

Psychiatry: Mindless or Brainless, Both or Neither?*

Z.J. Lipowski, M.D.

After a period marked by one-sided emphasis on psychodynamics and social issues, or what could be called "brainless" psychiatry on account of its relative neglect of cerebral processes, we are witnessing an opposite trend towards extreme biologism or "mindless" psychiatry. The pendulum has swung periodically from one to the other of these reductionistic positions throughout the history of psychiatry. The author argues that neither brainless nor mindless psychiatry can do justice to the complexity of mental illness and to the treatment of patients. Psychiatry's distinguishing feature as a clinical discipline is its equal concern with subjective experience,

or the mind, and with the body, including brain function, which together constitute a person, a psychiatrist's proper focus of inquiry and intervention. Moreover, a person, viewed as a mind-body complex, is in constant interaction with the environment. It follows that both study of mental illness and clinical practice need to take into account the psychological, the biological, and the social aspects. These three aspects are not mutually reducible and are indispensable for the understanding and treatment of the individual patient. Such a comprehensive, biopsychosocial approach provides an antithesis to the reductionistic viewpoints and, in the writer's opinion, is both practically and theoretically most satisfying.

*The First Distinguished Member Lecture presented at the 38th Annual Meeting of the Canadian Psychiatric Association, Halifax, N.S., September 28th, 1988.

It is a great and much appreciated honour and pleasure for me to be invited to give this lecture. As I stand here I cannot help reflecting on the un-



Z.J. Lipowski

predictability of life, especially that of a European of my generation. Forty-four years ago today I was in Warsaw, where the uprising against the Germans was coming to an end. When it ended several days later, after two months of fighting, the city was in ruins, which contained 200,000 dead, including about 60,000 men shot in mass executions. Not far from where I was, the Gestapo was shooting men by the hundreds and burnt their bodies, so that the odour of burning flesh was with us day and night. There was neither food nor running water. The danger of death was ever-present. Had a fortune teller told me then that one day I would live in Canada, be a psychiatrist, and have the honour to deliver this lecture, I would have laughed: the chance of mere survival seemed so bleak. Yet by dint of undeserved luck I did survive the war in Warsaw, where an estimated 800,000 people died a violent death in the course of five years.

That wartime experience was my introduction to the study of human behaviour and to psychiatry. It offered a unique chance to observe how different people cope with and adapt to extreme stress. It taught me that such stress, notably confrontation with death, can turn out to be a positive motivating force, in that it helps one to appreciate life and to try and make the most of what one is capable of. As Goethe wrote, "A great crisis uplifts a man, little ones depress him." To make some sense of what was going on around me, and also to escape it, I turned to books, mostly fic-

tion and philosophy until a friend gave me to read a book on psychiatry, Kretschmer's *Physique and Character*.¹ He attempted to correlate certain personality types and psychoses with certain patterns of bodily structure and function. It was a psychosomatic book, in that it focused on the mind-body relationship, and it opened a new horizon for me. I decided on psychiatry as a career, as it seemed to offer the most promising avenue to the study of that relationship, and have not been disappointed. An interest in both its theoretical and practical aspects has stayed with me to this day. Moreover, a personal exposure to two dogmatic belief systems, fascism and communism, has left me resistant to dogmatism in psychiatry. Both the Nazis and the Communists insisted that their respective doctrines represented applied science and that one's racial or socioeconomic background, respectively, precluded one's ability to grasp scientific truth.

