

Psychosurgery as Brain-disabling Therapy

Psychosurgery merits special attention because, as the prototype of brain-damaging therapeutics, it can shed light on the clinical effects of other brain-disabling treatments such as electroconvulsive therapy (ECT) and the major tranquilizers. Despite the paucity of active practitioners and advocates of psychosurgery, many psychiatric authorities have condoned this treatment precisely because the principles that find their extreme expression in lobotomy and other forms of psychosurgery also find more subtle expression in all the major somatic treatments in psychiatry.

While it is true that the number of patients who undergo psychosurgery is relatively small, perhaps no more than a few hundred per year in the United States, the treatment is irreversible in all cases and poses a significant threat to the well-being of the patients.^{10,27} Psychosurgery is also important because it reflects a frontier in engineering technology for the infliction of brain damage. Engineering breakthroughs will inevitably bring about quicker, easier, and more accurate methods for inflicting such damage. The danger of these new methods leading to a massive revival of psychosurgery is magnified by the continuing enthusiasm displayed for wide-scale usage by such media-minded advocates as M.H. Brown.⁴⁹ Most ominously, Mark, Ervin, Sweet, Delgado, Rudin, and others have openly advocated psychosurgery as a solution to vast political problems, including urban rioting and political protest, which they presume is sometimes rooted in brain damage and dysfunction.^{14,45} That Mark has greatly tempered his political pronouncements under criticism is gratifying, but it is no reason to give up vigilance. Similarly, attempts to renew use of psychosurgery in prisons, state mental hospitals, and institutions for the retarded have been stopped or checked, in part through efforts of individuals affiliated with the Center for the Study of Psychiatry; but only continued energetic criticism stands between the psychosurgeons and their expressed intent to operate upon these groups.^{14,15,68} A second wave of psychosurgery that would rival or surpass the original 50,000 operations performed in the United States will remain a threat for the indefinite future.

Defining Psychosurgery

According to the brain-disabling hypothesis (see Chapter 6), psychosurgery shares several characteristics with the other more common inpatient psychiatric treatments including ECT and the major tranquilizers. First, it produces its effect by *damaging normal brain tissue*.^{*} Second, its primary and overriding clinical effect is the subsequent production of *mental dysfunction*. Third, the mental dysfunction brings about a *less able or more helpless person*, who typically reacts with some degree of apathy (disinterest) or euphoria (unrealistic well-being), and who is easier to manage, control, or influence.†. With the encouragement of his physicians, this person often denies his personal and iatrogenic deficits after the surgery.

In order to accomplish these ends psychosurgery must specifically mutilate those areas of the brain most directly involved in thought and emotion: the frontal lobes or the so-called limbic system (or both), including the cingulum, amygdala, thalamus, and hypothalamus. (While the term *mutilation* is offensive

^{*}Breggin assumes that psychiatric surgery, in common with ECT and neuroleptic medication, acts by damaging normal brain tissue. While this may be true of psychosurgery in certain instances (the massive frontal hypocirculation demonstrated by Ingvar and Franzen or the evidence of frontal temporal and ventricular atrophy in chronic schizophrenia documented by numerous investigations [i.e., Asano, Haug, or Johnstone] showed that many surgical interventions in the past *were not* directed against normal brain tissue), it certainly is not the case for ECT or neuroleptic medication in the psychoses. In his classical monograph, Ottoson established that the therapeutic efficacy of ECT was related to the seizure discharge and was independent of the current energy, the latter correlating with the transient organic psychosyndrome. More recently, Kronfol and associates have found that nondominant ECT in depression is associated with improvement in visuospatial cognitive functions and recovery from depression, dominant ECT having no beneficial effect on nondominant or dominant hemispheric cognitive functions. With respect to neuroleptics and schizophrenia, the fact that chlorpromazine, together with propranolol, reverses the electrodermal asymmetries found in chronic schizophrenia, or that the same phenothiazine restores the acoustic deficit present in the right ear of schizophrenics in auditory temporal discrimination tasks—this being parallel with symptomatic improvement—is hardly suggestive of “brain damage” as being the crucial parameter for therapeutic efficacy of major tranquilizers in the endogenous psychoses.³⁴ There is a large body of neurochemical studies, pioneered by Snyder that relates the antischizophrenic action of neuroleptics to their antidopaminergic postsynaptic influences on mesolimbic structures.¹² The *modus operandi* of major tranquilizers is neurochemical and electrochemical, shifting critical synaptic units to different states of neural excitability. “Brain damage,” of course, can be a late sequela of long-term treatment with tranquilizers, but would Breggin argue that only with induced tardive dyskinesias are tranquilizers effective? (Ingvar DH, Franzen PAG: *Acta Psychiat Scand* 50:425–562, 1974; Asano N: In Mitsuda H (ed): *Clinical Genetics in Psychiatry (Problems in Nosological Classification)*. Tokyo, Japan, Igaku Shoin, 1967, 209–219; Haug JO: *Acta Psychiat Scand* 38:14–21, 66–86, 96–104, 1962; Johnstone EC, Crow TJ, Frith CD, Stevens M, Kreal L, Husband J: *Acta Psychiat Scand* 57:305–324, 1978; Ottoson J: *Acta Psychiat Scand [Suppl]* 145:103–127, 1960; Gruzelier J: In “Propranolol and Schizophrenia”, New York, Alan R Liss, 1978, 99–118; and Hammond NV, Gruzelier JH: *Quarterly J of Exper Psychol* 30:91–103, 1978; Snyder SH: *Am J Psychiat* 133:197–202, 1976).—PF-H

†It is clear that cerebral surgery in mental illness necessarily induces a circumscribed brain lesion but not always “dysfunction”; for example, a follow-up study of 58 patients, both with and without epilepsy, who were subjected to amygdalotomy for the treatment of either epilepsy or aggressive behavior, Small and associates could find no significant changes in neuropsychological test scores before and after surgery in 20 cases tested with the Halstead-Reitan-Wepman battery. While euphoric indifference is certainly a possible consequence of frontal lesions, at a particular level such a transformation may restore an individual to normality if, previously, he was the victim of a chronic, intractable depression, anxiety, or crippling obsessional illness. (Small IF, Heimburger RD, Small JG, Milstein V, Moore DF: Follow-up of stereotaxic amygdalotomy for seizure and behavior disorders. *Biol Psychiatry* 12:401–411, 1977)—PF-H

to some advocates of psychosurgery, it has been used by others.^{35,40} I believe it is important not to disguise the nature of the intervention with euphemisms.) ECT produces more diffuse brain damage and dysfunction with particularly traumatic effects upon the temporal lobes and memory (see Chapt. 6), and the major tranquilizers reach more deeply into the brain to affect the basal ganglia and reticular activating system, as well as the frontal lobes and limbic system. But beyond these differences in the kind and location of damage, ECT, the major tranquilizers, and psychosurgery share a common brain-disabling effect and can produce severe, irreversible brain damage.^{18,19} Because of the highly integrated nature of the frontal lobes and limbic system the dysfunction will be somewhat generalized, regardless of the type or exact location of the traumatizing agent.^{53,63}

What about operations on *abnormal* brain tissue, as in psychomotor epileptics and biologically retarded individuals? Operations in these cases are generally labeled psychosurgical if the *aim* of the surgery is to influence thoughts, feeling, or conduct. More precisely, these operations are psychosurgical if the effect that is sought would be achieved in the absence of abnormality in the brain tissue. Thus, when retarded children or psychomotor epileptics are rendered more docile and manageable by thalamotomy or amygdalotomy, the psychosurgical effect is wholly independent of any real or imagined biologic abnormality and would occur in its absence. Typically the tissue in which the lesion is made is normal anyway, but even if it were abnormal, it would achieve the pacifying psychosurgical effect by impairing whatever normal function remained. Furthermore, neither the retardation nor the epilepsy will be improved, but indeed may be worsened by the additional trauma.^{15,18} The fact that lesions in normal animals produce the same psychosurgical effects should lay to rest the claim that these effects are dependent upon the presence of abnormal brain tissue or function.

