The Emergence of Psychiatry: 1650–1850

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Western psychiatry emerged as a medical specialty caring for the mentally ill over the course of the late 18th and early 19th centuries. This emergence was a contingent process, dependent on the co-occurrence of three historical developments that together shaped the young discipline. The first was the rise of the mind as an entity with numerous active faculties in the conceptual space between the body and the Christian soul. Only by the latter half of the 18th century was it common to conceptualize conditions like mania or melancholy as *mental* illnesses. The second advance critical to psychiatry's proto-specialty status, with its increasing focus on a mechanistic understanding of disease, was the rejection of humoral theories of insanity in favor of the brain and nerves as the seat of madness. The third development was the rise of the asylum. Only in dedicated institutions could mad-doctors be exposed to large numbers of the insane, permitting the development of a specialized clinical vocabulary grounded in faculties of mind, which led to new nosologic systems. The decline of humoral medicine, with its purges, bleeding, and emetics, and the urgent clinical need for care produced, in early asylums, the first novel treatment from the young specialty: moral therapy. We tell this story focusing mainly on the work of five philosophers and physicians: Descartes, Willis, Locke, Boerhaave, de Sauvages, and Cullen. Throughout its history, psychiatry has struggled with its sometimes disconjugate goals of understanding both mind and brain, with alternating efforts to expel one of these tasks from the profession. A historical perspective demonstrates that psychiatry is a profession inextricably linked to these two contrasting projects—and, indeed, jointly constituted by them.

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> This development [of proto-psychiatry] went hand in hand with new ways of thinking, amongst laity and professionals alike, which increasingly regarded disturbed cognition and conduct as posing distinctive problems beyond the province of both traditional divinity and general physick [medicine]. In particular, currents in metaphysics and medicine were proposing fresh paradigms of mind and body, behavior and self, thereby opening a new field eventually to be denominated the psychiatric (1).

In psychiatry today, we usually diagnose our patients on the basis of symptoms described to us using a mental vocabulary—e.g., despondent mood or auditory hallucinations—even while we often attribute their problems to as yet poorly characterized neurobiological abnormalities. We treat our patients with diverse methods, some seeking to intervene directly on the mind and others on the brain. The resulting tension between biomedical, brain-oriented psychiatry and psychological, mind-oriented psychiatry (including diverse flavors of psychotherapy, employing cognitive, behavioral, and psychodynamic orientations) has been observed, theorized, and broadly decried for decades (e.g., 2–7). In this essay, we aim to show that the tensions between these approaches have roots deeply embedded in the history of Western psychiatry. We cannot address this expansive genealogical root system in any comprehensive way here; our intention is to show that attempts to "heal" psychiatry, as well as attempts to provide new or radical approaches to the integration of biomedical and social models of psychopathology, would benefit from recognizing the long reach and the particular sources of this tension. Attention to the history of the field shows that psychiatry was *never* solidly settled as solely a mind-based or a brain-based discipline; the field is instead the result of centuries of uneasy but productive alliances between physicians and philosophers, alienists and neurologists, and clinicians and brain-based scientists. Accordingly, we believe that reform should be forward-looking, focused on finding a unified model that incorporates the essential tensions foundational to psychiatry's creation. Looking backward to the historical sources of the divide will help diagnose its causes and envision a productive future.

We focus here on three interrelated historical developments that, we argue, can illuminate important aspects of the state of contemporary psychiatry. The first was the creation of a conceptual space for the disordered mind, which had to be located in between the soul—the province of Christian theology—and the body, wherein the objects of early modern

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medicine were situated, studied, and classified (8, 9). This change paralleled the transfer, in Western Europe, of expertise in and the care of the mentally ill from religious to medical authorities (10–12). With this new conceptual space came a novel vocabulary in medical discourse, derived from contemporaneous philosophical accounts of the mind, to describe the forms of madness. The availability of this vocabulary was foundational to the explosion in psychiatric nosology in the 19th century.