You may wonder what all this has to do with the subject of my lecture. I wish to make a few points, however. Firstly, that not only one's choice of psychiatry as a career but also the orientation one adopts reflects in part one's life experience. If that experience happened to be varied and called for adaptation to uncertainty and ambiguity as well as for a critical attitude towards dogmatic belief systems, one is more likely to adopt an open-minded yet skeptical stance towards one-sided viewpoints in psychiatry. Voltaire called himself a fanatical antifanaticist; I sympathize with this position. Secondly, that history, both general and that of psychiatry, has much to teach us. One of its lessons is, I think, that human behaviour cannot be explained or predicted from any single theoretical standpoint. Every reductionistic point of view reaches a peak of popularity and then its influence wanes in the face of critical reappraisal. Yet after the enthusiasm has subsided and exorbitant claims have been cut down to size, a sediment of factual knowledge, concepts, and therapies remains, and our field grows. And thirdly, that the words "science" and "scientific," which we all revere and freely use to endorse our pet beliefs, are ambiguous and have at times been used to sanction man's inhumanity to man. It follows that a purely scientific and technological approach to man, to medicine and psychiatry, may be dangerous unless it is guided by a humanistic value system.

Whither Psychiatry?

With this preamble let me turn to the proper subject of my lecture. Its title has been inspired by an article by Szasz,² who writes: "Once again

in their history, psychiatrists are at a crossroads: they can choose to be mindless and lose their distinction from neurology; or they can choose to be brainless, as psychoanalysts (especially in Britain) often did, and lose their distinction from non-medical counsellors. But they cannot continue to go both ways." You may note that Szasz fails to consider a fourth option, to wit that psychiatry can and ought to be neither brainless nor mindless but, on the contrary, include in its purview both the mind and the brain. This inclusion in both theory and practice constitutes psychiatry's distinguishing feature, in my opinion.

I will not bore you with a philosophical discussion of the mind-body problem, the perennially controversial subject of a recent scholarly article by Wallace.³ He asserts that both the biological and the psychological aspects of mind are real, different, and not reducible to each other. I agree with this view. Toulmin,⁴ a philosopher, contends that the primary locus of the mind-body problem lies today in the realm of psychiatric practice. He goes on to make certain points which are worth quoting as they are relevant to my theme: "People often think of medical practice as 'applied science,' thus concealing the particularity of patients and their medical conditions. A patient may be studied either by a clinician or by a scientist who is researching his or her current disease. The scientist's interest is in any general features the patient may share with others suffering from the same disease. The clinician's interest is in whatever can throw light on this patient, in that bed, here and now. The clinician's knowledge of the patient will be 'informed by' biomedical science; but it is not, in its details, 'entailed by' any biomedical theory and typically goes beyond everything that scientists can yet account for."⁴

I have quoted this passage as Toulmin draws a clear distinction between clinical and scientific knowledge and practice, respectively, and underscores the limits of science when one is dealing with an individual patient. As psychiatrists, we are first and foremost clinicians rather than scientists. We need to apply in our clinical work a broad humanistic approach, one that draws on scientific knowledge from a number of areas but goes beyond it and constitutes an art. It is an approach based on the assumption that man, that every patient, is a mind-body complex in constant interaction with the environment. Consequently, in our clinical work we need to take into account every patient's biological, psychological, and social aspects. Every clinical encounter calls for a dual approach. On the one hand, the clinician needs to apply diagnostic reasoning based on general

principles of the clinical science applicable to the patient's presenting problem. On the other hand, the characteristics of the patient as a unique individual have to be taken into account, and this implies an empathic understanding of his or her subjective experience and the manner in which it is communicated. It is this essential aspect of a clinical encounter that has often been neglected in medicine and is currently in danger of being ignored by psychiatrists if they come to focus exclusively on the patient's brain function. Such mindless psychiatry would not be psychiatry but clinical neuroscience. In fact, Detre⁵ argues that we need to train a new breed of psychiatrists who are truly neuroscientists, and that psychiatry should be viewed as a branch of clinical neuroscience. Yet a neuroscientist is, by definition, a research worker focused on the brain, while a psychiatrist is primarily a clinician, one whose chief task is to diagnose and treat patients, and to do so involves more than applied biology and neuroscience. As Adolf Meyer⁶ put it, the special sphere of a psychiatrist's work is the study of the *patient as a person*. And a person cannot be simply identified with his or her brain.

