max Fink, a well-respected, biologically-oriented psychiatrist, was recruited to help with these studies. Ulett also was instrumental in the racial integration of inpatient psychiatry units at Malcolm Bliss.

In addition to his many achievements in the field of psychiatry, Ulett was also a professional magician. He died in 2015 at the age of 97.

THREE PROMINENT PSYCHOLOGISTS: SAUL ROSENZWEIG, JOHN STERN, AND JOE MATARAZZO

Saul Rosenzweig was a clinical psychologist who made important contributions to the field of psychology, including publications on personality theory, psychodiagnostics, creativity, and psychoanalysis. He had half-time appointments in both the neuropsychiatry and psychology departments at Washington University from 1948 to 1952. He was the chief psychologist at the Child Guidance Clinic at the medical school. In 1952, he became a professor and full-time faculty member in the psychology department, and he remained in that department until retiring to emeritus status in 1975.

John Stern joined the Department of Neuropsychiatry as a research associate in 1953. He eventually was promoted to full professor. He was head of the Division of Medical Psychology in the Department of Psychiatry from 1961 to 1969 and remained a member of the department until 1977–1978. He had a very active research laboratory at Malcolm Bliss Mental Health Center. He also joined the Department of Psychology in 1957 and served as chair of that department from 1987 to 1995. He retired in 2000.

Stern was a very productive investigator. He was a founding member of the Society for Psychophysiological Research and was honored by that society for his contri-

butions to the field of psychophysiology.

Joe Matarazzo was in the Department of Neuropsychiatry for a short time. He did his psychology internship at WUSM and then was an assistant professor of medical psychology in the Department of Neuropsychiatry in the mid-1950s. He left to help develop the first Department of Medical Psychology at Oregon Health and Science University. Matarazzo was instrumental in the development of the fields of behavioral medicine and health psychology. He served as president of the American Psychological Association in 1989.

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CHAPTER 6

Cohen, Guze, Robins, Winokur, and Other Exceptional Individuals

One remarkable individual had a great deal to do with the department's history even though he was never a member of the faculty. Mandel Cohen strongly influenced the growth of the department and championed its role in changing the orientation of American psychiatry from a psychodynamic model to a medical model. Some faculty members referred to Cohen as the grandfather of the department.

MANDEL COHEN

Cohen grew up in Alabama. He majored in English at Yale University and had a strong interest in psychology. While attending medical school at Johns Hopkins, Cohen worked with Adolph Meyer, perhaps the most noted psychiatrist in the United States at that time.

After medical school, Cohen moved to Boston and worked as a research fellow at Harvard. In his early studies, he examined topics such as blood flow in psychiatric conditions, anticonvulsant action of vital dyes, and oxygen consumption in persons with anxiety neurosis. After three years as a research fellow, he trained in psychiatry at Massachusetts General Hospital (MGH) where he obtained clinical experience in psychiatry, neurology, and neuropathology. The Rockefeller Foundation also provided him with funds for psychoanalytic training, and he was analyzed by Hans Sachs, who had himself been analyzed by Sigmund Freud. Cohen would later say that analysis neither helped him nor harmed him; rather, he felt it was a waste of time. In 1941, Cohen earned board certification from the American Board of Psychiatry and Neurology in both psychiatry and neurology.

Cohen went on to practice psychiatry and neurology at Harvard and MGH. At different stages of his career, he was a full-time academician, an academician with a small private practice, and a full-time clinician in private practice. Early in his career, he supervised two research labs while directing the psychiatric consult service at MGH. One lab worked on the development of anti-convulsants, and the other focused on studies of anxiety neurosis.

In addition to his work examining physiological and

metabolic aspects of illness states, Cohen studied clinical syndromes. He utilized specific diagnostic criteria for defining psychiatric illnesses and published now classic papers on depression, hysteria, and anxiety neurosis.

During this time, American psychiatry was controlled by psychoanalysts and those allied with the psychoanalytic movement. The psychoanalytic community was not supportive of academicians who did not subscribe to their orientation. Cohen was an independent thinker and a strong opponent of the psychoanalytic approach. Even though he was surrounded by analysts at Harvard and MGH, he rejected their psychodynamic interpretations of patients' symptoms. Needless to say, he was not liked by the Boston psychoanalytic community. Cohen was more comfortable with the academic neurologists, and several of his friends became national leaders in neurology, including Maurice Victor and Raymond Adams. Cohen taught Victor psychiatry when Victor was a resident in Boston. Victor also attended board review sessions at Cohen's home.

Although Cohen was not supported by Boston's psychiatric community, he remained in the Boston area. Decades later, after American psychiatry shifted away from psychoanalytic domination, Cohen's achievements were acknowledged and praised both in Boston and at a national level.

During the early part of his career, Cohen visited WUSM as a guest of Sidney Schwab. Cohen became a strong supporter of Edwin Gildea, and he championed the unique orientation of the Washington University Department of Neuropsychiatry. Cohen was instrumental

in helping shape the career of Eli Robins, and he encouraged Gildea to meet Robins. Later, Cohen encouraged another psychiatrist, Robert Woodruff, to join the WUSM Department of Psychiatry as well. He also interacted with George Ulett. He supervised George Saslow on the consult service at MGH. Cohen had a profound influence on another leader of American psychiatry, Paul McHugh. Cohen encouraged McHugh to train at either WUSM or the Maudsley, a well-established, medically oriented psychiatric hospital and academic center in London. McHugh trained at the Maudsley and eventually became the chairman of another department that championed scientific approaches to psychiatry—the Department of Psychiatry at Johns Hopkins.

The recruitment of Eli Robins, George Winokur, and Samuel Guze

During the mid-1940s, Gildea expanded educational, clinical, and research programs at WUSM. Saslow's work with the Department of Medicine and the psychiatry consult service led to the development of Medicine Clinic D. Ulett developed research and clinical programs at Malcolm Bliss and became a strong advocate for public psychiatry.

Between 1949 and 1955, Gildea recruited three extremely bright individuals with forceful personalities: Samuel Guze, Eli Robins, and George Winokur. These three became friends and formed a team that changed the direction of the field of psychiatry. Their creative intelligence, strength of personality, and persistence were instrumental in moving the field away from dogmatic psychoanalytic approaches and towards evidence-based medical model approaches. Gildea's supportive attitude provided the fertile soil in which the ideas of these three individuals took root.

Guze's road to becoming a psychiatrist

Guze's association with WUSM started earlier than either Robins' or Winokur's. In 1941, Guze transferred from City College of New York to Washington University in order to improve his chances of being

admitted to medical school. He had been advised that it would be better for him to get his undergraduate degree from Washington University than to be one of many Jewish premeds graduating from the City College of New York. Guze subsequently gained admission to medical school at WUSM and graduated in 1945. He then completed an internship in internal medicine at WUSM before entering the Army. After he was discharged, Guze returned to WUSM to continue his internal medicine residency. Over time, Guze became dissatisfied with his work in the medicine clinic—he felt that he was not able to address the full needs of his patients. Because of this, the chair of medicine, Barry Wood, encouraged Guze to work with Saslow, who was developing Medicine Clinic D, which would integrate psychosocial and psychiatric evaluations with medical evaluations. Guze enjoyed working with Saslow. Following the second year of his medicine residency, Guze left St. Louis to continue residency training at the New Haven VA, a hospital associated with Yale. Before leaving St. Louis, he secured a position to work with Carl Moore in hematology at WUSM the following year.

While Guze was in New Haven, Saslow received funding from the Commonwealth Foundation to establish a division of psychosomatic medicine at WUSM. Saslow offered Guze the initial psychosomatic fellowship position. After discussing this with Moore, Guze returned to WUSM in 1950 to work with Saslow as a fellow. During this year, he met Robins and Winokur.



Samuel B. Guze

The year of psychosomatic medicine fellowship fulfilled training requirements that allowed Guze to sit for internal medicine boards. This year of training was also acceptable to the American Board of Psychiatry and Neurology as formal psychiatry training. Guze decided to become certified in both specialties,

and he arranged to continue working with Saslow for two additional years. These three years fulfilled the training requirements necessary for him to sit for boards

in psychiatry.

Guze planned to open a private practice in internal medicine after he completed his training. At about the same time, Saslow was recruited back to Harvard by Erich Lindemann. Saslow invited Guze to join him in Boston, and Guze interviewed with Lindemann at MGH. From that interview, Guze concluded that the job would not be a good fit for him. He was concerned that it would not be a good move for Saslow either. It turned out that Saslow realized rather quickly that things were not going to work out at Harvard, and he left within two years to become the first full-time head of the Department of Psychiatry at Oregon Health and Science University.

Saslow was a key faculty member in the department at WUSM, and his departure left a big gap, especially in the area of psychosomatic medicine. Gildea, perhaps with the encouragement of Robins and Winokur, decided to offer Saslow's position to Guze. Guze had to make a major career decision. If he accepted the position, he would have a primary appointment in psychiatry and would be considered a psychiatrist with an internal medicine background instead of an internist with a psychiatric background. In the end, Guze decided to accept the position.

Guze was strongly influenced by Saslow, and several of Guze's publications during the mid and late 1950s involved research pertaining to the clinical interview. Guze utilized the interaction chronograph, the instrument that Saslow had used in his earlier work. During the 1960s, Guze's research involved studies of hysteria, sociopathy and criminality, and alcoholism. Guze also wrote extensively about the medical model approach to psychiatry.

Eli Robin's early days

Robins grew up in Texas. He obtained his B.A. from Rice University in 1940 and attended medical school at Harvard, graduating in 1943. After completing a rotating internship at Mt. Sinai Hospital in New York, he returned to Boston where he trained in both psychiatry and neurology. During this time, he worked with Mandel Cohen on clinical research related to hysteria in

males. Robins saw firsthand that Cohen was an excellent clinician who strongly believed in the importance of diagnostic criteria.

Robins met Lee Nelkin in a seminar course in Boston. They married in 1946. That same year, the Army sent Eli to San Antonio. When Eli received orders to go to Germany three weeks after he and Lee moved to Texas, they returned to Boston. While there, Eli developed weakness in his shoulder. The army doctors thought that this might be a hysterical reaction related to his deployment, but Cohen had Raymond Adams, a noted Harvard neurologist, evaluate him. Results from the clinical exam together with abnormal laboratory findings led to a diagnosis of polio. Several years later, Eli Robins developed a progressive, degenerative illness that eventually was diagnosed as multiple sclerosis. Whether the illness he experienced in 1946 was related to this later illness is open to speculation.

Robins did not go to Germany. Instead, he served for several years as head of the psychiatry department at the army hospital where he was initially treated for polio. Following this, Robins obtained further residency training in neurology. He became board certified in both psychiatry and neurology in 1951. Not many physicians at that time obtained board certification in both disciplines.

In 1949, Cohen arranged a meeting between Eli Robins and Gildea while all were attending the American Psychiatric Association meeting in Washington, D.C. Cohen thought that Gildea was key to the future of American psychiatry because of his research orientation and his leadership in building an academic department of psychiatry at an excellent medical school. Robins was interested in obtaining laboratory



Eli Robins working in Oliver Lowry's lab

Gildea arranged for him to work with Oliver Lowry as a U.S. Public Health fellow at WUSM. Lowry had developed very specialized techniques for the measurement of

neurochemicals in very small regions of the brain. Robins accepted the offer, and he and Lee moved to St. Louis in September 1949. After working as a fellow in Lowry's laboratory from October 1949 until June 1951, Robins accepted Gildea's offer to join the department as an instructor in neuropsychiatry.

During the early part of his career, Eli Robins was heavily involved in neuroscientific research. From 1951 through 1968, he published a large number of studies that utilized the microhistochemical techniques he had learned in Lowry's lab. His papers were published in top tier basic science journals, including the *Journal of Biological Chemistry* and the *Journal of Neurochemistry*.

Robins was also active in clinical research. He had participated in studies of male hysteria while working with Cohen in Boston. Another area of research to which Robins devoted much of his energy involved the study of suicide. Even though many psychoanalysts thought that suicide could not be studied, Robins developed clinical interview techniques involving "psychological autopsies" that opened up the field to research. He recruited George Murphy, a psychiatric resident at the time, to work with him on this project, and their work led to several now-classic papers as well as a seminal book, *The Final Months*.

George Winokur's path to WUSM

Winokur was born in Philadelphia in 1925. He obtained his undergraduate degree from Johns Hopkins in 1944 and his M.D. from the University of Maryland in 1947. After completing a rotating internship in Baltimore, he did two years of psychiatry residency training at the Seton Institute in Baltimore. At that time, residents had to apply for third-year positions. Winokur applied to several places, including WUSM where he subsequently completed his third year of residency train-



George Winokur

ing in 1951. Gildea then offered Winokur an instructorship in the department. Despite the fact that he knew he would leave soon to serve in the Air Force, Winokur accepted the position.

When Winokur left for the Air Force in 1952, he was not planning to return to St. Louis. However, Gildea recruited Winokur back to the department in 1954 by offering him a major leadership role at Renard Hospital, the new psychiatric hospital. At the time of his return, Winokur was concerned that the department may have been "gradually and inexorably grinding toward more psychoanalysis." In 1955, Saslow left, and Guze was recruited to fill Saslow's position. Winokur, Robins, and Guze started to meet regularly, and it did not take them long to develop a plan of action to change both the department and the field of psychiatry.

Winokur published on a variety of topics during the 1950s and early 1960s. During the mid-1960s, his research focused on affective disorders. When Paula Clayton finished her chief residency and joined the department in 1965, Winokur became her mentor. He, Clayton, and a talented psychiatric geneticist, Ted Reich, published a seminal book in 1969 entitled *Manic Depressive Illness*.

The teamwork of Robins, Winokur, and Guze

Although Eli Robins, Winokur, and Guze met in 1950–1951, they did not start working together until 1955. During the early 1950s, Guze completed a psychosomatic fellowship with Saslow and then became a full-time member of the Department of Medicine, Winokur was in the Air Force, and Robins was heavily involved in laboratory-based research.

In 1955, Guze accepted Gildea's offer to fill Saslow's position in the Department of Psychiatry and Neurology. He, Winokur, and Robins started to meet on a routine basis. All three were dissatisfied with the current state of psychiatry, and all three were opponents of the dogmatic approach of psychoanalysis. Although their interactive styles were very different, these men were bright, passionate, and worked well together. They mapped out a strategy designed to change the orientation of the field,

shifting the emphasis away from a psychodynamic-oriented approach and toward an evidence-based approach.

In the mid-1950s, the group presented their proposal to reorganize the department's approach to education and training to Gildea, who agreed to let them implement their plans. They restructured both the medical student and residency curricula, emphasizing accurate diagnosis and the critical importance of research. The department's approaches towards education, clinical care, and research were boldly different than approaches at almost all other medical schools around the country. Psychiatric education at most medical centers in the United States was controlled by psychoanalytically-oriented psychiatrists. In general, psychoanalysts taught that labeling a person with a diagnosis was irrelevant and potentially de-humanizing. They did not champion the application of evidence-based medical research and basic science research to psychiatry.



Robins, Gildea, Winokur, Guze

Robins assumed the role of director of medical student education. Guze took charge of both the consult service and the outpatient clinic, and Winokur directed the inpatient service and the residency program.

LEE ROBINS

When Lee Nelkin met Eli Robins, she was enrolled in a one-year master's program at Radcliffe. During her graduate training, she assisted Talcott Parsons, a major figure in the field of sociology.

After receiving her master's degree, Nelkin moved to Washington, D.C., and worked at the Division of Program Surveys. When this agency moved to Michigan,

she moved with them. She later returned to Boston and was employed as a secretary/research assistant by Erich Lindemann. She and Eli Robins married in 1946.

During her time with Lindemann, she was permitted to enroll in classes during her work days. She and Eli briefly left to go to San Antonio, but they soon returned to Boston. While Eli Robins was working as an army psychiatrist at Waltham General Hospital, Lee Robins returned to graduate school at Harvard. During these years, she was able to gather data that would form the basis of her Ph.D. thesis.

Eli and Lee Robins moved to St. Louis in 1949. Lee worked on her thesis during the time that she and Eli raised their four children. She received her Ph.D. from



Lee Robins

Radcliffe/Harvard in 1951. Eli often had faculty over to their house in the evening to work on various projects. One of these individuals was Patricia O'Neal, M.D., a full-time member of the department. Many years earlier in a room at Malcolm Bliss, O'Neal had discovered discarded records of children who had been evaluated in the Child Guidance Clinic. These detailed records contained a wealth of clinical information. Eli Robins encouraged O'Neal to develop a study based on these records, and she invited Lee to work with her on the project. This work led to several important publications and, eventually, to Lee Robin's classic book *Deviant Children Grown Up*.

Lee Robins worked on this and other research projects as a part-time member of the Department of Neuropsychiatry. In 1968, she obtained an NIMH Special Research Fellowship to study mathematical statistics, and in 1970, she was successful in obtaining a federally funded Research Scientist Award (RSA). She became a full-time faculty member and a professor of sociology in psychiatry in 1968. She maintained her RSA throughout her career. Lee Robins was a prolific and creative scientist. She was instrumental in developing the field of psychiatric epidemiology nationally.

In 1989, Lee Robins founded the Masters of Psychiatric

Epidemiology Program (MPE) at WUSM. Between 1989 and 2011, 56 individuals participated in this unique program. Following Lee Robins, Wilson Compton and then Linda Cottler led the program.

GEORGE MURPHY

George Murphy was a key member of the department from the late 1950s until he retired in 1990. His educational, clinical, and research contributions over a period of more than 30 years influenced scores of students and residents. He successfully championed the rigorous and toughminded approach that he and others in the 1950s generation of leaders established.

Murphy was a medical student at WUSM from 1948 to 1952. During that time, he interacted with Saslow and developed an interest in psychosomatic medicine. Nevertheless, Murphy decided to train in internal medicine, and he completed a rotating internship and subsequent year of medicine residency at Alameda County Hospital in Oakland, CA.

After he completed his year of residency, Murphy decided to work with Saslow in psychosomatic medicine for a year. When Saslow was recruited to Harvard, he invited Murphy to join him. Murphy accepted the invitation.

The year in Boston did not go well for either Murphy or Saslow. Even though Lindemann recruited Saslow to Harvard and knew Saslow from their earlier work together, he apparently felt threatened by Saslow's return. Murphy, being Saslow's trainee, was caught up in this dynamic. In addition, like most academic centers at this time, Harvard

had a strong psychoanalytic orientation, and this dogmatic approach to the field was not to Murphy's liking.

His two years of psychosomatic medicine training counted toward requirements necessary to take the psychiatry boards. Following the year in Boston, Murphy returned to St. Louis to complete a third

year of psychiatry residency that involved inpatient work with Winokur. During this year, Eli Robins recruited Murphy to work on a study about the relationship of psychiatric disorders and completed suicides. Murphy enjoyed interacting with Winokur, Robins, and Guze, and in 1957, he accepted Gildea's offer to stay in the department as an instructor in psychiatry. Over the years, Murphy's research and publications spanned a variety of topics, including seminal works on suicide and important studies examining the efficacy of psychotherapies. He held key educational positions in the department, including director of medical student education and director of the resident outpatient psychiatry clinic. He remained active in the department until his retirement in 1990 at which time he became an emeritus professor.

PAULA CLAYTON

Paula Clayton was another key faculty member during this period. Clayton joined the department about seven years after Murphy. She was one of a small number of female medical students attending WUSM between 1956 and 1960. She had planned to train in internal medicine until Eli Robins burst into one of her classes and, according to Clayton, said: "We've just been approved for a rotation in psychiatry; now we are going to teach you about psychiatric diagnosis. We want you to come to class! You can't take it lightly! We're going to lock the doors if you are not here on time." Clayton was attracted by the internal medicine-like approach that the psychiatry department was



Paula Clayton

initiating. She liked the psychiatry faculty and decided to stay at WUSM and train in psychiatry instead in internal medicine. After completing her psychiatry residency in 1964, Clayton was invited to stay as an instructor/chief resident. A chief residency year had become a mechanism by which a person could earn his or her way onto the



George Murphy

faculty. Winokur became her mentor, and the two worked together on a variety of research projects addressing affective disorder. Clayton was appointed director of the psychiatric inpatient service in 1975. In 1980, she left WUSM and joined the University of Minnesota as the first female head of a department of psychiatry in the country.

RICHARD HUDGENS

Richard Hudgens was another faculty member with a long and influential tenure in the department. Hudgens attended WUSM from 1952 to 1956. As a medical student, he interacted with both Guze and Saslow. During the summers, he participated in research in the lab of Edward Dempsey, who later became dean of the medical school. Hudgens completed an internship and one year of internal medicine residency at the University of Virginia. During this time, he became increasingly interested in the psychiatric problems of his patients. He eventually decided that psychiatry better fit his interests than internal medicine, and he switched to the psychiatry residency program at Virginia. After a year, he transferred to North Carolina Memorial Hospital to complete two more years of psychiatry residency. After his residency training, Hudgens served in the Air Force for two years as a psychiatrist. He joined the Department of Psychiatry at WUSM in July 1963, the same year Eli Robins became department head.

Hudgens remained a full-time member of the department until January 1974. During this time, he also was heavily involved in curriculum development for the medical school and served as assistant dean and then associate dean for curriculum from 1967 until 1974. In July 1971, he became director of the psychiatry residency program after Winokur left WUSM to become head of the Department of Psychiatry at the University of Iowa.