The second development critical to psychiatry's proto-specialty status within 18th-century medicine was agreement on an organ about which to specialize. Earlier accounts of mental illness followed Galen in explaining its etiology in humoral imbalance, located within the body in vapors, biles, and other fluids. As medicine moved toward a mechanistic understanding of disease and interest in pathogens and dysfunctions grew, influential physicians and philosophers began to study the brain and form hypotheses about the operation of its parts. Anatomists in the 17th century had traced the nerves to the brain, conclusively refuting the Aristotelian theory that the mind was located in the heart. Over the next two centuries, the brain played a central role in the creation of the specialties of neurology and psychiatry, just as the eye was then doing for early ophthalmology (13). New theories of brain function provided a groundwork for explanatory models for psychopathology.

The third critical development was the emergence of the private mad-house and public asylum, constructed in large numbers over the 18th and 19th centuries, which provided novel employment and entrepreneurial opportunities for physicians in a competitive marketplace (1, 14, 15). Such institutions gave mad-doctors exposure, for the first time, to substantial numbers of insane patients, providing the opportunity to develop new taxonomies and therapies. In their earliest days, the therapies employed by these proto-psychiatrists—purges, induced vomits, and bleeding—were based on the humoral theories widely used by all physicians. A critical boost to the new proto-specialty was the development of specific therapies that treated the psyche, focusing on both the doctor-patient relationship and the therapeutic milieu (14).

MIND, BODY, AND BRAIN IN THE 17TH CENTURY: DESCARTES, WILLIS, AND LOCKE

While madness has always been with us, in much of Europe and the United States a medical specialty that cares for the mentally ill only arose between the mid-18th and the mid-19th centuries (1, 9, 11, 12, 16). It began with a small cadre of physicians in the latter 1700s, whose livelihood included treating the insane in private and public asylums. These physicians began to publish, first, case histories—partially as advertisements of their therapeutic skills—and then textbooks (17–21). By the mid-19th century, the formal signs of the emerging profession were evident in Germany, France, Britain, and the United States with the widespread development of nosologies, the publication of specialty journals, and the founding of professional organizations (1, 11, 12, 15, 22).

Meanwhile, within the diverse and often warring Christian factions of 17th-century Western Europe, there was heated debate over the nature of the human soul—over whether it was of material or immaterial substance, and whether it was immutable, like God, or destined to decay, like mortal flesh. Against this background, novel theories of the relationship between the mind and the body emerged, often in a medical context. Here we focus on three central figures, all natural philosophers with strong interests in both medicine and the mind: Descartes, Willis, and Locke.

French mathematician and philosopher René Descartes (1596–1650) argued that only the immaterial soul thinks, and that the body itself operates according to the principles of mechanical physics. Nonetheless, while allowing that the soul is separable from the body after death, Descartes held that its functions in this life depend on the structure of the brain and nervous fluids, what at the time were called animal spirits. "There is within us," he wrote, "but one soul, and this soul has no diversity of parts" (23, p. 346). The mental faculties, however, can be affected by mechanical changes in the body. Accordingly, Descartes attributed madness to structural disorders of the brain and animal spirits, rather than to a pathology of the immaterial and incorruptible soul (24, p. 160).

Animal spirits also played a central role in the work of the widely celebrated English physician Thomas Willis (25) (1621–1675), whose *Cerebri Anatome* was published in 1764. While, like Descartes, Willis attributed some intellectual operations to an immortal and immaterial soul, unlike Descartes, he also recognized a lower "sensitive" soul, which allowed him to explain many mental faculties in neurological terms. The animal spirits, for Willis, had their own form of agency, and could themselves be overtaken by passions: "Madness often comes about because the [animal] spirits give in to a powerful passion against the better judgment of the rational soul, or because they extend themselves too far out of hubris" (26). Willis's influential localization of functions within the brain further fleshed out his theory of madness as a problem of the spirits within the nervous system, and particularly within the brain.

While a student at Oxford, the physician and philosopher John Locke (1646–1704) transcribed Willis's lectures in 1664–1665 and was familiar with his theory of the rational and sensitive souls. However, in *An Essay Concerning Human Understanding*, first published in 1690, Locke stated that he would not "meddle with the Physical Consideration of the Mind," thus distancing his approach to mental illness not only from that of Descartes but also that of Willis (27, I.i.2, 43). Instead, Locke considered madness to be a disorder of the ideas of the mind, rather than the animal spirits of the brain. He saw that the appropriate level of causal explanation was not that of the nerves and spirits, but what we would now refer to as psychological factors—the connections between our ideas. Madmen, Locke believed, "argue right from wrong

Principles" and "by the violence of their Imaginations, having taken their Fancies for Realities, they make right deductions from them" (27, II.xi.13, 161). In other words, Locke thought that madmen had not lost their ability to reason per se, but rather had certain mad ideas that led them to irrational conclusions. Locke identified the "violence" of the madman's imagination with a particular sort of "association" of ideas resulting from traumatic experience, obsessions, or bad habits, and stressed that most people, otherwise quite sane, have some associated "mad" ideas (27, II.xxxiii.1–4, 394–395).

