Who owns the mind? In every age, we humans—self-observing pri-
mates that we are—struggle to understand our own mental pro-
cesses. In every age, we humans dream up a compelling model
to capture our deepest thoughts, to explain our motives and yearnings, and to
attempt to cure psychic pain.

In the old days of Western religion, under the authority of God, prophets and
priests forged this explanatory vision, in which madness could be seen as a gift
from heaven, a manifestation of religious ecstasy, a conduit for divine revelation.

Then, just a few centuries ago, philosophers armed with pure logic swept them
away: psychosis could be used as a method of inquiry into the nature of reality,
revealing new truths about the essence of the world and our existence or, more
challengingly, used to throw our usual assumptions and perceptions into disar-
ray, to make it impossible to take our normal world for granted, to amplify Car-
tesian doubts. For a while, philosophers ruled.

In our postmodern age, though, psychiatrists have pushed priests and philos-
ophers aside, since we—and I speak as a psychiatrist—carry the banner of science.
And science, by measurement, observation, and theory, prevails.

Which paradigm of the mind is most dominant? Who cares who owns the
mind? Everyone, whether we admit it or not. Those who define the mind—and the
causes of its perturbations and cures—become arbiters of truth, definers of nor-
mality and disorder, dictators of treatment goals and methods, and possibly
sources of inspiration.

But here’s the thing: though psychiatrists now own the mind, we can’t make
up our minds about the mind. What is the mind? A strange persisting state of being
that emerges from our hundred-billion-cell organ, connected by 100 trillion
synapses, yes, but what is its essence, what are its organizing principles? And especially when its functioning goes awry: what has gone wrong? Our ruling explanation, our entire worldview, our mindset, as it were, keeps changing—one dream, one vision, one paradigm rashly sweeping away the last.

This book is about three revolutionary models of the mind that have emerged, ruled for a brief time, and—one after another—been largely replaced, in a matter of only a few decades. Each model is, in a sense, a vision, a fantasy that organizes the brain’s unfathomable complexity in a simplified but compelling way.

But first, let me introduce myself: I am a psychiatrist, trained mostly in New York. I have been on the Columbia University medical faculty since 2000, conducting psychiatric research in mood disorders, supervising residents, and practicing clinical psychiatry. In addition, for two decades I have taught preclinical P&S medical students in the Narrative Medicine Program in a creative nonfiction class, The City of the Hospital, which uses narrative methods to explore the worlds of illness and healing. I have published widely in both psychiatric and literary journals and have written several popular books.

My research has focused on what can be called “clinical therapeutics”—studies of psychotherapy, psychopharmacology, and combined treatments—and has used neuroimaging, MRI, and PET scans to measure the effects of psychiatric treatments. Clinical therapeutics is the amazing and daunting art and science of incorporating the best from research and theory into daily work with patients and determining which treatments work best for which disorder.

Prevailing paradigms and models are necessary to guide such research. They are even more important for treating patients. As a practicing physician it is impossible to hold yourself apart from the moment, to reject all models of body and mind. Instead, you are impelled by the necessity of making decisions with limited knowledge in order to help the person in front of you. This is the essence of medical practice, including the specialty of psychiatry. As a doctor, you thus need a working model, a vision to organize the reality that you face daily.

Yet as a practicing psychiatrist it has been dizzying to live through the transitions from one model to the next, in which the ground suddenly shakes and a new system rises up, replacing our previous assumptions and uprooting our complacencies.
Hence my career, like that of many of my colleagues, has been one of continual revolution and upset. Each model of psychiatry has its strengths, its weaknesses and inadequacies, yet each model appears to represent an advance upon previous ones. Or does it? Hence the turmoil and excitement, the chaos and revisioning of what is before our eyes, that each new model brings in. The daily questions, what to do with this patient, how to help this person in front of us who is suffering, flailing, drowning, are answered so differently by each model that it can be hard to know what to do. But we must decide before the end of the hour.