Animal Research and the Brain-disabling Hypothesis

While the results of mutilating the frontal lobes and limbic system of animals cannot be extrapolated without interpretation to human beings, it can be presumed that the destructive results will be *amplified* in human beings who are far more dependent in their daily functioning upon the higher level activities of the brain. The fundamental premise of psychosurgery that human beings can *think too much* or *feel too much* is hostile to every important psychological, philosophical, and religious analysis of the nature of human life.*

Most lobotomy research in animals has demonstrated marked behavioral losses. Brody and Rosvold, for example, found the social hierarchies established

*Here we are, perhaps, getting closer to the heart of the misunderstanding. The psychiatric syndromes which modern neurosurgery seeks to alleviate with specific discrete targets are pathologic intrusions, the consequences of altered cerebral functions that are empirically improved by inducing a different pattern of cerebral organization. It is not a question of dehumanizing normal people who happen to be more reflective or more sensitive than the majority of their fellow men—PF-H

by normal monkeys in a group cage disintegrated after the lobotomization of low status animals "because of the impaired ability of low status animals to relearn avoidance response appropriate to their relative position in the hierarchy."²⁰

Deets and colleagues at Harlow's Primate Laboratory have conducted the most thorough review and careful experiments concerning lobotomy. Lobotomized animals "showed less proximity and contact" with normal animals and "directed less exploration toward the inanimate environment, and displayed more fear grimacing, screeching, and other disturbed behaviors."²⁶ The normal animals in turn avoided their mutilated cohorts.

Deets and colleagues confirm the brain-disabling hypothesis.

The nonhuman primate data thus provide a reasonable, consistent picture of the effects of frontal lobe lesions upon social and emotional behavior. Some studies have indicated that transient increases in aggression may follow frontal damage. However, the long-term prognosis for animals subjected to frontal damage is social withdrawal and increased emotional disturbance. Operated animals are less aggressive, tend to avoid social interactions, and receive less attention from other animals. Reports that some human mental patients are more manageable following lobotomy may reflect a similar trend toward social withdrawal and lessened assertiveness.

The Primate Laboratory investigators are under no illusions that they have "helped" their animals or cured any "illness." Instead they concur with some of the earliest investigations on lobotomized primates. "The higher sentiments . . . , above all, . . . sociability, . . . disappear after mutilation of the frontal lobes, whilst the primitive emotions, . . . especially . . . irrational, illogical, fear, . . . remain, sometimes even intensified."

These conclusions are remarkably similar to those found in the major clinical and experimental studies of lobotomized humans. They confirm the need to test such drastic interventions upon animals, and to heed the warnings before applying them to humans.

In animal stereotactic psychosurgery, damage to the amygdala has been most thoroughly studied. Rosvold and associates found that bilateral amygdalectomy in monkeys gave a misleading impression when the animals were viewed in the abnormal situation of isolated cages where they appeared to be more aggressive.⁵⁷ In the group cage, they were clearly less able and lost dominance in the group. Brady and co-workers found that damage to the amygdala produced "relative docility" and more difficulty learning.⁶ Normal emotional responses to conditioned avoidance, such as "defecation, urination, vocalization, and piloerection," almost always occurred in control animals but "rarely, if ever" in animals who had undergone surgery. Kling reviewed the literature on amygdalotomy in monkeys and found that amygdalotomized animals experienced severe disruptions in their social behavior, including social isolation from normals in the field environment, an increased fear of normal monkeys, and a tendency to remain in close physical contact with each other in confined areas. Normal monkeys tend to treat the monkeys who had been operated on with increased aggression, indifference, or curiosity, depending upon the species. He observed amygdalectomized monkeys in the wild and found that they became "social isolates, appear fearful

and withdraw from any type of closeness with group members.”⁴² Kling also reports that “tameness toward man is a well known effect after amygdalectomy and has also been reported after . . . cingulectomy.”⁴³ Again mimicking similar effects in humans, caged (institutionalized) animals after psychosurgery are more tame toward man; in the wild, they are unable to live socially, and often unable to survive.

Cingulotomy in monkeys produces a generally similar reaction to other forms of psychosurgical mutilation, but the data are sparser. One of the earliest studies by Ward remains among the most informative. He ablated the anterior third of the cingulum in four monkeys.

The monkey's mimetic activity decreased and it lost its pre-operative shyness and fear of man. It would approach me and curiously examine my finger instead of cowering in the far corner of the cage. It was more inquisitive than the normal monkey of the same age. In a large cage with other monkeys of the same size it showed no grooming or acts of affection toward its companions. In fact, it behaved as though they were inanimate. It would walk over them, walk on them if they happened to be in the way, and would even sit on them. It would openly take food from its companions and appeared surprised when they retaliated, yet this never led to a fight for it was neither pugnacious nor even aggressive, seeming merely to have lost its “social conscience.”⁴⁷

Again this animal study conforms to clinical data in humans and confirms the brain-disabling hypothesis that psychosurgery tends to create more tractable, docile, and helpless individuals. Smith reported similar results after the ablation of the anterior cingulum (area 24) with the animals becoming “stuporous,” withdrawn and relatively inactive for several days after the surgery, followed by a persisting “tameness.”⁶¹ The monkeys would take food offered by hand instead of running away in their previous fashion.

Watson and associates found that unilateral cingulectomy produces neglect of sensory stimulation to the opposite side of the body. They hypothesize that the lesion interrupts the corticolimbic reticular activating system connections, producing a “unilateral defect in the altering response to sensory stimuli.”⁷² If so, cingulotomy may obtain some of its clinical effect through a mechanism similar to the major tranquilizers, which also suppress the alerting response.

There are rare exceptions in the animal cingulotomy literature. Pribram and Fulton could find no obvious changes in the social behavior of monkeys after surgery, although they noted a “shortened duration of avoidance behavior” in which the animals more quickly overcame avoidance reactions to frustrating situations.⁵⁵ They do not elaborate on this finding, and do not consider it important. They acknowledge that their failure to find gross changes is contrary to the literature, but offer no explanation. Pribram and Fulton were both advocates of psychosurgery, and Fulton is most deserving of the title *Father of Psychosurgery*, for his research, personal enthusiasm, and influence inspired Moniz, Freeman, and many other psychosurgeons.³⁶ Animal research demonstrating severe deficits usually has been conducted by animal laboratory researchers rather than by clinically oriented advocates of the treatment like

Pribram and Fulton. With only limited exceptions, the animal literature demonstrates consistent lobotomylike effects for all forms of psychosurgery.⁴³

Lobotomy and its Pioneers

Modern psychosurgeons sometimes reject comparisons between lobotomy and stereotactic surgery. In their reviews and clinical presentations, they virtually ignore the original lobotomy studies. There are many reasons to look carefully at the original lobotomy reports. Most obviously, animal research, functional neuroanatomy, and many clinical reports make apparent that modern psychosurgery is a direct, if more sophisticated, extension of lobotomy.^{53,63*} There are also more subtle reasons for examining the early literature. First, pioneers are usually far more willing to describe the actual damaging effects of their therapies, while those who follow will often edit out the gruesome details in the interest of the public relations. (I have documented this in my book.¹⁸) Second, the outspoken innovators often give a truer picture of the aims of their treatment. Third, the more gross effects of earlier forms of treatment often provide clues to what should be looked for in more sophisticated versions of the technology. In this way the early lobotomy studies provide us with the material more appropriately and ethically obtained from animal studies—an exaggerated look at the effects of the treatment when applied to organisms without regard for their integrity or safety. Finally, a reminder of the unabashed disregard for basic human values so blatantly displayed by psychosurgery pioneers may encourage a healthy skepticism toward renewed efforts in the same direction.

