

Last Resort

Psychosurgery and the Limits of Medicine

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Introduction

A Stab in the Dark

Error which is not pleasant is surely the worst form of wrong.
T. H. Huxley (1888)

“The knife passed as usual. . . . On the whole, I think this case should be a satisfactory section.”¹ With these casual words, dictated in 1947, a surgeon described an afternoon’s handiwork in which he performed a major brain operation upon a thirty-three-year-old woman. First, the patient’s head was partially shaved and then immobilized against a modified dental chair. After a local anesthetic was given, a burr hole was drilled into each of her temples and the buttons of bone removed so that the surgeon could observe the exposed brain. (The patient was conscious during the operation and could answer questions.) Into one of these holes he slowly inserted a blunt-edged scalpel and then swept it back and forth, severing the connections between the front portion of the brain and its deeper centers. The procedure was then repeated on the other side. Satisfied that no major blood vessels were inadvertently cut, he finished the operation by meticulously sewing up the surface layers of the brain. Lastly, he replaced the pieces of bone removed earlier.

What makes this particular story different from the usual dramas of heroic medicine was the unlikely reason why this young woman had become a candidate for brain surgery. The surgeon was not, as might be expected, removing a life-threatening tumor or cleaning out an abscess caused by a runaway infection. In fact, the best medical instruments of the time would have indicated that the patient’s cerebral tissues were perfectly normal. The brain looked healthy enough – at least prior to surgery.

The reason this young woman was in the surgical chair that day had little to do with the known condition of her brain. More to the point was her social status. A proven failure in life, the young woman had become a permanent resident on a mental hospital ward. A bitter divorce was evidence of her incapacity to fulfill the traditional role of a housewife; and with no occupation or career in sight, the patient was unable to live independently. Throughout her life, the patient had seemed unable to

establish the “right” kinds of social bonds (in this regard, her sexual liaisons with other women did not help her case). The patient herself had little hope that she might ever become a fully functioning citizen, and bouts of depression, hallucinations, and other grave mental afflictions eventually led to a string of suicide attempts. Her relatives saw no choice other than to commit her.

The patient’s fate thus fell into the hands of a series of psychiatrists who saw only further problems ahead. To them, the patient’s life history and clinical signs were all too evocative of a kind of severe mental deterioration they had seen many times before. When the usual modes of treatment and counseling had failed to change her situation, these physicians had come to their own wits’ end. Convinced of the need for more direct intervention, they recommended that a lobotomy – a new kind of brain operation – be tried in the hope of turning her life around. In a calculation that seems rather startling to us today, these doctors believed that by destroying a portion of this patient’s brain they might make life for her more bearable as well as transform her into a better person. Desperate circumstances, they told themselves, justified drastic acts. If pressed, the patient’s doctors would have had to admit that they had little idea of the exact neurophysiological mechanism by which the operation worked. For example, even one of its supporters went so far as to depict the use of lobotomy as being little more than “a stab in the dark” – literally, as well as figuratively.² Psychosurgery had become their treatment of last resort.

This patient’s story was not unique. Although these psychiatrists were unsure about the procedure’s physiological action, they were certain that it would have a dramatic effect on the course of their patients’ lives. And so it happened that the drama above was played out in America time and time again. Between the procedure’s initial introduction in 1936 and its decline in the mid-1950s, at least twenty thousand such operations were performed in the United States.³ Lobotomy had become the latest technological solution for a range of problems that as yet had no good answers.

This book is about hope and despair, about our faith in the powers of science to deliver us from the reality of human tragedy. Its central concern is with the story of medical progress, the process by which advances in scientific knowledge presumably leave us individually and collectively better off. In particular, it is about those fateful moments of convergence when a discovery concerning the inner workings of the body is perceived as having a profound significance for human welfare.