Despite Locke's immediate influence on politics, education, and philosophy, his influence on the medicine of the mind was limited in the first half of the 18th century (9). Herman Boerhaave (1668–1738), professor of medicine at the University of Leyden in the Dutch Republic and the most influential physician of that age, accepted the Cartesian dualism of a mechanical body and an immaterial thinking mind or soul. Critical to our story, Boerhaave argued that this soul had no place in medicine. He held that mental causes were outside the boundaries of a physician's concern: "It is not the Business of the Physician to be acquainted with what the Mind is, how it passes from one thought to another [for] … the Knowledge of them [is] of no Use to the Physician, so far as they have no relation to the Body …" (28, §696.5, p. 270). Judgments of reality depend entirely upon the strength of the corporeal impression in the brain. When the brain impression becomes as strong from internal causes as it had been from external ones, it is impossible for even the wisest person to tell the difference. He discusses the delusion of "an eminent Gentleman" otherwise completely sane, who was convinced that he could not walk because "his Legs were two Straws," and could not "by any Arguments be persuaded from his Error" (29). He was only cured by the staging of a mock robbery in which, through terror, he was forced to save his life by fleeing on foot. Significantly, Boerhaave sees nothing in this cure but a "violent motion in the Body which makes a stronger Impression" than the deluded idea which had become lodged in the man's corporeal imagination. But as we will see in the following section, this mechanistic physicalism gave way in the following decades to a variety of schools of thought that brought the mental back in, following up on Locke's insight that mental illness is a problem of associations of ideas, as well as Willis's case for the crucial role played by active forces in the brain.

MADNESS AND LOCALIZATION IN THE BRAIN

In the latter decades of the 18th century, conceptual space was created that permitted alienism to develop as a medical profession. We tell this story through two physicians, French and Scottish, both internationally known medical nosologists: François Boissier de Sauvages (1706–1767) and William Cullen (1710–1790). In his *Nouvelles Classes de Maladies* of 1732 (30), de Sauvages included "*maladies spirituelles*," mental illnesses, as one of 10 overall classes. He further divided this class into three species: disorders of the imagination, judgment, and will. In this early work, he followed Boerhaave in treating these disorders as simply resulting from changes in the brain. However, while Sauvages retained these divisions in a second and far larger work on nosology, *Nosologie Méthodique*, published in 1763, he rejected what he took to be the materialism of Boerhaave (31, p. 594) and argued that patients' abuse of their free will plays a central role in the cause and cure of many mental disorders (31, p. 602). "Madness," he wrote, "depends on the dual conditions of the mind and the body" (31, p. 602). As the historian of psychiatry Akihito Suzuki writes, "In defiance of Boerhaave's dictum, Sauvages's physicians no longer limited their target of intervention to the body of the [insane] patient, but looked at and acted on the moral and mental part" (9, p. 431). This was a critical development indirectly enabling the later emergence of psychiatry.

William Cullen, who held consecutive chairs of chemistry, institutes (theory) of medicine, and practice of physick at the University of Edinburgh, was also a leading medical nosologist in his day. His *Synopsis Nosologiæ Methodicæ*, first published in 1769 (32), was translated into French by Pinel (33), whose own theory of classification of diseases was substantially influenced by Cullen (34), as was that of the leading late-18th-century Italian physician Vincenzo Chiarugi (35) and that of Cullen's former student Benjamin Rush (36), a leading figure in 19th-century American psychiatry. Cullen was, by way of these influences, a key transitional figure from the world of 18th-century general medicine to the development and growth of alienism—the treatment of mental illnesses—in subsequent decades.