As Fulton admiringly put it, Moniz was the first modern surgeon to have the “hardihood of soul” to pursue psychosurgery after the negative reaction to it among medical colleagues toward the end of the previous century.³⁶ Moniz admitted to the devastating effects witnessed at a conference and among his own patients. “In summary, from the psychological viewpoint, this patient experienced difficulty in association and synthesis . . . from which are derived all the other symptoms observed: puerility, change of character, loss of social and moral sense, instability, etc.”⁵¹ Although a strong advocate of lobotomy, Tow observed of Moniz: “He claimed that seven cases were cured, eight improved and that five unaltered. It is obvious now that he was using the term ‘cured’ in a special sense, a modification in meaning not subsequently abandoned by others.”⁶⁷ Indeed, from the origins of psychosurgery until today’s National Commission study, “improved” or “cured” in psychosurgery studies usually means “brain-damaged.”⁶⁵

Moniz’s work encountered disfavor among those who experienced it firsthand. The psychiatrist who originally worked with him compared Moniz’s operations to war wounds, and Moniz’s career was eventually cut short by the

*Calling modern psychosurgery a direct extension of lobotomy implies that all areas of the brain have the same functions and their lesions lead to the same kind of deficit, whereas it is well established, for instance, that surgery of the cingulum, of the anterior frontal areas, or of the supraorbital white matter have very different clinical consequences, measurable with psychological testing—eds

refusal of his state hospital superintendent to permit him to operate, and by crippling that resulted from being shot by a lobotomy patient.⁶⁷ His work was nonetheless highly publicized by Walter Freeman, and largely as a result of this, Moniz received the Nobel Prize.

Freeman's descriptions of his first patient establish his attitudes toward patients and confirm the brain-disabling hypothesis. The patient was brought to him by her husband without previous hospitalization. Freeman sides with the husband and displays overt hostility toward his new patient. "The patient was a past master at bitching and really led her husband a dog's life."³⁵ By means of poignant, dramatic dialogues, Freeman portrays the woman's panic-stricken reaction to involuntary surgery, followed by euphoric indifference after the mutilation.

In another vignette, in their book *Psychosurgery*, Freeman and Watts describe the subduing of "a negress of gigantic proportions" who terrorized the ward staff prior to surgery. "Yet from the day after operation (and we demonstrated this repeatedly to the timorous ward personnel) we could playfully grab Orethra by the throat, twist her arm, tickle her behind the ribs and slap her behind without eliciting anything more than a wide grin or a hoarse chuckle."³⁵

Freeman was in favor of operating on adolescents early in their life difficulties. His 1961 description of the lobotomy effect confirms the brain-disabling hypothesis, and especially the aim of producing a more tractable, docile person.

Lobotomy bleaches the affect attached to the ego. Thus it reduces the patient's interest in his inner experiences. This makes for quick responses to external situations with reduction in premeditation. At the same time it reduces sensitiveness and self-consciousness. The patient may flare up in anger, is less capable of restraining himself, but he is also unable to sustain his rage. In this respect he becomes more immature, more child-like. The reduced sensitiveness makes it possible to discipline the patient without hurting his self-esteem. His reactions are vivid but fleeting. Most of the time he is at peace with the world as well as with himself. Once his emotional distress is reduced to the tolerable level, or maybe a little below, he becomes outgoing and even friendly. Upon this new personality a great deal of constructive building can be accomplished.³³

Freeman and Watts also applied the brain-disabling hypothesis in lobotomizing younger children. They describe normal fantasy life as "mental activity at its highest and most difficult," including "creative imagination," "writing, music, painting, etc., or just plain daydreaming when it is indulged in for its own sake."³⁵ According to Freeman and Watts: "In a study of children after prefrontal lobotomy, special attention was given to fantasy life. This fantasy life was smashed beyond repair." The aim was to "redirect his behavior into socially acceptable channels."

Writing in 1959 after the initial development of newer forms of psychosurgery, Freeman continued to emphasize the devastation of creativity by psychosurgery. "Creativity seems to be the highest form of human endeavor, . . . Theoretically on the basis of psychologic and personal studies, creativeness should be abolished by lobotomy. . . . On the whole,

psychosurgery reduces creativity, sometimes to the vanishing point.”³⁴ If creativity is gone, as well as a variety of related functions such as “imagination, concentration, visualization, self-criticism,” individuals may be able to function, but on a lower level. “Although they may not become leaders in their professions, they serve adequately and comfortably.”

Freeman expresses the brain-disabling hypothesis with special flare when defending against the accusation that lobotomy may produce criminals.

Indolence and tactlessness are the outstanding motifs. Personal responsibility and self-control are determined more by the previous customs of the family and the community. “Lobotomy has not let loose upon society a grotesque horde of amoral automations.” As a matter of fact, lobotomized patients seldom come in conflict with the law precisely because they lack the imagination to think up new deviltries and the energy to perpetrate them. What the investigator misses most in the more highly intelligent individuals is the ability to introspect, to speculate, to philosophize, especially in regard to the self. Maybe it was the abnormal development of these intellectual-emotional exercises that got the patients into trouble originally.³⁴

In his book-length experimental study, *Personality Changes Following Prefrontal Leucotomy*, Tow used a variety of tests, imaginative situations and questionnaires to confirm experimentally and statistically the clinical observations of Freeman.^{67*} He dispelled once and for all the myth that lobotomy and psychosurgery changes cannot be measured, including the intellectual deterioration. Unhappily, modern psychosurgery investigators have wholly ignored Tow’s findings and his research techniques, especially his discovery that mental deficits after psychosurgery appear most grossly when the patient is subjected to tests or situations that require *initiative, responsibility* or *self-direction*. He also affirmed a clinical reality almost wholly overlooked by modern investigators—that *psychosurgery patients are unable or unwilling to appreciate and to verify their deficits, however severe they may be*. The loss of self-direction plus the tendency to deny their deficits and to overestimate their well-being make psychosurgery patients especially suitable candidates for suggestion and influence at the hands of physicians and investigators who wish to obtain testimonials to the value of the treatment.

When taking into account the patient’s tendency toward denial and his inability to perform in a self-determined manner, Tow was able to demonstrate many intellectual deficits.