Customarily, the saga of medical science has been told through detailed expositions of medicine’s most visible successes – the kinds of innovations

that placed their creators in the pantheon of Nobel prize winners. Such case studies suggest themselves as the likeliest place in which to examine the development of modern medicine. In this manner, my own historical strategy in this book is to explore the life course of a particular therapeutic innovation as it made its way from early experimental trials to full-fledged dissemination as a valued therapy. However, the specific subject that I have selected for such a case study – that of psychosurgery in America – does not present itself as an obvious choice.

At first glance, the idea of analyzing the trajectory of medical progress by studying the fate of lobotomy seems a peculiarly wrongheaded, if not perverse, place to begin. If anything, psychosurgery now connotes an image exactly *opposite* to that of mainstream medicine, its reputation firmly established as something that occurred on the far periphery of accepted practice. An argument could even be made that it has become our most visible icon for everything that is dangerous and bad about uncontrolled medical science, about the havoc that can ensue when evil (or perhaps simply misguided) individuals masquerade as competent scientists or doctors. A steady production of popular books, movies, and plays – *One Flew Over the Cuckoo's Nest*, *Planet of the Apes*, and *Frances*, to name a few – have forcefully explored this point. As a result of these gripping and often lurid portrayals, we have become morbidly fascinated by lobotomy's potential to transform its victims into robots or "vegetables," individuals no longer able to disturb the powers that be and, in so doing, to destroy that which is most sacredly human within us.

During the heated political debates of the 1970s, in which various aspects of medicine were criticized as forms of social control cloaked in the ideology of science, lobotomy was denounced by the laity and professionals alike as an indefensible form of domination. Bioethicists, for example, found in psychosurgery an almost ideal subject with which to prompt debates on where to draw the line between individual and societal interests in medicine, a balance continually upset by emerging technologies. Neurophysiologists and other researchers joined in such attacks, happy to point out the superior status of their own scientific methods as compared to the barbarism of the receding past. And as a result of the popular outcry, an unusual federal commission was created to construct guidelines for its regulation.⁴

Over time, the meaning of *psychosurgery* has thus become restricted to that of a "cautionary tale" of science gone awry, a "morality play" to instruct eternal vigilance. We tell ourselves that this was by no means the first time that a therapeutic fad was driven forward by a cadre of physicians who overstepped the boundaries of good medicine; and that, should we drop our guard, it will certainly not be the last. What could this ugly

story possibly have in common with those that recount *true* medical triumphs?

While the mad-doctor characterizations make for great polemics and for spine-tingling science fiction, as history they are often just plain wrong. In the best account to date of lobotomy's rise, Elliot Valenstein recently noted that psychosurgery was "not an aberrant event but very much in the mainstream of psychiatry."⁵ Indeed, even a cursory examination of the day's medical reports will show that the psychiatrists who recommended the procedure, the neurosurgeons who performed the operations, and the scientists who justified it, all came from the highest ranks. To be sure, most lobotomies were performed on patients in the back wards of the remote state hospitals, a fact consistent with the most negative scenarios. This statistic only reflects, however, the reality that the majority of the nation's mentally ill happened to reside within the state hospital system. Lobotomies were also performed in most of the elite research institutes, in the (then) well-equipped and staffed veterans' hospitals, and even in the richly endowed private asylums.

The simple truth was that one could grow up in a socially powerful family, consult the most respected physicians in the nation, and enter the finest mental institutions money could buy – and still end up with a lobotomy. Such was the case of the young woman described at the beginning of this introduction, who received her brain operation in a private mental hospital that was ranked as one of the best. Her surgeon was Dr. W. Jason Mixter, at the time one of the most prominent neurosurgeons in the world. There is also the unexpected news that Egas Moniz, the Portuguese neurologist who invented lobotomy, was awarded the Nobel Prize in 1949. Psychosurgery *was* in the pantheon, after all.