Meyer's psychobiological conceptions have profoundly influenced our field, yet the struggle for dominance among reductionistic approaches to it continues. Eisenberg,⁷ for example, contends that "despite the lip service paid to brain-mind integration, its implications are daily contravened in both theory and practice." He calls attention to the paradox that just as medicine begins to be more psychosocially oriented, psychiatry is becoming ever more biomedical. He goes on to warn us that we are in danger of exchanging the one-sided brainless psychiatry of the past for the equally one-sided mindless psychiatry of the future which ignores the patient's subjective experience as a person. This whole issue has been raised again and again over the past decade. Three recent editorials in psychiatric journals are particularly noteworthy as they have been written by biological psychiatrists. Wortis⁸ observes that "crude, mechanistic formulations are by no means uncommon among biological psychiatrists," too many of whom "find it more convenient to prescribe a drug than to get acquainted with their patients." Van Praag,^{9,10} the author of the other two editorials, argues that two opposing views on the diagnosis and treatment, one biological the other psychological, vie for dominance in psychiatry to the detriment of our patients. He contends that such tendency to one-sidedness is deeply ingrained in our field and threatens its survival. According to him psychiatry would be boring in-

deed if it were reduced to psychopharmacology.⁹ I fully agree. Goodwin,¹¹ a neuroscientist, comments that it would be regrettable if there grew up a new biologism in psychiatry, one "more in tune with the times than social psychiatry or psychoanalysis is now, but just as irrationally based."

These comments by two prominent biological psychiatrists and a neuroscientist are heartening, as they are so explicitly critical of the currently ascending mindless psychiatry. They also highlight the fact that reductionistic approaches to our field are alive and well despite a holistic tradition in American psychiatry, one that goes back two centuries to Benjamin Rush.¹² He expressed his position in simple words: "Man is said to be a compound of soul and body. However proper this language may be in religion, it is not so in medicine. He is, in the eye of a physician, a single and indivisible being, for so intimately united are his soul and body, that one cannot be moved without the other."¹³ This holistic approach to both medicine and psychiatry was greatly elaborated by Meyer and others in the first half of this century, and more recently by Engel.¹⁴ I have myself argued consistently over the years for such a comprehensive approach to mental illness and to the practice of psychiatry.^{12,15-17} We need to bring together facts and hypotheses concerning mental disorders from three mutually irreducible vantage points, that is, the psychological, the biological, and the sociological. By contrast, during the nineteenth century the view prevailed that, as Gray¹⁸ put it succinctly 120 years ago, "insanity is not recognized as a bodily disease, a disorder of the brain." When one reads the current literature one gets the impression that we have moved full circle.

Why does a struggle for dominance among the various approaches characterize our field? Why do reductionistic viewpoints predictably recur and claim superiority? Grinker¹⁹ has addressed this issue in his article "Psychiatry rides madly in all directions." He wrote: "Psychiatry seems to suck in partial ideas from many sciences as if it were a vacuum abhorring itself, which in itself is not deplorable. But accepting each idea as a fact and quickly making a fashion of its application without testing or validation is detrimental even to an applied science. Have we nothing of our own?"¹⁹ This question raises the crucial issue of the proper scope of psychiatry. Its core focus is on abnormal experience and behaviour of persons that cause suffering for them or for others, or both. As physicians, our role is to diagnose and treat such abnormalities. Yet what is considered abnormal changes over time and hence the bound-

aries of our field are fluid. As members of the DSM-III task force we spent the first few months trying to define mental disorder and agreed that we could not come up with a generally acceptable definition. Moreover, the very concepts of experience and behaviour refer to two distinct kinds of data, the subjective and the objectively observable, respectively.