There seems to be impairment of the powers of abstraction and synthesis; of perception of relations and differences; of the ability to deal with complex situations, planning and taking out of the next action and its consequences; and appreciation of one’s own mistakes. These are, of course, not several discrete functions, but they

*The criticism leveled at Breggin by many of his opponents (including in the present book) in the ECT controversy, namely that he seems to prefer to rely on old data and not on the most modern literature, can apply also here: Tow’s studies are 25 years old, Greenblatt and associates’ data, mentioned later, 30 years old. Other than leukotomy, long ago abandoned, the outcome of contemporary psychosurgical techniques should be quoted—eds

are several closely related aspects of intellectual activity, which the tests show to be impaired. There is also impairment of the power of sustained attention and of the capacity for fine discrimination; and a dulled appreciation of the subject's own level of success or failure.⁶⁷

Tow goes on to epitomize these losses as a general simplification of the personality. "Possibly the truest and most accurate way of describing the net effect on the total personality is to say that he is more simple; and being more simple he has rather less insight into his own performance."

In the last paragraph of the book he adds a perception that serves as one of my own themes. "The conclusion would be that after loss of the prefrontal area there is a generalized impairment of mental activity, and that this impairment is greater in the higher and more peculiarly human functions than in others."

This loss of "peculiarly human functions" is best expressed in what must be the most sensitive recorder of human experience, the autobiography. Tow finds that postlobotomy self-descriptions are shorter and less productive, the shortest being a simple sentence, "I am unable to do what you wish." The postlobotomy content is equally modified. It is "simple" and "deteriorated," characteristically with a "complete degeneration of style, with poor writing, repetition of words and lack of much meaning." Of all before and after experimental records, autobiographies written and evaluated under double-blind conditions are the most informative, but the technique has never been repeated in the stereotactic psychosurgery literature.

Tow's studies affirmed the brain-disabling hypothesis: the less effective, disabled human being is a more fit person for control in simplified environments.

In so far as the occupation becomes simpler and less demanding of complex mental activity, the handicap becomes progressively less. . . .

. . . One generalization which is fairly consistently true is that his performance is considerably better in a structured situation. . . .

. . . Where the test is completely unstructured for him as in the autobiographies, the verbal fluency tests and the abstract words, the deterioration in the performance of the subject was so gross as to be obvious without quantitative comparison. Where the situation is structured for him so that he has only to perform to a certain set pattern, with certain narrow limits, his performance approximates more nearly to his pre-operative.

In his lengthy treatise, Tow studiously avoided both ethical and clinical considerations. But in a commentary in *Lancet*, he applied the brain-disabling hypothesis by advocating lobotomy for backward, custodial patients on the grounds that the more gross effects of lobotomy, "such as emotional barrenness, gross egocentricity, lack of responsibility toward others, and lack of appreciation of moral and spiritual values," would be easily overlooked because the "abnormal psychologic environment of the chronic hospital ward" is consistent with these lobotomy defects. "I believe in any large hospital for the chronic insane—say with 2,000 beds—one could justifiably pick out the hundred worst patients and deprive them of part of their frontal lobes. One would invariably do a certain amount of good."⁶⁸

The best-known and most detailed hospital-based study of lobotomy was published by Greenblatt, Arnot, and Solomon.³⁸ The authors systematically attempt to hide the defects imposed upon their patients in an effort to improve the image of lobotomy; but the study is large, disorganized and poorly edited so that a careful reading turns up many obvious indications of the degree to which they have disabled their patients. For example, a patient touted in one section as vastly improved by the psychiatrists because he runs away from his parents' home turns out to need supervisory social work assistance in another section, because he no longer has the sense to wear warm clothes when he goes out in the cold.

In the introduction, Solomon ridicules critics of psychosurgery who hold views that are "distinctly emotional, based upon a conscious or unconscious belief that the frontal portion of the brain is the holy of holies." He claims that the study shows lobotomy increased "the total joy of living" and "human happiness and contentment" for the patients. However, the psychologist's report, which is shunted toward the back of the book and given no more space than "Lobotomy and Urinary Bladder," discloses that the patients are either so apathetic or "slaphappy" that they cannot focus on the testing situation. Judgment and insight are grossly impaired, and abstract reasoning is often impaired with an increasing deterioration over time. In the psychologist's opinion, the psychiatrists' clinical reports are so biased that they cannot be trusted; many of the patients rated improved by the psychiatrists show gross signs of brain damage.

As in almost all psychosurgery (and ECT) studies, more women than men were operated and more women than men were judged as improved by their psychiatrists.^{10,69} Why women should be preferred targets for brain-disabling therapies, and why they should be judged more often improved would seem to have obvious sexist implications. I have evaluated this in detail in regard to ECT and the same principles apply to psychosurgery.¹⁸ Basically the brains and minds of women are undervalued in psychiatry, much as they are elsewhere.*

Lobotomy was a controversial treatment from its inception, and was the object of one of the most severe self-criticisms ever rendered by an establishment psychiatric organization. In 1948 the Group for the Advancement of Psychiatry estimated that 5,000 patients had been operated on, and made observations that remain unfortunately appropriate today.

However, from this extensive material studied over such a long period of time very few conclusive answers to any questions have been derived. Instead there is considerable aggressive propagandizing for the operation by those who perform it or use it as an essential therapeutic technique. Their statements as to the therapeutic effects and the non-existence of deleterious results are not sufficiently supported by convincing evidence. . . . The literature on lobotomy has been growing steadily, but consists largely in repetitive reiterations of similar statements by the few individuals who are performing the operation in great quantity.³⁹

*Breggin does not consider for a moment that if there is an overrepresentation of women subjected to psychosurgery (and to ECT), it might simply be because affective disorders are overrepresented in that sex. In fact, Valenstein had shown that for the United States since 1970, there was no evidence globally of differential referral by sex for psychiatric surgery.—PF—H

Gradually lobotomy fell into general disrepute. As it declined, a series of more objective and sometimes controlled follow-ups showed that disabling the brain and mind of mental patients in the long run did much harm and little, if any, good.^{48,56,70} Vosberg observed that "whether the induced brain syndrome comes to be recorded as 'improvement' or not depends upon the niche available to the post operative patient."⁷⁰ Even follow-ups that gave limited endorsement to lobotomy admitted that most patients experienced severe mental losses. Dynes found that nursing care and problems of violence were temporarily alleviated, but that the patients appeared more psychotic with a chronic brain syndrome superimposed on their schizophrenia.²⁸ Miller found that 12% of postlobotomy patients had epilepsy, and 91% had defects in their personality attributable to lobotomy.⁵⁰ All modern psychosurgeons have ignored the fact that lobotomy patients grew *worse* with time, probably due to maturation of the brain damage with increasing distortion of brain architecture, and due to psychological delapidation after the partial ruination of the ability to learn and to relate to people. The National Commission study by Teuber and associates, for example, evaluates most patients shortly after cingulotomy, ignoring past experience that psychosurgery patients tend to deteriorate.

Modern Psychosurgery and Brain-disabling Hypothesis

The modern psychosurgical literature is of very poor quality, even compared with the earlier literature. It lacks the clinical depth of Freeman's studies, the experimental thoroughness displayed by Tow's testing program, and the rich detail of the Greenblatt, Arnot, and Solomon report. Nor are there any controlled follow-up studies. Under mandate from the National Commission, Valenstein surveyed the entire modern literature and could not find *one* "well-controlled study using objective evaluation methods."⁶⁹ The vast majority (90%) were so poor that they could not have been "accepted for publication by the editors of a respected experimental journal" had they dealt with animals. I believe that the modern psychosurgeon's resort to charts and statistics without any detailed or meaningful references to actual cases is the product of a growing determination to hide the disabling effects of the survey from prying eyes.

