Editorial

What is Behavioral Medicine?

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We are witnessing today a unique stage in the evolution of psychosomatic medicine. According to Lipowski [1], psychosomatic medicine as a scientific discipline and as an approach to medical practice has "staged a spectacular comeback" and is "once more in the mainstream of contemporary medicine and thought". Evidence for psychosomatic medicine being in the mainstream of contemporary thought can be found, for example, in the publication of Engel's [2] paper entitled "The Need for a New Medical Model: A Challenge for Biomedicine" as a lead article in *Science*. Engel goes beyond Lipowski's distinction between the "old" versus "new" psychosomatic medicine by calling forcefully for the development of a new "biopsychosocial" model that can encompass all health and disease. A similar conclusion has been put forth by Weiner [3] and Leigh and Reiser [4] who contend that "all medical and psychiatric illnesses can be regarded as psychosomatic, in that comprehensive understanding and care cannot be achieved without considering the three interrelated systems (biological, psychological and social systems of medical and psychiatric patients)".

Paralleling this resurgence of interest in psychosomatic medicine is the emergence of a related field linking the behavioral and biomedical sciences. The term "behavioral medicine" is currently finding its way into assorted articles, chapters and books (e.g., Birk [5]) and is being adopted as a new name by various centers, departments and laboratories across the country (e.g., The Laboratory for Behavioral Medicine at the Stanford Medical School under the direction of Stewart Agras).

The commitment to behavioral medicine has recently brought together a distinguished, multidisciplinary group of behavioral and biomedical scientists to help establish the parameters of this emerging field. The participants of the Yale Conference on Behavioral Medicine [6] also express support for the new *Journal of Behavioral Medicine* to be published by Plenum. Not sur-

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Supported by the National Heart, Lung and Blood Institute.

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Received for publication August 16, 1977.

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Published by Elsevier North-Holland, Inc.

prisingly, there have also been discussions in various quarters regarding the formation of a new Society for Behavioral Medicine.

Where is this movement coming from? What does the term behavioral medicine mean, and how is it similar to and/or different from the modern meaning of psychosomatic medicine? Is behavioral medicine a term that reflects the continued evolution of psychosomatic medicine, or does it come from different quarters, with somewhat different goals and concerns? These questions are not easily answered, for there is presently little agreement regarding the definition and scope of behavioral medicine. However, we can point to certain trends at this time, recognizing that the issues raised by emergence of behavioral medicine will have important implications for theory, research and practice of psychosomatic medicine.

Historically, the field of psychosomatic medicine evolved primarily from the biomedical sciences. Its initial foundation was based on the psychoanalytic theories of Freud and Alexander, and secondarily on psycho-physiological studies of patients performed by investigators trained for the most part in medicine and psychiatry. On the other hand, the evolution of the field of behavioral medicine has been more directly stimulated by input from the behavioral sciences. It has drawn heavily from theories of learning, basic research on animal physiological psychology and human psychophysiology, and most recently from research in social and clinical psychology. The historical differences regarding the role of the biomedical versus behavioral sciences in the evolution of the two fields is also seen in the research goals of the two fields. Psychosomatic medicine has traditionally emphasized etiology and pathogenesis of physical disease. Behavioral medicine, on the other hand, has tended to be more directly concerned with behavioral approaches to the treatment and prevention of physical disease. Although these generalizations are oversimplifications, they do serve the purpose of communicating the opinions of some of the more vocal proponents of the two fields, and of reflecting the fact that there is unfortunately some tendency to regard the two approaches as being separate and even polarized. If, historically, psychosomatic medicine has tended to emphasize etiology and pathogenesis, and behavioral medicine treatment and prevention, then each has contributed to a comprehensive view of disease, and ideally there should be no conflict between them (e.g., understanding etiology and pathogenesis is essential for rational treatment and prevention).

It is becoming increasingly accepted that modern advances in the behavioral sciences can provide important theories and techniques of relevance to medicine (e.g., Williams and Gentry, [7]). One of the unique contributions made to medicine by behavioral scientists, for example, has been research on visceral learning (e.g., Miller, [8]). Interestingly, the first book to use the term behavioral medicine in the title was a book evaluating the clinical status of biofeedback procedures in medicine and psychiatry [5]. Although there is controversy regarding the clinical value of biofeedback procedures in the

treatment of specific psychophysiological disorders (e.g., [9], there is general agreement that biofeedback has provided an important basic research tool for investigating the behavioral regulation and plasticity of physiological processes e.g. [10]. Furthermore, biofeedback is providing new models and techniques for examining the role of behavioral factors in the etiology and treatment of physical disease (e.g., Miller and Dworkin, [11]).

Behavioral medicine should not be equated solely with biofeedback. One group of investigators see behavioral medicine as the application of theories and techniques from the discipline of psychology to medical research and practice. This use of the term behavioral medicine overlaps with, but is not identical to, another new term, health psychology. Whereas researchers in behavioral medicine are particularly concerned with direct patient evaluation and treatment (this is also sometimes referred to as medical psychology), researchers in health psychology tend to be concerned with broader issues, including the design and evaluation of behavioral factors in health care systems.

