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Introduction

Psychiatry is the medical field that deals with mental illness. A woman who finds herself depressed and anxious will seek help from a psychiatrist. A young man who hears voices when no one is present, speaks incoherently on occasion and declines all social invitations may likewise go to a psychiatrist, or be taken to one by his mother. The psychiatrist will interview the person, order some basic medical tests, and perhaps review a brain scan. Once the psychiatrist has diagnosed a specific disorder, treatment begins. Most patients are told to take a drug targeting some specific area of the brain or some specific neural pathway. New drugs are constantly being developed, in many cases by psychiatrist-scientists with expertise in genetics, neuroscience and related biomedical fields. This is modern psychiatry. It developed gradually, beginning in the second half of the nineteenth century.

Everyone is familiar with the great medical discoveries of the nineteenth century – antiseptic surgery, x-rays, vaccines, general anesthetics. Psychiatry had no such discoveries, at least none in the usual sense of the word. Nineteenth century psychiatry saw advances, but few came from the laboratory. Instead, the history of psychiatry in the nineteenth century is mostly the history of ideas and the men (only men) who came up with them. By promoting the idea that insanity is a disease, not a moral punishment or a social deviance, these men lessened stigma and improved patient care. By demonstrating that madness is not unitary, but rather a diverse group of separate illnesses, they instituted major changes in psychiatric diagnosis. And, with the idea of bringing science into psychiatry, they broke ground for the molecular, genetic and neurobiological findings that now offer real hope for better treatments.

Before psychiatry, there was simply medicine, and from its beginning, a small minority of physicians specialized in mental illnesses. In the period from the Renaissance up until the beginning of the nineteenth century, physicians provided services to individuals and families, but there was not yet a medical field of psychiatry. There were no hospitals reserved for psychiatric patients and no professors of psychiatry in universities. Patients, usually described as “mad”, were kept at asylums located far from cities.

They received custodial care, but were offered little in the way of treatment. The few doctors whose responsibility it was to manage the asylums pondered the nature of what they confronted. They asked questions. Why do some patients improve with time whereas others fall into irreversible dementias? Can anything be done to help them? Does punishment work? Does reward work? What causes madness? Is the defect in the body or in the mind?

Psychiatry became recognized as a medical specialty when it turned the foregoing questions into scientific questions. This happened first in Europe, and mostly in Germany after the German victory over French forces in the Franco-Prussian War. The new German nation that formed after the war was flush with money and confidence. By investing heavily in transport systems, factories and educational institutions, it fostered a social environment and infrastructure ideal for science and medicine. With scientific projects springing up everywhere, psychiatrists at first observed, then participated.

The central figure in this book is Emil Kraepelin, the man most responsible for creating modern psychiatry. While Sigmund Freud was also highly influential, his contributions were different from Kraepelin's and, overall, less enduring. Whereas Freud adopted a psychological approach to mental illness, Kraepelin became an advocate of biological psychiatry. Freud's patients had relatively mild disorders (neuroses), while Kraepelin's patients had more severe illnesses (psychoses) such as schizophrenia (which he called *dementia praecox*) and bipolar disorder (which he called manic-depressive insanity). Over time, Freud's innovative method of treatment, psychoanalysis, lost favor within the psychiatric profession, even as his broader ideas became absorbed into popular culture. Contrastingly, Kraepelin's classification of mental illnesses remains embedded in the widely used *Diagnostic and Statistical Manual of Mental Disorders*.

Although Kraepelin was the main actor, he was by no means the only person bringing about changes. His support for a science-based psychiatry was shaped by the writings of Wilhelm Griesinger, a German internist who extolled the benefits of basic biological research for medical advancement. As well, Kraepelin's ideas on disease diagnosis drew upon the novel insights of Karl Kahlbaum, a somewhat eccentric and reclusive psychiatrist from eastern Prussia.