And on a broader level, we wonder: Does each new model actually represent an advance from the previous ones? Does it improve patient outcomes? Does it expand our understanding of the mind and brain in a meaningful way? That is what I hope to explore in this book.

So what are the three visions, the three revolutionary models of mind and brain, that have ruled psychiatry since I began training in the late 1970s?

First came the Age of the Couch. It’s hard to imagine today, but in the 1970s psychoanalysis still ruled in America. Its priests were ardent Freidians, psychoanalysts with elegant Park Avenue offices, and they governed via haughty, interminable silences. Their rule began in the early twentieth century and peaked in the 1950s and ’60s, but they still held power when I was training in the 1970s and ’80s. Every young intellectual yearned to lie on tufted upholstery three or four times a week year after year, unscrolling fantasies before an impassive listener who could free them from early traumas. The mind could be liberated through free association, by regression, and by interpretation of transference and then purged by catharsis.

For decades, this vision was nowhere more vibrant than at the Payne Whitney Clinic in New York City. There, a dozen disciples were admitted to each psychiatric residency class for a four-year period of indoctrination. Those were the ranks I gladly joined in the summer of 1980.

Sure, we were eager to analyze our psychotherapy patients in order to cure their neuroses. But we also yearned to cure ourselves. If we did not enter psychoanalysis on our own volition, each of us was practically compelled to become a patient by our supervisors’ earnest advice: personal analysis was the sole way to become a capable psychiatrist. Succumbing eagerly or reluctantly, we found ourselves reclining upon burgundy Ultra Suede or chocolate leather and spent hours tripping royally through our earliest memories, exploring family secrets, our sex- and drug-obsessed adolescences, and the seamy depths of our own minds, hoping
to join our professors and psychotherapy supervisors in a state of godlike self-actualization.

But here’s the thing: ownership of the mind is never secure. It is constantly in contention, at risk of insurrection. And indeed, the seeds of disruption had been planted even before we settled into our first year of residency training.

In July 1980, when I began residency training, the *Diagnostic and Statistical Manual*, third edition, the *DSM-III*, had already been published by the American Psychiatric Press. With 494 pages and 265 diagnoses, the *DSM-III* quickly replaced the 1968 *DSM-II*, with its 182 diagnoses in a mere 134 pages. The *DSM-III* was shockingly free of psychoanalytic ideas. Thus, said our psychoanalytic supervisors, it was doomed. With its takeout-menu diagnoses, in which you’d choose one symptom from column A, two from column B, and three from column C to come up with your dinner order, it totally ignored the unconscious mind, where all disorder originated. But we gradually became aware that the *DSM-III* was fated to gut our Freudian complacency.

This is why: If you could have a menu for diagnoses, so could you have a menu of treatments to heal these serious disorders—a menu for major depression, for bipolar disorder, for schizophrenia. These new treatment menus, it soon became clear, rarely included the heretofore gold-standard treatment of psychoanalysis. Our analytic supervisors grieved openly, shocked that the latest *DSM* announced the dawning of a new paradigm in which they played almost no role.

The second vision is one that I have struggled to name. Was it the vision of the *DSM* diagnosis? The vision of targeted psychotherapy? Or the vision of the pill—the FDA-approved drug, the sleek capsule, the chemical apotheosis of twentieth-century American pharmaceutical and capitalistic ingenuity that soon began to dominate our work with patients? In a way, it was all three, as played out in the setting of the modern psychiatric clinic. Clearly, not only did the *DSM-III* spawn a host of new diagnoses (all urgently demanding to be treated, of course!), but it also birthed a host of new treatments, both psychotherapies and medications, all neatly sorted by disorder.

And what treatments they were.

