

Editorial

PSYCHOLOGY, THE BASIC SCIENCE FOR MENTAL HEALTH

Largely through research supported by the National Institute of Mental Health (NIMH), we now know a great deal about the causes of various forms of mental illness, the conditions maintaining them, and the ways in which they might be treated and prevented. Mental illness can be diagnosed reliably, and there are available more, and more effective, options for treating it. Much of this advance has come from research devoted to such specific syndromes as schizophrenia, anxiety disorder, and depression. But the foundations for this applied, clinical research have been laid by research on basic processes that are presumably implicated in mental illness. Some of this basic research has achieved a better understanding of the structure and functions of the nervous and endocrine systems, while other relevant research has focused on genetic factors. But these efforts to understand the biological basis of abnormal mind and behavior have been complemented by other research that investigates the basic psychosocial processes that are relevant to mental health and illness.

This central role of basic psychosocial research in understanding and treating mental health has long been recognized by NIMH. In 1992 the National Advisory Mental Health Council (NAMHC), the advisory board of NIMH, convened a Behavioral Science Task Force, co-chaired by Gordon H. Bower and myself, for the purpose of reviewing recent research in the behavioral and social sciences, highlighting those recent accomplishments that are especially relevant to mental health, and identifying promising research opportunities for the future. The task force included a subcommittee of behavioral scientist members of the NAMHC itself, the director and chiefs of the Division of Neuroscience and Behavioral Science at NIMH, and a distinguished panel of 46 researchers, in fields running from ethology to cultural anthropology, who prepared a large number of concise reviews of advances in psychosocial knowledge—reviews that fill three volumes. Now, after more than 2 years of work, the task force has issued its final report, *Basic Behavioral Science Research for Mental Health: A National Investment*.

This issue of *Psychological Science* reprints the executive summary of the task force report, along with introductory comments by Dr. Rex W. Cowdry, acting director of NIMH, and a list of the people who contributed to

the process. In a cooperative publishing venture, *American Psychologist* is simultaneously publishing the introduction and recommendations of the report. The full report is available from the NIMH Division of Neuroscience and Behavioral Science.

BASIC PREMISES

Two premises underlie the task force report. The first is that basic and applied research go hand in hand. This assumption is commonly made elsewhere in the health sciences. It is why training programs in the health professions include courses in biochemistry, anatomy, physiology, microbiology, genetics, and pharmacology. These are the basic sciences for medical research and practice. They tell us how things operate normally, so that we may recognize what is wrong in disease. The same principle applies in the case of mental illness. Studies of normal behavioral, mental, and social processes provide a baseline against which mental illness and abnormal behavior can be measured and understood.

The second assumption is that psychosocial factors are as important as biological factors in gaining a full understanding of the causes, courses, and treatments of mental disorders. Consider, for example, the strongest case we can make for genetic influences on mental illness—namely, schizophrenia. The best estimate of the concordance rate for schizophrenia in identical twins is about 40%. This value indicates a significant (and substantial) genetic component to schizophrenia, but makes clear that variables besides genetic inheritance are also important determinants of major mental illness. According to the logic of twin studies, the remaining variability in outcome, approximately 60% of the total, is attributable to those features of the psychosocial environment that are not shared by the twins in question. That is, the different outcomes for the schizophrenic proband and his or her normal twin are due to environments and experiences that the twins do not have in common.

A similar case can be made at the other end of the illness cycle. For example, it appears that different cultures differ strikingly in the recovery of their peoples from serious mental illness. Thus, the recovery rate from the first episode of schizophrenia is approximately 4% in Denmark, but approximately 48% in Nigeria. And even within a particular culture, aspects of the psychosocial

environment have substantial effects. For example, we now know that individuals who have recovered from schizophrenia are less likely to relapse if they are discharged to a family characterized by a positive rather than a negative emotional atmosphere, moreover, it turns out that it is the nature of the family as perceived by the patient, rather than as would be described by an objective observer, that affects outcome.