My own estimate of 400 to 600 psychosurgical operations a year, based on a personal survey I made in 1971 and 1972, has been confirmed by the American Psychiatric Association survey.²⁷ There was a decline in the number of psychosurgical operations performed between 1971 to 1973, which Donnelly says, "was, without doubt, the consequence of the notoriety that was generated by adverse publicity regarding psychosurgery."²⁷ This was indeed the intention of the educational campaign I began in 1971.

At the present time, according to my own and the American Psychiatric Association survey, nearly 50% of the operations in the nation are performed by only four surgeons. Indeed, two surgeons, H. T. Ballantine and M. H. Brown, account for a large share of the total. The most popular operation appears to be cingulotomy, but I suspect that a great deal of lobotomy goes unreported in the

literature, and in the surveys too. The stereotactic surgeons are more vocal and more obvious, but I have received the impression from neurosurgeons that individual surgeons continue to perform occasional lobotomies, especially for pain, while carefully avoiding publicity.

Despite its scientific inadequacy, the literature on modern lobotomy confirms the brain-disabling effect of all modern psychosurgery. William Scoville, whose career has spanned all forms of psychosurgery, now performs a limited lobotomy under direct vision which he calls orbital undercutting. He believes that all psychosurgery performs the same "blunting function" and identifies the cingulotomy as a "cingulate leukotomy." He also believes that the blunting beneficially effects "constitutional over-sensitivity to emotional tension", certainly a simpleminded, atavistic theory of psychiatric disorders. He elaborated on this theme in 1972 in his Presidential Address to the International Society for Psychosurgery, and stated, "The work to date indicates that functional mental disease is benefitted by surgical lesions only when they exhibit an excess or exaggeration of normal feelings or thoughts."⁶⁰ He resurrects the notion that some people think and feel too much, a view we have seen staunchly supported by Freeman. Scoville states, "I believe that psychosurgery of the prefrontal lobes does have a blunting effect," and adds, wholly without scientific justification, "hopefully of a selective nature, on those thought processes and feeling tones which are grossly exaggerated above normal."

Kalinowsky, whose work also spans the entire history of psychosurgery, continues in 1973 to embrace the blunting effect of all psychosurgery, and the common brain-disabling effect of operations in any area of the limbic system.

It was later realized that the psychopathology of the brain-stem syndrome and of the frontal-lobe syndrome hardly differ. It is this experience that may explain why *the lasting effects of psychosurgery, both therapeutic and side-effects, are identical, irrespective of whether the operation is performed in the frontal lobes or in the deeper parts of the brain. . . .* The one psychiatric change which is the whole purpose of psychosurgical procedures is the *diminished concern* (italics mine).⁴¹

P.L. Breggin and I have reviewed the effects of thalamotomy and hypothalamotomy on children as practiced largely abroad.^{7,10,12,15} The rendering of institutionalized children "more passive" and "less spontaneous" confirms the brain-disabling hypothesis. In the United States Mark, Ervin, and their colleagues have performed thalamotomies in the past, one lengthy reported case ending in suicide.^{10,15,46} O.J. Andy performed thalamotomies on several dozen institutionalized children, largely for the control of aggressivity and hyperactivity; but in a 1973 Duquesne Law Review debate with me stated that my criticism had forced a halt to his operations.^{2,7,10,11}

Thalamotomies and hypothalamotomies, in the United States at least, may currently be largely of academic interest, but an understanding of their effects is important in confirming the brain-disabling hypothesis.

The most detailed analyses of the effects of hypothalamotomy and thalamotomy were provided by the two pioneers of the surgery, Spiegel and Wycis, who were also key figures in the development of stereotactic surgery.

Spiegel and Wycis relate the effects of their surgery directly to the older lobotomy operation. "As after the various types of frontal lobe surgery, the main therapeutic effect of thalamotomy is found in the emotional sphere. The affective responses of the patient, his emotional tension, and his anxiety may be reduced; his hallucinations and delusions may fade, and his obsessions and compulsions may lose their force. His agitation may be allayed and he may become *less assaultive and more easily manageable* (italics mine).⁶²

The patients display a typical, if milder, lobotomy syndrome, including a loss of abstract reasoning. The euphemistic language in the following quote should not be allowed to cloud the reality that these patients are rendered less able in a lobotomylike fashion.

The trends revealed by the Rorschach record may be summed up as follows. Some patients appear to have less difficulty meeting and coping with previously upsetting or emotionally charged situations. They seem better able to show emotional expression without becoming blocked or resorting to uncontrolled outbursts of feeling. *They appear to be somewhat more practical and concrete in their thinking and less apt to generalize* (italics mine).⁶²

Observations such as these confirm the interrelationship between thought and feeling. Since these patients are less able to "generalize," or to find the deeper meaning in their experiences, they are less motivated to react emotionally. The demonstration of these deficits after surgery deeper into the limbic system confirms the principle announced by Scoville and by Kalinowsky that all psychosurgical operations are cut from the same biologic cloth.

The literature on amygdalotomy again substantiates the brain-disabling hypothesis. Balasubramaniam and co-workers from India have called amygdalotomy "sedative neurosurgery" and advocate it for unruly, hospitalized children.³⁻⁵

The improvement that occurs has been remarkable. In one case a patient had been assaulting his colleagues and the ward doctors; after the operation he became a helpful addition to the ward staff and looked after other patients. In one case the patient became quiet, bashful and was a model of good behavior. . . . This operation has proved to be useful in the management of patients who previously could not be managed by any other means.⁴

More recently in *Psychosurgery* Balasubramaniam has compared amygdalotomy and hypothalamotomy and concluded, "The decision to do amygdalotomy or hypothalamotomy is more often a matter of individual preference."⁵ Though speaking to a predominantly Western audience, he continues to emphasize the authoritarian power gained by means of psychosurgery in institutions. "After the operation, they develop a sense of fear. In cases that are still mildly troublesome, the threat of punishment quiets them. They are shy of strangers. . . . The patient became more co-operative and obeyed commands."

The one detailed psychometric analysis of postamygdalotomy patients confirms the lobotomylike effects and the brain-disabling hypothesis. After testing Vaernet's patients, Ruth Andersen concluded,

Typically the patient tends to become more inert, and shows less zest and intensity of emotions. His spontaneous activity tends to be reduced, and he becomes less capable of creative productivity. . . . Paradoxically, at the same time the patient seems to become less capable of inhibiting their responses, whether these may be initiated by casual outer events or they may be irrelevant continuations of their answers.

With these changes in initiative and control of behavior, our patients resemble those with frontal lesions. . . .

*Presumably he will make the most of this gain in well-structured situations of a somewhat monotonous and simple character (italics mine).*¹

This closing sentence of the Andersen report replicates the findings of Tow in frontal lobotomy patients. Many amygdalotomy patients may have less obvious damage than frontal lobotomy patients, but the damage is qualitatively very similar.