The new drugs that we pioneered in the 1980s and ’90s in the psychiatric clinic were mostly capsules, not pills. Potent compounds, they were sealed in high-tech
multicolored plasticine, ready to deliver their mute cargo of tiny globules optimally to the right part of our patients' digestive systems—like tiny Apollo 13s and Geminis taking astronauts deep into space. Around 1989, inspired by the psychiatrist Peter Kramer, we clinicians—for we took pride in being creatures of the clinic—began resonating to the new SSRIs, the selective serotonin reuptake inhibitors, including Prozac and a half dozen related drugs, which alleviated not only depression but everything from panic attacks to bulimia to body dysmorphic disorder.

The new DSM-III-inspired psychotherapies were equally revolutionary. (Suffice it to say, they excluded psychoanalysis). Every month, we scanned the “Green Journal,” the American Journal of Psychiatry, for the latest updates on the talking cure. There we found rigorous new outcome studies of interpersonal therapy, cognitive therapy, exposure therapy, dialectical behavioral therapy, even streamlined supportive therapy. IPT, CBT, DBT: we threw their initials around, the new “evidence-based therapies.” Suddenly there were dozens of scientifically conducted studies showing how targeted therapies could remedy the major DSM-III diagnoses, whether depression or panic disorder or schizophrenia.

New psychiatric clinics sprang up everywhere to treat the hordes of newly DSM-diagnosed patients with our snazzy new treatments. The vision “condensed,” as my analytic supervisors would put it, around that object: the clinic. The clinic was the holy space where the diagnoses derived from the DSM—and the neuroactive chemicals developed by Big Pharma and the new manualized treatments devised by psychotherapy researchers—could all be put to the test. Only in the clinic could the DSM-inspired doctor make precise diagnoses and treat their patients with fancy new interventions. And then—stand back as lives (we hoped) were transformed!

Hence, it is best to call the second vision the Age of the Clinic.

During this dazzling period, I was working in one of the best clinics in New York City, first as a staff psychiatrist, then as assistant director, and then as director, overseeing treatment for thousands of patients, an ever-growing enterprise that eventually had over fifty thousand visits per year. Proudly, we called ourselves “clinicians,” swearing allegiance to the DSM-III and its ever-plumper updates: the 1987 DSM-III-R (revised edition) with 292 diagnoses in 567 pages, the 1994 DSM-IV with 410 diagnoses in 886 pages, and then the DSM-IV-TR, the weirdly named but barely changed “text revision” of IV.

Soon, though, and perhaps inevitably, along with the triple triumphs of our DSM diagnoses, our focused therapies, and our potent pharmaceuticals, a
nightmare began to emerge. A countervision, an insurrection, a chaotic uprising. Was it creative chaos, from which some vastly improved new order was imputed to gradually emerge? Or was it merely bloodshed?

The clinic’s heyday lasted barely a decade. By the mid-1990s, cursed by a first wave of American health-care reform, we clinicians faced crushing rules dictated by newly powerful health insurance companies, which began a merciless process of “managing” care.

It was war. A massive collision between Wall Street’s desire for maximal economic return and the clinic’s lofty ideals—in which patients could be given enough time and attention to get a proper diagnosis and receive treatment from expert doctors and therapists until they began to recover. Instead of a therapeutic paradise, we were suffocated by the number crunchers, and the clinic soon became a sweatshop. Overwhelmed by massive caseloads, our therapists began shortening sessions, seeing patients by the group or every quarter hour, squeezing more bodies into each eight-hour day. We psychiatrists saw patients once per month, then every two or three months for “med checks” to renew their Celexa or Risperdal supplies—for fifteen, then ten, then five minutes, until finally we were basically waving a prescription pad in front of a crowded waiting room. Goodbye analytic couch; goodbye luxurious endless emotionally charged silences. And hello fluttering prescription pad and drive-through psychotherapy!

And then, in the early years of the twenty-first century, my third decade of practice, yet another vision began to emerge. We abruptly found ourselves living in the era of the whole human genome, of “personalized,” or what was soon renamed “precision,” medicine and the visualization of “task-based” brain-center activations by a dazzling array of neuroimaging techniques using MRI and PET scanning machines. Not only that, we were clearly at the first stages of trying to tweak our brains’ “epigenetics” and “retuning” aberrant brain circuits by direct-current electricity or profoundly disruptive drug infusions. We are now, in short, immersed in a neuroscience revolution in psychiatry.