Two other men, also associated with Kraepelin, are featured in this book. Bernhard Gudden was Kraepelin's mentor early in his psychiatric career. Gudden was schooled in the old asylum-based psychiatry, but he became a pioneer of the new hospital-based psychiatry. Besides introduc-

ing Kraepelin to clinical psychiatry, he also taught neuroanatomy to Kraepelin's long-time colleague, Franz Nissl. Unfortunately, Gudden suffered an early, tragic death in circumstances indicative of psychiatry's growing social power.

Nissl was a psychiatrist who, like many other German psychiatrists at that time, mixed clinical care with neuroanatomical research. Whereas Kraepelin relished the intellectual challenges of clinical psychiatry, Nissl lived to work in the laboratory. He made a few discoveries, but he also squandered time trying to prove untenable hypotheses. Thus, he was not nearly as successful, nor as influential, as Kraepelin. Nevertheless, because of his close personal relationship with Kraepelin, and because he participated in the campaign that demonstrated the brain's astonishing complexity, I highlight his life and work.

Germany was not the only country in which modernization occurred, nor was neuroanatomy the only pursuit of the scientifically minded nineteenth century psychiatrists. The Parisian Phillipe Pinel and his pupil Jean-Etienne Esquirol instituted reforms and began to identify and define specific mental illnesses. The task of diagnosis was to prove especially troublesome for many psychiatrists, and it became an obsession of Emil Kraepelin. Also in France, the theory of hereditary degeneration was born. It was a seductive speculation that seemed to explain the prevalence of insanity within certain social classes.

Degeneration theory spread rapidly throughout Western Europe, but less so in America, which was still relatively isolated from European developments. Although Benjamin Rush and Dorothea Dix accomplished important reforms in patient care, Americans did not significantly advance the science of psychiatry until European ideas arrived in America early in the twentieth century.

Readers may be surprised to find fulsome descriptions of scientific experiments in this book. I have included them because science is the hallmark of modernization in psychiatry, and it was not all brain research. Kraepelin, for example, ardently pursued experimental psychology, believing it to be the key for understanding mental illness. Nonetheless, for most of Kraepelin's peers, neuroscience was the main attraction.

Before Galileo, it was assumed that all celestial objects circle around the earth. God's works were perfect and the earth was at the center of the universe. The telescope changed everything, because it allowed Galileo to see a different kind of universe. Several centuries later, neuroanatomists began seeing small nerve cells in the human brain, thanks to newly powerful

microscopes. The outward looking telescopes helped humans find their place in the universe, whereas the inward looking microscopes provided clues to our mental lives.

I tell the stories of the men and their ideas in roughly chronological order, albeit with sidetracks. My account of early modern psychiatry begins in the early 1800s and ends at midnight, New Year's eve, in the year 1899. The final chapter differs from all preceding chapters. It brings nineteenth century European advancements to America and updates them to present day concerns; intermixed with that, I offer my thoughts on the future of psychiatry.

No full-length biography of either Kraepelin or Nissl has yet appeared, although Kraepelin did leave an autobiography of sorts in his *Memoirs*. Elsewhere, the lives of Kraepelin and Nissl are documented in their research articles, letters and administrative papers. Many important works of the nineteenth century were published originally in German, but most have been translated into English; when available, I have relied on these translations.

I am indebted to the intrepid scholars whose research in this treacherous field enabled the present work. Several of their books are listed in the Recommended Readings. The Osler Library of the History of Medicine at McGill University was a great resource for both printed and online sources. I thank Dr. Maike Rotzoll, who hosted my visit to Kraepelin's former clinic at the University of Heidelberg and allowed me to photograph documents held in the clinic's archive. Ursula Voss translated a nearly impenetrable article from the *Heidelberger Tageblatt*, and Rüdiger Krahe helped with other translations. Karen and Gene Brewer reviewed an early version of the manuscript. Special thanks to Volkhard Buchholtz, publisher and editor *außergewöhnlich*. Dorothy Chase was encouraging and supportive from beginning to end.