Cullen held that the nervous system plays a central role in the physiology of the animal economy. But, like Sauvages, this did not prevent him from ascribing a central causal role to the mind and its ideas. At the beginning of his book on physiology, Cullen defined the subject as "the doctrine which explains the conditions of the body and of the mind necessary to life and health" (37, IV, p. 3). In lectures elaborating on this definition, he stressed the importance of taking into account the influence of the mind on the operations of the body—a theme he elaborated upon, especially when he came to discuss the physiology of the brain (37, CXVI ff.). While opposing the then common animist view that held that an immaterial soul controlled all body operations (38), he argued that, given the difficulty of accessing the fine mechanisms of the brain and nervous fluid, it was necessary to take into account human psychological factors in medicine (37, CXVII and CXXII).

When Cullen turned to the classification of insanity in his influential *Synopsis Nosologiæ Methodicæ* (1769) (32), he placed it in the "order" of "Vesaniae" (insanity) and characterized it as a disease in which "the judgment [is] impaired, without pyrexia [i.e., fever] or coma" (39, p. 130). He divided mental illness into three classes—amentia ("imbecility of the judgment, by which the relations of things are either not perceived, or not remembered"), melancholia ("partial insanity, without dyspepsia"), and mania ("universal insanity") (39, pp. 131–133). In each case, insanity is identified as a dysfunction

in judgment, a mental faculty that is, at least in principle, correlated with a specific pattern of excitation within the brain.

In his *First Lines of the Practice of Physic* (first published in 1777), Cullen argues that the hallucinations and the erroneous passions that often accompany insanity should be separated from the disorder of judgment that constitutes the essence of the disease itself (40, pp. 237–238). While maniacal patients often ramble from one subject to another, their preoccupation

> often turns upon a mistaken opinion of some injury supposed to have been formerly received, or now supposed to be intended: and it is remarkable, that such an opinion is often with respect to their former dearest friends and relations (40, pp. 270–271).

They subsequently develop exorbitant anger, and "their false judgments lead to some action which is always pushed with impetuosity and violence." Following Locke, Cullen held that in mania disordered judgment often results from a false and confused association of ideas (40). It also involves "an interruption or perversion of the ordinary operations of memory, the common and necessary foundation of the exercise of judgment" (40, p. 259), perhaps reflecting what today we call "delusions of reference." In his discussion of melancholy, Cullen focuses on the predisposing cause of the disease, which he describes as a "serious thoughtful disposition, … disposed to fear and caution" (40, p. 284). When "seized with an anxious fear, … much indulged, as is natural to such persons, [it] may easily grow into a partial insanity." Still, melancholy, like mania, is primarily a disease of the intellectual faculty, of judgment, rather than a disease of affect. While Cullen turned to traditional treatments, including restraint, confinement, and "forcing such persons to some constant uniform labour" (40, p. 283), he does suggest in the case of melancholy that "it will be generally sufficient to acquire some awe over them … to check the rambling of their imagination, and incoherency of judgment" (40, pp. 282–283)—a treatment famously used later by the Reverend Francis Willis in the treatment of mad King George III (41).

Cullen himself speculated that it was an "inequality in the excitement" of the nervous fluid in different parts of the brain that caused delirium (40, p. 264). He held that the evidence for this existed in cases of transitory insanity in which the patient eventually fully recovered (40, p. 269). But he also argued that until we learn more about the brain and nervous system, "the conditions of the human mind must engage our attention" (42, pp. 5–6). Here we see Cullen anticipating the struggles that psychiatry would face in treating mental conditions that were, in practice, irreducible to physical mechanisms.

Alongside these influential nosologies, physicians began to attribute different pathologies to different parts of the brain. In 1798, John Haslam, the physician and apothecary to Bethlem Hospital, who is often cited as offering a vivid description of the first case of schizophrenia clearly recognizable by modern standards (43), published a book containing 29 cases of insanity with descriptions of their clinical presentation and course, alongside postmortem examinations of their brains (18). Thomas Arnold followed in devoting 46 pages of his 1806 text on insanity (44) to "appearances on dissection" of the insane, much of which was focused on the brain. An important contribution to this anatomical tradition of dissection (completed without modern histological techniques or standardized protocols for the treatment of postmortem samples) was the discovery of signature pathological structures in cases of general paresis of the insane by Antoine Laurent Jessé Bayle in 1822 (45). Jan Goldstein describes a German physician who, reflecting on the vogue among researchers in the 1840s for specialization on increasingly narrow targets, mused that "every organ has its priest" (11, p. 60). A focus on brain correlates of insanity, therefore, was present decades before Griesinger's famous declaration that insanity was a brain disease (46).