Until recently, the subjective data, or the mind, had been regarded as falling outside the realm of science. Since psychiatry has inevitably focused on such data, it has often been viewed as that branch of medicine lacking scientific foundations. This viewpoint is the legacy of what Whitehead²⁰ referred to as "the disastrous separation of body and mind which has been fixed on European thought by Descartes." The mind was to be excluded from the purview of natural science. That narrow conception of science has been challenged lately.^{3,21,22} Sperry,²² a Nobel prize laureate, argues that we have entered a mentalist or humanist revolution, one characterized by a new paradigm. Subjective phenomena have come to be regarded as "causal constructs in the scientific explanation of brain function and behaviour."²² Mental states may be viewed as emergent properties of brain processes that cannot only interact functionally at their own level of organization but also influence physiological processes in the brain and thus play a causal role in neuronal events. This emerging mentalist paradigm challenges the traditional viewpoint that a full understanding of mind and behaviour is possible in strictly objective physicochemical and physiological terms. It is indeed ironic that in psychiatry the currently ascending biological reductionism moves in the opposite direction. We are in danger of regressing to the nineteenth century "brain mythology," the notion that mind is but an epiphenomenon, one entirely explicable by the neuroscience.

It is in the nature of our field that we need to deal with the most complex aspects of human biology, aspects which cut across a number of scientific disciplines and can be approached from diametrically different vantage points. It is thus no wonder that there should be a strong temptation to reduce the complexity by formulating one-sided explanations for mental illness and by applying single modes of treatment. The problem arises, however, when such formulations are proclaimed to be the ultimate truth and in a manner which reminds me of T.S. Eliot's poem "Choruses" from *The Rock*.²³ At one point the chorus leader cries: "Silence! and preserve respectful distance. For I perceive approaching The Rock. Who will

perhaps answer our doubts. The Rock. The Watcher. The Stranger. He who has seen what has happened. And who sees what is to happen. The Witness. The Critic. The Stranger. The God-shaken in whom is the truth inborn."

In my 33 years in psychiatry I have witnessed three embodiments of The Rock. When I started my psychiatric training, the psychoanalyst was The Rock in whom was the truth inborn. We were led to believe that every facet of behaviour could be interpreted and explained from the vantage point of a single theory. A deceptive art of the plausible was applied to the full in clinical practice and teaching but what was plausible was not presented as such, or as working hypotheses, but rather as fact. If you asked for evidence, you might be told: "This is scientific." If you persisted in asking irreverent questions, you would be given to understand that a flaw in your personality created a resistance to your seeing the truth. Both of these responses gave me a sense of *déjà vu*. To be sure, I kept an open mind to psychodynamic conceptions and have always applied some of them in my psychotherapeutic work. Concepts, such as those of unconscious mentation and intrapsychic conflict, have been of inestimable value. Yet I could never accept the claim that psychodynamics was *the* basic science of psychiatry or that psychoanalytic theory provided both a necessary and a sufficient basis for the understanding of human behaviour, normal or not.

The 1950's was largely an era of brainless psychiatry. When in my last year of training I visited Dr. George Engel, whose work I greatly admired, he said to me: "Some of my psychoanalytic colleagues talk as if the skull was filled with cotton-wool." Things have changed over the past 38 years and cotton-wool has been discretely replaced with the brain, as exemplified by a recent article by Cooper,²⁴ who writes: "If we can demonstrate that physiologic interventions are more efficient ways to achieve a portion, at least, of the effects we seek—that is, relief of pain and opportunities for growth—as physicians, we welcome the most effective treatment."²⁴ This enlightened statement reaffirms the view held by many of us that in clinical work we need to apply that treatment modality most likely to help the given patient.

The next embodiment of The Rock was the community psychiatrist. Psychiatry was to be mainly social in its orientation and concerned with social change, primary prevention of mental illness, and ultimately with the bringing about of a millenium of positive mental health. Community psychiatry, like psychoanalysis before it, brought

valuable new insights into the causes of mental illness and stressed such important issues as the pathogenic role of certain forms of social interaction and of lack of social support. It rightly emphasized the need for prevention and crisis intervention. However, it tended to downplay the importance of the biological and psychological factors in mental illness and extended the limits of our field to the breaking point.²⁵ It also accelerated psychiatry's drift away from medicine. Predictably, a counterreaction followed. In the early 1970's, the National Institute of Mental Health decided to try and halt that drift by sponsoring the development of consultation-liaison psychiatry as a bridge between medicine and psychiatry.²⁶ A dramatic growth of liaison psychiatry in the United States followed, one coupled with a continued spread of general hospital psychiatric units, and a trend to remedicalize psychiatry.²⁷ This trend has been motivated, in part, by political and economic concerns, in that psychiatrists had come to realize that unless they drew closer to medicine, they would lose their medical identity, as well as patients taken over by nonmedical mental health practitioners.