Ironically, a reappraisal of psychosurgery that faithfully depicts its former centrality within mainstream psychiatry raises more problems than it dispels. As in the case of other popular treatments whose initial therapeutic esteem eventually soured, psychosurgery's about-face in clinical fortune poses a troubling enigma: why would reasonable, well-meaning physicians and scientists at first value a procedure so highly, only to abandon it later as obviously meritless and inhumane? As Roger Cooter has argued in discussing the nineteenth-century faith in phrenology, it is insufficient to state that proponents simply acted unthinkingly until that inevitable time when they "came to their senses." This kind of response does not confront the question but merely redescribes it.⁶ We are left with two variant story lines, equally disturbing: (1) that something so dubious as lobotomy was on a pedestal alongside the likes of anesthesia and x-rays, if

only for a limited time, or (2) that membership in science's supposedly eternal hall of fame is revocable.

The transitory nature of medical convictions also bedeviled contemporaries. The confidence of these practitioners was sorely tested by the realization that, one day, the shifting sands of scientific knowledge would bare the foundations of their own therapeutics. None of them were immune from future ridicule. In 1941, the colorful psychiatric statesman C. C. Burlingame expressed this quandary in an intimate after-dinner speech irreverently entitled "Quacks But No Ducks." "What then," he asked his brethren, "of our vitamin capsules, our electric therapies, our ultra violet lamps, our short wave treatments and our shock therapies . . . ?" He continued:

Do we use these as empirically as our predecessors did their leeches and their bleedings? . . . Are we, in the light of others who come after us, going to be accused of being users of stupid, bizarre or crude methods? Will they think us no better than quacks? . . . Will they read our shock therapy methods with horror and say, "Why, they should have used baseball bats – it would have been just as productive of results"?⁷

As it so happens, within a few years of this speech the biggest such bat in Burlingame's own medical repertoire was in fact psychosurgery. How are we to resolve this tension between past and present to reach a perspective from which to understand – and perhaps judge – our medical heroes, fallen or otherwise?

At issue is our understanding of how medical science evolves. Typically, the explanation of how a new treatment achieved widespread acceptance by the medical profession reduces to this: it was effective, spectacularly and undeniably so. Diphtheria antitoxin saved a young girl's life on Christmas Eve, 1895; penicillin prevented countless thousands of gangrene-related amputations during the Second World War; and so on. The usual parade of such examples reinforces belief in the supposition that the life course of a medical innovation is determined mostly by that treatment's inherent soundness. Procedures that work, fly and are assured their place in the medical record; those that do not, crash and appropriately find only oblivion. The true value of any particular therapy is thus assumed to be a quality that is both immediate and yet transcendent, equally visible across the decades.

It is precisely this assumed timelessness of medical potency that has distorted our historical vision. Charles Rosenberg observed not too long ago that historians of medicine have been accustomed to considering the subject of therapeutics "an awkward piece of business" and have generally "responded by ignoring it," especially in regard to medicine as it was

practiced before the advent of the laboratory. In his diagnosis, the problem lies in our preoccupation with applying the standards of modern medicine to the methods of yesteryear's physicians. When examining a particular mode of therapy, the first question has always been "Did it work?" – a criterion, Rosenberg notes, more physiological than historical. Within such a framework, the sensibilities of the physician and the historian have converged: as there were indeed few treatments of any scientifically proven merit until the late nineteenth century (other than, say, digitalis, quinine, or vaccination), it is no wonder there has been a dearth of interest in telling the story of apparently worthless medicine. Curiously, historical accounts of the postscientific era of medicine have likewise been hobbled within this framework.⁸ As the matter of what are the great medical triumphs is already known, the essential narrative of the story is virtually prefabricated. All that remains for the historian to do is interview the extant researchers as to what, in their recollection, led to the fateful discoveries.

The model of medical science that is generated by all this attention paid to the stories of laboratory success is also directly responsible for our tortured historical paradoxes. Medical innovation is at root a risky, perilous venture, a drama that has been obscured by the focus on only those instances where everything went right. To assume that when physicians consider a new treatment they somehow are guided by a special insight into its true clinical value – a value not yet determined – is to impose an unwarranted, although heartening, teleology.