Is this third era the “Age of Neuroscience”? Willy-nilly, since the year 2000, I’ve joined a whole corps of science-obsessed psychiatrists, which is just now coming into its own as “clinician-neuroscientists”, as “circuit psychiatrists.” However poorly prepared we may be to understand or incorporate advances from
neuroscience, we do our best to progress into the new era. We are forever scrutinizing the research literature, reevaluating our methods, squinting yet again at our patients: we seek to tunnel our way into a truly scientific psychiatry. True, our two most powerful instruments, the MRI and PET, are both “scanners”—but so are we.

Hence, I’ve settled on calling our emerging new vision the “Age of the Scanner.”

The physical soul of this era is, as I’ve said, embodied in our brain-imaging machines. The magnetic resonance imaging (MRI) scanner cleverly uses computers to generate images that show not only the structure of the brain but also its connectivity, and, more amazingly, it lets us see neural circuits at play as blood surges to particular hubs. Our positron emission tomography (PET) scanners use radioactive tracers to measure chemical levels deep inside our subjects’ brains without probes or needles or neurosurgical instruments and can thereby test the effects of disorders and their treatments on levels of chemicals in the brain.

To me, the MRI is the more revolutionary of the two technologies. Using fluctuations in magnetic signals, the MRI can capture the way that thoughts, moment by moment, alter brain activity. It can demonstrate, how, over time, our patients’ customary behaviors sculpt the brain’s insulated white-matter circuits and can resize and reshape their very brain cells. In the old days, our patients lay upon an overstuffed couch, letting their minds wander, awaiting their psychoanalyst’s wise interpretation. Today, our research patients lie stretched upon a scanner bed, peering through goggles at scenes of virtual reality, instructed to cogitate and problem solve, or told to close their eyes and summon feelings of sadness or euphoria or simply let their minds wander.

We psychiatrists-turned-neuroscientists have begun to find specific brain areas that are activated when our patients learn to juggle or when they wrestle with moral dilemmas or when they are stirred by sadness or anxiety. Psychiatric journals are now chock-a-block with gene heatmaps, colorful brain images, and complex statistics. The Age of the Scanner has brought psychiatry more fully into the world of medicine, ever closer to finding pathological anatomy and disease-associated genes.

Already, the Age of the Scanner has begun to deliver its first practical treatment advances. We are now starting to trace the brain circuits that underlie the DSM psychiatric disorders and to devise ways to modify their activity. We intend these new drugs, such as ketamine, and brain-stimulation devices, such as the
transcranial magnetic stimulator, to rapidly reset these aberrant circuits. We prescribe ancient approaches like mindfulness meditation and yoga, which have been shown to have a profound capacity to retune these circuits. Furthermore, neuroscience inspires us to take new looks at existing medications, whether FDA-approved drugs, drugs of abuse, or plant-based compounds that have been used for millennia in indigenous spiritual experiences, and to employ them for brain-circuit retuning. We continually translate our latest findings from the lab to patient care and back to the lab again.

Already this latest vision has become the most compelling one of all.

But one more thing, oddly enough, connects the Age of the Couch and the Age of the Scanner.

The story.

The psychoanalyst and the behavioral neuroscientist are strange bedfellows in their appreciation of the value of stories. Partly, this has to do with the never-ending talk of psychotherapy, the healing dialogue between doctors and patients, which, once started, rarely terminates. For the psychoanalyst, dreams provide direct entry to the unconscious. Interpreting dreams and fantasies—recasting and retelling these unconsciously derived tales—was the method by which patients sought cure.