In the United States, Mark, Ervin, and Sweet have performed an intricate and highly experimental version of the amygdalotomy using multiple indwelling electrodes. Their purpose is to treat violence that they believe to be associated with psychomotor epilepsy. I have evaluated their work extensively, observing that the connection between psychomotor epilepsy and aggression is unfounded and that the amygdalotomy tames the aggression (and all responsiveness) without affecting the epilepsy.^{14,37}

Whitty and colleagues described the use of cingulotomy to tame difficult patients.⁷³ One individual was "less prone to impulsive behavior, easier to manage" and less complaining, while another was "less aggressive to staff." A third patient displayed a reduced amount of anger for a while, and then required lobotomy to subdue her permanently. As postlobotomy patients, many showed a significant weight gain. Again as in the lobotomy literature, the authors recommend that the operations be reserved for "well-preserved basic personalities" because of the destructive effects on personality. The authors find much less personality change after cingulotomy than after lobotomy, but the thrust of the dysfunction is in the same direction.

Livingston reported on 55 cases of cingulotomy. His evaluation of the postoperative change as a greater normality does not mesh with the obvious lobotomylike effect. "The majority show a striking mood change characterized by pleasantness and evidence of contentment, absence of hostility and fear, and exhibit an emotional coloring and reactivity which often is strikingly normal in quality."^{44*}

Foltz and Lowell report on the personality effects of cingulotomy in individuals suffering from both psychogenic and somatic pain.³¹ The dramatic change

*Breggin, at great length, reminds his readers of the disabling postleukotomy syndrome which followed the blind leukotomies. This is no longer relevant since no one in the contemporary period advocates these crude cerebral interventions that were truly "mutilating", although even then some individuals on balance, benefitted both subjectively and objectively. Breggin's interpretation of his sources is, at times, curious. For example, citing Livingston who wrote about 55 patients subjected to cingulotomy ("The majority show a striking mood change characterized by pleasantness and evidence of contentment, absence of hostility and fear, and exhibit an emotional coloring and reactivity which often is strikingly normal in quality"), Breggin observes that these patients display "the obvious lobotomylike effect."—PF—H

in the operating room is strongly reminiscent of reports by Freeman and Watts on lobotomy patients. Note that the patients become more tractable.

Immediate results from the lesions usually were apparent in the operating room. Continued verbal communication was maintained with each patient during the operation in order to evaluate to some degree his emotional state and degree of pain. A complaining, uncomfortable, apprehensive patient usually showed a dramatic change in demeanor at the time the lesions were made. The patients became *tractable, agreeable*, and often showed a little vague disorientation (*italics mine*).³⁵

It is well known that postlobotomy patients often endure severely painful illnesses without complaining about them, and that this self-neglect may be responsible for their high mortality rate. Dynes, for example, found that "patients did not complain about pain and in a few instances patients have had fractures, coronary occlusions and perforated ulcers without complaining."²⁸ Foltz and Lowell reported the same effect after cingulotomy. One patient suffered a myocardial infarction on the fourth postoperative day and "showed no agitation or apprehension during this." The authors believe that the changes were similar but not as severe as in lobotomy. "A change in affect usually was obvious, but not a severe flattening of affect, nor marked lethargy or unresponsiveness."³¹

The most interesting observations were deleted from the final presentation of the paper, but were resurrected during the panel discussion that followed the paper. Dr. Robert S. Dow asked the authors if there were less unfavorable symptoms of the classical prefrontal lobotomy when these patients were seen postoperatively. Foltz replied,

Dr. Dow, changes do occur in persons who have this type of lesion. This excerpt from the full manuscript covers this important point: *It must be accepted that these patients are changed persons after cingulotomy*, but the change is indeed subtle. It is most difficult to classify and describe the changes that occur, but it is obvious that *effective lesions produce a definite stabilization of emotional lability* that was not present before operation. Much of the anxiety, which is so manifest in these ill, unhappy people, is no longer apparent. The patient with a good result simply is not precipitously reactive to his own environment, and his own situation as he was prior to operation. . . . The perception of pain as such does not appear to be modified, but the patient's total reaction to pain and the threat to existence that it represents is modified markedly³¹ (*italics mine*).

The patient's existential response to life has been blunted or crushed.*

The authors do not believe that lobotomylike personality deterioration takes place after cingulotomy, but they advise against operating on individuals with an "inadequate personality." They believe that "cingulotomy by electrocoagulation should be included as a type of 'selective leucotomy' "

*Where Foltz and Lowell describe a subtle change in personality postoperatively, a definite stabilization of emotional lability, and a reduction of anxiety, Breggin concludes that for these patients "the existential response to life has been blunted or crushed."—PF-H

The most "scientific" of recent psychosurgery studies was mandated by the National Commission, but ironically is so lacking in objectivity and scientific method that, based on the canons for scientific research established by Valenstein in his Commission-sponsored survey of the literature, it would be categorized among the worst studies.^{65,69} As with most modern psychosurgery studies, the main text is largely devoid of sufficient personal data that would permit the reader to make an independent analysis. But unlike other studies, it does provide an appendix of short case vignettes. Although obviously laundered and edited in order to make a good impression, these vignettes nonetheless provide strong confirmation of the lobotomylike effects, plus an unusual opportunity to see the importance of the authority of the unnamed surgeon in the patients' improvement (the surgeon is Ballantine).

One of the patients is described as having a "moderately manic temperament which was reflected in the vehemence with which she defended the operation she had received and inveighed against those who she thought were its critics."⁶⁵ How this hostility toward critics may have been cultivated as a part of the "cure" was reported to me directly by another patient from this National Commission study. This individual had been told by the psychosurgeon that doing well after the operation was extremely important to counteract the criticism of a "Washington, D.C., psychiatrist" who was against the operations. This patient felt involved in a heroic medical enterprise with national implications—until the first blush of hope, excitement and euphoria faded in the face of lobotomylike apathy and difficulty in concentrating.

The vignettes, as skimpy and biased as they are, have many references to both apathy and euphoria following the surgery. The apathy is often described as a lessened intensity of emotional response and is interpreted as an improvement; the euphoria, even when accompanied by rebirth and religious conversion imagery, is also considered an improvement. The surgeon's paternalistic interventions play a part, as in one case where he found employment for the husband and wife following surgery. That his charisma, and the patient's willingness to be "saved," play as strong a role as the surgery itself is suggested by one placebo patient who could not be operated on after the burr holes had been drilled, because of distortions in the architecture and landmarks of the brain. This patient "still would recommend cingulotomy to others, expresses deep gratitude to surgeon." The case also indicates the surgeon's willingness to manipulate his patients, for this person was told only that "the procedure had to be somewhat modified."

Despite the intent to make cingulotomy look like something wholly different from lobotomy, obvious lobotomy syndromes are described:

After cingulotomy (in February '75), tremendous change . . . went on an "absolute binge" of social calls (patient says, for one month, wife for three months) . . . always wanted to go out, to call on people . . . then this slackened, (wife says they ran out of people to visit, but patient indicates some of his fears came back; he didn't and still doesn't want to test whether his suspiciousness has really left him). Patient produces the intriguing statement that perhaps [his suspiciousness] had been "disguised by the elation." He cannot explain the "elation" after his cingulotomy but is

very definite it was there and then gradually subsided. Gives vivid example of a neighbor whom he says he'd mistrusted and disliked for years (pre-op), and still does mistrust and dislike, but does not dwell so much on it—is not driven by it. Patient says main side-effect of cingulotomy is that he “cannot focus as much on anything (as before), but in my case that is healthful” (*sic*); cannot concentrate and that helps against the “monomania,” as he calls it. (*As in original, including “sic”*)⁶⁵

This patient is described as “probably partially improved.” His quitting drinking is called a “considerable achievement,” though he has traded periodic (and potentially irreversible) brain dysfunction from alcoholic intoxication for gross and irreversible brain mutilation. The disingenuous statement about the “intriguing” nature of the patient’s elation displays ignorance about the commonplaceness of this reaction to brain damage, or it reflects an effort to disguise the reality that much of the cingulotomy effect is based on this lobotomylike syndrome of euphoria and denial.