Similarly, our understanding of what determines the trajectory of a medical innovation after the first experimental reports have been published has also been distorted by exclusive attention devoted to the best-case exemplars of medical science. In such stories, the consideration of a treatment or diagnostic device's efficacy happens only once: in the initial stage of discovery. The technology itself is tracked as a kind of black box, the inner aspects of which are divorced from further analysis; its path into widespread clinical practice is reduced to a matter of political economy – another instance of "technological momentum" in play. A generation of political scientists, economists, and sociologists have thus plotted the diffusion of EEG machines, intensive-care units, CAT scanners, and the like in the United States, with the rate of adoption being determined by such indices as the number of hospitals and the mode of funding.⁹ In this manner, medical technologies are reified into discrete, stable entities that are somehow insulated from the overall historical process; lost along the way is any consideration that the functions of a given treatment or instrument may be multiple, not single, and in a process of continual flux.¹⁰

New approaches to the issue and a way out of the resulting paradoxes

can be found, however, by deliberately examining the story of therapies that have *not* stood the test of time.¹¹ For Rosenberg, the lesson that traditional therapeutics (i.e., the prescientific practices of the nineteenth century and before) offers historians of medicine is their invitation to a more anthropological reading of how medicine functions: things work not just within a human body but within a prevailing culture. Traditional therapeutics were judged successful by lay and professional groups, Rosenberg argued, because these interventions were consistent with a conceptual system that linked the two communities.¹² In the prelaboratory era, the classic treatments didn't fail because they were revealed to be inadequate. Rather, the world itself had changed in the interim, altering the inner cultures upon which the previous system of therapeutics had ultimately depended. Cast in this manner, the history of medicine was thus reintegrated into broader historical currents. To explain why physicians reached consensus that a particular treatment appeared worthwhile, the historian now looked to the sensibilities of the time, not just to the laboratory results; moreover, the history of medicine itself was promoted into an unusually valuable resource for reconstructing past cultures.

Rosenberg's article heralded a wave of similar investigations into the social meaning and structure of earlier periods of medical practice.¹³ Even so, historians of medicine have generally shied away from applying such lessons to therapies in the scientific era. As Rosenberg himself pointed out, the modern period is characterized by a cleavage between scientific and lay cultures. Moreover, it is one thing to argue that the evaluation of a traditional therapy was dependent upon cultural factors at a time when *none* of the participants could scientifically ascertain its actual clinical value. It is quite a different challenge to make such a claim stick in modern times, when the true efficacy of a treatment is presumably knowable to those on the scene.

For the scientific era, it is in the stories of failed medical technologies that new avenues into the problem can be found. Their baroque charms notwithstanding, such episodes are valuable in that, as case studies running counter to expected form, they test comfortable assumptions concerning the introduction, evaluation, and diffusion of therapeutic innovation. (One might say that they are historical "control" samples.) As evidence mounts that supporters of many ill-fated treatments were not acting outside of accepted medical practices, the claim is weakened that their more fortunate counterparts succeeded because of a careful adherence to the standards of good scientific medicine. Any connections made between what a treatment *really* does and its subsequent life course must be proven, not assumed. In short, medical treatments do *not* possess an inherent clinical attractiveness in the way that physical objects possess

mass. Rather, clinical assessment is a contingent historical product. The foundation of medical belief thus becomes, in its own right, an important subject for historical explanation.¹⁴

In the story before us, how was the connection made that operating on the brain was a likely route to improved mental health? What conditions existed at the time that made such a drastic response appear necessary for so many? Why were the changes exhibited by patients after lobotomy interpreted as bona fide clinical gains? Why did psychosurgery work – then?

Answering these questions for the case of lobotomy will illustrate the kinds of social and professional factors that shape the evaluation of medical therapies – factors that are rooted in specific moments and hence are vulnerable to change.

To chronicle the rise of psychosurgery is to follow two narrative lines. On one hand, it is a case study of the origin, adoption, and diffusion of a particular medical technology, a story that was played out over two decades and that moved between elite research laboratories and numerous clinical sites scattered around the nation. At the same time, it is an account of what happened within the medical specialty of psychiatry in a period roughly bounded by World War I and the Korean War. My goal here is to demonstrate the importance of weaving both kinds of narratives into a single story, and for this purpose, the topic of lobotomy provides an excellent opportunity for analyzing how the power of medical knowledge becomes directed toward particular areas of concern.