In January 1974, Hudgens left academia to open a private practice. He had enjoyed his various roles in the department and at the medical school, but he most enjoyed providing clinical care. He decided to make his living as a private practice clinician while continuing as a voluntary teacher in the department.

His fifteen years in private practice were very successful. He had a reputation as an outstanding clinician as well as an excellent teacher of residents and medical students. In 1989, C. Robert Cloninger, the department head at the time, invited Hudgens to return to the department in the role of director of inpatient psychiatry. Hudgens accepted and returned as a full professor. When Cloninger created an executive committee and formal vice-chair system in the department in 1992, Hudgens became the first vice chair for clinical affairs. He continued in this position until 1997.

Hudgens remained active in the department as a clinician and educator until his retirement in May 2014. Over the years, he developed a strong interest in the history of the department. He interviewed many individuals during the late 1980s and early 1990s and wrote about the department's role in changing the direction of American psychiatry. His research into the department's history inspired the current author to write this manuscript.



Richard Hudgens

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CHAPTER 7

Eli Robins as Department Head

1963–1975

Edwin Gildea was head of the Department of Psychiatry and Neurology for 20 years and 8 months. During that time, he recruited a remarkable group of faculty. His style of leadership encouraged these individuals to be creative, and the department grew in size and stature. When Gildea took over as head in 1942, the department was developing a reputation as the place for psychiatrists and psychiatric trainees who were not interested in a strong psychoanalytic emphasis. It also was the place for those interested in conducting psychiatric research.

Gildea planned to step down from his position as department head in 1963, the year he turned 65. The executive faculty and administrative leadership at WUSM were supportive of the department's orientation, and they realized that the department was different from departments of psychiatry in the rest of the country. There were two internal faculty members who had the credentials to be the next department head—George Ulett and Eli Robins. In spring 1962, a committee of the executive faculty recommended that Robins be appointed head when Gildea stepped down.

In February 1963, medical school leadership decided that the Department of Psychiatry and Neurology would continue as the Department of Psychiatry and a newly created Department of Neurology. James O'Leary was appointed the first head of the new neurology department.

Prior to being appointed department head, Robins, together with George Winokur and Samuel Guze, had reorganized didactic programs within the department. These three individuals were collectively in charge of medical student education, the inpatient service at Renard Hospital, the outpatient psychiatry clinic, the consult service, and the residency program. They stressed medical model approaches and the importance of research in all educational endeavors.

Robins was not supportive of psychoanalytic approaches, and unlike Gildea, he was not concerned about placating those in the psychoanalytic community. Gildea had tried to maintain a peaceful co-existence with analysts.

Despite this, he was not appreciated by the psychoanalytic community. Robins made it clear that he did not support psychoanalytic psychiatry. Hence, psychoanalytic training did not play a major role in the didactics of the department.

Winokur's interactive style was outgoing and vocal. He was an enthusiastic clinician and researcher. Winokur was known to be a very friendly individual who enjoyed interacting with every member of the faculty. He was an outspoken critic of psychoanalytic approaches, and this was well known to those who trained with him.

Of the three, Guze's personality was the most reserved. Like Robins and Winokur, Guze was very bright. He also was highly organized and extremely disciplined. Perhaps because of his administrative interests, Guze was careful in how he expressed his opinions. His concerns about psychoanalytic psychiatry were expressed beautifully and deliberately in his writings.

Even though these three were not supportive of psychoanalytic psychiatry, they were aware that their trainees needed to understand the language and principles of psychoanalysis in order to pass the psychiatric board exams. Guze summarized key aspects of psychoanalysis in a handout and would give a lecture summarizing these key principles.

Research was central to the department's mission. Laboratory research, epidemiological research, diagnostic research, and genetic research were all strengths of the department during the 1970s. Several excellent basic

scientists became members of the department, including Blake Moore and William Sherman, who joined the department in 1957 and 1963, respectively. These two biochemists remained in the department for three decades. Ted Cicero, a neuroscientist, joined the department in 1970. He remained an active, full-time member of the department until his retirement in 2020. He continues his research as an emeritus professor.

The Feighner criteria

In the 1960s, faculty members in the Department of Psychiatry were involved in a variety of research projects. They strongly believed that research was essential for the advancement of psychiatry. This view was not broadly accepted by psychoanalytically-oriented clinicians in leadership positions at other medical schools around the country.

Residents were expected to participate in research with a faculty member. In 1967, John Feighner, a second-year psychiatry resident, proposed a project that involved organizing and integrating research that addressed various psychiatric diagnoses. Although members of the faculty were actively engaged in studies of many different psychiatric illnesses, no one had focused on reviewing and organizing the material. Feighner suggested that such a review could be written and submitted for publication. This idea was enthusiastically embraced by Robins, Guze, and Winokur. They invited Robert Woodruff, a talented junior faculty member, to participate in this effort along with another resident, Rodrigo Muñoz, who had been planning to work with Robins on another study. Well-attended meetings occurred two to four times each month over a period of about nine months. Research and clinical papers were gathered and discussed. Criteria for 14 illnesses were developed based on the research literature and augmented by the clinical expertise of the group. Only 14 diagnoses were included because of the paucity of research pertaining to other potential diagnoses.

The results of these discussions were organized into a paper that was published in the *Archives of General Psychiatry* in January 1972. Even though Feighner was

the junior member on the team, he was designated as the first author on the paper. Thus, these research criteria are often referred to as the Feighner criteria or the St. Louis criteria. Locally, the approach of rigorous emphasis on accurate diagnosis was referred to as “Renardian,” in deference to Renard Hospital where the WUSM psychiatry inpatient service and administrative offices were located. Some faculty members referred to faculty from other institutions who supported evidence-based approaches and believed in the importance of rigorous emphasis on accurate diagnosis as Renardians.

Two years before the publication of the Feighner et al. paper, Robins and Guze had published a seminal article in the *American Journal of Psychiatry* entitled “Establishment of diagnostic validity in psychiatric illnesses: its application to schizophrenia.” In this paper, the authors outlined criteria for defining the “validity” of clinically-based psychiatric disorders. This paper was an essential precursor to the Feighner paper.

These two publications attracted national and global attention. The Feighner et al. paper became one of the most cited papers in psychiatry.

Robert Spitzer and DSM-III

During the mid-1970s, the leadership of the American Psychiatric Association (APA) decided that it was time for a new version of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM). Robert Spitzer had worked on the previous edition of the manual, and he agreed to take the lead in developing a new edition. Although organized psychiatry was dominated by psychoanalytically-oriented psychiatrists at this time, there were leaders in the APA who were concerned that psychiatry was drifting too far away from the rest of medicine.

As described in Hannah Decker’s remarkable book *The Making of DSM-III®: A Diagnostic Manual’s Conquest of American Psychiatry*, individuals from the National Institutes of Health (NIH) encouraged Spitzer to work with Eli Robins and the St. Louis group as part of a research effort addressing affective disorders. Spitzer made about six trips to St. Louis and found that the approach the St. Louis group had been utilizing to develop

diagnostic criteria was compatible with his own views. Spitzer became a supporter of the department's approach and philosophy.

In 1978, Spitzer and Robins published a paper in which they introduced an updated set of diagnostic criteria called the Research Diagnostic Criteria (RDC). This paper expanded on the work previously reported in the Feighner et al. paper. The RDC were developed to aid in a study of affective disorders, where there was a need to define subtypes. Although Spitzer and Robins may have had differing opinions about subtyping affective disorders, they worked well together writing the paper. Robins was more the academic purist, and Spitzer more the pragmatist.

Spitzer established a task force to work on developing the new edition of the DSM. As detailed in Decker's book, this committee had strong St. Louis ties. Initially, it consisted of five psychiatrists, two psychologists, and a psychometrician. Of the original five psychiatrists on the committee, three had St. Louis connections. Robert Woodruff was a WUSM faculty member, Nancy Andreason was a faculty member at the University of Iowa where Winokur had become chair of the psychiatry department, and George Saslow, chair of the Department of Psychiatry at Oregon Health and Science University, had been a member of the WUSM department under Gildea. When Woodruff died in 1976, Paula Clayton from WUSM was added to the task force. Denny Cantwell, a child psychiatrist who had been a medical student and psychiatry resident at WUSM, also became a member. During the task force's first meeting, it became evident that the members all shared the same desire to develop a criteria-based approach to defining psychiatric illnesses. They were aware that this approach was a major shift from earlier editions of the DSM.

Spitzer realized that DSM-III needed to be a document that would be useful to a broad range of clinicians as well as insurance companies. He fully understood that the DSM was not primarily a research document. The Feighner criteria had been developed to aid in psychiatric research, and the Feighner et al. paper discussed only the limited number of research-justified diagnoses. Spitzer knew that the various committees of the APA would not

accept a document with a limited number of diagnoses. The new DSM had to be wide enough in scope to allow practicing clinicians the ability to provide diagnoses for a broad group of patients. One category of diagnosis in the Feighner et al. paper was "Undiagnosed Psychiatric Illness." The St. Louis group assumed that this category would apply to a significant minority of patients. Although categorizing a substantial number of research participants as suffering from an undiagnosed psychiatric illness made sense for carefully designed research projects, Spitzer realized that it would be unacceptable in a document such as the DSM, which was intended for use in general practice.

Spitzer demonstrated extraordinary skill, energy, and political know-how in moving the work forward. He was able to maneuver the work of the DSM-III task force through the many concerns voiced by groups with competing interests. He was aware of the concerns of the psychoanalytic community, and he knew that he would have to negotiate his way around roadblocks that would be put in his way. After significant drama and remarkable persistence by Spitzer, DSM-III was approved by the APA and published in 1980.

Some from the St. Louis group were not fully satisfied with the final product because it expanded the number of diagnoses well beyond those that could be justified by data. Nevertheless, the publication of DSM-III was a necessary and central ingredient in the paradigm shift that led the field of psychiatry away from psychoanalytic dogma and towards evidence-based medicine.

Criteria-based diagnoses, the psychopharmacology revolution, and the decline of psychoanalysis

With the establishment of research-based diagnostic criteria, it became feasible to address the incidence and prevalence of psychiatric disorders. Lee Robins and her team at WUSM developed important epidemiologic research instruments that enabled surveys involving very large samples of individuals. Their instruments were designed to be administered by well-trained non-clinicians in a reliable and affordable manner.

The results from these epidemiologic investigations were eye-opening. Prior to these studies, most people in the field considered major depression to be an uncommon illness, but epidemiologic data demonstrated that a large number of individuals suffered from major depressive disorder. Obsessive-compulsive disorder, once thought to be rare, was shown to occur in a significant number of individuals. Psychotic illnesses such as schizophrenia and bipolar disorder were each discovered to occur in 1% of the population.

These epidemiologic findings attracted major interest from the pharmaceutical industry. During the 1950s and 1960s, antipsychotic drugs, antidepressant medications, and minor tranquilizers had been developed. Initially, pharmaceutical companies were not overly interested in antidepressants because the market for these drugs was not considered to be large. Tricyclic antidepressants and monoamine oxidase inhibitors were available, and the development of newer drugs was not a high priority. Once epidemiologic studies indicated a larger market for antidepressants, drugs like fluoxetine (Prozac), which had been synthesized earlier but not tested rigorously, were taken off the shelf and studied. A number of similar selective serotonin reuptake inhibitors (SSRIs) were developed, approved by the FDA, and marketed. Similarly, new data demonstrated that anxiety disorders were common, and new benzodiazepines were developed. In addition, certain SSRIs were shown to be effective for various types of anxiety disorders, thus expanding the market for this group of agents.

Interestingly, most members of the department were not involved in studies of psychopharmacologic agents. Only a few WUSM faculty members, including George Ulett and Kathleen Smith, participated in psychopharmacologic studies. The clinicians in the department were confident in their abilities to make accurate diagnoses and utilize recently discovered medications appropriately, but psychopharmacologic research was not a priority for most of the faculty.

The availability of medications to help outpatients with depressive and anxiety disorders became a significant concern to those in the psychoanalytic community. When antipsychotics were used to treat very ill inpatients,

analysts were not alarmed because, for the most part, they did not treat psychotic patients with psychoanalytic therapy. However, the possibility of treating anxious and depressed outpatients with medications posed a threat to those utilizing long-term psychoanalytic therapy with such patients.

Furthermore, the use of quantitative assessment scales to demonstrate the efficacy of medications was problematic to analysts. They thought that these tools were unable to measure the true benefits of psychoanalytic therapy. Many analysts were uncomfortable with applying the scientific method to the examination of outcomes of psychiatric treatments.

Certain short-term psychotherapies also were shown to be effective in the treatment of a variety of psychiatric conditions. For example, cognitive behavioral therapy and interpersonal therapy were found to be as effective as medications in treating milder forms of depressive and anxiety disorders. Those in the psychoanalytic community believed that long-term, insight-oriented therapy was required to successfully treat these disorders, and they found research demonstrating that short-term, evidence-based therapies were equal to or more beneficial than psychoanalytic therapy threatening.

The use of evidence-based diagnostic criteria; the availability of effective medications for outpatient treatment of common psychiatric disorders; the development of effective, brief, evidence-based psychotherapies for treatment of psychiatric disorders; and the progress of neuroscientific research in elucidating new knowledge regarding human behavior and psychopathology all contributed to reducing the influence of psychoanalysis.

The paradigm shift away from psychoanalytic interpretations and towards empirically based, medical model approaches was remarkable for several reasons. This change began as a conscious effort by three individuals—Eli Robins, Winokur, and Guze—in the mid-1950s. Robins was the intellectual leader of the three, and he initially led the charge. The success of this movement required more than what could be provided by WUSM academicians alone, however. Spitzer provided the necessary next step by developing the radically different DSM-III. He had the political skills to take the evidence-based

diagnostic approaches that he learned from the WUSM group and adapt the Feighner criteria and Research Diagnostic Criteria to make DSM-III acceptable to clinicians and APA leadership.

The speed of the transition is noteworthy. During a 20-year period, the field of psychiatry transitioned from one dominated by the dogmatic approach of psychoanalysis to a field of medicine that used research and evidence-based approaches to advance understanding of psychiatric illnesses. Leadership in the field changed along with the change in approach. Whereas it was difficult to become the head of a psychiatry department during the 1950s to 1980s without being strongly supportive of psychoanalysis, this was no longer the case after the turn of the century. Top academic centers were interested in finding psychiatric leaders who would be able to build and maintain strong, research-oriented, clinical departments.

Increasing concerns about Robins' health

During Robins' tenure as department head, the groundwork was laid for the remarkable paradigm shift from psychoanalysis to medical model psychiatry. Even more remarkable is the fact that this was accomplished while Robins was increasingly handicapped by a progressive, degenerative illness.

As mentioned in the previous chapter, Robins developed a neurologic condition in 1946. Doctors in the armed services thought that his condition was "hysteria"

and that he was trying to avoid military service. Based on objective clinical and laboratory findings, Mandel Cohen and the respected neurologist Raymond Adams determined that Robins had polio.

Robins' symptoms eventually subsided, and he moved to St. Louis where he was both healthy and productive during the 1950s and early 1960s. In 1963, Robins became head of the newly named Department of Psychiatry.

What was not apparent to many was that Robins had begun to develop symptoms of an illness that would become increasingly disabling. As early as 1961–1962, George Murphy and Guze had independently noticed that Robins had developed twitches and clumsiness. The magnitude and frequency of these twitches increased and were thought to be seizure-like. Eventually, Robins received a variety of medications for these movements. He, and those close to him, tried to minimize the visibility of his symptoms.

Late in 1963, several months after becoming department head, Robins developed a painful shoulder condition. It was severe enough that Guze drove Robins to and from work. By November 1963, Robins developed myelitis and couldn't walk. He also had trouble writing and eventually had difficulty feeding himself. He stayed home for about six to nine months. Guze brought him his mail and attended meetings for him. Robins partially recovered and returned to the office in the summer of 1964. He had regained some ability to write and feed himself, but he was still unable to walk. He experienced other episodes of myelitis in the mid-1960s, and progressive physical deterioration continued. Eventually, his condition was diagnosed as multiple sclerosis.

Although Robins became increasingly physically compromised during the 1960s and early 1970s, he was still highly productive. He worked on the Feighner criteria paper during the late 1960s. His critically important work with Spitzer occurred during the 1970s. He was actively publishing his quantitative histochemical work. In fact, during the twenty years from 1965 to 1985, he published over 100 articles. He also published a classic book in 1981—*The Final Months: A Study of the Lives of 134 Persons who Committed Suicide*.



Eli Robins during teaching rounds

Winokur and Guze worked closely with Robins during this time. They helped fill in any gaps that occurred as a result of his illness. Winokur left the department in July 1971 to become chair of psychiatry at the University of Iowa. Around the same time, Guze became vice-chancellor for medical affairs at WUSM. Two other faculty members, Woodruff and Richard Hudgens, began meeting with Robins on a routine basis and helping him with department matters.

Some of those working closely with Robins began noticing cognitive changes during the early 1970s. Robins was highly respected and liked by all. However, it became increasingly apparent that these changes were beginning to significantly interfere with his academic and administrative functions. In 1975, the executive faculty made the difficult decision that the time had come for Robins to step aside as department head and appointed Guze as his successor.

A time of transition

Guze had been assisting Robins since the first symptoms of Robins' illness appeared in the early 1960s. Guze admired Robins, and Robins had strongly influenced Guze's thinking. During the 1960s, Guze was hopeful that Robins' symptoms would improve or stabilize. Unfortunately, his illness continued to progress, and during the early to mid-1970s, Guze became increasingly concerned about the effects of Robins' progressive disorder on the health of the department.

In addition to his academic achievements, Guze was a highly organized and effective administrator. From 1965 until 1971, he held the title of assistant to the dean at WUSM. In 1971, he was appointed vice-chancellor for medical affairs. In 1974, Guze was offered the chair of the Department of Psychiatry at Johns Hopkins University, and he and his spouse made several trips to Baltimore. Guze was very interested in the position, but he also believed that Robins would not be able to continue much longer as department head at WUSM. Guze was concerned that the direction of the department might change if an outside academician became the new head.

The executive committee of the medical school was

aware of the offer from Hopkins, and they did not want Guze to leave. A proposal was offered: If Guze stayed at WUSM, he would become head of the Department of Psychiatry when Robins could no longer fulfill his responsibilities as department head. Guze accepted this arrangement and turned down the offer from Hopkins.

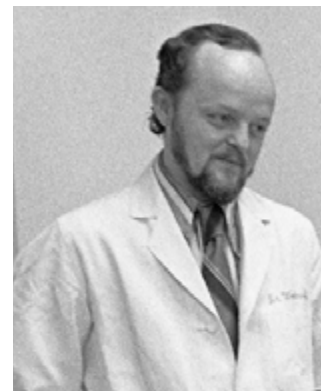
Guze was appointed department head in mid-1975. He remained both vice chancellor for medical affairs and department head until 1989. Robins stayed in the department until August 1989 at which time he transitioned to emeritus professor.

Robins recruited many remarkable faculty members during his tenure as department head. I will highlight four.

ROBERT WOODRUFF

Robert Woodruff was a faculty member from 1967 until his death in 1976. He received his M.D. from Harvard. He, like several other WUSM faculty members, was strongly influenced by Mandel Cohen, who advised him to train in psychiatry either at the Maudsley in England or at WUSM. Woodruff decided to train at WUSM and was a psychiatry resident from 1961 to 1963. After two years in the military, he returned to WUSM and was chief resident during the 1965–1966 academic year. He then joined the faculty and rose to the rank of full professor by 1974. After Hudgens left the department to enter private practice in 1974, Woodruff was appointed residency director.

Woodruff was an individual with many talents and interests. Some referred to him as a Renaissance man. He played classical guitar. He was a prolific researcher and was the principal investigator of the Clinic 500 study, a major research endeavor that involved longitudinal follow-up of 500 individuals who received care in the department's outpatient resident clinic. He was a co-author of the 1972 Feighner et al. paper, and he took the lead in organizing and writing the



Robert Woodruff

first edition of the classic book *Psychiatric Diagnosis* with Donald Goodwin and Guze.

Woodruff worked closely with Eli Robins. As Robins' illness progressed, Woodruff increasingly helped him with various departmental responsibilities. During the mid-1970s, Robins was not able to travel and, therefore, was not able to serve on the DSM-III task force. Robins asked Woodruff to substitute for him on this committee.



Woodruff, Robins, Cloninger, Montgomery, Clayton, Reich, Murphy

Woodruff and Hudgens were close friends. There were many changes in the department during the 1974–1975 year, including Hudgen's departure to begin a private practice and Robins leaving his role as department head. Woodruff became more reclusive during this time and developed significant symptoms of an affective disorder. He tried to hide these symptoms from Guze and others. He reportedly had marked diurnal variation and avoided interacting with people during mornings. Some faculty members were aware that he was taking lithium, but the severity of his symptoms was hidden from his colleagues.

In March 1976, Woodruff parked his car at the St. Louis airport and flew to Boston. He took his life in a hotel room there. His death came as a tragic surprise to many.

JOHN OLNEY

After receiving his M.D. from the University of Iowa, John Olney trained as a psychiatry resident at WUSM from 1964 until 1968. He joined the faculty in 1968 and remained active until a few days before his death in April 2015. Olney truly loved research, and his contributions to the neuroscientific community were of

parallel importance to the contributions by Robins, Winokur, and Guze to the field of clinical psychiatry.