MORAL INSTITUTIONALIZATION AND TREATMENT

Having reviewed the emergence of a conceptual space for the disordered mind over the 17th and 18th centuries, and the concurrent increased focus on the brain as the locus of mental illness, we turn to the third key development that laid the groundwork for the emergence of modern psychiatry: moral therapy. At the same time as Cullen was discussing madness in the context of general medical practice, mad-doctoring was actively practiced in both public and private asylums. These institutions provided the basis for the clinical training of specialists, who in turn developed, out of necessity, new treatment protocols. William Battie (1703–1776), physician of St. Luke's asylum in London (founded in 1750 as a rival to four-century-old Bethlem Hospital, infamously known as "Bedlam"), published "A Treatise on Madness" (47) in 1758, in which he argued for the limited use of traditional medical cures, including the use of bleeding and the herb hellebore (47, pp. 94ff.). Increasingly, private asylums advertised humane treatment for the insane (1, pp. 127–129).

In the 19th century, legislation for the humane treatment of the insane resulted from the work and publications of French physician and alienist Philippe Pinel (1745–1826) and English Quaker philanthropists William and Samuel Tuke (1784–1837). In the first edition of his *Traité Médico-Philosophique sur l'Aliénation Mentale, Ou La Manie* in 1801 (21), Pinel described the new methods employed at the Bicêtre Hospital in Paris—what came to be referred to as "moral treatment." He castigated earlier writers on insanity for relying on "fruitless theory," which resulted in "inefficient treatment," rather than careful observation of their patients. Pinel foregrounded social and personal causes of the disorders of his patients, criticizing the previous reliance on drugs and confinement in the treatment of the insane. These approaches contributed to the "violence of the symptoms" of mania, he argued. Similarly, in his *Description of the Retreat, a Quaker Institution Near York, for Insane Persons, of the Society of Friends* (1813) (48), Samuel Tuke promoted the "superior efficacy, both in respect of cure and security" of the

methods employed by his grandfather William Tuke, the tea merchant who in 1796 established the York Retreat. Like Pinel, Samuel Tuke described the failure of most pharmaceuticals like opium in treating the insane and argued that traditional methods of restraint only exacerbated the disease of maniacal patients. The mad should be spoken to as rational agents, Tuke argued, and it should be the desire for esteem, rather than fear, which motivated them toward "self-restraint" and control of their own conduct. There were, of course, differences between the "moral treatment" of insanity at Paris and York. While Pinel restricted religious exercises on the ground that they promoted dangerous ecstasy, regular readings of the Bible took place at the York Retreat, and the simplicity of Quaker manners was encouraged (49).

Humanitarian treatment of the insane was also stressed by the Italian physician and alienist Vincenzo Chiarugi, whose three-volume treatise *On Insanity* (35) was published in 1793–1794, before the works of Pinel and Tuke. Chiarugi wrote that "it is a supreme moral duty and medical obligation to respect the insane individual as a person" (50, pp. 63–64). While he introduced reforms into the mental hospital of Bonifazio in Florence, where he was the medical director, he was less influential than Pinel and Tuke as a result of the political circumstances in Italy at the time, as well as the limited translations of his work. Interestingly, as a follower of Morgagni, Chiarugi was convinced that his most important contribution lay "in the one hundred anatomo-pathological reports of his mental patients."

In both England and France, as well as the United States, moral therapy became increasingly influential in the first half of the 19th century (11). It is, we suggest, of substantial historical import that with the rise of moral therapy, proto-psychiatry gained its first specialized therapy—a psychosocial one. The school of thought that located mental illness in pathological ideas, rather than physical changes in the brain, enabled this shift. At the same time as moral therapy was gradually adopted in asylums throughout the English-speaking world, mental illness was formally medicalized as all asylum directors were required to be physicians. While similar outcomes were arrived at in France, it was only after a long and bitter struggle with the Catholic Church (11). The intertwining of the rise of psychiatry as a medical discipline and the asylum movement for the care of the insane is best illustrated by the original names for the Royal College of Psychiatry and the American Psychiatric Association, founded, respectively, in 1841 and 1844: the Association of Medical Officers of Asylums and Hospitals for the Insane, and the Association of Medical Superintendents of American Institutions for the Insane. The inclusion of the term "Medical" in both titles is no accident.

