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The need for a new medical model: a challenge for biomedicine

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At a recent conference on psychiatric education, many psychiatrists seemed to be saying to medicine, "Please take us back and we will never again deviate from the 'medical model.'" For, as one critical psychiatrist put it, "Psychiatry has become a hodgepodge of unscientific opinions, assorted philosophies and 'schools of thought,' mixed metaphors, role diffusion, propaganda, and politicking for 'mental health' and other esoteric goals" (1). In contrast, the rest of medicine appears neat and tidy. It has a firm base in the biological sciences, enormous technologic resources at its command, and a record of astonishing achievement in elucidating mechanisms of disease and devising new treatments. It would seem that psychiatry would do well to emulate its sister medical disciplines by finally embracing once and for all the medical model of disease.

But I do not accept such a premise. Rather, I contend that all medicine is in crisis and, further, that medicine's crisis derives from the same basic fault as psychiatry's, namely, adherence to a model of disease no longer adequate for the scientific tasks and social responsibilities of either medicine or psychiatry. The importance of how physicians conceptualize disease derives from how such concepts determine what are considered the proper boundaries of professional responsibility and how they influence attitudes toward and behavior with patients. Psychiatry's crisis revolves around the question of whether the categories of human distress with which it is concerned are properly considered "disease" as currently conceptualized and whether exercise of the traditional authority of the physician is appropriate for their helping functions. Medicine's crisis stems from the logical inference that since "disease" is defined in terms of somatic parameters, physicians need not be concerned with psychosocial issues which lie outside medicine's responsibility and authority. At a recent Rockefeller Foundation seminar on the concept of health, one authority urged that medicine "concentrate on the 'real' diseases and not get lost in the psychosociological underbrush. The physician should not be saddled with problems

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that have arisen from the abdication of the theologian and the philosopher." Another participant called for "a disentanglement of the organic elements of disease from the psychosocial elements of human malfunction," arguing that medicine should deal with the former only (2).

The two positions

Psychiatrists have responded to their crisis by embracing two ostensibly opposite positions. One would simply exclude psychiatry from the field of medicine, while the other would adhere strictly to the "medical model" and limit psychiatry's field to behavioral disorders consequent to brain dysfunction. The first is exemplified in the writings of Szasz and others who advance the position that "mental illness is a myth" since it does not conform with the accepted concept of disease (3). Supporters of this position advocate the removal of the functions now performed by psychiatry from the conceptual and professional jurisdiction of medicine and their reallocation to a new discipline based on behavioral science. Henceforth medicine would be responsible for the treatment and cure of disease, while the new discipline would be concerned with the reeducation of people with "problems of living." Implicit in this argument is the premise that while the medical model constitutes a sound framework within which to understand and treat disease, it is not relevant to the behavioral and psychological problems classically deemed the domain of psychiatry. Disorders directly ascribable to brain disorder would be taken care of by neurologists, while psychiatry as such would disappear as a medical discipline.

The contrasting posture of strict adherence to the medical model is caricatured in Ludwig's view of the psychiatrist as physician (1). According to Ludwig, the medical model premises "that sufficient deviation from normal represents *disease*, that disease is due to known or unknown natural causes, and that elimination of these causes will result in cure or improvement in individual patients" (Ludwig's italics). While acknowledging that most psychiatric diagnoses have a lower level of confirmation than most medical diagnoses, he adds that they are not "qualitatively different provided that mental disease is assumed to arise largely from 'natural' rather than metapsychological, interpersonal or societal causes." "Natural" is defined as "biological brain dysfunctions, either biochemical or neurophysiological in nature." On the other hand, "disorders such as problems of living, social adjustment reactions, character disorders, dependency syndromes, existential depressions, and various social deviancy conditions [would] be excluded from the concept of mental illness since these disorders arise in individuals with presumably intact neurophysiological functioning and are produced primarily by psychosocial variables." Such "nonpsychiatric disorders" are not properly the concern of the physician-psychiatrist and are more appropriately handled by nonmedical professionals.