Olney was a careful and innovative researcher. He possessed dogged determination, and he did not shy away from aggressively defending his work. Olney discovered that excessive stimulation by glutamate, an excitatory neurotransmitter, could lead to brain damage. He coined the term “excitotoxicity” to describe



John Olney

this glutamatergic-induced damage. He suggested that increased release of glutamate may be responsible for brain damage that occurs in a variety of disorders, such as traumatic brain injury, epilepsy, and stroke. Olney also suggested that chemicals used as artificial sweeteners had structural similarities to excitatory amino acids and may cause excitotoxic damage. Needless to say, some of his findings were disconcerting to several commercial industries.

Olney also discovered that various substances lead to brain damage by influencing the glutamatergic system. He suggested that dysregulation of the glutamatergic system might be involved in certain psychiatric disorders, including schizophrenia.

In addition, Olney and his colleagues showed that the finely tuned process of brain sculpting via programmed cell death can be negatively impacted if a fetus or infant is exposed to certain medications or substances. He demonstrated that alcohol has a powerful effect on programmed cell death during vulnerable periods of fetal and infant brain growth. In humans, this vulnerable period includes the last trimester of pregnancy and the first few years of infancy.

He and his team also showed that commonly used anesthetics can cause dysregulation of brain sculpting via processes involving programmed cell death in infants. He suggested that exposure to anesthetics during this critical period can have more risks than had been appreciated previously. These results were not initially accepted by pediatric anesthesiologists. Olney persisted as additional

research confirmed his findings, and his work led to recommendations for changes in the timing of elective surgery during the first several years of life.

TED CICERO

Ted Cicero took a post-doctoral position in the department after receiving his Ph.D. in neuropharmacology from Purdue University. He joined the faculty in 1970 and remained a full-time member of the department until becoming professor emeritus in 2020. Cicero served the department and university in a variety of roles. In 1992, he was appointed vice-chair for research in the Department of Psychiatry and served in that capacity until his retirement. In 1996, he was appointed vice chancellor for research at Washington University. He held this position until 2006, when he decided to step down in order to return to research.

Cicero joined the department to work on studies of the endogenous opioid system and hypothalamic-pituitary functioning. One of his many significant findings was that exposing male rats to opioid drugs influenced the development of the rats' offspring and that the resulting changes in the offspring were transmitted to subsequent generations. In other words, an environmental exposure led to biological changes inherited by future generations. This work helped establish a new scientific field called epigenetics—the study of environmental influences on genetic processes.



Ted Cicero

Later in his career, Cicero utilized post-marketing surveillance databases related to prescription opioid use to better understand the relationship of opioid use and abuse. This work led to a better understanding of heroin abuse by various demographic groups.

TED REICH

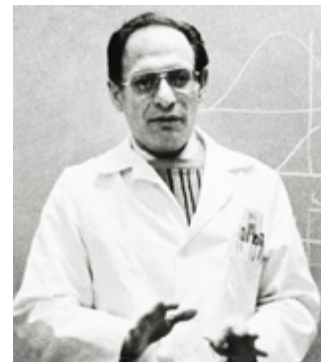
Theodore (Ted) Reich received his M.D. from McGill University in 1963. He was a psychiatry

resident at WUSM from 1965 to 1969 and then studied genetics at the University of Edinburgh for two years. He returned to WUSM in 1971 as an assistant professor. He remained on the faculty until his death in 2003.

Reich was an active researcher, clinician, and mentor. He is considered to be one of the founders of the field of psychiatric genetics. His work advanced the methodology in this field and increased knowledge about the genetic underpinnings of a number of psychiatric disorders. His enthusiasm for psychiatric research was infectious.

In addition to his research accomplishments, Reich also enjoyed being a clinical psychiatrist. In 1976, Guze appointed Reich to be chief of psychiatry at Jewish Hospital. As described in a later chapter, psychiatry at Jewish Hospital had been dominated by psychoanalytically-oriented psychiatrists and child psychiatrists, and until the mid-1970s, it had its own psychoanalytically-

oriented psychiatry residency program. This program was unrelated to the program at WUSM and lost its accreditation in 1976. The leadership of Jewish Hospital asked Guze if he would take control of psychiatry services at the



Ted Reich

hospital. Under Reich's and Guze's leadership, the inpatient and outpatient psychiatry facilities at Jewish Hospital became training sites for the WUSM psychiatry training program. The orientation of psychiatry at Jewish Hospital rapidly transitioned to a medical model emphasis. In 1996, Barnes Hospital and Jewish Hospital merged to form Barnes-Jewish Hospital. The inpatient unit and outpatient clinic at the former Jewish Hospital merged with the inpatient units and outpatient clinic at the former Barnes Hospital. After this merger, Reich was appointed head of the combined Barnes-Jewish outpatient clinic. He remained in this position until his death.

During the 1950s, 1960s, and early 1970s, the department was proudly controversial and edgy. Many were attracted to the department because of this reputation. The 12-year period that Eli Robins led the department was a truly remarkable time in the history of the

WUSM Department of Psychiatry and in the history
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CHAPTER 8

The Leadership of Samuel B. Guze

1975–1989

Sam Guze was an extremely bright, highly organized, and disciplined individual. Throughout his career, he remained a strong champion of the evidence-based, medical model approach that he, Eli Robins, and George Winokur had developed in the 1950s. He strongly supported psychiatric research, including epidemiologic, genetic, and neuroscientific studies. In addition to being an energetic advocate for psychiatric research, he devoted substantial time and energy to resident and medical student education.

When Guze accepted the offer to become department head in 1975, he decided that he also would remain vice chancellor for medical affairs. This decision was not without controversy. Some faculty thought that the department would be better served if Guze stepped down as vice chancellor. Others believed that having a department head who was also a senior member of university administration enhanced the

Guze's style was very different from Robins'. Guze was more formal. Although he might have enjoyed being as accessible as his predecessor, this was not possible due to the wide range of his responsibilities. Guze made it clear that he would be available to any department member whenever the need arose, and he made certain that his administrative staff never put off faculty requests for meetings. He was willing to be available for breakfast meetings, late afternoon meetings, Saturday meetings, or evening meetings. He literally divided his work day into two halves; he addressed university matters during half of the day and turned his attention to the Department of Psychiatry during the other half. His efficiency was remarkable as was his dedication to both the department and the university. His ability to switch from his role as vice chancellor to his role as department head was extraordinary. If any area suffered from his dual responsibilities, it was his own research. Whereas many department heads maintain a research lab while running a department, Guze spent his "research time" maintaining a vice chancellorship.

Guze made a deliberate decision to be actively and visibly engaged in the educational endeavors of the department. He not only organized the Grand Rounds series, he also prepared and presented most of these weekly talks. Toward the end of a typical week, he and the chief resident would decide which patient to invite to be interviewed at the following Tuesday's Grand Rounds. During the Grand Rounds, he would interview the patient for



Guze in teaching rounds

prestige of the department. Guze believed that he could successfully maintain both positions. If the administrative leaders of the school had insisted that Guze choose one position over the other, he indicated that he would have given up the vice chancellorship.

about 15 minutes and then discuss articles relevant to topics he wanted to emphasize.

Guze also participated in professor's rounds with each group of medical students rotating on the psychiatry service. He had weekly teaching rounds with the residents and would personally interview each applicant to the residency program. Guze initiated a book club for residents. He picked the book and purchased a copy for each resident attending these optional teaching sessions. Following Guze's death, Richard Hudgens continued the book club.

Guze was a meticulous writer. In addition to numerous research articles, he published "Psychiatric Capsule and Comment" from 1979 to 1985. This was an independently edited newsletter that was published by HP Publishing Company and distributed to all psychiatrists by Roche Laboratories. In each of 10 to 12 issues published each year, Guze reviewed and discussed six research articles relevant to psychiatry. He also initiated a new peer-reviewed journal—*Psychiatric Developments*. Guze and Sir Martin Roth from England were the editors of this journal, which was published by Oxford University Press from 1983 to 1989.

Guze wrote or co-authored a number of books. The first edition of *Psychiatric Diagnosis* by Woodruff, Goodwin, and Guze was published in 1974. After Woodruff died, Goodwin and Guze published four more editions. Following Guze's death, two former WUSM faculty, Carol North and Sean Yutzy, published the sixth and seventh editions in 2010 and 2019, respectively. In 1976, Guze published another, now classic, book: *Criminality and Psychiatric Disorders*. Another influential book—*Why Psychiatry is a Branch of Medicine*—was published in 1992. Guze also edited several books, including the first edition of the textbook *Adult Psychiatry*, which included chapters written by current or former members of the Department of Psychiatry.

Residency training

During the 1970s and 1980s, most residency programs in the U.S. were psychoanalytically oriented. Washington University was an exception. During the

mid-1970s, there was an attempt to force the department's training program to become more psychoanalytic. The history of the psychiatry residency program is discussed in Chapter 13.

Inpatient psychiatric facilities

In 1943, the first dedicated inpatient psychiatric facility on the WUSM campus opened in McMillan Hospital. These inpatient units could accommodate approximately 54 psychiatrically ill patients. As a result of the extraordinary financial support of the Renard family, a new 100-bed facility, Renard Hospital, opened in 1955. Patients of both private practice psychiatrists and full-time faculty members were treated there. Psychiatry residents admitted and followed patients of the private practice doctors, but they had limited responsibilities for their treatment. The patients of the full-time faculty were admitted either to the "teaching" service and managed by the instructor-level chief resident or to the full-time faculty's service. Residents worked closely with either the chief resident or the full-time faculty in evaluating and treating these patients. A resident's typical caseload involved 5 to 8 patients on the teaching service and another 10 to 15 patients on the private practice service. This system encouraged residents to observe the management of a significant number of private patients and to co-manage, with careful supervision, a reasonable number of patients on the teaching service.

During Guze's tenure, private practice psychiatrists admitted the majority of patients and had significant influence in hospital matters. Hospital issues were discussed at regular breakfast meetings of the Renard Staff Society. These meetings were attended by the leadership of the hospital staff, Guze, private practice psychiatrists, and several full-time members of the department. If the private staff and the full-time staff did not agree on certain issues, Guze would listen to everyone's opinions and decide on the best course going forward.

During the 1970s, two major additions to Barnes Hospital were constructed—the East and West Pavilions. In 1981, inpatient psychiatry services were moved from Renard Hospital to the 14th and 15th floors of the new

West Pavilion. The total number of psychiatric beds remained the same. The Renard Hospital building was renovated to accommodate departmental administrative offices, faculty offices, and research laboratories. Another major renovation of Renard occurred in 2020.

The child and adolescent psychiatry division and Jewish Hospital

The history of the Division of Child and Adolescent Psychiatry is reviewed in Chapter 12. When Guze became department head, E. James Anthony, the head of the child and adolescent psychiatry division and first Ittleson Professor of Child Psychiatry, was reporting directly to the dean because of a time-limited restriction attached to the establishment of the Ittleson professorship. Guze was able to incorporate the division into the department in 1976, and the division head started reporting to the department head.

The history of psychiatry at Jewish Hospital is also described in Chapter 12. Guze was asked to take over psychiatry services at Jewish Hospital in 1976. In the following years, he and Ted Reich dramatically changed the orientation there from a psychoanalytic emphasis to a medical model emphasis.

Research

Research productivity remained a top priority during the Guze era. The faculty was successful in advancing a broad portfolio of federally funded research. Several major centers and large collaborative studies facilitated this research. An Alcoholism Research Center and a Drug Abuse Research Center had been established in 1967 and 1972, respectively, while Robins was department head. A center entitled “Models of Diagnosis, Prognosis, and Family Resemblance in Psychiatry” was formed with federal funding in 1978. In 1986, this grant was renamed the “Epidemiological Genetics and Family Study.” The Collaborative Study on the Genetics of Alcoholism (COGA) was funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) in 1989 with Reich as one of the principal investigators. Several

federally funded training grants also were established during the time that Guze headed the department. These grants provided support for training new investigators.

New faculty

C. Robert Cloninger, Barry Hong, Eugene Rubin, Charles Zorumski, and Richard Todd all joined the department between 1974 and 1986. Cloninger and Zorumski would later become heads of the department. Rubin would be appointed vice chair for education in addition to being residency director; Hong would become vice chair for clinical affairs (psychology); and Todd would become head of the child and adolescent psychiatry division. The careers of these individuals are discussed in later chapters.

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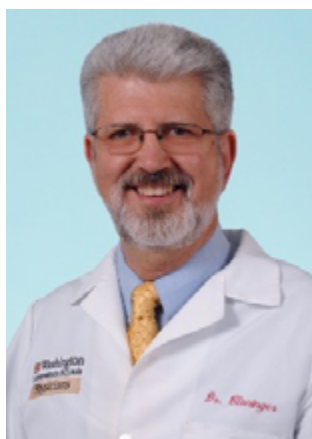
CHAPTER 9

The Cloninger Era

1989–1993

In 1989, Samuel Guze resigned his roles as department head and vice chancellor because of the university rule requiring department heads to step down when they reached the age of 65. The members of the search committee for the next department head understood that the paradigm shift in the field of psychiatry had been driven largely by faculty in the Department of Psychiatry at WUSM. After considering external and internal candidates, they decided that the best person to lead the department would be C. Robert Cloninger.

C loninger received his M.D. from WUSM in 1970 and completed his psychiatry residency training at WUSM in 1973. During his residency, he was actively engaged in research with Guze. He joined the faculty as an instructor in 1973 and rose through the ranks to become a full professor in 1981. Cloninger became an international leader in the field of psychiatric genetics. In addition to seminal genetic epidemiologic studies of alcoholism, schizophrenia, somatization disorder, and mood and anxiety disorders, he published important work elucidating personality



C. Robert Cloninger

variants. Later in his career, he became the founding director of the Center for the Psychobiology of Personality and the Sansone Family Center for Well-Being.

In 1992, Cloninger established a formal vice-chair system and formed a departmental executive committee consisting of the vice chairs, the department's business manager, and himself. This committee met routinely to discuss departmental issues.

The initial vice chairs were:

Vice Chair for Clinical Affairs: Richard Hudgens, M.D.

Associate Vice Chair for Clinical Affairs: Barry Hong, Ph.D.

Vice Chair for Education: Eugene Rubin, M.D., Ph.D.

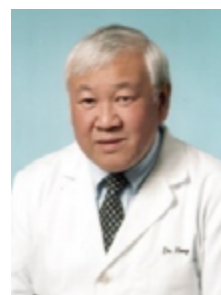
Vice Chair for Research: Ted Cicero, Ph.D.

Associate Vice Chair for Research: Charles Zorumski, M.D.

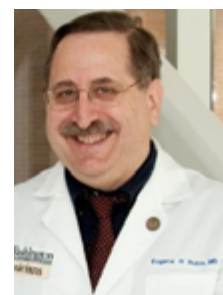
Vice Chair for Clinical Research: Ted Reich, M.D.



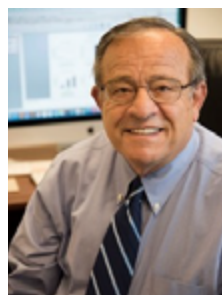
Hudgens



Hong



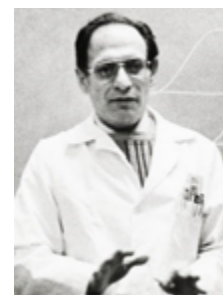
Rubin



Cicero



Zorumski



Reich

These individuals are profiled in other chapters.

Faculty recruitment

Cloninger expanded the size of the faculty to enhance research productivity and increase the department's clinical capabilities. Andrew Heath, John Csernansky, Alison Goate, Joan Luby, and John Newcomer joined the department during this time. All were later honored by receiving chaired professorships in the department. (See Appendix A.)

Child psychiatry

In 1989, Felton Earls, the director of the Division of Child Psychiatry, left the university after accepting a position at Harvard. Cloninger assumed leadership of the division while he recruited its next director. In 1990, Richard Mattison joined the department as director of the William Greenleaf Eliot Division of Child Psychiatry. He also assumed the directorship of the child and adolescent psychiatry fellowship program.

Financial issues

Financial issues affected the Department of Psychiatry while Cloninger was department head. Reimbursements for psychiatric care were not enough to cover the cost of delivering that care and, therefore, funding clinical faculty was difficult. For instance, Medicaid payments for psychiatric care were very low, and many patients hospitalized on the inpatient service were either insured by Medicaid or not insured at all.

There were other financial concerns. There were allegations of improper use of federal research funds in the department, and on December 16, 1992, Dean William Peck wrote a memo to faculty and staff acknowledging that the department was undergoing internal and external audits regarding “departmental practices and procedures for the internal allocation of federal research funds.” Coopers and Lybrand, the accountancy firm that had already been performing a general university review of grants and administrative practices, conducted the audit of the psychiatry department. Based on the audit's findings, the university voluntarily reimbursed the federal

government about 2% of the direct and indirect research funds awarded to the department during the two-year period under review. Dean Peck shared the results of the audit with faculty and staff at the School of Medicine in a memo dated February 26, 1993, much of which was reprinted in the March 4, 1993, issue of the *Washington University Record*.

The audits together with tightening financial constraints had an understandably negative effect on department morale. On March 10, 1993, Cloninger wrote a letter to the faculty and staff informing them that although the executive faculty of the medical school continued to support his leadership, he had decided to ask Dean Peck for a leave of absence from administrative responsibilities. This request was granted as of March 15, 1993. Guze agreed to serve as acting department head, and Cloninger focused on his research and teaching.

Nearly a year later, on February 14, 1994, Dean Peck sent a memo to the faculty and staff indicating that Cloninger had elected to resign as department head in order to continue to focus on his research, teaching, and clinical work. Cloninger would remain the Wallace and Lucille K. Renard Professor and would become the Director of the new Center for the Psychobiology of Personality in the Department of Psychiatry.

Over the subsequent 25 years, Cloninger stayed at the university and continued to contribute to the Department of Psychiatry in terms of research, teaching, and clinical care. He retired in 2019 and became professor emeritus.

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CHAPTER 10

The Return of Guze as Department Head

1993–1997

In early 1993, Samuel Guze was enjoying his roles as senior statesman, writer, teacher, and clinician. Nevertheless, when Dean William Peck asked him to resume the role of department head to help the department during a stressful time, Guze immediately accepted.

Guze continued the vice-chair structure and departmental executive committee that C. Robert Cloninger had put in place. Guze often commented that the nature of the position of department head had changed during the four years since he had held the position. Department heads no longer enjoyed the same flexibility and freedom that they had in earlier years. Regulations governing educational programs, federal grants, and clinical work had increased substantially.

The morale of faculty members in the department was not high. Results from the audit had been published in the March 4, 1993, *Washington University Record*, and it was understandable that department members were feeling uncomfortable. Faculty and staff had been required to recertify their Personnel Activity Reports in which they estimated their time and effort in research, instruction, and administration. Various members of the department were interviewed by auditors, and grant administration practices were scrutinized.

One of Guze's major tasks was to improve the financial health of the department. He had the difficult task of maintaining and enhancing departmental strengths while trimming the budget. This required establishing priorities and decreasing the size of the department. Even though Guze was well respected by the faculty, morale was not helped by the tasks he had to perform.

Although Guze did not publicly complain about what he had to do, those around at the time knew that it was wearing on him. His goal was to strengthen the department to the point that the school's leadership was comfortable searching for a new department head.

During this period, research remained strong in the department. Medical student education and residency training remained a priority, and educational programs

were stable. The residency program underwent a site visit by the Accreditation Council for Graduate Medical Education (ACGME) in August 1993, and the visit went well.

Leadership of the child and adolescent psychiatry division changed. Richard Todd strongly believed that the division should become more research oriented. Todd was being recruited by another university, and as part of a retention effort, he was appointed director of the division in 1995. He succeeded Richard Mattison, who had assumed the position in 1990 while Cloninger was department head. (See Chapter 12.)

In spring 1995, leadership of the medical school assembled an external committee to review the psychiatry department. This committee included Huda Akil, Jack Barchas, Floyd Bloom, David Kupfer, and Peter Whybrow. Akil and Bloom were internationally recognized leaders in neuroscience research. Barchas, Kupfer, and Whybrow were heads of well respected, research-intensive departments of psychiatry. The members of this committee were aware of the important role the WUSM department had played in changing the direction of the field. They reviewed all aspects of the department and made many suggestions. One of their assignments was to recommend when a search for a new department head should be initiated. They concluded that although problems remained and the financial crisis still had to be fully resolved, the department was ready for a permanent head. They thought that the person selected would be impressed with the extraordinary potential of the department and the strengths of its faculty.

Guze strongly believed that the time was right to start a search for a new department head. The external committee had agreed with him, and a national search was initiated.

CHAPTER 11

The Zorumski Era

1997–2022

By the mid-1990s, the medical model philosophy that had originated in the WUSM Department of Psychiatry had been adopted at several medical schools. The dominance of American psychiatry by psychoanalytic psychiatrists was fading. No longer were medical schools favoring psychoanalytically-oriented psychiatrists to lead their psychiatry departments. Top academic centers were increasingly interested in building strong, research-oriented departments of psychiatry.

The leadership of Washington University was aware of the local, national, and international importance of the Department of Psychiatry at WUSM. The department was one of the top U.S. psychiatry departments in terms of federally funded grants. Its faculty continued to move the field toward an evidence-based, medical model approach. The training programs were stable and well respected. Several challenges remained for the department, including fiscal difficulties and morale issues related to earlier events.

At the time, many thought that the search committee would prefer an external candidate who was a neuroscience-oriented psychiatrist. Although there were some academic psychiatrists with a basic science research background, there were few high quality researchers with strong clinical interests.