It is clear that psychiatry, a clinical discipline equally concerned with both the mind and the body, must remain a part of medicine.²⁸ This being so, we had to pay more attention to traditional medical procedures, one of which is diagnosis. In the mid 1970's the DSM-III task force was formed with this in mind. When invited to join it, I hesitated whether to accept, fearing that it would be an armchair exercise by a few obsessive souls, one of little practical consequence. It turned out to be a valuable experience. It brought home to me the wide social implications of what is and what is not included in an official psychiatric classification. We were approached by various pressure groups demanding that this or other conditions be included in or excluded from the classification. There is wide agreement among psychiatrists that DSM-III was a successful achievement. To classify the phenomena under study is an essential procedure of every empirical science and is necessary for psychiatry. A classification serves to stimulate formulation of testable hypotheses and hence research, and to facilitate communication. It is not an end in itself, however. Unfortunately, this point is sometimes missed and some of us tend to fall prey to a mania classificatoria, a new disorder.

In the past several years the third embodiment of The Rock has entered the stage in the form of psychiatrist as a neuroscientist. Psychiatry has rediscovered the brain with a vengeance. Judd is

quoted to say that "the brain is the organ of psychiatry" and that we are returning to neuropsychiatry.²⁹ Detre⁵ proclaims that the "mind and the brain are one and the same." Yudofsky³⁰ tells us that "now more than ever our patients can benefit from the estuarial confluence of neurology and psychiatry through the historic and futuristic model that is neuropsychiatry."³⁰ This purple rhetoric of the new Rock sounds like the language of a religious convert. It amuses those of us who have never ignored the brain. As a liaison psychiatrist I could not afford to forget it, as I have often encountered organic mental syndromes, especially in my work as a consultant to the Montreal Neurological Institute,³¹ and developed a special interest in delirium.³² On the DSM-III task force my job was to revise the classification of those syndromes and I tried to blur the sharp distinction between them and the functional disorders as a step towards a future multifactorial etiologic classification of mental disorders.³¹ Yet I have never considered myself to be a neuropsychiatrist and believe that the current fad to revive the obsolete term "neuropsychiatry" is divisive and superfluous. Some years ago, a neurologist, Miller,³³ defined psychiatry as neurology without physical signs but added that it called for "diagnostic virtuosity of the highest order." This statement brings out one of the essential differences between neurology and psychiatry and we can leave it at that.

Another current fad is to tell patients that they suffer from a chemical imbalance in the brain. The explanatory power of this statement is of about the same order as if you said to the patient: "You're alive." It confuses the distinction between etiology and correlation, and cause and mechanism, a common confusion in our field. It gives the patient a misleading impression that his or her imbalance is *the* cause of his or her illness, that it needs to be fixed by purely chemical means, that psychotherapy is useless, and that personal efforts and responsibility have no part to play in getting better. Yet how can chemical imbalance explain the predicament of one of my patients, a woman, who developed a depressive stupor after the death of her only son and after she was forced to give up her dead son's dog but not after the death of her husband? To assume, as we all do, that biochemical processes underlie mental activity and behaviour does not imply that they are the causal agents but rather constitute mediating mechanisms. They are influenced by the information inputs we receive from our body and environment and by the subjective meaning of that information for us. It is that meaning which large-