References and notes

1 A. M. Ludwig, *J. Am. Med. Assoc.* 234, 603 (1975).
2 *RF Illustrated*, 3, 5 (1976).
3 T. S. Szasz, *The Myth of Mental Illness* (Harper & Row, New York, 1961); E. F. Torrey, *The Death of Psychiatry* (Chilton, Radnor, Pa., 1974).
4 R. Rosen, in *The Relevance of General Systems Theory*, E. Laszlo, Ed. (Braziller, New York, 1972), p. 45.
5 H. Fabrega, *Arch. Gen Psychiatry* 32, 1501 (1972). –
6 ——, *Science*, 189, 969 (1975).
7 G. L. Engel, *Ann. Intern. Med.* 78, 587 (1973).
8 H. Rasmussen, *Pharos* 38, 53 (1975).
9 S. Kety, *Am. J. Psychiatry* 131, 957 (1974).
10 G. L. Engel, *Perspect. Biol. Med.* 3, 459 (1960).
11 R. Ader, in *Ethology and Development*, S. A. Barnett, Ed. (Heinemann, London, 1973), p. 37; G. L. Engel, *Gastroenterology* 67, 1085 (1974).
12 J. Cassel, *Am. J. Public Health* 54, 1482 (1964).
13 G. L. Engel, *Psychosom. Med.* 23, 18 (1961).
14 R. S. Duff and A. B. Hollingshead, *Sickness and Society* (Harper & Row, New York, 1968).
15 H. R. Holman, *Hosp. Pract.* 11, 11 (1976).
16 K. Menninger, *Ann. Intern. Med.* 29, 318 (1948); J. Romano, *J. Am. Med. Assoc.* 143, 409 (1950); G. L. Engel, *Midcentury Psychiatry*, R. Grinker, Ed. (Thomas, Springfield, Ill., 1953), p. 33; H. G. Wolff, Ed., *An Outline of Man's Knowledge* (Doubleday, New York, 1960), p. 41; G. L. Engel, *Psychological Development in Health and Disease* (Saunders, Philadelphia, 1962).
17 G. L. Engel and L. Salzman, *N. Engl. J. Med.* 288, 44 (1973).
18 R. Dubos, *Mirage of Health* (Harper & Row, New York, 1959); *Reason Awake* (Columbia Univ. Press, New York, 1970); E. Mayr, in *Behavior and Evolution*, A. Roe and G. G. Simpson, Eds. (Yale Univ. Press, New Haven, Conn., 1958), p. 341; *Science* 134, 1501 (1961); *Am. Sci.* 62, 650 (1974); J. T. Bonner, *On Development. The Biology of Form* (Harvard Univ. Press, Cambridge, Mass., 1974); G. G. Simpson, *Science* 139, 81 (1963).
19 R. Dubos, *Man Adapting* (Yale Univ. Press, New Haven, Conn., 1965).
20 L. von Bertalanffy, *Problems of Life* (Wiley, New York, 1952); *General Systems Theory* (Braziller, New York, 1968). See also E. Laszlo, *The Relevance of General Systems Theory* (Braziller, New York, 1972); *The Systems View of the World* (Braziller, New York, 1972); Dubos (19).
21 K. Menninger, *The Vital Balance* (Viking, New York, 1963); A. Sheldon, in *Systems and Medical Care*, A. Sheldon, F. Baker, C. P. McLaughlin, Eds. (MIT Press, Cambridge, Mass., 1970), p. 84; H. Brody, *Perspect. Biol. Med.* 16, 71 (1973).
22 G. L. Engel, in *Physiology, Emotion, and Psychosomatic Illness*, R. Porter and J. Knight, Eds. (Elsevier-Excerpta Medica, Amsterdam, 1972), p. 384.
23 M. Mead, *Science* 191, 903 (1976).
24 G. L. Engel, *J. Am. Med. Assoc.* 236, 861 (1976).
25 J. M. McGinnis, *J. Med. Educ.* 51, 602 (1976).
26 H. Fabrega and P. R. Manning, *Psychosom. Med.* 35, 223 (1973).
27 A. Meyer, *J. Am. Med. Assoc.* 69, 861 (1917).
28 A. H. Schmale, W. A. Greene, F. Reichsman, M. Kehoe, G. L. Engel, *Adv. Psychosom. Med.* 4, 4 (1964); G. L. Engel, *J. Psychosom. Res.* 11, 77 (1967); L. Young, *Ann. Intern. Med.* 83, 728 (1975).
29 G. L. Engel, *J. Nerv. Ment. Dis.* 154, 159 (1972); *Univ. Rochester Med. Rev.* (winter 1971-1972), p. 10.
30 ——, *Pharos* 39, 127 (1976).

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