The search committee also was interested in a candidate with a teamwork mindset. The executive faculty of the medical school had tremendous authority, and the search committee, which consisted of several department heads, had a strong interest in choosing a person who would work well with the other department heads.

In the end, the search committee found their candidate within the ranks of the department faculty. Charles Zorumski was both a successful neuroscientist and someone with a strong team sports background, having been a highly decorated goalie on Saint Louis University's two-time national championship soccer team and a Division I college soccer coach. He knew what teamwork meant,

and he was well liked by those who worked with him.

Zorumski was born in St. Louis. He attended college and medical school at Saint Louis University. After receiving his M.D. in 1978, he joined the residency program at WUSM. Like many of his colleagues, he was attracted to the program because of its medical model philosophy. Following residency, he did a year as chief resident/instructor from 1982 to 1983. Zorumski did not anticipate an academic, research-oriented career when he joined the residency program, but he became involved in both clinical research and basic science/electrophysiology projects during his training.



Charles Zorumski

Although Zorumski was soft spoken around faculty, Sam Guze recognized his talent and encouraged him to consider an academic career. Following chief residency, Zorumski remained an instructor in the department and accepted a post-doctoral position in the lab of Gerald Fischbach, head of the Department of Anatomy

and Neurobiology. Zorumski excelled in this basic science environment and benefited from the mentoring of Fischbach and others in Fischbach's lab. He continued his research career as a Klingenstein Fellow in Neurosciences from 1987 to 1990. He also received scientific

training from John Olney, a psychiatrist and neuroscientist who served as mentor for his initial career development grant from the National Institute of Mental Health (NIMH). During this time, Zorumski also had clinical responsibilities, including supervision of the psychiatry consult service at Barnes Hospital.

Zorumski became a successful neuroscientist. His early research involved studies of synaptic communication between cells in the hippocampus. He studied both glutamatergic and GABAergic neurotransmission and how these systems adapt to prior neural activity. He has also studied the basic mechanisms and clinical potential of neurosteroids. In addition, he participated in clinical research, including studies of electroconvulsive therapy (ECT).



Charles Zorumski (standing)

Becoming a department head was not one of Zorumski's early career goals. He enjoyed research, teaching, and clinical responsibilities, and he enjoyed living in St. Louis. In 1992, C. Robert Cloninger appointed Zorumski to the department's executive committee as associate vice chair for

research. From that experience, he gained insight into departmental administrative and academic matters.

By the mid-1990s, Zorumski still was not interested in becoming a department head outside of St. Louis, but he indicated that he would be interested in the position at WUSM. He believed that WUSM would be a place where he could contribute as department head while still maintaining his research career. The search committee decided he was the best candidate for the job and offered him the position of head of the Department of Psychiatry. Zorumski accepted the offer and agreed to start on April 1, 1997. Part of his reason for choosing April 1 was that he liked the fact that it was April Fools' Day.

Departmental executive committee

Zorumski decided to continue the departmental executive committee that Cloninger had initiated. Keith Isenberg replaced Richard Hudgens as one of the two vice chairs for clinical affairs. Barry Hong's title changed from associate vice chair for clinical affairs to vice chair for clinical affairs. Eugene Rubin and Ted Cicero remained as vice chairs for education and research, respectively. Ted Reich no longer served on the committee. When Isenberg left the department in 2006, Michael Jarvis replaced him as one of the two vice chairs for clinical affairs.

Isenberg received his M.D. from Indiana University in 1978 and did his psychiatry residency at WUSM. He joined the department as an instructor in 1982 and became a full professor in 2001. Isenberg directed the ECT service. He retired from the department in 2006.



Keith Isenberg



Michael Jarvis

Jarvis received his Ph.D. from the University of Illinois at Urbana-Champaign in 1982 and his M.D. from WUSM in 1985. He became instructor and chief resident in 1989 after completing his psychiatry residency in the department. He was promoted to professor in 2006. He was appointed medical director of the inpatient psychiatry service in 1993 and vice chair for clinical affairs in 2007.

Hong earned a Master of Divinity degree from Concordia Seminary in 1972 and a Ph.D. in psychology from Saint Louis University in 1978. He joined the department in 1974 as a medical research technician. In 1978, he became an instructor of medical psychology in psychiatry, and in 2001, he was promoted to the rank of professor. In 1992, he was appointed associate vice chair for clinical affairs by Cloninger, and in 1997, he was appointed one of two vice chairs for clinical affairs by Zorumski. In 1993,

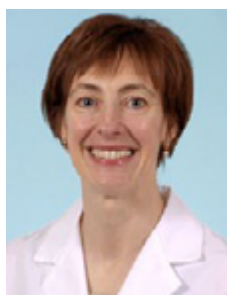


Barry Hong

Hong became director of psychological services in the department and chief psychologist at Barnes Hospital. Hong has been active in research studies pertaining to post-traumatic stress disorder (PTSD) and organ transplantation.

Over his tenure as department head, Zorumski expanded the executive committee with the addition of four vice-chair positions. Laura Bierut was appointed vice chair for faculty development in 2016. Steven Mennerick was appointed associate vice chair for research in 2017. When Cicero stepped down from full-time duties in 2020 to become professor emeritus, Mennerick became vice chair for research. In 2021, Melissa Harbit joined the executive faculty as vice chair for clinical affairs. The clinical operations of the department were rapidly expanding, and Zorumski decided that there was a need for another vice chair to join Jarvis and Hong, particularly since Hong was moving toward retirement in 2022. In 2021, Patricia Cavazos-Rehg was appointed vice chair for diversity, equity, and inclusion (DEI).

Bierut received her M.D. from Washington University in 1987 and completed her psychiatry residency training at WUSM in 1991. After spending several years at the Karolinska Institute in Sweden and the University of Washington in Seattle, she returned to WUSM as an instructor in the Department of Psychiatry. She was promoted to the rank of professor in 2007 and became an Alumni Endowed Professor in 2014. Bierut's research investigates genetic and environmental influences on psychiatric disorders, with a particular emphasis on understanding addiction.



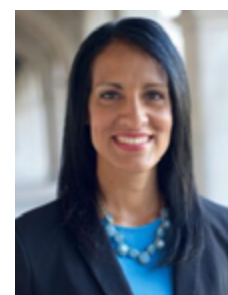
Laura Bierut



Steven Mennerick



Melissa Harbit



Patricia Cavazos-Rehg

Mennerick received his Ph.D. in neuroscience from Washington University in 1995, working under the mentorship of Zorumski. He did postdoctoral fellowships at SUNY Stony Brook and then returned to Washington University as a postdoctoral fellow. He joined the Department of Psychiatry as an assistant professor in 1999 and reached the rank of professor in 2010. He became the scientific director of the Taylor Family Institute for Innovative Psychiatric Research at WUSM in 2017. His laboratory studies the mechanisms underlying neuronal excitation and inhibition in the central nervous system. In 2020, Mennerick became Interim Associate Dean for Graduate Education. In this capacity, he oversees the Division of Biology and Biological Sciences.

Harbit received her M.D. from the University of Iowa in 1997 and completed her psychiatry residency at WUSM in 2001, serving as chief resident during her last year of training. She then completed a fellowship in forensic psychiatry at the University of Rochester before returning to WUSM as an instructor. She was appointed director of forensic psychiatry in 2002 and assistant director of the psychiatry residency program in 2007. She was the medical director of the BJH Psychiatric Support Center from 2015 to 2020. She was promoted to professor of psychiatry in 2017.

Cavazos-Rehg received her Ph.D. in psychology from the State University of New York, Buffalo, in 2004 and completed an internship in clinical psychology at the St. Louis Veterans Affairs Medical Center the same year. She then was a NIH-Postdoctoral Fellow in the Division of Health Behavior Research at WUSM. She joined the Department of Psychiatry as a research instructor in 2007 and reached the rank of professor in 2020. She is the director of the Postdoctoral Mentored Training Program in Clinical Investigation. Her research focuses

on mental health epidemiology, and she is particularly interested in understanding how policy and social media shape health risk behaviors in young people.

Departmental approach to health care delivery

During Zorumski's early days as department head, he worked with the clinical faculty to develop a capitation system for reimbursement with one of the university's health care providers. A capitation system is a method of payment based on the number of individuals covered by the plan; it does not involve billing for each visit. This system worked well for the department. Patients received excellent care, and reimbursement was fair. However, the medical school's practice plan eventually decided not to implement a capitation system broadly, but instead maintain a fee-for-service system. The rates the university negotiated for psychiatric care were not favorable to the department. Neither was the model used to determine overhead for billing. In addition, the inpatient psychiatry service, although busy, served a significant number of patients who were either uninsured or insured by Medicaid, which offered very low reimbursement rates for psychiatrists. Thus, unlike some other clinical departments at WUSM, faculty psychiatrists were not able to generate sufficient clinical income to cover their costs much less benefit the department financially. Therefore, clinical care provided by department faculty became focused on supporting the educational and research missions of the department.

Inpatient care

In 1997, there were four inpatient psychiatry units with approximately 110 beds on the 14th and 15th floors of the West Pavilion of Barnes-Jewish Hospital. Two units were for general psychiatry patients, while one was a psychiatric intensive care unit. The fourth unit specialized in the care of elderly patients. This geropsychiatry unit had opened on February 2, 1987, with 10 beds; it increased to 22 beds in 1994. Eugene Rubin was the original medical director of the unit, and he instituted the administration of specific standardized assessments

as part of standard patient care. Thus, the unit was conducive to clinical research as well as clinical care. Over the years, several collaborative research projects were conducted with faculty from the Brown School of Social Work using data collected from patients on the geropsychiatry unit.

An inpatient adolescent unit existed for about five years during the early 1990s. A psychiatric day hospital was operational from 1994 to about 2001. The day hospital included a day program for the treatment of substance use disorders. Eventually, these programs were discontinued.

Until the late 1990s, the majority of patients admitted to inpatient psychiatry units at Barnes and Barnes-Jewish Hospitals were under the care of psychiatrists in private practice. Over time, the number of patients admitted by private attendings decreased for several reasons. Some private practice physicians moved their practices to west St. Louis County, and Barnes-Jewish Hospital was no longer a convenient location for them or their patients. Most rooms at the hospital were double occupancy, and obtaining a private room was difficult. In order to obtain and maintain hospital privileges, private practice physicians were expected to be available for teaching residents and medical students, which was not always compatible with a busy private practice. Also, tension sometimes existed between full-time faculty clinicians and private practice clinicians. As private practice psychiatrists admitted fewer patients, more beds became available for admissions to the teaching service, and the size of this service grew. There was a danger that the teaching service would grow too large, and the educational value to residents would diminish. The Accreditation Council for Graduate Medical Education (ACGME) residency review committees (RRCs) were sensitive to the size of teaching services. The number of patients was expected to be sufficient for teaching residents how to manage patients, but not overwhelming in terms of volume. Since many patients admitted to the teaching service had no or inadequate insurance, the department could not afford to hire full-time faculty to care for patients if that care was not contributing to resident education.

The leadership of the hospital was interested in

expanding the number of beds for non-psychiatric services. Since fewer beds were needed to accommodate the needs of private practice psychiatrists and there was a need to reduce the size of the teaching service, the hospital and the department agreed to reassign some of the psychiatry beds. Around 2003, the psychiatry units on the 14th floor of the West Pavilion closed and the space was redesigned for use by other services. The psychiatry units on the 15th floor of the West Pavilion were reconfigured into three units: a general psychiatry unit, an intensive care unit, and a geropsychiatry unit. There were approximately 46 beds on these three units combined. All patients admitted to the psychiatry inpatient service were patients of the full-time faculty on the teaching service, who worked closely with the residents to provide care.

In 2015, inpatient psychiatric services at Barnes-Jewish Hospital (BJH) expanded in a somewhat unexpected manner. The St. Louis Regional Psychiatric Stabilization Center (PSC) had been supported by Missouri's Department of Mental Health as well as by funds from the Regional Health Commission, BJC Healthcare, and SSM Health. Because of federal funding cuts, the State stopped supporting PSC. For a variety of reasons, BJH decided to assume responsibility for this facility, and the psychiatry department agreed to provide medical oversight. The facility was renamed BJH Psychiatric Support Center. The general psychiatry beds in this facility became part of BJH's inpatient psychiatry units. In 2020, BJH Psychiatric Support Center was renamed again and became BJH Psychiatric Center–Delmar Campus (PCDC). As part of BJH inpatient psychiatry units, this campus was a training site for medical students and psychiatry residents.

Clinical supervision of the inpatient teaching service

Prior to 1994, there were approximately 20–30 patients on the teaching service at Barnes Hospital. The remaining 80 patients on the inpatient psychiatry service were managed by private practice psychiatrists. Patients on the teaching service were under the direct care of an

instructor-level chief resident. This chief resident supervised about five first-year residents, teaching them how to manage very ill patients. Medical students were also part of the treatment team. For a variety of reasons, this system gradually changed from one in which the chief resident supervised the care of all inpatients on the teaching service to a system consisting of five teams, each supervised by a full-time faculty member. The position of chief resident also evolved. Prior to 1994, three instructor-level chief residents were appointed each year. Their year was divided into three four-month rotations supervising the inpatient service at Barnes Hospital, the inpatient and outpatient services at Jewish Hospital, and the ECT service and outpatient clinic at Barnes Hospital. Starting in 1994, the instructor-level chief resident positions were eliminated and one fourth-year resident was appointed chief resident. In the new system, the chief resident had important administrative, teaching, and resident recruitment responsibilities. Full-time faculty members covered clinical attending responsibilities. Some of the reasons for this shift were related to the consolidation of inpatient psychiatry services after the merger of Barnes and Jewish Hospitals and the decision to have the ECT service run by faculty who specialized in the administration of this treatment.

Development of the clinician track

The establishment of a clinician track for faculty at the medical school had a significant influence on clinical programs within the Department of Psychiatry. Prior to the development of the clinician track, faculty starting their academic careers entered the department as either an instructor or, if they had a strong research background, as an assistant professor. Once at the assistant professor level, the tenure clock started to run. If a faculty member was unable to earn tenure within 8.75 years, he or she would no longer have a faculty position. In order to obtain tenure, a faculty member had to demonstrate productivity involving high quality research. Demonstrating excellence as a teacher and clinician was helpful, but tenure was not often given unless a faculty member had a reasonable research portfolio. This was

true even if the person was essential for educational and clinical programs in the department. Over time, the granting of tenure was increasingly restricted to those faculty who were able to obtain independent federal grants to support their research.

Every clinical department needs faculty who are excellent clinicians and clinical educators, and a clinician track was approved at the medical school in 1995. This track allows individuals who excel in clinical care and educational responsibilities to be promoted to the ranks of associate professor and professor without needing a strong research portfolio. The number of individuals on the clinician track grew rapidly.

As expected, many new physician faculty in the Department of Psychiatry advanced on the clinician track. They were encouraged to participate in research, but research productivity was not a requirement for promotion. On the other hand, physicians in the department who were successful in obtaining research funding and were advancing on the tenure track were usually not required to spend large amounts of time providing clinical care. Prior to the introduction of the clinician track, most physician faculty in the psychiatry department embraced research as an important aspect of their careers. With the growth of the clinician track, many were not necessarily interested in actively pursuing research.

Education

The medical school's curriculum underwent major revisions in 1997, and these changes influenced the Department of Psychiatry's medical education programs. Prior to these changes, there was a psychiatry course during the second year of medical school consisting of about 22 hours of lectures and patient interviews. This course was not part of the core pathophysiology curriculum. The third-year psychiatry clerkship was six weeks long and consisted of three weeks on the inpatient service at Barnes Hospital and three weeks on the inpatient service at Malcolm Bliss Hospital.

In the revised curriculum, the third-year psychiatry rotation decreased in length from six weeks to four weeks, allowing the third-year neurology rotation to

increase from two weeks to four weeks. Although the leaders of the psychiatry department were not pleased that the third-year clerkship was trimmed by one-third, they were successful in negotiating almost double the hours for the second-year psychiatry course. Equally important, the psychiatry course became part of the second-year core curriculum, meaning that grades from the psychiatry course had as much significance as grades from other core courses. Students had to take the course seriously. In addition, the second-year neurology course was taught during the same time, and January became "brain month" for second-year medical students. This intense exposure to brain disorders was beneficial to both the psychiatry and neurology departments.

The medical student curriculum was revamped again in 2020. The new curriculum required several years to develop, and psychiatric education is prominent throughout this new curriculum. Brendan O'Connor, director of the third-year psychiatry clerkship, was the driving force in the department's role in the development of this curriculum.

The residency program continued to do well. ACGME site visits in March 1999, April 2005, and August 2010 all went smoothly. Nationwide, the emphasis on psychoanalytic psychiatry that was palpable in the early 1980s had decreased substantially.

Rules and regulations involving residency training continued to increase at the national level. This paralleled increasing bureaucratic complexity that was becoming part of all aspects of medicine. New regulations required a marked increase in documentation. The role of residency director morphed from primarily educator to equal parts educator and administrator.

The psychiatry residency program and the child and adolescent psychiatry fellowship program are discussed in more detail in Chapter 13.

Research

During the 1990s, the field of neuroscience became politically fashionable. President George H.W. Bush designated the decade from 1990 to 1999 as the Decade of the Brain. Around the country, the field of

psychiatry was transitioning from a non-research-oriented discipline to a research-intensive specialty. One of Zorumski's top priorities was to enhance the research productivity of the department. The department already enjoyed a reputation as being one of the most research productive departments of psychiatry in the country. Many faculty members were successful in obtaining federally funded research grants. Each year, the faculty published several hundred peer-reviewed articles in major journals. Zorumski's approach toward nurturing successful research-oriented faculty members was to do everything he could to leave them alone and let them thrive with as little distraction as administratively possible. Some of the major research contributions by faculty members are reviewed in Chapter 14.

Zorumski decided on a strategy of growing new faculty from within, following a tradition that had worked well for his predecessors. This plan was partially a result of the fact that finances were tight, and Zorumski believed that growing faculty within the department by use of training grants and career development awards was more effective and cost efficient than recruiting externally. One way to develop non-clinician investigators was by starting them on the research track, a third track available at the university in addition to the tenure and clinician tracks. The research track provided research-oriented faculty members an opportunity to advance in the department without the demands of the tenure (investigator) track. Faculty members on this track were required to have research funding, but they were often part of a larger research team in which the team leader provided funding for the entire group. Some faculty members on this track were successful in securing independent funding and were able to shift to the tenure track as their careers evolved.

Research-oriented residents and fellows were often invited to stay in the department after they completed their clinical training and develop research skills as postdoctoral fellows on one of the department's training grants. Several research-oriented residents became faculty members in the department after completing such postdoctoral training.

In order to attract research-oriented medical students

to the department's residency and fellowship programs, the department initiated the Psychiatry Residency Research Education Program (PRREP). Nuri Farber, psychiatry residency director, and Anne Glowinski, child and adolescent psychiatry fellowship director, obtained federal funding for this program in 2018. In addition to strong clinical training, residents and fellows participating in PRREP receive advanced research mentoring and supervision. Following their residency/fellowship training, those with continued interest in a research-intensive academic career may continue research training within the department.

Another strategy Zorumski utilized to maximize research productivity was to foster research relationships among various departments at WUSM. This strategy involved encouraging collaborative research projects as well as hiring faculty with joint or dual appointments in different departments.

Federal research grants to the department approximately doubled between 1997 and 2007. During the 1997 to 2015 time frame, several newly established endowed chairs benefited investigators in the department. New centers were also established, and several awards honoring residents and medical students were instituted.

During Zorumski's tenure, several extraordinarily generous gifts to the department helped support the department's missions. This is fully discussed in Appendix B.

It should be noted that in December 2017, Zorumski became the longest sitting department head in the history of the Department of Psychiatry. Edwin Gildea previously held this distinction.

The COVID-19 pandemic

Zorumski delivered an annual "state of the department" address each spring. When he presented his talk to the faculty, residents, and staff in May and June of 2020, he first discussed the state of the department prior to the COVID-19 pandemic. This part of the talk was very upbeat. The department was having a phenomenal year. Research funding was at an all-time high, reaching \$56.7 million, including \$33.3 million from National Institutes of Health (NIH) grants. The depart-

ment ranked third among all departments at the medical school in terms of research funding. Thirteen faculty had grant support of over \$1 million per year. Zorumski mentioned several excellent research recruits who were joining the department. He stated that the psychiatry department would be one of the primary occupants of the large neuroscience building under construction on the medical school campus.

Zorumski reported that clinical programs were equally successful. Renovation of the inpatient psychiatry floors had been completed, and new contracts with BJH were either completed or in progress. Plans to expand the department's outpatient practice were in the process of being implemented.

He discussed the success of the department's education programs. Both the psychiatry residency program and the child and adolescent psychiatry fellowship program had expanded in size. The Psychiatry Residency Research Education Program (PRREP) had been successfully launched in both training programs. More recently, the residency program had initiated the Leadership in Education and Administration Program (LEAP), which emphasized career development as clinical educators. The goal of both training programs was clearly articulated—to produce leaders in the field of psychiatry. In addition, a new medical school curriculum was scheduled to start in fall 2020 after several years of intensive planning. This was the first major revision of Washington University's medical curriculum in many decades. Psychiatry was very much involved in the design and implementation of the new curriculum.

Then, the COVID-19 pandemic arrived.