Surprisingly perhaps, stories are also central to neuroscience-based research in the twenty-first century. Today, in the Age of the Scanner, neuroscientists speak of “autobiographical narrative” as a way of organizing the brain. Stories (whether heard or told) allow our brains to connect and make sense of wildly diverse experiences. To the neuroscientist, stories propel the brain’s continual and unending process of restructuring and reconnecting itself.

To make sense of changes in the psychiatric profession over the past several decades, to explore these three visions, it is perhaps inevitable that this book should be a collection of stories. Both neuroscientists and psychoanalysts prize autobiographical narrative for its organizing power for mind and brain.
These fourteen tales are indeed autobiographical narratives, written from my perspective as a psychiatrist practicing in New York City from the early 1980s to the present day, a physician who spends his time working with patients, doing research, and helping run clinics and hospitals. More precisely, I see them as adventure stories. The book documents my own internal battles as explorations of the self, full of wonder and angst and occasional surprising revelation, as well as my vicissitudes in what the poet and physician William Carlos Williams called “the city of the hospital”: amid labor strife, cutbacks, and mutating bureaucracies, my fellow doctors and I find amazing science and unexpected poetry in hallways and waiting rooms, encounter brilliant and not-so-brilliant students, and have to reckon with our own limitations and frailties. And of course, my daily adventures center on the innumerable patients a doctor encounters every day, sometimes baffling and frustrating and often inspiring.

My approach here differs from other recent and classic books about psychiatry. Thomas Szasz’s 1961 classic *Myths of Mental Illness* and David Heath’s more recent *Pharmageddon* are compelling polemics that add little to daily clinical practice. Jeffrey Lieberman and Ogi Ogas’s 2015 *Shrinks: The Untold History of Psychiatry* is a broad history of the field that induces useful humility in present-day enthusiasts. Alan Frances’s 2013 *Saving Normal* is a well-deserved critique of *DSM* overreach that can temper a doctor’s diagnostic enthusiasms. This book is not intended as a scathing exposé; instead, it is an effort to explore the lived experience of practice—by a doctor who is in practice—over decades of ever-changing theoretical models.

My writing has been strongly influenced by literary physician-writers, including the surgeon Richard Selzer, the immunologist Lewis Thomas, the infectious disease specialist Abraham Verghese, and especially the poet-physician William Carlos Williams, whose *Doctor Stories* features an engaging and highly imperfect protagonist. *Letter to a Young Female Physician*, by the Massachusetts General Hospital internist Suzanne Koven, continues this medical literary tradition, with an increasingly urgent goal of rehumanizing medical care. Rehumanization of care is crucial for psychiatry, where many practitioners have abandoned psychotherapy and become mere pill pushers and many people struggle to find accessible, affordable, and humane treatment.

The fourteen tales of in this book span the three-plus decades since I entered residency training and began to work as a practicing psychiatrist and then as a
psychiatric researcher. The organization is thematic and roughly chronological, from the Age of the Couch, framing my experiences from 1980 to 1994; to the Age of the Clinic, from 1985 to 2000; and the Age of the Scanner, from the late 1990s to today. Ages, like stories, often overlap, since it is rare for one age to end abruptly before the next begins. Instead, they often coexist for a time, reflecting natural reality. My goal in telling stories is to engage deeply and shed light on serious issues within the recent history of psychiatry, writing from the crucial perspective of the actual implementation of care using three vastly different theoretical models.

In telling these stories, I realize that each age has remade me. I began as a psychoanalyst in the making; I then became an enthusiastic clinician, a devotee of the DSM method for diagnosis and designing new treatments; and now, in recent years, I have been remade yet again as a circuit psychiatrist, exploring neuroscience’s tools as they begin to be applied to the consulting room and now, very suddenly, to the unexpected new world of psychedelic research.

As such, these stories are efforts to explore the different visions of these three revolutionary eras of the mind. Each of them, I believe, describes a voyage in foreign territory, an investigation into something unknown, and an amazing adventure in which my colleagues and I—and our patients and research subjects—all seek to define the bounds of new continents.
THE COUCH, THE CLINIC, AND THE SCANNER