CONCLUSIONS

From our perspective in the early years of the 21st century, the structure of modern psychiatry can seem natural, as if it were preordained as the only possible profession that could have evolved to study and care for the mentally ill. Considering the history of psychiatry helps to dispel that limiting view. Our discipline arose from a conjunction of historical forces, each of which might have evolved differently. Psychiatry has its current structure in part because over the course of the 17th and 18th centuries, changes in the post-Enlightenment religious and philosophical projects allowed for the consideration of the mind within a naturalistic framework—though one molded within still powerful theological constraints. Prior to the 17th century, it was impossible to talk about mental disorders in a strict sense because no such thing as a diseased mind could be comprehended (9). At the same time, the brain came into focus as an object for study, whose parts could be explained like those of any other complex organ. At this contingent nexus of historical developments, a specialty treating psychopathology could emerge that, as a result of its concomitant attention to the brain, was able to remain within the medical profession—rather than trailing after the mind toward what would have become a very different profession of moral therapeutics. It could easily have been otherwise.

Philosophy played an important role in the earliest phases of the development of psychiatry by providing conceptual tools and vocabulary that 18th-century physicians could use to describe the mental aberrations they were trying to treat. From these descriptions emerged the first modern psychiatric categories, constituting a separate nosologic field from diseases that were simply somatic, and therefore demanding specialist knowledge for their diagnosis and treatment. From the time of Descartes and Locke in the 17th century, the alliance between philosophers and mad-doctors continued for centuries, in England (51) as well as in France, where Pinel strongly advocated for philosophical reading as a key feature of clinical training for alienists (34, 52). "All Enlightenment-inspired physicians," Goldstein writes, "liked to think of themselves as *médecins-philosophes*. But the psychiatrists were, and throughout the 19th century would remain, the most relentlessly philosophical of the breed" (11, p. 240). The alliance of these two fields has diminished in the 20th and 21st centuries, as psychiatry strove to be closer to somatic medicine; but the residue of earlier philosophical commitments has remained and could well do with a renewed engagement.

Despite origin stories that describe psychiatry as marching progressively from mind-based theories to brain-based theories, its historical evolution included foundational commitments both to the mind and to the brain. In a manner belied by the frequent current focus only on psychiatry's biomedical roots, the role of the mind was, historically, an essential component of psychiatry's medical identity. For centuries, doctors and alienists diagnosed and treated patients whose primary disorders involved dysfunction in key mental faculties such as judgment, mood, and volition. Given this, we should avoid the pressures to reject mind-based practices and research in an attempt to become, as some have advocated, clinical neuroscientists (45); we have no reason to think psychiatry will reach its apotheosis by completely embracing the brain sciences. Similarly, we

should scrutinize desires to reject brain-based perspectives on mental illness, as did psychoanalysis during its domination of American psychiatry in the mid-20th century, for the same reason—the history of psychiatry has always included attention to both mind and brain, and excluding one perspective would transform it entirely, depriving it of the stimulating struggle toward integration.

Our first specialized therapies acted in the realms of what was at the time called the "moral," and what we might now call the psychological or the social. But to cement our medical identity, we adopted with equal zealousness our grounding in the brain. These two goals, of understanding the mind and understanding the brain, have struggled for dominance throughout psychiatry's development—indeed, our history is one of alternating moments where it seemed certain that one aspect of the profession or the other would soon be expelled for good. With some distance, though, we can see that ours is a profession inextricably linked to these two contrasting projects—and, indeed, jointly constituted by them. Theorizing this linkage, both descriptively and prescriptively, will help psychiatry stay consistently committed to its epistemic and ethical values. Our story adds further support in particular for the value of an integrative pluralistic approach (53). While sometimes frustrating and deeply perplexing, our joint loyalty to mind and brain has produced and will continue to stimulate a healthy tension which has helped define our field. Parens (54) has termed this tension in its clinical manifestations "binocularity"—the creative struggle to see our patients as being, at the same time, minded and brained. This remains the unique charge of our discipline, from the lab to the clinic.

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