Emergency plans were developed in case residents and faculty were needed to help staff medical units treating patients infected with the virus. Plans also were developed for faculty to care for psychiatrically ill patients in the emergency room, thus freeing up ER doctors to manage COVID-19 patients. Medical students were not permitted to work in the hospital during much of spring 2020 when the effect of the pandemic on the hospital system was at its initial peak. Department faculty rapidly organized a group of psychiatrists, therapists, and social workers to help medical school staff and faculty needing

psychiatric support.

The four largest hospital systems in St. Louis formed a joint task force to coordinate efforts in dealing with the pandemic. This cooperation was extremely effective. The citizens of St. Louis responded well to the initial phases of the COVID-19 pandemic by staying home as much as possible, mirroring how St. Louis had responded to the influenza pandemic of 1918. The number of hospitalizations in St. Louis during spring 2020 was manageable, and residents and faculty outside the Department of Medicine were not required to work on COVID-19 units.

During this time, most psychiatry faculty and staff rapidly moved their offices home. Teaching conferences, including weekly Grand Rounds, occurred remotely via Zoom videoconferencing. As experience grew with working remotely, it became evident that for some, a home office might be a better way of working even after the pandemic.

Once clinical care reached a manageable steady state, the financial consequences of the pandemic had to be addressed. In his address, Zorumski noted that the medical school was projected to lose between \$50 and \$60 million per month and cash flow was rapidly becoming an issue. Non-essential clinical work had necessarily stopped during the spring. In order to face the financial challenge, medical school departments were instructed by the school's leadership to cut their budgets substantially. Since each department functioned independently, financial steps differed among departments. Individuals throughout the medical school were furloughed. Twenty-five individuals in the Department of Psychiatry were furloughed, and four more reduced their time and effort. A hiring freeze was implemented. Bonuses were either eliminated or deferred. Salary cuts were announced for academic year 2021 (July 2020–June 2021) and ranged from 3% to 8% depending on income level. The university eliminated its contributions to employees' retirement programs; these contributions were as high as 11.5% for older employees. There was hope that some of these cuts might be reversed later in the academic year if clinical operations and research could be resumed in a safe manner.

The pandemic led to the rapid development of tele-

health at the medical school. Physicians in the psychiatry department who specialized in outpatient work quickly adapted to working with patients via phone calls or videoconferencing and established themselves as leaders in telehealth services at the medical school. The successful implementation of telehealth had implications for the growth of outpatient care in the department. For instance, plans to develop a new physical plant for faculty outpatient work were put on hold until future methods of care delivery and space needs became more evident.

Several faculty rapidly developed research protocols related to the pandemic. In addition, faculty modified existing clinical research protocols in order to continue their projects during social isolation. New methods of assessment and tele-research were implemented.

Zorumski did not sugarcoat his comments to the department in spring 2020. He was his usual open and honest self. In addition, the dean of the medical school, David Perlmutter, communicated often with faculty and staff via email. Naturally, no one wanted to hear that they would need to work harder for less money. However, both Zorumski and the dean explained the situation clearly. Faculty and staff understood.

During summer 2020, clinical practices, either via telehealth or in person, returned with safety protocols in place. In addition, faculty learned how to safely resume elective procedures. By September 2020, cash flow at the medical school and affiliated hospitals improved substantially and this, together with successful management of endowment funds, allowed the medical school to retroactively reverse faculty and staff salary cuts and to resume contributions to retirement funds. By the start of 2021, a second and larger wave of COVID-19 cases hit the St. Louis region, leading to hospitalization of even more patients than during the spring and summer of 2020. Nonetheless, lessons learned in 2020 proved valuable and the medical school and hospitals were able to manage effectively through the second wave. It is important to note that the first COVID-19 vaccines became available in December 2020 and likely played a key role in dampening the impact of the second wave. Another wave of infections began in the summer of 2021. Departmental efforts to provide education, counseling, and clinical care

for employees persisted throughout the pandemic.

Although research that required in-person visits was delayed, faculty proved to be resourceful and continued to be successful in growing the department's research portfolio. Also, there was an increasing appreciation of the clinical contributions of our department by members of the general medical school community. This created opportunities to expand the numbers of clinically-oriented faculty.

In his spring 2021 address, Zorumski reviewed the growth of the department in terms of faculty numbers, research grants, and the endowment. The number of faculty had reached an all-time high of 130. About half were physicians. Thirty-three were on the tenure track, 63 on the clinician track, and 35 on the research track. Total annual research funding had reached \$59.9 million—the third highest among departments at WUSM. Of this amount, \$36.6 million was from NIH, placing the department as eighth in federal research funding of U.S. psychiatry departments. The endowment had grown to over \$120 million, and the department's annual budget was over \$90 million.

There were significant clinical issues that influenced the psychiatry department during the pandemic. BJH and St. Louis Children's Hospital were dealing with staff shortages. In addition, patients who were admitted to psychiatric services at both hospitals were very ill. The number of beds on the inpatient services was temporarily decreased due to a shortage of nursing staff. There had been a shortage of inpatient psychiatric beds throughout the St. Louis region prior to the pandemic, and this shortage was exacerbated by the staffing shortage. Often, there were a large number of patients in the BJH and St. Louis Children's Hospital emergency departments in need of an inpatient psychiatric bed.

SECTION 3

Miscellaneous Topics

SECTION 3

Miscellaneous Topics

CHAPTER 12

The Psychoanalytic Movement, Psychiatry at Jewish Hospital, and the Division of Child and Adolescent Psychiatry

During the 1940s and 1950s, the psychoanalytic movement was becoming a major force in American psychiatry. Psychoanalysts were successful in obtaining significant roles on committees of the American Psychiatric Association. Many new department heads and residency directors were either psychoanalysts or strong supporters of psychoanalysis. It became increasingly difficult for academic psychiatrists to achieve leadership positions unless they were strong supporters of psychoanalysis.

Edwin Gildea was a research-oriented physician and not a strong proponent of psychoanalysis. His appointment as head of the Department of Neuropsychiatry at WUSM was consistent with the strong research orientation of the medical school. From the time the Department of Neuropsychiatry was established in 1938, the executive faculty and the dean as well as individuals at the Rockefeller Foundation were interested in a department that would advance knowledge through research.

Gildea was not popular among the psychoanalytic community. Nevertheless, he was interested in harmony within his department, and he was supportive of the involvement of psychoanalysts in the department and in St. Louis. In fact, Gildea was an important figure in the development of the St. Louis Psychoanalytic Institute.

The interactions between the St. Louis psychoanalytic community and the Department of Neuropsychiatry can best be illustrated by reviewing three developments: the birth of the St. Louis Psychoanalytic Institute, the history of the Department of Psychiatry at the Jewish Hospital of St. Louis, and the history of the Division of Child and Adolescent Psychiatry.

The St. Louis Psychoanalytic Institute

Prior to Gildea's arrival in 1942, there was a small number of psychoanalytically-oriented psychiatrists who interacted with the newly created Department of Neuropsychiatry. These physicians were psychoanalytic

candidates from established psychoanalytic institutes in several major cities around the country. David Rioch, the first head of the Department of Neuropsychiatry, was supportive of psychoanalytic approaches. Analyst Edgar Van Norman Emery was given a part-time staff appointment in the department. In 1939, a European-trained analyst, Felix Deutsch, joined the department from Boston. He received funding from the Macy Foundation to study dermatologic and allergic reactions in patients. At first, Deutsch was given a half-time appointment, but he later was granted a full-time appointment. Deutsch did not stay in the department very long and returned to Boston in 1941.

Another analytic candidate, Hyman Fingert, was appointed to the full-time faculty in 1939. Fingert was instrumental in developing psychiatry services at Homer G. Phillips Hospital. He also treated patients at Bliss Psychopathic Institute. Like many faculty members, he took a leave of absence in order to serve in the military for several years. He returned to the department in the mid-1940s and remained involved in teaching for many years.

In the mid-1940s, two other physicians who were psychoanalytic candidates, Conrad Sommer and Alex Kaplan, were offered appointments in the department. Fingert, Sommer, and Kaplan successfully completed their candidacies in psychoanalysis in 1946, 1947, and 1950, respectively. Another psychoanalyst, Bernard Cruvant, joined the department in 1953. Cruvant, Fingert, Sommer, and Kaplan taught a weekly psychoanalytic seminar for

psychiatry residents during a third of the academic year.

In the 1950s, there was growing interest in establishing a fully accredited psychoanalytic institute in St. Louis. For this to happen, “training analysts” would need to live in the St. Louis region. Gildea asked the faculty at the Chicago Institute of Psychoanalysis to review Fingert’s and Sommer’s credentials to see if they qualified for certification as “training analysts.” Eventually, they both gained approval by the appropriate committee of the American Psychoanalytic Association.

In 1956, there was an organizational meeting of a newly formed St. Louis Psychoanalytic Foundation. The purpose of this foundation was to develop the framework for a fully accredited St. Louis Psychoanalytic Institute. Several leaders from WUSM attended the inaugural meeting, including Oliver Lowry (dean of the medical school), Edwin Gildea, Margaret Gildea, James O’Leary (a neurologist), Henry Schwartz (a neurosurgeon), Irwin Levy (a neurologist), Cruvant, and Fingert.

The Danforth Foundation offered initial financial support for the foundation. The leadership of the St. Louis Psychoanalytic Foundation was eventually successful in raising additional funds and fulfilling the various administrative and didactic requirements necessary to establish the St. Louis Psychoanalytic Institute. Provisional certification of the institute was approved in December 1973, and the American Psychoanalytic Association gave full accreditation status to the St. Louis Psychoanalytic Institute in 1976.

Psychiatry at Jewish Hospital

A number of Jewish hospitals were built in the late 1800s and early 1900s in response to the fact that Jews sometimes were denied care at U.S. hospitals. The Jewish Hospital in St. Louis opened in 1902. In addition to providing clinical care, it provided a training site for Jewish doctors. The hospital was initially located on Delmar Boulevard, just west of Union. Construction of a new hospital on Kingshighway was completed in 1926, and the building was dedicated in May of that year. In 1963, Jewish Hospital entered into an affiliation agreement with Washington University School of Medicine and

became one of the medical center’s major teaching hospitals. In 1996, Jewish Hospital merged with Barnes Hospital to create Barnes-Jewish Hospital.

Irwin Levy, a neurologist, was appointed head of neuropsychiatry at Jewish Hospital in 1953. Levy was a strong supporter of psychoanalysis. He abruptly resigned from his role as head of neuropsychiatry in 1958, and Alex Kaplan was appointed to succeed him. Kaplan had been the acting director of the Child Guidance Clinic from 1953 to 1958.

Jewish Hospital opened an inpatient psychiatry unit in 1958, and William Cone, a psychiatrist who was a psychoanalytic candidate, was appointed head of the unit. Jewish Hospital also established a 16-bed child psychiatry unit the same year. The therapeutic approach on the child psychiatry unit was based on a therapeutic community model utilizing psychoanalytic principles. This unit was developed, in large part, as a result of the strong interest and financial support of a major benefactor, Ellen Steinberg.

The child psychiatry unit opened at about the same time that E. James Anthony, a prominent child psychiatrist, was recruited from England to direct the newly created Division of Child Psychiatry at WUSM. Anthony and his colleagues in the new division became responsible for the child psychiatry unit at Jewish Hospital. Anthony was a strong supporter of psychoanalytic approaches. The child psychiatry unit was not without controversy, however, and the nurses went on strike after the first six months because of the aggressive behaviors of the patients. Psychoanalytic approaches were not well suited for these severely ill and psychotic children. Treatment was costly. As a result of financial issues coupled with significant concerns about the effectiveness of the therapeutic approach, the inpatient child psychiatry unit closed in 1966.

Kaplan led the psychiatry department at Jewish Hospital from 1958 until 1966. Nathan Simon, another psychoanalytically-oriented psychiatrist, became the next head. From the 1960s through the mid-1970s, Jewish Hospital sponsored its own psychiatry residency program. Not surprisingly, this program was psychoanalytically oriented.

It is interesting to think about the fact that during the 1970s psychiatry at Jewish Hospital was dominated by psychoanalytically-oriented individuals, while a block away, faculty members in the WUSM Department of Psychiatry were involved in a movement that would contribute to diminishing the dominance of psychoanalysis in the United States.

Simon stepped down as head of the psychiatry department at Jewish Hospital in 1975. Harold Wolff became interim head of the department. The psychiatry residency program at Jewish Hospital lost its accreditation in 1976. The leadership of Jewish Hospital asked Samuel Guze, head of the Department of Psychiatry at WUSM, to take over the Jewish Hospital Department of Psychiatry. Guze was not eager to become involved with psychiatry at Jewish Hospital, but the parties eventually negotiated an agreement. In 1976, Guze appointed Ted Reich, a full-time faculty member in the WUSM Department of Psychiatry, as head of psychiatry at Jewish Hospital. Reich was known to be an excellent clinician as well as a superb investigator with expertise in genetics and genetic epidemiology. Inpatient and outpatient psychiatry at Jewish Hospital were rapidly integrated into the WUSM psychiatry residency program. Medical model approaches to treatment were instituted. Reich led the department at Jewish Hospital until 1996 when Barnes Hospital and Jewish Hospital merged to become Barnes-Jewish Hospital. The inpatient unit and outpatient clinic at the former Jewish Hospital closed, and psychiatric services were consolidated at the former Barnes Hospital. Reich became head of the Barnes-Jewish outpatient clinic.

Division of Child Psychiatry

Various events led to the establishment of the Division of Child Psychiatry in 1958. Blanche Ittleson and the Ittleson Foundation provided financial support for the establishment of an endowed Chair of Child Psychiatry. Additional financial support came from the board of the Mission Free School in St. Louis, which also donated the use of a building they owned. The Division of Child Psychiatry also absorbed two established clinics affiliated with WUSM. Finally, an inpatient child psychi-

atry unit was established at Jewish Hospital (as described earlier in this chapter), and the newly appointed head of the Division of Child Psychiatry assumed leadership of this unit.

THE ITTLESON FOUNDATION

Henry Ittleson, the founder of CIT Financial Corporation, established the Ittleson Foundation in 1932. After his death, the foundation continued under the leadership of family members, including his wife and son. By the late 1940s, the Ittleson Foundation had developed a special interest in mental health and the mental, physical, and social well-being of children.

In 1956, the Ittleson Foundation established the Blanche F. Ittleson Chair of Child Psychiatry at WUSM with a gift of \$400,000. This was thought to be the first endowed chair of child psychiatry in the U.S. Specific conditions were attached to this gift, and there were significant discussions among WUSM leadership about whether to accept the money. One of these conditions directed that the Ittleson Professor report directly to the dean of the medical school instead of the head of the Department of Psychiatry and Neurology. This meant that the Division of Child Psychiatry would be under the direction of the dean, who would control the division's finances. In the end, the conditions were accepted with modifications, namely that restrictions could be overruled in five years by a 75% vote of the executive faculty and that all restrictions would end in 25 years.

THE MISSION FREE SCHOOL

The Mission Free School was incorporated in 1863 and was one of many community projects developed by William Greenleaf Eliot and members of the Unitarian church in St. Louis. The purpose of the school was to provide education for poor children.

Eliot was a Unitarian minister who moved to St. Louis from Boston in the 1830s and founded the first Unitarian church west of the Mississippi River. Eliot and leaders of the church were involved in a variety of projects that led to new civic institutions in St. Louis. Education was a major focus for both Eliot and church leaders. They were

instrumental in the formation of the St. Louis Public Schools. Mary Institute was established in memory of Eliot's daughter Mary, who died as a young woman. Together with Eliot, Wayman Crow, a St. Louis businessman and Missouri state senator in addition to being a member of the Unitarian church, founded a university initially called Eliot Seminary. Eliot wanted this school to be non-sectarian, and eventually the name was changed to Washington University.

In 1958, the board of directors of the Mission Free School initiated discussions with WUSM leadership regarding possible financial support from their endowment and the use of a building that they owned. An agreement was reached whereby this gift would support the newly created Division of Child Psychiatry. In honor of William Greenleaf Eliot's role in creating the Mission Free School, the Division of Child Psychiatry was named the William Greenleaf Eliot Division of Child Psychiatry.

CLINICAL SERVICES IN THE NEW DIVISION OF CHILD PSYCHIATRY

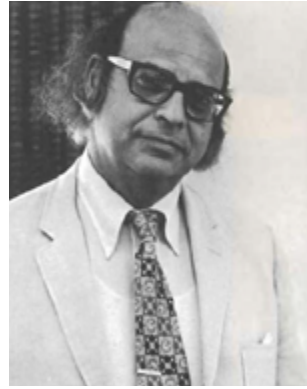
In addition to the inpatient unit at Jewish Hospital, two already established clinics became part of the new Division of Child Psychiatry. The Community Child Guidance Clinic was located in a university-owned house on Scott Avenue. It was established in 1948 to provide clinical care to children, create research opportunities, and assist in the development of educational programs. A second clinic, the Child Evaluation Clinic, opened in 1956; its mission was to evaluate and treat children with mental retardation (now referred to as intellectual disability).

DIVISION DIRECTORS

E. James Anthony, M.D., was recruited as the first Blanche F. Ittleson Professor of Child Psychiatry in 1958. Anthony was a child psychiatrist from Great Britain with a psychoanalytic orientation. Similar to the psychiatrists at Jewish Hospital, the faculty and staff in the child psychiatry division were strongly influenced by psychoanalysis in the 1960s and 1970s. During the same time, faculty members in the WUSM Department

of Psychiatry were teaching medical students and residents to utilize medical model approaches in their care of patients.

When Guze became head of the WUSM Department of Psychiatry in 1975, he offered to help Anthony recruit new faculty and expand the division if Anthony would



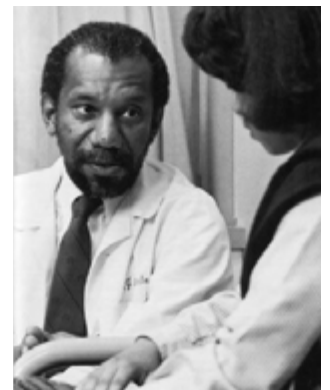
E. James Anthony

bring the division into the department. Anthony rejected this offer. A year later, however, Anthony asked for the department's help in resolving some critical issues within the division. Again, Guze agreed to help if Anthony would bring the child psychiatry division into the department.

Consequently, the Division of

Child Psychiatry became part of the Department of Psychiatry in 1976. In 1981, Anthony retired as division director, and Guze recruited Felton Earls to be the new division head and second Ittleson Professor. The era of a psychoanalytically-oriented Division of Child Psychiatry ended with Anthony's retirement. Anthony was a respected leader in the field of child psychiatry. He authored more than 300 articles and many books. He served as president of the American Academy of Child and Adolescent Psychiatry from 1981 to 1983.

Felton Earls, M.D., received his undergraduate and medical degrees from Howard University. He trained in pediatrics and adult psychiatry at Massachusetts General Hospital. He then trained in child psychiatry at the Hospital for Sick Children in London. He joined the faculty at Harvard in 1974.



Felton Earls

Earls became the head of the Division of Child Psychiatry at Washington University in 1981. He led the division until 1989 when he accepted an offer to return to Harvard.

C. Robert Cloninger, department head at the time,

assumed leadership of the division during the search for the next director. In 1990, Richard Mattison, M.D., became director of the William Greenleaf Eliot Division of Child Psychiatry and Ittleson Professor. He also assumed the directorship of the child and adolescent psychiatry fellowship program.



Richard Mattison

Mattison received his M.D. from Cornell University in 1972 and completed his psychiatry training at Cornell after a pediatrics internship at Children's Hospital in Buffalo. He completed his child psychiatry fellowship at UCLA. At WUSM, Mattison focused his attention on strengthening clinical and

educational programs in the division. He stepped down as division director in 1995, and Richard D. Todd, M.D., Ph.D., assumed leadership of the division.

Todd received his Ph.D. from the University of Texas at Dallas in 1977 and his M.D. from the University of Texas Health Science Center, San Antonio, in 1981.

He was a psychiatry resident at Stanford University from 1981 to 1984 and then moved to St. Louis where he completed a child and adolescent psychiatry fellowship at WUSM in 1986. He joined the faculty as an assistant professor in 1986 and became professor in 1993. Todd began his career as a laboratory-



Richard Todd

based, basic science researcher. Over time, however, he developed interests in molecular genetics and genetic epidemiology, and shifted the emphasis of his research to genetic epidemiology. He was passionate about basic and clinical research of childhood disorders and strongly advocated for a strong research focus within the division. He was persuasive in his advocacy, and Guze appointed Todd director of the Division of Child Psychiatry in 1995. Todd remained in this position until his death in 2008.

John Constantino, M.D., was chosen to be the next division director. Constantino received his M.D. from Washington University in 1988 and completed his pediatrics, psychiatry, and child psychiatry training at Albert Einstein College of Medicine. He joined the department as an instructor in 1993. He was promoted to professor in 2009, the same year he became director of the Division of Child Psychiatry. Constantino is an internationally known expert in autism spectrum disorders. In addition, he has developed new methods and services that engage stressed urban families in interventions that prevent child maltreatment and promote infants' earliest social attachments.



John Constantino

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CHAPTER 13

The Psychiatry Residency Program and the Child and Adolescent Psychiatry Fellowship Program

In the mid-1900s, most general psychiatry training programs were psychoanalytically oriented. In contrast, the residency program at WUSM based its training on a medical model approach, which emphasized the importance of reliable diagnosis, evidence-based treatments, and research. However, the child and adolescent psychiatry fellowship program, which began in 1961, was psychoanalytically oriented. In the 1980s, this orientation changed to a medical model approach.