ly determines what we think, feel, and do. This is not to deny, of course, the importance of genetic and other biological factors for the way in which we respond to information and how it affects us for better or for worse. The rapid progress in neuroscience is most important for psychiatry as it promises to throw new light on the etiology and pathophysiology of mental disorders and to help develop more effective treatments.³⁴ But beware of The Rock and his reductionistic gospel! At this time the neuroscience offers precious little that we could apply in our daily work with patients. Moreover, there is reason to doubt that any amount of neuroscientific progress will ever do away with a need for a comprehensive approach to the study and treatment of mental illness. Neither mindless nor brainless psychiatry would do. Progress of neuroscience is essential, of course, if we are to cope effectively with one of the scourges of our times, that is, dementia. We used to hear in the past that we were living in an age of anxiety and this was changed to depression. We could now say, with equal hyperbole, that we are entering the age of dementia, as the incidence and prevalence of Alzheimer's disease and the AIDS dementia complex grow. The devastating features of dementia were poignantly expressed by a poet, Juvenal, already in the second century AD: "Worse by far than any bodily hurt is dementia: for he who has it no longer knows the names of his slaves or recognizes the friend with whom he has dined the night before, or those whom he had begotten and brought up."³⁵ In the past decade the research on Alzheimer's disease has mushroomed yet no cure for it is in sight. Only neuroscience can be expected to discover it.

We have entered a phase in the history of mankind marked by an unprecedented growth and volume of scientific research and information. Some two million scientific articles are published annually. At least 3,000 medical journals come out worldwide. This phenomenon has both positive and negative aspects for us. On the positive side, we are witnessing remarkable advances in the sciences relevant to our field, such as neuroscience, psychopharmacology, and cognitive psychology. One can expect that these advances will have a profound effect on our knowledge and treatment of mental illness. On the negative side, it becomes increasingly more difficult to keep up with the burgeoning literature and to avoid an experience of information overload.³⁶ In order to cope with it one may try to confine oneself to a narrow area of subspecialization and thus lose the view of our field as a whole. There is a pressing need to integrate in a coherent theoretical framework the mass

of diverse and relentlessly growing information. We should deliberately sponsor the development of psychopathology as a unified scientific basis of psychiatry, as I proposed two decades ago.¹⁶ We should establish in Canada not only academic chairs in psychopathology but also a truly academic institute for advanced studies and education in psychiatry. Such an institute should be affiliated with a teaching general hospital and develop close collaboration both with it and with those university departments whose work is relevant to psychiatry. No such institution exists in Canada and one is sorely needed in order to provide leadership as well as top quality research and training.

Conclusion

To conclude, I would argue that neither brainless nor mindless psychiatry could do justice to

the complexity of mental illness and to the treatment of patients. A comprehensive, biopsychosocial approach to our field is needed, as such an approach is both its hallmark and reason for continued existence. I have personally found it intellectually satisfying as well as practically useful, and it has helped to make my work as a psychiatrist rewarding and fascinating for me. I wish to end by quoting Paul Schilder:³⁷ "My attempt then is to unify in one framework phenomenology, psychoanalysis, experimental psychology, and brain pathology. This may be called eclecticism. Yet each of these points of view and approaches has brought forth factual knowledge, and factual knowledge of different fields must, in its fundamentals, hang together and somehow be amenable to unification." Herein lies the challenge for psychiatrists in the coming years.