Although the first lobotomies occurred in America in 1936, the proper place to begin the story of its acceptance is at the turn of the century when Adolf Meyer outlined a new vision of psychiatry, one that might join the separate fields of the asylum physician, the elite neurologist, and the general practitioner into a single medical specialty. Within Meyer's monistic philosophy of psychobiology, all distinctions were to be collapsed among the various approaches toward understanding mind and body; and by replacing the reigning concept of insanity with that of maladjustment, the reach of the modern psychiatrist was to extend into the concerns of everyday life. Chapter 1 describes how, as a result of the stimulus of World War I and the calculated patronage of the Rockefeller Foundation, Meyer's framework was established as the primary platform for remaking the domain of mental health in America. Within the new framework, it was hoped, psychiatry might emerge as the one field that might link all the disparate studies of humankind, from neurophysiology to urban sociology. For the moment, a special premium was placed on any investigation

that promised to link the world of the laboratory with grave problems of human living.

Left unsettled, however, was where the new gains would first emerge. Would the remote state hospitals become centers of scientific advance, or would elite academic medical centers find a way to bring the study of mental disorders within their doors? As the constituencies within each domain held to widely differing conceptions of what was valid therapeutic practice or research, the future shape of psychiatry itself was considered to be at stake in the issue. Such tensions were muted in the 1930s, however, when an expansive model of medicine prevailed, allowing all of the fractious elements of the new psychiatry to coexist – for a time. With insanity redefined as a problem of mental disorder and maladjustment, it was even left an open possibility that the latest advance in psychiatry would come not from psychiatrists but from elsewhere.

By all accounts, the specific link between neurosurgery and mental disorders was forged at the Second International Neurological Congress held in London in 1935. Egas Moniz, a Portuguese neurologist, happened to be in the audience when John F. Fulton, a distinguished Yale neurophysiologist, described the interesting results of his brain experiments on chimpanzees; Moniz returned home from the meeting convinced about the possibility of psychosurgery. Chapter 2 explores how the standard account of the origin of psychosurgery – a familiar story of serendipity in science – is both less and more true than at first reading. On the one hand, that the chimpanzee experiments would be interpreted within a psychiatric framework at Yale was not a product of mere happenstance, for they occurred within a program that was one of the showpieces of the new psychobiology. On the other hand, the direct role of Fulton's research as an intellectual stimulus to Moniz has been overstated at the same time that his indirect role as its most significant patron, in convincing others to invest in the procedure's future, has remained hidden.

The subsequent change in lobotomy's status from that of an experimental technique of uncertain merit, to a perception that it was of widespread utility and certain benefit, is the subject of Chapter 3. Moniz's technique was targeted at first mostly on patients with agitated depressions. The immediate cessation of the patient's misery deeply impressed the first psychosurgeons; such visible results convinced other medical observers to follow suit. H. D. Banta has observed that the uses of a medical technology often change once the technique moves away from its initial trials into larger field studies, where new possibilities arise.¹⁵ So too with psychosurgery. When the lobotomy studies shifted from the office-based practices to mental hospitals, the operations were found to have a positive effect on a different group of patients, the chronic schizophrenics. Al-

though the gains in such cases were not considered as impressive as those achieved with the original class of depressives, this discovery had a profound impact on lobotomy's later course. This latter class of patients constituted the most pressing problem for the mental hospitals, in that no adequate treatments were yet available for their condition. Psychosurgery was thus introduced into a realm of almost limitless horizons, having no real competitors.