Psychiatry residency program

The psychiatry residency program at WUSM was approved by the American Medical Association (AMA) and the American Board of Psychiatry and Neurology (ABPN) in 1944. New mechanisms for certifying residency programs were established in the mid-1950s, and the program received initial accreditation in 1955. During the 1970s and 1980s, rules and regulations pertaining to residency programs grew. This increase in regulation occurred around the same time that the shift away from psychodynamic psychiatry toward medical model psychiatry was gaining momentum. Nevertheless, psychoanalytically-oriented psychiatrists still had powerful voices in determining psychiatric training requirements in the 1980s, and psychoanalytic experiences were emphasized during training in most programs.

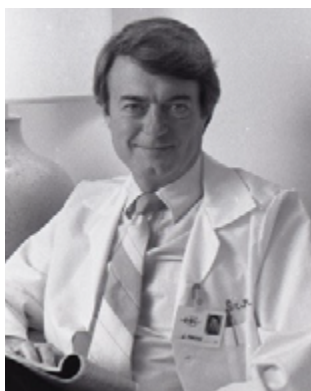
Edwin Gildea directed the residency program himself from 1944 to 1955. During the 1955–1956 academic year, Eli Robins, George Winokur, and Samuel Guze proposed a reorganization of departmental responsibilities, and Winokur assumed the role of residency director. Winokur emphasized the importance of accurate psychiatric diagnoses. Residents also were required to actively participate in research. The residency program at WUSM became known as the place to go for trainees more interested in evidence-based, medical model psychiatry and research than psychoanalysis. Winokur remained residency director when Robins took over as department head in 1963. In 1971, Winokur left the department

to become chair of the Department of Psychiatry at the University of Iowa.

Richard Hudgens became residency director in 1971 and remained in that position until he left to enter private practice in 1974. During this time, the Feighner et al. paper introduced specific diagnostic criteria for psychiatric disorders. These criteria were designed to assist psychiatric research by improving reliability of psychiatric diagnoses. During these years, the psychopharmacologic revolution was also in full swing. Although the domination of psychoanalytic psychiatry was beginning to be challenged, psychoanalytically-minded psychiatrists maintained a powerful grip on administrative aspects of psychiatric education.

After Hudgens left the department, Robert Woodruff assumed the role of residency director. Unfortunately, he died by suicide just two years later. Guze, who had become department head in 1975, appointed Amos Welner to succeed Woodruff. Welner had received his M.D. from Hebrew University Hadassah Medical School in 1960. He joined the department in 1972 after finishing psychiatry residency training at WUSM. Welner remained residency director until 1979 at which time Guze appointed John Helzer to succeed him. Welner died two years later. His body was found in his office.

Helzer received his M.D. from the University of Utah and completed his psychiatry residency at WUSM. He joined the department as an instructor in 1974 and was



John Helzer

promoted to professor in 1983. He was the residency director from 1979 until 1985.

It would be logical to assume that the rapid turnover of residency directors was associated with instability in the training program; however, department heads were viewed as the leaders of the educational programs during this era.

In fact, department heads were listed as running the training programs. During the 1980s, the Accreditation Council for Graduate Medical Education (ACGME) began to define the responsibilities of residency directors more clearly.

Guze was a very visible and stabilizing influence during the 1980s. In 1983, the psychiatry Residency Review Committee (RRC) of the ACGME reviewed the WUSM residency program. In a letter to Guze dated April 4, 1983, the RRC reported that they were deferring a decision regarding continued accreditation of the training program until it underwent a specialist site visit. The committee indicated that “It is not clear that there is sufficient and appropriate out-patient experience, which would allow the resident to learn dynamically oriented psychotherapy.” At that time, a “specialist site visit” usually meant that an RRC-appointed senior psychiatrist would review updated information provided by the department and then conduct an in-person visit to evaluate the program with special emphasis on the RRC’s concerns. The fact that this review was felt to be necessary reflected the dominance of psychoanalysis.

Guze and the faculty considered this action by the RRC to be an affront to the department’s approach to psychiatry. Guze wrote a three-page response to the RRC. This letter is quite informative as demonstrated by the following excerpts:

Your letter of April 4, 1983 came as a great surprise. It is hard to believe that there could be any serious question about the continued accreditation of our residency training program. Our department has been training psychiatric residents

for over thirty years, based upon a consistent philosophy and strategy. In that time we have trained about 275 psychiatrists... Throughout these years, our department has had a strong, broadly conceived, biological emphasis, rather than a psychoanalytic one, but we have tried to present to our trainees a critical approach to all viewpoints in the field.

The letter goes on to describe the exceptional accomplishments of the department and former residents as well as the program and facilities. It continues:

Because of our long record of accomplishment, our preeminent faculty, our rich patient mix, our outstanding facilities, and our widely recognized commitment to strengthening psychiatric practice, training, and research, your letter is hard to understand, unless it represents the view that all psychiatry departments and all training programs must be alike. We do not emphasize psychodynamic approaches as much as many others do, but our residents are introduced to its concepts, principles, and methods. This seems reasonable because others do not emphasize many of the things we do. Surely, there is room in our field for a spectrum of views and emphases. The records of our former residents are outstanding. They have done well on the new in-training residency evaluation examination, they have done well on specialty board examinations, they are successful practitioners in scores of communities all over the country, and they are leaders in academic psychiatry. What better criteria can be used to judge our program?

We will certainly be happy to receive another site visitor or visitors; we have confidence in our faculty, our residents, our facilities, and our programs, but it is hard to see why it is necessary, not to mention the additional expense. Surely each residency training program is to be judged in its totality. Is it reasonable to conclude that despite our extensive major strengths, a lesser emphasis on psychodynamic thought than in some other program could be sufficient to consider not continuing our

accreditation? The implications of such a policy by the RRC are very serious.

The specialty site visitor—the head of a psychiatry department at another university—arrived a few months later and reviewed the training program. In the site visitor's opinion, the program was fine, and the RRC granted continued full accreditation for the routine four-year period. The next site visit occurred in 1988.

During the six years that Helzer was residency director, he was actively engaged in epidemiologic research. Because of the increasing administrative demands of the training program, John (Jack) Knesevich was appointed as his assistant. Helzer's research continued to be successful, and he wanted to devote more time to it. In 1985, he stepped down as residency director, and Knesevich took over the role of director. Helzer left the department in 1989 to become chair of the Department of Psychiatry at the University of Vermont.



John Knesevich

Knesevich received his M.D. from McGill University. He completed his psychiatry residency and chief residency at WUSM. In 1987, he left the department to accept a faculty position in the Department of Psychiatry at Dartmouth University. Guze appointed Eugene Rubin as the next residency director.

Rubin entered the university's Medical Scientist Training Program (MSTP) in 1971 and received his M.D. and Ph.D. degrees in 1978 and 1977, respectively. He conducted his Ph.D. research in the Department of Pharmacology, which at that time was headed by Oliver Lowry, the faculty member who had mentored Eli Robins about 20 years earlier. Rubin was the first graduate of Washington University's MSTP to train in psychiatry.



Eugene Rubin

Rubin was a psychiatry resident at WUSM from 1978 to 1982 and chief resident from 1982 to 1983. Charles Zorumski, who later became department head, completed his residency and chief residency at the same time.

Following chief residency, Rubin worked in the lab of Boyd Hartman, a research-oriented psychiatrist, for two years. In 1985, neurologist Leonard Berg obtained funding to establish the Washington University Alzheimer's Disease Research Center, and he invited Rubin to join this clinical research group. In addition to being an exceptional neurologist and clinical researcher, Berg had a passion for education and was president of the ABPN. Rubin had a longstanding interest in psychiatric education, and Berg helped Rubin become an ABPN board examiner.

In 1985, with the support of both Berg and Guze, Rubin shifted the emphasis of his career from basic science research to clinical research and psychiatric education. Guze appointed Rubin head of the medical student psychiatry clerkship in 1985. He became residency director in 1987. In 1992, C. Robert Cloninger appointed Rubin vice-chair for education, a position he still holds as of this writing (2022).

One of Rubin's goals was to bring long-term stability to the residency program. Soon after assuming the position of residency director, he started preparing for the next RRC site visit, which occurred in November 1988. Although many psychiatric educators remained strong supporters of a psychoanalytic emphasis in residency programs, the site visit went well and the site visitors did not challenge the training program's orientation. Rubin remained residency director until 2007. Several individuals worked with him as assistant residency directors, including Stephen Dinwiddie, M.D., who later became Vice Chair for Clinical Affairs and Chief of Forensics in the Department of Psychiatry and Behavioral Sciences at Northwestern University; Wilson Compton, M.D., M.P.E., the current Deputy Director of the National Institute of Drug Abuse; and Nuri Farber, M.D. Rubin worked with three department heads: Guze (1987–1989 and 1993–1997), Cloninger (1989–1993), and Zorumski (1997–2007). While Rubin was residency director, psychoanalysis gradually lost its domination over residency programs, and ACGME rules and regula-



Nuri Farber

tions expanded greatly.

In 2007, after twenty years as residency director, Rubin decided that it was time to pass the baton to new leadership. Zorumski offered the position to Farber, who had been assistant residency director since 1996, and he accepted. Farber obtained his M.D. from WUSM in 1989.

He completed his psychiatry residency at WUSM in 1993 and joined the department that same year. Farber worked in John Olney's laboratory, studying the mechanisms by which neuroactive chemicals, including prescribed and abused drugs, damaged or killed neurons and glia in the central nervous system. Farber also became active in clinical studies involving drugs such as ketamine. Thus, Farber, like Rubin, Welner, Helzer, Woodruff, and Winokur, had a strong research background. Most directors of psychiatry residency programs around the nation did not have strong research backgrounds, but research experience was considered important at WUSM.

Melissa Harbit was appointed assistant residency director in 2007. She received her M.D. from the University of Iowa in 1997 and completed her psychiatry residency at WUSM in 2001, serving as chief resident during her last year of training. She then completed a fellowship in forensic psychiatry at the University of Rochester before returning to WUSM. In 2021, she became a vice-chair for clinical affairs.



Melissa Harbit

Child and adolescent psychiatry fellowship program

The child and adolescent psychiatry fellowship program was first accredited in 1961. The director

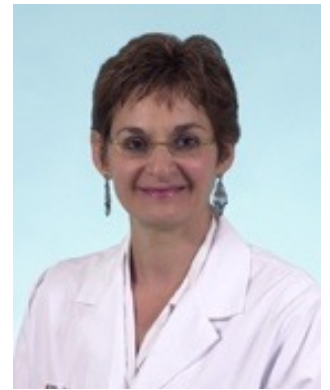


Abby Wasserman

of the Division of Child and Adolescent Psychiatry served as fellowship director until 1987, when Abby Wasserman was appointed fellowship director.

Wasserman was board certified in pediatrics as well as psychiatry and child and adolescent psychiatry. She obtained her M.D. and psychiatry training at Johns Hopkins. She remained fellowship director until Richard Mattison assumed leadership of the division in 1990. He decided to direct the fellowship program himself with Joan Luby as associate director.

In 1994, Mattison appointed Luby as director of the fellowship program. Luby received her M.D. from Wayne State University School of Medicine and did her psychiatry and child psychiatry training at Stanford. She joined the WUSM psychiatry department in 1990. In 1998, she became the founding director of the Early Emotional Development Program. Her research focuses on studies of early onset depression, including establishing the diagnosis in very young children; the effects of early life experiences on brain structure and function; and methods of treating depressed children.



Joan Luby



Anne Glowinski

Luby stepped down as fellowship director in 2005, and Anne Glowinski became the next fellowship director. Glowinski received her M.D. from Baylor and joined the department in 1998 after completing her psychiatry and child psychiatry training at Johns Hopkins. She obtained a Masters in Psychiatric

Epidemiology from WUSM in 2000. Her research interests include familial transmission of depression and suicidal behaviors in young individuals. Under her leadership, the number of first-year positions in the fellowship program grew from three to five. In 2014, she was appointed a member of the ACGME Psychiatry Review Committee.

Dehra Harris, M.D., was assistant director of the child and adolescent psychiatry fellowship program from 2010 to 2012. Following this, she became the medical director of the Standardized Patient Program at WUSM. T. Eric Spiegel, M.D., succeeded Harris as assistant director of the fellowship program.

Glowinski left the department in July 2021 for a position at the University of California, San Francisco. Spiegel was appointed fellowship director. Celina Jacobi, M.D., became associate director, and Alecia Vogel-Hammen, M.D., Ph.D., became assistant director. Spiegel received his M.D.



Eric Spiegel

from Saint Louis University. He joined the department after training in pediatrics, psychiatry, and child and adolescent psychiatry at the University of Utah. Among his current (2022) clinical roles, Spiegel is director of the Behavioral Health Unit and the psychiatry consultation and liaison service at St. Louis Children's Hospital. He has a strong interest in psychiatric education, psychotherapy, and consultation-liaison psychiatry. His research interests include child maltreatment.

CHAPTER 14

Major Contributions of Department Faculty to the Field of Psychiatry

(I want to thank and acknowledge Dr. Charles Zorumski for his assistance with this chapter.)

Members of the Department of Psychiatry at WUSM have had a strong influence on the field of psychiatry. This is most vividly illustrated by the successful efforts of Eli Robins, Samuel Guze, and George Winokur to change the orientation of the field away from psychoanalysis and toward the medical model. From the earliest days of the department, faculty members have advanced the field through groundbreaking research. Today's faculty are leaders in neuroimaging, genetics, genetic epidemiology, basic neuroscience, behavioral medicine, epidemiology, and clinical trials. Publications by department faculty members have influenced colleagues in the field and educated the public about psychiatry. A select sample of these contributions is reviewed in this chapter.

Research contributions

Research productivity has always been a core value of the department. The field of psychiatry has become one of the most research-intensive specialties in medicine due, in part, to the efforts of WUSM faculty during the 1950s–1980s.

A comprehensive review of the department's research contributions would require a rather large book. What follows is a representative list of these contributions.

During the 1950s and 1960s, it was difficult to obtain funding for research. From the early days of the department, psychiatric residents participated in departmental research. Medical students also were encouraged to work with faculty on research projects. Patients in the outpatient clinics participated in longitudinal studies.

Faculty, including Eli and Lee Robins, Samuel Guze, George Winokur, Paula Clayton, and George Murphy, utilized strict research diagnostic criteria in studying affective disorders, bereavement, psychotic disorders, anxiety disorders, personality disorders, and substance use disorders. Eli Robins and Murphy conducted classic studies of suicide. During the 1960s, Marcel Saghir and Eli Robins examined issues pertaining to homosexuality.

In 1970, Eli Robins and Guze published a seminal paper in which they proposed criteria for the validation of psychiatric diagnoses. This was followed in 1972 by

the publication of “Diagnostic Criteria for Use in Psychiatric Research,” which outlined what came to be known as the Feighner or St. Louis criteria and became one of the most influential papers in American psychiatry. This work set the stage for the 1978 publication of “Research Diagnostic Criteria” by Robert Spitzer, Jean Endicott, and Eli Robins. These latter two papers were the precursors to the DSM-III criteria and all subsequent Diagnostic and Statistical Manuals of Mental Disorders to date.

Lee Robins and her colleagues were pioneers in the field of psychiatric epidemiology. They incorporated diagnostic criteria into screening instruments that could be administered by non-clinicians, thus facilitating studies involving large numbers of individuals. The Diagnostic Interview Schedule (DIS) is one example of such an instrument. In the 1980s, the Epidemiologic Catchment Area (ECA) studies utilized such instruments to establish the prevalence and incidence of psychiatric disorders. Lee Robins also initiated pioneering work examining post-traumatic stress disorder (PTSD) in Vietnam War veterans. Subsequent studies involving victims of disasters were conducted by Elizabeth Smith, Carol North, Barry Hong, and Rumi Price. In later years, epidemiological instruments were developed to study substance use disorders, and diagnostic instruments were developed

to study psychiatric symptoms in children.

Throughout the department's history, research by faculty members advanced the field of psychiatric genetics. Initial studies involved patterns of familial inheritance and provided strong evidence that genes play a major role in an individual's risk for developing certain psychiatric illnesses. Department members, including Ted Reich, C. Robert Cloninger, John Rice, and Brian Suarez, developed a variety of methods for studying the roles of genes in psychiatric syndromes. Reich in particular had a profound influence on the field of psychiatric genetics. Not only did he help recruit and train faculty members in the department, but he also trained numerous human geneticists who became leaders in this field in Great Britain and elsewhere.

Andrew Heath joined the department in 1989, and he has trained a generation of leaders in the field of psychiatric genetic epidemiology. He and colleagues have utilized twin studies to advance knowledge about inheritance. They were successful in developing the Missouri Twin (Family) Registry into a valuable resource that generated multiple research projects, including national and international collaborations. Laura Bierut and her team along with Heath, Pamela Madden, Arpana Agrawal, and the department's twin registry research group have studied genetic contributions to substance use disorders including nicotine dependence.

Faculty members have also been leaders in the field of molecular genetics. They developed techniques that led to significant advances in knowledge regarding several disorders, including dementias and substance use disorders. Alison Goate demonstrated that specific genes contribute to risks of developing Alzheimer's disease and frontotemporal dementias. Carlos Cruchaga and colleagues have continued investigating genetic risks for dementias.

During the 1950s and 1960s, Eli Robins published neurochemical studies utilizing techniques developed by Oliver Lowry in the Department of Pharmacology. By the 1960s and 1970s, the Department of Psychiatry was unusual in that several faculty members were neuroscientists. Blake Moore identified several major proteins unique to glial cells, including a protein called S100.

William Sherman examined the phosphoinositol system and the influence of lithium on this system. John Olney, a psychiatrist and electron microscopist, initiated work that revealed processes of neurotoxicity and programmed cell death. These studies launched the field of "excitotoxicity," a term coined by Olney in 1969, which has dominated neurodegeneration research to the present day. He and his colleagues, including Nuri Farber, suggested that glutamate plays a role in the pathogenesis of schizophrenia. Olney's group continued groundbreaking work elucidating mechanisms of cell death and cell damage related to glutamatergic mechanisms. Their work clearly demonstrated the marked toxicity of alcohol use during pregnancy as well as the potential toxicity of several categories of clinically used medications in infants, including anesthetics and anticonvulsants. These findings led to changes in policies related to the timing of elective surgery in infants.

Ted Cicero studied the effects of abused drugs on the neuroendocrine system. His studies demonstrated that there was transgenerational inheritance of acquired traits secondary to morphine and ethanol exposures in rodents. This provided early evidence of a phenomenon that later became known as epigenetics.

Richard Todd became director of the Division of Child and Adolescent Psychiatry in 1995 and succeeded in creating a very productive, research-oriented division. Barbara Geller had joined the department in 1991, and her work demonstrated the existence of bipolar disorder in children, advancing our understanding of this disorder. Todd recruited additional faculty to the division, including John Constantino, Joan Luby, and Kelly Botteron. Faculty members initiated studies of attention-deficit/hyperactivity disorder (ADHD), childhood depression, bipolar disorder in children, and autism. Investigators also examined the influence of childhood abuse on the development of behavioral disorders. These studies took full advantage of neuroimaging technology and collaboration with Deanna Barch as well as advances in genetics and molecular genetics. Several other research-intensive faculty members have joined the division, including John Pruett, Cynthia Rogers, and Chad Sylvester. They have applied imaging techniques, cognitive neuroscientific

approaches, and behavioral studies to elucidate disorders that may already be developing in neonates and very young infants.

Beginning in the 1980s, faculty interested in behavioral medicine joined the department. Robert Carney and Ken Freedland, two clinical psychologists, initiated studies of the complex relationships between heart disease and depression. Patrick Lustman was recruited to help George Murphy conduct a clinical trial of cognitive behavioral therapy (CBT) for the treatment of depression. Lustman subsequently studied depression in individuals with diabetes. Barry Hong was involved in studies of patients being evaluated for organ transplantations.

Denise Wilfley joined the department in the early 2000s. She and her colleagues are leaders in the study of eating disorders and obesity. In addition to classifying and assessing these disorders, they have developed important psychotherapeutic treatment approaches. They also have developed creative and affordable methods for prevention and early intervention that are designed to reach a large number of individuals.

Washington University has been in the forefront of advancing neuroimaging technologies. Positron emission tomography (PET) was invented at Washington University and was utilized by Eric Reiman, Marc Raichle, and Eli Robins to study a human model of panic disorder. Wayne Drevets, Raichle, and colleagues used PET to map pathways involved in major depression, providing the first evidence for the importance of the subgenual cingulate gyrus in this disorder. In 2001, Raichle and colleagues, including Debra Gusnard, a member of the psychiatry department, published a seminal paper in which they described the default mode network in the brain. Recent work involving department faculty has included efforts to develop functional magnetic resonance imaging (fMRI) to study brain connectomes in individual patients (referred to as precision neuroimaging), offering hope of translating neuroimaging findings to personalized medicine.

Washington University was the lead institution in the Human Connectome Project, a multi-site, federally-funded project to map anatomical and functional connectivity within the human brain. This ambitious project

has led to the development of sophisticated techniques in static and functional imaging. Deanna Barch, the Gregory B. Couch Professor of Psychiatry and chair of the Department of Psychological and Brain Sciences, and colleagues have applied these techniques to the study of various disorders in children and adults, including the Adolescent Brain Cognitive Development (ABCD) Study, a major collaboration among leading neuroimaging centers in the country. Joan Luby, Kelly Botteron, John Pruett, Cynthia Rogers, and colleagues developed techniques to perform functional imaging in infants and very young children, allowing studies aimed at elucidating functional pathways and neural systems during normal development. Imaging techniques were also utilized to examine children with behavioral disorders, including depression, anxiety, and autism, and young adults with disorders such as schizophrenia.