A second group of investigators see behavioral medicine as the specific application of "behaviorism" to medicine, be it the older form of behavior modification (emphasizing operant and classical conditioning), or the newer forms of behavior therapy (emphasizing cognitive self-control procedures and social learning theory).

A third group of investigators differ from both of the above in that they tend to view behavioral medicine as basically a 1970's term for classic and /or current psychosomatic medicine and consultation-liaison psychiatry.

Given this diversity of opinion, it is understandable why miscommunication between investigators is often hard to avoid. It is our opinion that all of these definitions of behavioral medicine are deficient, for they fail to encompass the full scope of behavioral science knowledge and techniques directly relevant to physical health and disease. A definition of behavioral medicine emphasizing this perspective was developed at the Yale Conference on Behavioral Medicine [6]. Co-sponsored by the Departments of Psychology and Psychiatry at Yale University and the Yale University School of Medicine, and the National Heart, Lung and Blood Institute, the conference brought together a diverse group of distinguished behavioral and biomedical scientists (representing relevant specialties in psychology, sociology, anthropology, epidemiology and public health, psychiatry, cardiology and internal medicine). Their goal, to arrive at a common definition, statement of scope, and recommendations for the future development of the field, resulted in the following definition:

> "Behavioral medicine" is the field concerned with the development of behavioral-science knowledge and techniques relevant to the understanding of physical health and illness and the application of this knowledge and these techniques to diagnosis, prevention, treatment and rehabilitation. Psychosis, neurosis and substance abuse are included only insofar as they contribute to physical disorders as an end point.

Space does not permit us to summarize the logic behind this definition,[1] the specific proposals made regarding the scope of behavioral medicine, the proposal made for a journal, or the relative merits of forming a society [6]. However, what should be clear in the definition itself is that it sounds very similar to the proposals recently made by writers such as Lipowski [1], Engel [2], Weiner [3], and Leigh and Reiser [4]. The comprehensive volume by Weiner [3] emphasizing a psychobiological perspective, illustrates the substantial contributions to theory and practice made by research in psychosomatic medicine. In fact, Leigh and Reiser [3] conclude that "the modern concept of psychosomatic medicine is, therefore, not of a subspecialty of either medicine or psychiatry that treats defined psychosomatic illnesses, but rather of an *attitude* that espouses a holistic medical practice, utilizing up-to-date psychiatric and neurobiologic knowledge and concepts as well as principles and information gained from the social and behavioral sciences". They go on to propose that the new term behavioral medicine might be useful to denote this modern concept. It has the advantages of eliminating the implied dualism in 'psychosomatic medicine'."

Does all this then boil down to semantics, using a new name to help communicate a concept that has already evolved, but is hindered by an old name that symbolizes an older period in its development? Or does the term behavioral medicine imply something more? We submit that it does imply something more. It is our hope that the emergence of behavioral medicine will stimulate a degree of cooperation and collaboration between the behavioral and biomedical sciences that is greater than was historically (or is even currently) the case. Further, we hope that this attitude of cooperation and sharing of skills and knowledge will not be unduly hampered by political factors involved in various disciplines trying to claim its role as being primary to the concept of behavioral medicine.

There are a growing number of behavioral scientists in psychology, sociology and anthropology who are beginning to discover that they have something of value to contribute to medical research and practice. Conversely, there are growing numbers of internists, cardiologists, neurologists, and surgeons who are beginning to see the relevance of behavioral factors in medical practice. The extent to which any one research or clinical society, or any

[1]This definition was evolved to serve as a point of departure rather than as a final word. For example, although this definition purposely excludes traditional behavioral disorders per se from the scope of behavioral medicine, such disorders could be construed as being relevant to a broader conception of behavioral medicine. In fact, if behavioral disorders are redefined to reflect underlying functional disorders of the central nervous system (with the brain as the end organ in question), then it follows that psychosis, neurosis and substance abuse per se can be included in the present definition. This shift in emphasis reflects more than a change in semantics. It reflects an important change in conceptualization, in which mental disorders are no longer described in purely psychodynamic or behavioral terms, but rather are seen and studied from an integrated, psychobiological perspective. A similar issue applies to conceptualizing psychotherapy and behavioral change from the emerging perspective of psychobiology and behavioral medicine [12].

one publication, can stimulate and channel this growth is unknown. This issue is one that will not only face the readers of *Psychosomatic Medicine*, and the members of the American Psychosomatic Society, but the readers of numerous other journals and members of related societies. We have no simple answers to these complex questions. However, as two individuals committed to the continued integration of behavioral and biomedical approaches to physical health and illness, we hope that this editorial will stimulate additional discussion regarding possible mechanisms whereby this journal and society can stimulate more active participation of new investigators becoming interested in this growing field.

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