Because Teuber and co-workers were not only out to quiet critics of psychosurgery, but also to compete against advocates of ECT, the study takes a biased stance toward ECT. Both patients and investigators alike blame all the more disastrous side-effects upon ECT rather than cingulotomy. Cingulotomy, like lobotomy, sometimes brings about amnesia and denial for the operation itself. This is reported in several cases, but the memory loss and the denial is blamed on ECT, even in two cases (patients U.R. and C.V.) when the ECT took place before the cingulotomy! Case U.R. is especially absurd. According to the vignette, she “Kept asking husband afterwards ‘why do I have these (burr) holes?’” The patient “deems cingulotomy as without effect,” but the husband “thinks there is moderate improvement” because the patient has the “same preoccupations, but less intense.” The case presentation ends with the laconic statement, “Prefers it to ECT and would recommend operation to others,” leaving us to wonder if it is the husband or the wife (who denies having the operation *and* deems it unsuccessful!) who recommends it to others.

The determination of the investigators to blame ECT and to exonerate cingulotomy leads them to wholly irrational conclusions. Several patients had long courses of ECT as well as psychosurgery and showed gross intellectual deterioration, including a decrease in nonverbal fluency, tactile maze learning, and several forms of memory function. Although they have not tested any ECT patients who had not been given cingulotomy, and although there is no evidence in the literature that ECT typically produces gross deficits in their measurements, they conclude that ECT *alone* is responsible for the losses. Much more likely, the combined insults of ECT and cingulotomy produced gross signs of brain damage not usually obvious with either treatment alone.

Had the vignettes not been provided in the appendix, Teuber and colleagues’ study would have become one more unrevealing attempt to promote psychosurgery. Through the vignettes it reveals the lengths to which surgeon, investigators, and patients alike will go to create a false impression of “improvement” following the infliction of brain damage on the patient. More than any other, this study leads me to develop the concept of iatrogenic denial. This

crucial study has also been subjected to further detailed criticism by Coles and by Sterling.^{25,63*}

Psychosurgically Induced Schizophrenia

If schizophrenia is not a physical disease but a psychological response to an infinite variety of stress, then schizophrenic reactions might occasionally develop in response to the severe stress of brain damage from cingulotomy. In November 1977 Escobar and Chandel described a case of schizophrenia following cingulotomy.²⁹ The symptoms included "depersonalization and derealization" and "delusions of influence." The authors believe that this is "one of the first reports of schizophrenic-like symptoms as a complication of psychosurgery." †

In his monumental monograph on lobotomy effects, Tow specifically described schizophrenic reactions that appeared for the first time after lobotomy.⁶⁷ The syndrome was obvious in the sensitive before-and-after autobiographies, and occurred in subjects "whose pre-operative accounts were quite free from anything resembling schizophrenic writing." The postoperative autobiographies were often "nonsensical with alliteration, constant underlining, brackets, and quotation marks" and very bizarre, incomprehensible imagery. At times the imagery clearly related the inner mental shambles to the operation itself in what Escobar and Chandel might have called "delusions of influence."

I reported a case of florid psychosis following amygdalotomy in which the patient again felt at the mercy of mechanical forces beyond his control.^{12,13} One

* Concentrating on two of the clinical vignettes provided by Teuber and co-worker, Breggin castigates these investigators "ironically so lacking in objectivity and scientific method that it (their study) would be categorized among the worst studies by the canons for scientific research established by Valenstein" and quotes Sterling in support. Sterling, in fact, while not impressed by the outcome of the material analyzed by Teuber and co-workers writes "perhaps the best evaluations of modern psychosurgery are the two performed recently . . . by Teuber et al. and Mirsky and Orzack."—PF-H

† Breggin, thereby ignoring all contemporary research on the neurobiologic characteristics of the syndrome, views schizophrenia as "not a physical disease but a psychological response to an infinite variety of stress" and cites a single case study of Escobar and Chandel as demonstrating the occurrence of psychosurgically induced schizophrenia (after cingulotomy). The patient described was a woman, aged 44, who had been referred for intractable depression 7 months after a cingulotomy. She had been ill for 3 years before surgery with a depressive illness that failed to respond to tricyclics and ECT. After surgery, the depression was unchanged, but symptoms of depersonalization, nihilistic and somatic delusions, and paranoid ideas supervened. Schneiderian symptoms of the first rank were also present. Treated with imipramine (300 mg) and methylphenidate (30 mg), her insomnia disappeared, and there was a remarkable increase in psychomotor activity. However, the auditory hallucinosis increased, whereupon trifluoperazine (60 mg) daily was added, and in 3 weeks the psychosis had totally faded. The evolution of this illness suggests a depressive psychosis that was unmodified by the cingulotomy and that became contaminated by first rank symptoms when it reached the stage of delusional-hallucinatory intensity. Pope and Lipinski have demonstrated in their review that 20% of depressive psychoses exhibit first rank symptoms.¹⁰ The improvement in sleep and the relief of psychomotor retardation with combined tricyclics-MAOI medication, does not suggest a schizophrenic psychosis. Rather, a delusional mania was induced, which responded very rapidly to tranquilizing neuroleptics. (HG Pope, JF Lipinski: Diagnosis in schizophrenia and manic-depressive illness: A reassessment of the specificity of schizophrenic symptoms in the light of current research. *Arch Gen Psychiat* 35:811-828, 1978)—PF-H

psychiatrist who did not know the truth behind the “delusion” diagnosed him as a chronic paranoid schizophrenic. He wrote in a hospital discharge summary that the patient believed that another hospital (where he had been operated on) was “controlling him by creating lesions in his brain tissue by microwave and that they had placed electrodes in his brain tissue some time before. Stated that they can control him, control his moods, and control his actions, they can turn him up or turn him down.”¹² This patient was frequently incoherent and bizarre, and his images were pervaded by electrodes and other devices associated with his surgery. Those responsible for his surgery had labeled him “paranoid” prior to surgery because of suspicions of infidelity during a marriage that was failing. But in multiple published reports, they never diagnosed him as schizophrenic or described hallucinations, delusions, incoherence, or other gross disturbances of thought such as pervaded his postsurgery records and interviews. My analysis of his schizophrenic deterioration after surgery was later confirmed by two other observers, Chorover and Coleman.²²⁻²⁴

Scoville has warned that psychosurgical lesions that extend deeper than the prefrontal region can “cause rather than cure schizophrenic-like psychoses.”⁵⁹ While considering lobotomy a help for schizophrenia, Freeman³² also noted that the results of lobotomy and chronic schizophrenia were quite similar, and that lobotomy was not indicated for chronic schizophrenics. Dynes in a long-term follow-up, found that “there seemed to be a hastening of the intellectual deterioration seen in most chronic schizophrenias.”²⁸

Iatrogenic Denial

Especially in the few months following surgery when hopes remain high and the effects of brain damage tend to encourage euphoria, psychosurgery patients are often extremely suggestible. Kalinowsky and Hippus wrote in 1969,

It has to be admitted, however, that psychosurgery in the true sense of the word has only limited possibilities for these patients who may be quite suggestible but with whom a real transference relationship is difficult. . . . Even though the basic structure is apparently unchanged, marked alterations are seen in the patient's behavior. This was shown by Cattell, who found that a certain suggestibility and the patient's dependence on the therapist are increased, with a more childlike quality.