Using techniques to precisely measure the size and shape of specific brain regions, Yvette Sheline and colleagues found that the volume of the hippocampus is decreased in depression. This group also examined the importance of the default mode network in depression. John Csernansky and colleagues noted specific volume and shape changes in the hippocampus associated with schizophrenia; they also participated in major national collaborative studies of antipsychotic medications.

During the 1960s and 1970s, faculty members were, for the most part, not involved in treatment studies. There was one exception, however. George Murphy conducted one of the early trials comparing CBT to antidepressant medications. This study was the first independent clinical trial of CBT outside of Aaron Beck's group in Philadelphia. The fact that a key faculty member was an expert in CBT and initiated a psychotherapy trial may be underappreciated. Nevertheless, systematically studying psychotherapeutic modalities is consistent with the medical model of psychiatry and the development of evidence-based approaches to treatment.

More faculty became involved in treatment studies in later years. Studies by John Newcomer and colleagues contributed to understanding the metabolic side effects of antipsychotic drugs. Together with Ginger Nicol, these investigators extended their studies to include chil-

dren and adolescents.

Eric Lenze, a clinical investigator interested in clinical trials, joined the faculty in 2007. He and his colleagues have initiated a variety of studies regarding anxiety and depressive disorders, and cognitive dysfunction in the elderly. These federally funded studies investigate various modes of treatment, including pharmacologic, psychotherapeutic, and mindfulness approaches. During the COVID-19 pandemic, Lenze and Angela Reiersen implemented an innovative, “contactless” clinical trial of fluvoxamine, an antidepressant, to investigate whether it reduced deterioration in patients newly diagnosed with COVID-19.

Investigators in the department initiated basic neuroscientific studies that have been critical in the development of new classes of medications. Elegant physiological studies by Charles Zorumski, Steve Mennerick, Yuki Izumi, and colleagues utilized in vitro approaches and patch clamp techniques to examine glutamate and gamma-aminobutyric acid (GABA) receptors. This work led to a better understanding of the molecular mechanisms underlying processes involved in cellular communication, including long-term potentiation, long-term depression, and metaplasticity. These processes are involved in learning and memory. Together with Doug Covey, an organic chemist and professor of pharmacology in the Department of Developmental Biology, they initiated studies of neurosteroids and oxysterols and found that several of these endogenously derived, steroid-based compounds influence receptor physiology. These investigations led to a collaboration with industry to develop new classes of medications. The work of these faculty members was instrumental in attracting the philanthropic support of the Taylor family, and the Taylor Family Institute for Innovative Psychiatric Research was established in the Department of Psychiatry in 2012. Work supported by this institute is leading to the development of medications for a variety of neurologic and psychiatric conditions, including treatment-resistant epilepsy and postpartum depression.

In addition to studies involving steroid-based compounds, department faculty have been studying agents that lead to rapid antidepressant effects, including

ketamine and nitrous oxide. These studies have benefited from the combination of basic science research by Charles Zorumski, Steven Mennerick, and Yuki Izumi with clinical studies conducted by Eric Lenze, Nuri Farber, and Charles Conway. Clinical studies of nitrous oxide trace their roots to preclinical studies from the Olney and Zorumski labs in the late 1990's, which showed that nitrous oxide inhibits NMDA-type glutamate receptors, and builds upon advances in the use of ketamine as a rapidly acting antidepressant.

Current faculty members are involved in research on a great variety of topics. Under the research heading of the departmental website (<http://www.psychiatry.wustl.edu/>), there is a section called “faculty by research interest.” It is interesting to note that many faculty members are listed in several groups. Below is a brief description of some key topics being investigated in 2022.

Alcohol/substance use and related disorders

Many faculty members are involved in investigations related to substance use disorders. There is an emphasis on alcohol, cannabinoids, nicotine, and opiates. A variety of genetic, epidemiologic, and genetic epidemiologic approaches are being utilized. In addition, opiate use is being examined via post-marketing surveillance studies. Public health aspects of the use of these substances are also being investigated. Work on nicotine dependence is leading to personalized approaches to treatment.

Anxiety disorders/stress-related disorders

Members of the faculty are studying anxiety in various patient populations, including children, pregnant women, and the elderly. Some are investigating PTSD and the relationship between trauma and anxiety. Various approaches are being used in these studies, including neuroimaging. In addition, various modes of treatment are being examined.

Basic mechanisms

Faculty members are utilizing a variety of basic laboratory approaches to study brain and behavior. Glutamatergic and GABAergic functions are being studied with approaches ranging from animal models

of illnesses to single channel electrophysiology techniques. Glial and stem cell biology is being investigated, and various aspects of synaptic plasticity are being studied. The roles of neurosteroids and oxysterols are being elucidated. The neurosteroid brexanolone has been approved for treatment of postpartum depression, and other neurosteroids and oxysterols are currently in clinical development. Work on neurosteroids and oxysterols at Washington University has been led by members of the Taylor Family Institute, which facilitates collaboration among faculty members from five departments at the school of medicine.

Behavioral medicine

Several studies are looking at the interface between medical and psychiatric disorders, including heart disease and depression. Studies involving obesity and other eating disorders are ongoing. Other areas under active investigation include the relationship between psychiatric medications and weight gain, behavioral aspects of movement disorders, and the influence of various conditions on cognition.

Brain stimulation

Faculty members are studying a variety of brain stimulation techniques, including electroconvulsive therapy (ECT), transcranial magnetic stimulation (TMS), and vagus nerve stimulation (VNS). Charles Conway oversees a large multi-site clinical trial examining VNS in treatment-resistant major depression.

Child & adolescent disorders

Faculty members in the Division of Child and Adolescent Psychiatry are using state-of-the-art techniques to study autism, ADHD, affective disorders, anxiety disorders, and psychotic disorders. Diagnostic and evaluative tools have been developed, including the Social Reciprocity Scale, which John Constantino developed to facilitate clinical diagnosis and studies of autistic traits. Imaging methodologies have been adapted to allow functional and static imaging studies in infants. Studies of normal development provide background for examining developmental patterns associated with various disorders.

Investigators are advancing the field of neonatal psychiatry by studying newborns.

Dementias and neurodegeneration

Faculty members are involved in studies of dementias, Parkinson's disease, and tic disorders. Imaging approaches are being used to examine the role of dopamine in a variety of disorders. Several members of the psychiatry faculty are part of the Knight Alzheimer's Disease Research Center at Washington University and are involved in clinical, genetic, and epigenetic studies of Alzheimer's disease.

Depression and mood disorders

Many faculty members are involved in studies of affective disorders. The department's ability to advance knowledge in this area has been greatly enhanced by an anonymous gift that established the Center for Brain Research in Mood Disorders in 2016.

Studies of depression span the entire life spectrum. Members of the child and adolescent psychiatry division have demonstrated that very young children can develop depression. Research involving the very young includes both imaging and treatment studies. Other faculty are studying geriatric depression and are developing a variety of treatment methodologies, including medications, mindfulness training, and lifestyle approaches.

Faculty members are involved in studies of treatment-resistant depression. Treatments such as ECT, TMS, VNS, ketamine, and nitrous oxide are being studied. As mentioned previously, the interface of depressions and other medical disorders is the focus of the behavioral medicine group.

Medication trials

As already mentioned, a variety of treatment trials are in progress in the department. Most are federally funded. Some involve psychotherapeutic approaches in combination with medications. Treatment-resistant major depression has been a focus of several of these studies. Pioneering work in the genetics of nicotine dependence is leading to personalized approaches to treat this complex

addiction; this work is a major collaboration among multiple departments at Washington University.

Neuroimaging

Many faculty members are using advanced functional and static imaging approaches to study psychiatric disorders. Washington University is a leader in the development of these techniques, and faculty are pioneering efforts to use fMRI to study brain connectomes in individual patients.

Personality disorders

Investigators are studying the psychobiology and neurodevelopment of both normal personality and personality disorders, drawing upon pioneering studies on temperament and character by C. Robert Cloninger and seminal work on emotional development in very young children by Joan Luby and colleagues.

Schizophrenia/psychotic disorders

Several faculty members are involved in studying psychotic disorders with a variety of genetic and imaging techniques. Daniel Mamah leads the Washington Early Recognition Center (WERC), which focuses on early recognition of individuals at risk for psychosis. Adam Kepecs, a neuroscientist recruited to Washington University through the BJC Investigators Program, has developed a rodent model of auditory hallucinations that has profound implications for understanding cognitive and brain network mechanisms contributing to psychosis.

Educational publications

Members of the department have authored many books. George Ulett and D. Wells Goodrich published *A Synopsis of Contemporary Psychiatry* in 1956. This concise, 243-page book was written to help psychiatric trainees, non-psychiatric physicians, and other healthcare providers better understand psychiatry. In the first edition's preface, the authors wrote, "We have tried throughout to present the eclectic approach to psychiatry that has been fostered through the teachings of Dr. Edwin F. Gildea." In the

introduction, the authors stated, "Little attempt will be made to present theoretical formulations of etiology. This does not mean that the text is solely descriptive but rather that a paucity of 'pat' etiological formulations will be given, emphasizing the authors' belief that the future of psychiatry will be more scientifically productive than in the past." This book predates efforts by Eli Robins, Samuel Guze, and George Winokur to change the direction of the field. Perhaps Gildea's eclectic and science-oriented approaches to psychiatry set the stage for their work; Gildea recruited all three. The sixth edition of this book (now 442 pages long) was published in 1979.

It is interesting to note that faculty members in the department did not emphasize the existence of this book to trainees. Although Ulett was a member of the department when the first edition was published, he was "off campus" at Malcolm Bliss Psychopathic Institute most of the time. Why this book did not receive more attention by department members is unclear.

Department faculty wrote or edited several other textbooks. One of the most influential was *Psychiatric Diagnosis*, published by Robert Woodruff, Donald Goodwin, and Samuel Guze in 1974. In 221 pages, the authors reviewed the scientific literature pertaining to the 12 diagnostic categories supported by scientific evidence. After Woodruff died, Goodwin and Guze published four more editions of the book. After Goodwin and Guze passed away, Carol North and Sean Yutzy, psychiatrists and former faculty members, published the sixth edition in 2010 and titled it *Goodwin & Guze's Psychiatric Diagnosis*. The seventh edition was released in 2018.

Between 1979 and 1985, Guze authored 10-12 issues of "Psychiatric Capsule and Comment" each year. In each issue, he summarized and then commented on six research articles. This publication was distributed to psychiatrists throughout the country. Guze's goal in writing these commentaries was to sensitize psychiatrists to the importance of psychiatric research and illustrate the medical model approach.

In 1992, Guze published a masterful 145-page book entitled *Why Psychiatry is a Branch of Medicine*. In this work, he summarized his arguments supporting the medical model approach to psychiatry.

Guze undertook another major educational project with the publication in 1997 of a department-written textbook entitled *Adult Psychiatry*. All 31 authors were current or former members of the department. In 2005, Eugene Rubin and Charles Zorumski edited a second edition of *Adult Psychiatry* after Guze's death.

Guze was a role model for Rubin and Zorumski, and they coauthored several didactic books of their own. In 2010, they published a book targeting a non-medical audience entitled *Demystifying Psychiatry: A Resource for Patients and Families*. This book won the 2010 American Medical Writers Association Medical Book Award in the public/health care consumer's category. In 2011, they published *Psychiatry and Clinical Neuroscience: A Primer*. The goal of this book was to help residents, medical students, and other interested individuals better understand the increasing role of neuroscience in psychiatric thinking.

In 2010, Rubin and Zorumski initiated a blog hosted by Psychology Today entitled "Demystifying Psychiatry," stemming from the aforementioned book. Their goal was to inform the public about interesting advances in psychiatry. They post at least monthly, which has resulted in more than 165 posts as of early 2022. Guze's "Psychiatric Capsule and Comment" was the inspiration for this project.

Faculty members have also authored many highly influential books related to their research. Several examples include:

Deviant Children Grown Up: A Sociological and Psychiatric Study of Sociopathic Personality published by Lee Robins in 1966.

Manic Depressive Illness published by George Winokur, Paula Clayton, and Ted Reich in 1969.

Male and Female Homosexuality published by Marcel Saghir and Eli Robins in 1973.

Criminality and Psychiatric Disorders published by Samuel Guze in 1976.

The Final Months: A Study of the Lives of 134 Persons Who Committed Suicide published by Eli Robins in 1981.

Psychiatric Disorders in America: The Epidemiologic Catchment Area Study edited by Lee Robins and Darrel Regier in 1991.

Feeling Good: The Science of Well-Being published by C. Robert Cloninger in 2004.

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SECTION 4

Looking Ahead

SECTION 4

Looking Ahead

CHAPTER 15

The Future of Psychiatry | A Personal View

Through the first quarter of the 20th century, most psychiatrists in the United States worked in asylums. Academic psychiatry departments became a reality in the U.S. during the mid-1900s, and the small number of psychiatrists who worked in these departments were involved in teaching and research in addition to clinical care. Beginning in the late 1940s, there was marked growth in the number of psychiatrists specializing in psychotherapeutically-oriented outpatient psychiatry. The number of patients in asylums decreased dramatically from the late 1950s through the 1980s as the number of patients treated in outpatient settings rose. During this time, academic departments of psychiatry also grew and the federal government provided higher levels of research funding. The National Institute of Mental Health (NIMH) was created in the late 1940s. In 1949, its budget was \$9 million. This increased to \$14 million by 1955, \$50 million by 1959, and \$189 million by 1964. By FY 2019, the budget appropriated for NIMH was \$1.8 billion.

During the early part of the 21st century, the field of psychiatry became increasingly attractive to medical students, and the number of students graduating from U.S. allopathic and osteopathic schools entering the field increased. There was also greater interest among research-oriented medical students. M.D.-Ph.D. graduates of Washington University's Medical Scientist Training Program (MSTP) are representative of this group of students. Washington University's MSTP began in 1969. In 1978, a graduate of the MSTP (the author) entered a psychiatry residency for the first time. Between 1978 and 1994, only three WU MSTP graduates entered psychiatry residencies. Over an equivalent period ending in 2019, more than 25 WU MSTP graduates chose to train in psychiatry.

A likely reason for the increasing popularity of psychiatry among research-oriented medical students is the remarkable progress in research involving basic and translational neurosciences, genetics and genetic epidemiology, epigenetics, brain imaging, and cognitive neurosciences. These advances are leading to new therapeutics.

Though no one has a crystal ball, I will describe where I think the field is headed over the next few decades. If nothing else, these predictions may prove humorous for

those reading this at the mid-century point.

The second psychopharmacology revolution

Advances in psychopharmacology exemplify progress in the field. The first psychopharmacology revolution occurred during the 1950s and 1960s with the discovery of antipsychotics, antidepressants, and anxiolytic agents, and the demonstration of the therapeutic efficacy of lithium. Around 2019, a second revolution began with the discovery of several medications that have very different mechanisms of action from earlier drugs. A ketamine-based medication was approved in 2019 for the treatment of depression. It and other ketamine-based medications are thought to exert their effects via the glutamate-based excitatory neurotransmitter system. Ketamine-based drugs work quickly (hours to days) and may prove useful in treating a variety of psychiatric conditions. Over the next decade, it is likely that a variety of medications will become available based on knowledge gained from ketamine therapeutics.

Neurosteroids are a group of neuroactive chemicals found in the central nervous system. New medications based on the structure of these endogenous substances

are being developed. Allopregnanolone is one such drug; it was approved for the treatment of postpartum depression in 2019. Over the next several decades, there likely will be a number of neuroactive steroids approved for the treatment of a variety of psychiatric and neurologic conditions.

Psychedelic agents also may become part of this second psychopharmacologic revolution. Evidence supporting their therapeutic utility is accumulating. Such medications probably will be administered in carefully monitored settings. Interestingly, one or two doses may be sufficient for long-lasting therapeutic effects.

Some new treatments may not require daily dosing. For example, allopregnanolone is effective as a one-time, 60-hour intravenous infusion. Certain ketamine-based treatments may not need to be administered daily. One or two treatments with psychedelic medications may have long-term benefit.

Some pharmacologic treatments may be effective when paired with psychologic treatments for certain conditions. For example, when memories are recalled, there is a period of time when they may be modified before being re-saved. This process is called memory reconsolidation, and it can be exploited for therapeutic purposes. Thus, it is possible that memories related to posttraumatic stress disorder can be modified by administering certain medications during a critical period just prior to activating memory recall and reconsolidation.

Interventional psychiatry

The field of interventional psychiatry will undergo dramatic advances over the next several decades. I believe that this area will become a subspecialty of psychiatry. Examples of therapeutic interventions used in psychiatry include electroconvulsive therapy (ECT), transcranial magnetic stimulation (TMS), vagus nerve stimulation (VNS), and deep brain stimulation (DBS). Although some of these procedures have been available for many years, advances in functional and structural neuroimaging, coupled with advances in interventional methodologies, will lead to the ability to target specific brain areas, including structures located deep in the brain.

Functional and structural imaging procedures are becoming increasingly relevant to psychiatry. This trend will continue, and in my opinion, it is likely that psychiatric imaging will become a subspecialty of psychiatry. These technologies will allow the mapping of neural networks in individual people. Structural and functional imaging tools will be used to advance psychiatric research and pinpoint brain regions that can be targeted by various interventional approaches.

Innovative treatment approaches

Personalized medicine

Over the next several decades, personalized treatments will increase. Biomarkers will be identified that correlate with treatment responsivity. Measuring such biomarkers in an individual patient will allow providers to develop a specific treatment plan that is most beneficial for that person.

Neuroplasticity

Brain cells interact dynamically with other brain cells. New connections can be formed, and older connections can be eliminated. This phenomenon is known as neuroplasticity. Some psychiatric treatments influence the wiring between cells, which subsequently modifies functional connectivity within and between neural networks. The process of neuroplasticity is an active area of brain research. More knowledge about the mechanisms underlying this process will likely open up new avenues for treatments.

Real-time interventions

Symptoms associated with psychiatric disorders fluctuate. As technologies advance, real-time assessments will become increasingly common. If symptoms cross a threshold of severity, real-time interventions will likely be possible. Such interventions may include immediate connections to online mental health workers or self-help groups. Rapid internet-based interventions tailored to the particular disorder may occur. As artificial intelligence advances, it will be interesting to evaluate the best

methods for intervention and whether some interventions can be delivered online via artificial intelligence delivery systems.

Advances in diagnosis

Before 1980, diagnoses were unreliable, meaning that two physicians examining the same patient often did not reach the same diagnostic conclusion. Since the development of DSM-III in 1980, psychiatric diagnoses have been based on descriptive criteria that were developed to maximize diagnostic agreement among clinicians and among researchers. The ultimate goal of psychiatric diagnosis is to classify disorders reliably based on underlying mechanisms. Recent work suggests that our diagnostic classification system, although reliable, may not properly reflect underlying pathophysiological mechanisms. A breakdown in the same brain system(s) may present as different illnesses in today's diagnostic system but be related mechanistically. Over the next few decades, substantial progress will be made in elucidating the relationships among brain mechanisms, clinical symptoms, and etiologies.

Treatments Settings

As late as 1940, two-thirds of the 2,295 members of the American Psychiatric Association worked in psychiatric hospitals. The use of psychotherapeutic approaches, especially psychoanalytic therapies, grew in the U.S. from the 1930s through the 1970s. Treating outpatients became more prestigious and lucrative than managing asylums. During the same time, the number of psychiatrists increased significantly, and most new psychiatrists focused their attention on treating patients in outpatient settings.

The number of patients in asylums dropped dramatically from the 1960s through the 1980s for a variety of reasons, including social movements encouraging treatment of chronically ill patients in community settings, the growth of psychiatric units in general hospitals, and the development of new and effective medications. Most patients were treated in outpatient and general hospital

settings. Because some patients with severe, chronic psychiatric illnesses were not able to be treated successfully in community settings, many became homeless and/or entered the prison system. Currently (early 2020s), psychiatrists treat patients in a variety of settings including outpatient offices, academic settings, acute care psychiatric units in general hospitals, and prisons. A small number work in inpatient facilities treating the severely chronically ill.

What will happen over the next 30 years regarding treatment settings? The current shortage of psychiatrists will persist for the foreseeable future despite the fact that an increasing number of medical students are entering the field. In order for the medical profession to help the large number of individuals with psychiatric disorders, many psychiatrists will work in integrated care settings. In such systems, primary care teams will manage patients with mild psychiatric disorders. Psychiatric nurse practitioners, physician assistants, and social workers will be members of primary care teams and will discuss patient management with psychiatrists on a regular schedule. Thus, psychiatrists will serve as advisors and educators. Psychiatrists will continue to provide direct care for more severely ill patients, but they will increasingly refer patients to providers with different skill sets. For example, appropriately trained therapists can administer formal psychotherapy. Some patients will be followed jointly by psychiatrists and physician assistants or nurse practitioners.

There will continue to be a need for long-term care facilities for some patients with severe, treatment-resistant disorders. Many hope that well regulated, chronic care psychiatric hospitals will re-emerge, and some psychiatrists will specialize in the care of patients with severe, treatment-resistant, chronic illnesses. These facilities will also conduct research involving the illnesses that lead to the need for such care.