In the years immediately following World War II, the use of psychosurgery reached its heyday, peaking at over five thousand such operations performed in 1949 alone. A large number of psychiatrists had found in lobotomy a tool that altered human character to an extent unmatched by any other resource in their armamentarium. For them, psychosurgery clearly worked. The next three chapters explore the reasons why the procedure was viewed so positively: lobotomy worked on several levels simultaneously. Chapter 4 documents the acute crisis facing the nation's vast system of overburdened state mental hospitals. Professional leaders desperately sought means of motivating the public to reinvest in the mental health infrastructure, as well as of shoring up the profession against further demoralization. They settled upon a strategy of selling a vision of what psychiatry might accomplish if it were sufficiently medicalized, equal in stature and resources to the best of the other specialties. Lobotomy, the most visibly medical intervention of the day, was seized upon as exactly the kind of "active treatment" that might bring results to the profession of psychiatry as well as to the individual patient.

Lobotomy did not cure any patients of a specific disease. More accurately, it transformed them into persons whose characteristics, physiological as well as psychological, were quite different than they had been before the operation. The challenge is to explain why such effects were interpreted as a true medical benefit, and why such a drastic procedure was considered necessary in the first place – and even humane. Even its most vocal advocates advised that lobotomy was to be used only as a treatment of last resort, and that recipients "paid a price" in unfortunate side effects. Psychosurgery was a form of human salvage, not rescue.

The reason lobotomy programs rose to such prominence, Chapter 5 argues, lies in the special circumstances of the day that had placed so many patients within this category of last resort, and that had framed the matter of mental health in such a manner that the operation's benefits were amplified and its drawbacks minimized. It is hard, decades later, to appreciate the enormity of the clinical challenge facing psychiatrists in the 1940s. When physicians figured the therapeutic calculus according to the time's harsh realities, even the marginal gain that resulted from the operation in the average patient was interpreted as sufficient justification to

proceed. Moreover, beginning in the late 1930s, institutional psychiatrists invested their hopes in a series of somatically based therapies. Thus began a new era of “heroic” therapy in psychiatry, as the use of insulin coma, metrazol convulsion, and electroshock stormed onto the hospital wards. Even as hopes were raised by psychiatry’s newfound potency, however, the problem of what to do with those patients who resisted cure was increasingly problematic. Psychosurgery, which offered the promise that now no mental patient might slip outside the reach of medical intervention, thus became the capstone to the modern psychiatric system.

The question of lobotomy’s perceived efficacy leads to another historical dilemma. Psychosurgery often was considered necessary not just from the perspective of the patient’s welfare but from that of the harried institutions. Lobotomy was also an administrative cure. Some patients, it is clear, received a lobotomy primarily because their obnoxious behaviors made life difficult for everybody else around them. How is it possible that the lobotomists saw no contradiction between their responsibilities as healers and the need to maintain order on the wards? Indeed, recent critics of psychiatry have characterized this latter role as proof that psychiatrists were more concerned with their mission as enforcers of social control than with the guidelines of valid medical practice.

Chapter 5 also explores how such easy distinctions are anachronistic. Thanks to the long legacy of psychiatry’s institutional locus, and to the interjection of Meyer’s more recent model of maladjustment, lobotomy’s ability to render the unmanageable more manageable was interpreted as a direct clinical gain and not just hospital expediency. In the 1940s, a patient’s restoration to citizenship was in fact the highest criterion of mental health. Moreover, the dual responsibility of preserving the public as well as individual health was exactly the combined service role Meyer had carved out for the modern psychiatrist.

How the *individual* patient came to be selected for the procedure is the focus of Chapter 6. By re-creating in some detail the population of an entire mental hospital for a selected year, it is possible to reconstruct the kinds of considerations that targeted particular persons for the procedure. The winnowing process was neither random nor fixed, but specified in the interaction of local circumstances and generalized knowledge; the challenge of clinical decision making also involved an array of considerations not usually associated with narrowly defined images of medicine. The story of psychosurgery thus becomes an occasion to reexamine the human boundaries and limitations of the art of medicine. Taken together, these three chapters reconstruct why lobotomy made sense to psychiatrists – around 1949.

Even as the use of lobotomy accelerated, establishing it as a significant