In *Battle for the Mind*, Sargant notes the same suggestibility. “It is said that leucotomy tends to make people matter-of-fact and conventional so that they lose their personality. And it is true that the result is, in general, to make them more ordinary members of a group, open to suggestion and persuasion without stubborn resistance.”⁵⁸

Although I know of no previous discussion of the issue, there is a strong correlation between confabulation and euphoria on the one hand and suggestibility on the other. Confabulation and euphoria are almost the same phenomenon, reflecting the patient's *denial* of his damaged state. Confabulation refers specifically to the tendency to elaborate untrue facts or stories in order to deny

and to conceal memory loss and other mental deficits. It is an attempt to convey the appearance of normality. Similarly, euphoria is a fabricated or unrealistic mood of well-being. Suggestibility, as Sargant rightly indicates, is also closely related to the desire to appear "normal" or "part of the group." Thus individuals who are seeking to deny their damaged state or their personal problems through confabulation and euphoria are likely to be eager for "suggestions" from authority that they are improved rather than damaged. They will also be easily encouraged and motivated to put up a show of normality. This cooperative effort to fabricate a state of normality can be called *iatrogenic denial* (including confabulation and euphoria)—the mutual effort of suggestion by the physician and denial by the patient for the purpose of making the patient seem "normal" or "improved," especially when the patient suffers from iatrogenic brain damage. Ultimately, physician and patient alike are denying the reality of what has taken place, except in those rare instances where physicians like Freeman, Watts, or Tow openly admit that they are mutilating their patients to take advantage of their brain dysfunction.

The charade of suggestion and denial of course has a long history in medicine and is an aspect of every quick cure, from minor hoaxes such as over-the-counter patent medicines to major hoaxes such as mesmerism.⁶⁴ Iatrogenic confabulation or euphoria is unique in that *the physician actually damages the brain of the patient in order to render him more or less permanently suggestible and dependent*. It is responsible for most of the so-called cures after brain-damaging therapeutics, and may be wholly responsible for lavish testimonials such as those reported by Teuber and associates.

Two Thorny Issues

Two issues seldom raised in scientific debate must be raised in regard to psychosurgery: one is the issue of veracity, and the other is the determination of psychosurgeons to isolate their patients from view.

Because contemporary psychosurgeons seldom provide detailed clinical data or the kind of autobiographic material that made Tow's study unique, we must rely wholly upon both their judgment and their veracity. Soon after I became involved in the psychosurgery controversy I began to receive communications from patients and their families. One particularly startling case involved a patient who had been written up in multiple scientific and lay publications by several esteemed professors of psychiatry and neurosurgery as an example of a psychosurgical cure without any serious side effects. Upon interviewing the patient and reviewing a substantial portion of his records, it turned out that he had become a chronic custodial mental patient with 100% disability following his surgery.^{12,13,22-24} More recently I have interviewed another mentally disabled patient who has been acclaimed as a successful cure, this time from the National Commission study by Teuber and colleague.⁶⁵

The determination of the psychosurgeons to isolate their patients from critical examination is most striking: despite requests from myself and many others, not a single psychosurgeon has permitted a critic of psychosurgery to

interview even *one* of his patients in a face-to-face setting. The National Commission carried on this tradition of isolation. Although I personally initiated the legislation forming the Psychosurgery Committee of the National Commission through the offices of Senator J. Glenn Beall, Jr., of Maryland, neither I nor any other critic of psychosurgery was given a voice in planning any of the commission studies or an opportunity to interview any of the patients. If the lobotomy effects in the study by Teuber and associates crept into the carefully laundered vignettes, consider how much more apparent they would have become if the tests and the interviews had been oriented toward disclosing them.

General Observations

All psychosurgery disables the brain and obtains its primary clinical effect by the production of mental dysfunction. All psychosurgery produces a similar lobotomylike effect, although it may vary widely in degree. The disabling effect is often described as "blunting the emotions" or reducing emotional intensity, but because of the integrated nature of the frontal lobes and limbic system, any effective lesion will tend to produce more widespread deficits, including a loss in abstract reasoning, imagination, judgment, concentration, and self-determination.

The major clinical effect of psychosurgery (and all brain-disabling therapies) is *iatrogenic denial*. The patient becomes more tractable and dependent, loses some degree of judgment about his mental state, and turns to denial (including confabulation and euphoria) as a defense against his personal problems and his brain damage and dysfunction. The physician aids and abets this through suggestion, often in the form of his great enthusiasm for the treatment and his willingness to give his approval to increasingly dependent patients. As Tow documented, the primary losses will not be easily measured in standard tests, but require measurement of such higher level human activities as self-direction, initiative, independence, spontaneity, imagination, judgment, insight, and concentration, all of which are impaired by damage to the frontal lobes and limbic system.

The argument that other medical therapies disable organ function is not relevant. When the heart muscle is partially disabled to prevent arrhythmias, the human nature or psychological quality of the individual is not impaired. When frontal lobe and limbic system function is disabled, the person is impaired in exactly those higher level functions that make human life unique. As many pioneer and contemporary surgeons have admitted, the *person* is changed. More exactly, the person is damaged or disabled.

Conclusions

Following the Psychosurgery Report from the National Commission, the Secretary of Health, Education and Welfare laid down guidelines for psychosurgery in HEW facilities and with HEW funds.²¹ In opposition to the Commission's recommendations and much more in line with my own, he called for an absolute

prohibition on psychosurgery for prisoners, involuntary mental patients, incompetents, and children.^{18,24} To these prohibitions should be added the warning that psychosurgery, by its nature, is damaging to the highest mental faculties. Even without human studies, animal research provides sufficient warning to ban its experimental or clinical use on human beings.

I have not dealt with the legal, ethical, and political ramifications of brain-damaging therapeutics, which I have reviewed extensively in other sources.^{14,16-19}

In brief, I do not believe that brain mutilation will ever be an ethical approach to solving human problems.* Nor do I believe that the general principle of brain-damaging therapeutics should receive continued acceptance in any form. Those who wish to continue experimenting with these devastating alternatives should limit their research wholly to animals. From the very beginning psychosurgeons have ridiculed the idea that the human brain deserves special consideration as the organ most responsible for human nature and human values. If the brain does not deserve this consideration, then human life itself is demeaned and loses value.

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*Breggin concludes that "brain mutilation will [n]ever be an ethical approach to solving human problems." Nor does he believe in "the general principle of brain-damaging therapeutics" being accepted in any form. While I have the highest respect for the humane and humanitarian concerns that clearly move Dr. Breggin, I believe that these dramatic slogans are misleading, when and if they prevent individuals suffering from intolerable and otherwise unmodifiable mental illnesses from gaining relief, even if this relief is at the cost of demonstrable psychological deficits. To the extent, however, that the campaign initiated by Dr. Breggin has helped to promote a more vigorously critical evaluation of psychiatric surgery, it has been extremely valuable. Also, its impact in curbing the misplaced enthusiasm of those workers in the United States a few years ago, who saw in cerebral surgery the possible cure of social deviance, terroristic politics, or criminality, has been extremely timely and of the utmost importance for the future of psychiatric surgery.—PF-H

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