General hospitals will continue to need psychiatrists to consult on medically ill patients. Many general hospitals will maintain a psychiatry or med-psych unit, and some psychiatrists will focus on these levels of care.

New diagnostic approaches and interventions will require facilities that can deliver short-term interventions

requiring professional supervision. Such facilities may be capable of providing brain mapping studies as well as interventional approaches discussed earlier in this chapter. In addition, certain new medications may need to be administered in well-monitored settings.

The number of elderly persons is increasing, and the population residing in nursing homes is expected to grow. There will be an increasing need for psychiatrists to work in conjunction with nursing home physicians. This may be accomplished by a mixture of direct care and indirect care via phone consultation with the treating physicians.

Prison psychiatrists will still be needed. This need should stabilize, or even decrease, if more chronic care psychiatric hospitals are established.

Advances in neurosciences, neuroimaging, and genetics, coupled with therapeutic advances, will continue to make psychiatry an exciting and attractive field for research-oriented physicians and those graduating from M.D.-Ph.D. programs. The number of academic psychiatrists who focus their careers on psychiatric education and/or research will grow.

Subspecialties

The American Board of Psychiatry and Neurology (ABPN) was formed in 1953–1954. In 1959, child and adolescent psychiatry (CAP) became the first ABPN-approved psychiatric subspecialty. In 1991, the first certificate in the new subspecialty of geriatric psychiatry was awarded. These subspecialties were followed by addiction psychiatry (1993), forensic psychiatry (1994), and consultation-liaison (psychosomatic) psychiatry (2005). Other subspecialty areas have multiple paths to certification. For example, board-certified sleep medicine physicians may have trained in internal medicine, neurology, pediatrics, or psychiatry. However, the number of psychiatrists entering such joint fields has been small.

As reported in the 2019 annual report of the ABPN, there were 38,890 active board-certified psychiatrists, 8,235 child and adolescent psychiatrists, 1,398 geriatric psychiatrists, 1,164 addiction psychiatrists, 1,321 forensic psychiatrists, and 1,172 consultation-liaison psychiatrists.

About 450 psychiatrists become board-certified in CAP each year. Only 46–73 psychiatrists become certified annually in each of the other four subspecialties. The total number of subspecialists with active certifications is likely to decrease over time because a significant minority elect not to re-certify after their ten-year certificates lapse. In my opinion, it is unlikely that geriatric psychiatry and psychosomatic psychiatry will remain viable as subspecialties. Whether or not addiction psychiatry and forensic psychiatry will remain viable is difficult to predict.

There will be new areas of psychiatry that will require extensive training. I predict that two such areas are psychiatric imaging and interventional psychiatry. Whether a subspecialty involving psychiatric imaging falls under the psychiatry umbrella, radiology umbrella, or both is hard to predict.

Public health psychiatry

During the early months of 2020, the COVID-19 pandemic struck the world. Life changed. It became clear very quickly that the usual way of thinking about health care and the usual methods of delivering health care were no longer adequate. The response of our department to the pandemic is documented in Chapter 11.

It is likely that the pandemic will lead to increased interest in public health. Some psychiatrists may decide to focus on public health psychiatry for their careers. Some areas where psychiatrists can make meaningful contributions include health care policy, improved health care delivery systems, preventative and wellness approaches, and public education.

Many of my predictions in this chapter are physician-centric in that new diagnostic and treatment approaches likely will require the involvement of physicians. Although psychiatrists will play roles in public health psychiatry, non-MD mental health professionals will be equally active in shaping new policies, wellness and preventative programs, and public education.

Summary

The field of psychiatry has an exciting future. New methodologies will be utilized to further our understanding of disorders involving emotion, motivation, cognition, and perception. Exciting new treatments will be developed. Psychiatrists increasingly will be recognized as physicians with expertise in brain-related science and in the assessment and treatment of disabling behaviors. Recognition of the importance of integrated care will lead to further psychiatric training of non-psychiatric physicians. Each member of mental health teams will play critical roles in helping patients with psychiatric disorders.

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CHAPTER 16

Concluding Thoughts

Robert Brookings reorganized the leadership of Washington University School of Medicine following Abraham Flexner's review, and he established a powerful executive faculty system that encouraged recruitment of strong academic leaders. With the support and encouragement of the Rockefeller Foundation, an independent Department of Neuropsychiatry was created in 1938. The initial leaders of this department stepped down in 1942, and Edwin Gildea was appointed department head. Gildea was a strong believer in the importance of psychiatric research. He was able to recruit a talented group of individuals and provide them with an environment that allowed them to initiate a paradigm shift away from psychoanalysis and toward an evidence-based, medical model approach.

The success of this paradigm shift was enhanced by the development of DSM-III. This document grew from a collaboration between department members and Robert Spitzer. The shift towards careful definition of psychiatric disorders coupled with the parallel psychopharmacological revolution led to psychiatry rapidly becoming a research-intensive, evidence-based field of medicine.

Members of the department continued to advance the field by making major research, educational, and clinical contributions. Over time, other departments of psychiatry adopted evidence-based, research-intensive approaches. Increasingly, department heads at top American medical schools were chosen at least partially based on their excellent research credentials. Being a psychoanalytically-oriented psychiatrist was no longer a prerequisite for heading a department.

This author believes that we are currently in the middle of two major paradigm shifts in the field of psychiatry. The first involves methods of delivering psychiatric care. Partially in response to a critical shortage of psychiatrists, psychiatric care will increasingly be provided in collaborative care models. Psychiatrists will focus their attention on the care of patients with complicated psychiatric symptomology, while primary care physicians will manage patients with more straightforward psychiatric disorders in collaboration with mental health providers, including psychiatrists.

The second paradigm shift involves the impact of neuroscientific research on elucidating the pathophysiological underpinnings of psychiatric symptoms. Advances in molecular and systems neuroscience coupled with advances in genetics will likely lead to different approaches to the diagnosis and treatment of illnesses. This paradigm shift is being led by several great departments of psychiatry, including the department at Washington University in St. Louis School of Medicine.

APPENDIX A

Endowed Professorships in the Department of Psychiatry

The Department of Psychiatry has attracted many talented faculty members. Complete faculty lists are available in the annual bulletins of the medical school. The Bernard Becker Medical Library has digitized the bulletins going back to 1914; they can be accessed online at http://digitalcommons.wustl.edu/med_bulletins/.

The Department of Psychiatry has been the beneficiary of a number of endowed professorships over its history. Brief descriptions of these professorships will be provided in this appendix along with lists of recipients. Several of these faculty members have been profiled previously in this manuscript. Others will be profiled here. At the present time (early 2022), 13 department members hold endowed professorships.

The **WALLACE AND LUCILLE K. RENARD PROFESSORSHIP IN PSYCHIATRY** was the first endowed professorship established in the department. Between 1941 and 1949, Wallace and Lucille Renard made several major gifts to the Department of Neuropsychiatry, including funds that enabled the building of Renard Hospital. The professorship that bears their names was established in 1941. The first recipient was Edwin Gildea. When Gildea retired, Eli Robins became the next Renard Professor. He held the professorship until his retirement at which time C. Robert Cloninger was honored with the Renard Professorship. When Cloninger retired in 2020, Eric Lenze was appointed the Renard Professor.



Eric Lenze

Eric Lenze received his M.D. from Washington University in 1994 and completed psychiatry residency training at WUSM in 1998. After completing a fellowship in geriatric psychiatry at the

University of Pittsburgh Medical Center, he remained at that institution first as a research fellow and then as a faculty member. He returned to the WUSM Department

of Psychiatry in 2007 as an associate professor and was promoted to full professor in 2011. Lenze's main research areas include the development and testing of treatments for depression and anxiety, as well as studies related to enhancing brain health in older adults.

The **BLANCHE F. ITTLESON PROFESSORSHIP IN CHILD PSYCHIATRY** was the next endowed professorship established in the Department of Psychiatry. The Ittleson family formed the Ittleson Family Foundation in 1932, and Blanche F. Ittleson served as a trustee of the foundation for many years. Because of her interest in the mental health of children, she was instrumental in funding this professorship in 1956. E. James Anthony was the first Ittleson Professor. In 1983, Felton Earls became the next to receive this honor. Subsequent recipients were Richard Mattison and Richard Todd. John Constantino is the current Ittleson Professor.

Spencer T. Olin and his wife, Ann, established the **SPENCER T. OLIN PROFESSORSHIP IN PSYCHIATRY** in 1974. Spencer Olin served the St. Louis community in a variety of important roles, including as a Washington University trustee and Barnes-Jewish Hospital board member. The family has been generous to the university



Andrew Heath

in donating their time, energy, and financial support over the years. Samuel Guze was the initial recipient of the Olin Professorship. After Guze's death in 2000, Andrew Heath was named the next recipient.

Heath received his D.Phil. in psychology from the University of Oxford in England.

He joined the department in 1989 as an associate professor and became a full professor in 1996. He is an internationally recognized leader in the fields of genetic epidemiology and alcoholism research. He developed the Missouri Family Registry, a major conduit for twin studies at Washington University, and serves as director of the Midwest Alcoholism Research Center.

In 1986, George Couch and his family endowed the **GREGORY B. COUCH PROFESSORSHIP IN PSYCHIATRY** in memory of Gregory Couch. When establishing the Couch Professorship, the family stipulated that it should support a faculty member involved in research related to



John Csernansky

schizophrenia. John Csernansky became the first recipient of the Couch Professorship in 1990. Csernansky received his M.D. from New York University and completed his psychiatry residency at Stanford. He joined the department as an associate professor in 1990. His research interests include

neuroimaging of neuropsychiatric disorders, particularly schizophrenia and Alzheimer's disease, and animal models of neuropsychiatric illness. Csernansky left the department in 2008 to become chair of the Department of Psychiatry and Behavioral Sciences at Northwestern University Feinberg School of Medicine.

John Newcomer became the second Couch Professor. Newcomer received his M.D. from Wayne State University and completed his psychiatry residency and a research fellowship at Stanford. He joined the department as an instructor in 1990 and achieved the rank of professor in 2005. His research interests involve psychopharmacologic treatment of schizophrenia. Newcomer left the university in 2011 to become senior associate dean for clinical research and professor of psychiatry at the University of Miami.



John Newcomer



Deanna Barch

The third and current Couch Professor is Deanna Barch. As of this writing, Barch is chair of the Department of Psychological and Brain Sciences in the School of Arts and Sciences in addition to being a professor in the Departments of Psychiatry and Radiology. She received her Ph.D. in clinical psychology

from the University of Illinois at Urbana-Champaign in 1993. She came to Washington University in 1998 as an assistant professor of psychology in the School of Arts and Sciences. In 2008, Barch was promoted to professor of psychology and was named director of the Conte Center for the Neuroscience of Mental Disorders in the Department of Psychiatry. Her research is focused on studying connections among cognition, emotion, and brain function to better understand deficits in behavior and cognition characteristic of illnesses such as schizophrenia and depression. Barch has the distinction of being chair of one department and holding an endowed chair in another. This arrangement is unusual and demonstrates the collegial relationships among departments. In 2015, the Department of Psychology changed its name to the Department of Psychological and Brain Sciences.

The **SAMUEL AND MAE S. LUDWIG CHAIR IN PSYCHIATRY** was established at Jewish Hospital in 1989. Members of the Ludwig family were active in the Jewish Federation of St. Louis. They were strong supporters of Jewish Hospital, and this support will continue into perpetuity with their generous gift of an endowed professorship. Following the closure of the Department of Psychiatry at Jewish Hospital, the Ludwig Chair became the Samuel and Mae S. Ludwig Chair in Psychiatry at Barnes-Jewish Hospital. The first recipient of the Ludwig Chair was Theodore (Ted) Reich. As already described, Reich became head of psychiatry at Jewish Hospital in 1976. He was a world leader in psychiatric genetics.

Following Reich's death in 2003, Alison Goate became the recipient of the Ludwig Chair. Goate received her doctoral degree from the University of Oxford in



Alison Goate

England. She joined the department in 1992 as an associate professor of genetics in psychiatry. She became a professor in 1998. She is a leading expert in the molecular genetics of psychiatric and neurologic illnesses, and her work on the molecular genetics of Alzheimer's disease and other dementias has had

major impact in this field. Goate left the university in 2014 to become the founding director of the Ronald M. Loeb Center for Alzheimer's Disease at the Icahn School of Medicine at Mt. Sinai in New York.

Following Goate's departure, Joan Luby was named the next recipient of the Ludwig Chair. As mentioned earlier, Luby is a pioneer in the description and validation of clinical depression in preschool age children and an internationally known expert in the developmental psychopathology of depression.

Samuel Guze and his spouse, Joy, established the **SAMUEL B. GUZE PROFESSORSHIP** in 1998. The first and current recipient of this professorship is Charles Zorumski.

John Feighner established the **JOHN P. FEIGHNER PROFESSORSHIP IN NEUROPSYCHOPHARMACOLOGY** in the late 1990s. As mentioned earlier, Feighner was a resident and chief resident in the department in the 1960s. He was the first author of the classic 1972 paper that established diagnostic criteria for major psychiatric illnesses. He later became president and director of the Feighner Research Institute in San Diego and made many contributions to the field of neuropsychopharmacology. John Olney was installed as the first Feighner Professor in 1999. As described earlier, Olney's pioneering work initiated the concept of excitotoxicity. Following Olney's death in 2015, Ted Cicero became the next Feighner Professor. Following Cicero's retirement in 2020, Steven Mennerick was named Feighner Professor.

The Washington University Medical Center Alumni Association established the Alumni Endowed Professorship program during the 1977–1978 academic year. The goal

of the program is to create one professorship in each department at the medical school. Funding comes from contributions by medical school alumni and former house staff. The **ALUMNI ENDOWED PROFESSORSHIP IN PSYCHIATRY** is the tenth endowed professorship established through this program. Laura Bierut was installed as the first Alumni Endowed Professor in Psychiatry in January 2014.



Denise Wilfley

Denise Wilfley was installed as the **SCOTT RUDOLPH UNIVERSITY PROFESSOR** in May 2014. This professorship resides with the university and not with the Department of Psychiatry. Wilfley received her Ph.D. in counseling psychology from the University of Missouri, Columbia in 1989. After faculty positions

at Yale University and San Diego State University/UCSD, she joined the Department of Psychiatry at Washington University in 2002 as associate professor. She was promoted to professor in 2003. Wilfley's research focuses on examining the causes, prevention, and treatment of obesity and eating disorders, particularly in children and adolescents.

In 2018, Tamara Hershey was installed as the **JAMES S. MCDONNELL PROFESSOR OF COGNITIVE NEUROSCIENCES IN PSYCHIATRY AND RADIOLOGY**. This professorship was established in 2001. Hershey received her Ph.D. in clinical psychology (neuropsychology track) from Washington University in 1996. Following a postdoctoral fellowship with Joel Perlmutter at Washington University, she became a clinical supervisor in the Department of Psychology. She joined the Department of Psychiatry as an instructor in 2001 and reached the rank of professor of psychiatry, neurology, and radiology in 2012. Hershey accepted the position as Lab Chief of



Tamara Hershey

the Neuroimaging Laboratories in the Department of Radiology in 2017 and became a dual member of the Departments of Psychiatry and Radiology. She was appointed co-director of the Neuroscience Ph.D. Program in the Division of Biology and Biomedical Sciences the same year. In 2018, she was named director of the McDonnell Center for Systems Neuroscience. Hershey's research interests include the neuropathophysiology underlying cognitive and mood aspects of Parkinson's disease and other dopaminergic disorders, and the neuropathophysiological and behavioral effects of obesity and diabetes.



Doug Covey

The Taylor family established the **ANDREW C. AND BARBARA B. TAYLOR DISTINGUISHED PROFESSOR OF PSYCHIATRY** in 2019. In 2012, the Taylor family had established the Taylor Family Institute for Innovative Psychiatric Research. The family made another generous donation in 2018–2019, which

included funds to create this professorship. Douglas Covey became the inaugural recipient of this professorship. Covey obtained his Ph.D. in chemistry from Johns Hopkins University. He joined the Department of Pharmacology at Washington University in 1977. Covey is a natural products chemist and an international expert in the chemistry of cholesterol and cholesterol-derived messengers. He and his team have developed several compounds in a class known as neuroactive steroids. His work has been critical in the discovery of new therapeutic agents. He has been a vital member of the Taylor Family Institute since its inception.

In 2020, Carlos Cruchaga was named the **BARBARA BURTON AND REUBEN MORRISS III PROFESSOR**. He obtained his Ph.D. in biochemistry and molecular biology from the University



Carlos Cruchaga

of Navarra in Pamplona, Spain. After completing a postdoctoral fellowship in the Division of Neurosciences at the University of Navarra, he did a postdoctoral fellowship in the Department of Psychiatry at WUSM. He became an assistant professor in the department in 2010 and professor of psychiatry, neurology, and genetics in 2019. His research involves identifying novel pathways implicated in neurodegeneration.



Adam Kepecs

Adam Kepecs was named the **ROBERT J. TERRY PROFESSOR OF NEUROSCIENCE** in 2021. He obtained a B.Sc. in mathematics and computer science from Eötvös Loránd University in Budapest, Hungary, in 1997 and a Ph.D. in neuroscience from Brandeis University in 2002. In 2007, he became an

assistant professor at Cold Spring Harbor Laboratory in N.Y. He became a professor there in 2016 and was appointed chair of their neuroscience program in 2018. He joined the departments of neuroscience and psychiatry at Washington University in 2020 as professor and BJC Investigator. His research focuses on elucidating neurobiological and computational processes involved in decision-making and cognition, and applying the results from these studies to better understand the pathophysiology of psychiatric symptoms.

APPENDIX B

Research Endowments, Major Gifts, and Endowed Lectureships

Research Endowments/Major Gifts

Since 2012, the department has been fortunate to receive several research endowments. These funds are critical in supporting new and innovative research directions.

In 2012, Andrew and Barbara Taylor and the Crawford Taylor Foundation established the Taylor Family Institute for Innovative Psychiatric Research with a gift of \$20 million. The purpose of the institute is to facilitate the discovery and development of new treatments for psychiatric disorders. (More information is available at: <https://taylorfamilyinstitute.wustl.edu/>) The initial focus of investigators associated with the institute has been the study of a group of compounds known as neurosteroids. Charles Zorumski is the first and current director of the institute.

In 2018, the Taylor family increased its support for the institute with an additional \$10 million gift. A portion of this gift was used to establish the Andrew C. and Barbara B. Taylor Distinguished Professor of Psychiatry.

In 2016, the Department of Psychiatry received a \$5 million gift from anonymous donors to establish the Center for Brain Research in Mood Disorders (C-BRiMD). As stated on the C-BRiMD website (<https://mood.wustl.edu/>), “The center leverages the intellectual and physical resources of the Department of Psychiatry and the greater neuroscience community at Washington University as a multidisciplinary, state-of-the-art research and clinical program focused on severe mood and anxiety disorders. C-BRiMD serves as a vehicle for novel human research and treatment development for serious psychiatric illnesses.”

In addition to their support in establishing the Gregory B. Couch Professorship, George and Debra Couch have annually donated funds that have been instrumental to the development of the Couch Scholars Program. These funds are used to help support junior faculty during the critical early stages of their career development.

In 2022, the Hermann Center for Child and Family Development was established with a \$15 million gift from Bob and Signa Hermann. The center combines the world-class research of the Division of Child and Adolescent Psychiatry with a new model for behavioral health care focusing on the whole family. It supports the division’s work in developing evidence-based strategies to prevent the development of behavioral disorders in higher risk children and delivering treatment to those who develop these disorders.

Endowed Lectureships

The Department of Psychiatry is fortunate to have nine endowed lectureships, which help support visits by speakers from other institutions. In addition to presenting talks at Psychiatry Grand Rounds, the invited scholars have the opportunity to interact individually with members of the department.

The lectureships have been funded by friends and family of the individuals listed below.

- Eli Robins Lecture – established 1976.
- Edwin F. Gildea Lecture – established 1977.
- Alex H. Kaplan Lecture – established 1986. Alex Kaplan, M.D., was a psychoanalyst with a long history of involvement with the department that included teaching residents and medical students.
- Frank O. Shobe Lecture - established 1987. Frank Shobe, M.D., trained at Washington University and was a member of the voluntary psychiatry faculty for over 35 years. Friends, patients, and family honored him by establishing this lecture in his name.
- Samuel B. Guze Lecture – established 1990.
- Peggy Sansone Memorial Lecture – established 2001. This lectureship, together with the Sansone Family Center for Well-Being, was established in memory of Peggy Sansone by her family.
- Marjorie Frank Lesser Resident Invitational Lecture – This lectureship was established in 2002 as the Resident Invitational Lecture. It was supported by Marjorie Lesser through the Barnes-Jewish Hospital Foundation from 2011 to 2018, and it was renamed the Lesser Resident Invitational Lecture during that time to acknowledge her support. This lecture series continues to the present.
- Lee Robins Lecture – established 2004.
- Dr. Adolfo and Fanny Rizzo Endowed Lecture – established 2018. Adolfo Rizzo was a child and adolescent psychiatrist who practiced in St. Louis for three decades and had a clinical appointment in the Division of Child and Adolescent Psychiatry. He established this endowed lectureship with a charitable gift through his estate.

Lists of the speakers of each of these lectureships are available in the history section of the department's website: <https://psychiatry.wustl.edu/about/history-timeline/>

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