REFERENCES

1. Kretschmer E. *Körperbau und charakter (Physique and character)*. Berlin, Germany: Springer-Verlag, 1944. 305 p.
2. Szasz T. Psychiatry: rhetoric and reality. *Lancet* 2:711-2, 1985.
3. Wallace E. Mind-body: monistic dual aspect interactionism. *J. Nerv. Ment. Dis.* 176:1-20, 1988.
4. Toutmin S. The recovery of practical philosophy. *Amer. Scholar* 57:337-52, 1988.
5. Detre T. The future of psychiatry. *Amer. J. Psychiat.* 144:621-5, 1987.
6. Meyer A. Progress in teaching psychiatry. *J. Amer. Med. Assn.* 69:861-3, 1917.
7. Eisenberg L. Mindlessness and brainlessness in psychiatry. *Brit. J. Psychiat.* 148:497-508, 1986.
8. Wortis J. The history of psychiatry. *Biol. Psychiat.* 23:107-8, 1988.
9. van Praag H M. Psychiatrist: endangered species. *Hum. Psychopharmacol.* 2:59-60, 1987.
10. ———. Psychiatrists, beware of dichotomies! *Biol. Psychiat.* 21:247-8, 1985.
11. Goodwin G M. Review of "Biological psychiatry" by M. Trimble. *Lancet* 1:801, 1988.
12. Lipowski Z J. Holistic-medical foundations of American psychiatry: a bicentennial. *Amer. J. Psychiat.* 138:888-95, 1981.
13. Rush B. *Sixteen introductory lectures*. Philadelphia: Bradford and Lonskeep, 1811. p. 256.
14. Engel G L. The need for a new medical model: a challenge for biological science. *Science* 196:129-36, 1977.
15. Lipowski Z J. Integration versus reductionism in psychiatry. *Integrative Psychiat.* 1:60-4, 1983.
16. ———. Psychopathology as a science: its scope and tasks. *Compr. Psychiat.* 7:175-82, 1966.
17. ———. To reduce or to integrate: psychiatry's dilemma. *Can. J. Psychiat.* 31:347-51, 1986.
18. Gray J P. Insanity, and its relations to medicine. *Amer. J. Insanity* 25:145-72, 1868.
19. Grinker R R. Psychiatry rides madly in all directions. *Arch. Gen. Psychiat.* 10:228-37, 1964.
20. Whitehead A N. *Modes of thought*. London: Macmillan, 1938. 241 p.
21. Pribram K. The cognitive revolution and mind brain issues. *Amer. Psychol.* 41:507-20, 1986.
22. Sperry R W. Psychology's mentalist paradigm and the religion/science tension. *Amer. Psychol.* 43:607-13, 1988.
23. Eliot T S. *The complete poems and plays. 1909-1950*. New York: Harcourt, Brace and World, 1971. p. 97.
24. Cooper A M. Will neurobiology influence psychoanalysis? *Amer. J. Psychiat.* 142:1395-402, 1985.
25. Kubie L S. Pitfalls of community psychiatry. *Arch. Gen. Psychiat.* 18:257-66, 1968.
26. Lipowski Z J. Consultation-liaison psychiatry: the first half century. *Gen. Hosp. Psychiat.* 8:305-15, 1986.
27. Passou R O. The remedicalization of psychiatry. *Hosp. Community Psychiat.* 38:145-51, 1987.
28. Lipowski Z J. Linking mental and medical health care: an unfinished task. *Psychosomatics* 29:249-53, 1988.
29. Emphasis on brain takes psychiatry on exciting path. *Psychiatric News* 5 August 1988.
30. Yudofsky S C. Neuropsychiatry: an idea whose time has come—again. *Hosp. Community Psychiat.* 38:701, 1987.
31. Lipowski Z J. *Psychosomatic medicine and liaison psychiatry. Selected papers*. New York: Plenum, 1985.
32. ———. *Delirium: acute brain failure in man*. Springfield, IL: Thomas, 1980. 576 p.
33. Miller H. Psychiatry—medicine or magic? *Brit. J. Hosp. Med.* 22:122-4, 1970.
34. Pardes H. Neuroscience and psychiatry: marriage or coexistence? *Amer. J. Psychiat.* 143:1205-12, 1986.
35. Lipowski Z J. Organic mental disorders: their history and classification, with special reference to DSM-III. (Miller N E & Cohen G D, eds.) *Clinical aspects of Alzheimer's disease and senile dementia*. New York: Raven Press, 1981. p. 37-59.
36. ———. Sensory and information overload: behavioral effects. *Psychosomatic medicine and liaison psychiatry. Selected papers*. New York: Plenum, 1985. p. 47-69.
37. Schilder P. *Medical psychology*. New York: International Universities Press, 1953. 428 p.