These facts do not have their origins in the genes, or in the nervous or endocrine systems. Rather, they have to do with how the environment, especially the social environment, affects the people who live in it, and they have to do with the cognitive, emotional, and motivational processes that guide the individual's interactions with that environment. Thus, from its initial two premises, the task force draws the conclusion that psychology, sociology, and anthropology must be basic sciences for mental health, along with genetics, physiology, and neuroscience. Therefore, basic researchers in these behavioral sciences, including those studying nonhuman animals, deserve continued, and increasing, support from NIMH.

ACCOMPLISHMENTS TO DATE

Of course, NIMH has always supported basic psychosocial research, and the report makes it clear that the institute's investment in basic psychosocial research has paid off handsomely. Over the past decade or two, we have completely revolutionized our understanding of basic behavioral, mental, and social processes. These changes have affected every aspect of behavioral and social science—from elementary processes of classical conditioning to the complexities of human development and social relations. Compared with the situation of 20 years ago, the current base of knowledge is almost unrecognizable. For example:

- Learning is no longer viewed as the passive acquisition of stimulus-response associations, but rather the active generation of predictions and hypotheses concerning forthcoming events.
- Perception turns out to be more than the flow of stimulus information from peripheral receptors to the brain, but rather reflects a complex interaction between bottom-up and top-down processes.
- Our understanding of how people think, reason, and make judgments and decisions has completely overturned the standard model for human rationality, which has prevailed for more than 2,000 years.
- We have an entirely new view of the nature of unconscious mental life, and of the reciprocal relations between cognitive and emotional processes.
- We know better how to support people's intrinsic motivation for learning, behavior, and behavioral change.

- The cognitive capacities of infants and young children are far greater than we previously imagined.
- We have discovered the fundamental structure of individual differences in personality, and we understand better the way in which personality emerges, and changes, as the individual interacts with his or her environment.
- We have a better notion of how social status, and social affiliation, affects the individual's attitudes and behaviors—how individuals draw support from people around them, and how they relate to others in order to create a supportive social environment.
- We know more about the role that culture plays in the life of the individual, and we have a better appreciation of cultural differences in attitudes, beliefs, and behavior.

One major theme emerging from the report is the importance of reciprocal influence, or bidirectionality of causation, between biology and culture, between the individual and society, and among cognition, emotion, and motivation. Another is the continuing importance of research on nonhuman animals, in both laboratories and naturalistic environments.

RECOMMENDATIONS

The report also contains some recommendations for action. There have been striking advances in our knowledge of psychosocial processes, but our understanding is far from complete. We need to fill in a lot of the details. Moreover, in many instances, the findings of research have opened up entirely new territory to be explored.

Some of these recommendations involve new institutional structures for research. For example, some of the most exciting research in personality, development, and social interaction is longitudinal. Unfortunately, the demands of longitudinal behavioral research are not entirely compatible with the constraints imposed by traditional research grant review. It is hard to do 20-year follow-ups when you have to compete for funding every 4 years, so the task force has proposed new funding mechanisms for longitudinal research.

Because the scope of psychosocial research is very broad, the task force expresses concern that some excellent work may slip through the cracks as NIMH returns under the National Institutes of Health umbrella and acquires a different, and drastically reduced, review structure. In order to give the institute the best review possible, the report proposes an expanded system of study sections, which will ensure both breadth of coverage and depth of expertise.

Most important, the task force proposes expanded support for investigator-initiated research. This has al-

ways been the source of the greatest advances in our field—or, indeed, in any area of science. NIMH review committees see a great deal of excellent science—science that will take us in new directions, and show us things we would not otherwise know—that will not be done because of the lack of federal support. There was a time when the pay line for federal grant applications was between 40% and 50%. Now it is closer to 10%. The task force recognizes that there are more good researchers, doing more good research, than ever before—and that more than anything else, what we need is more resources to support them.

WHAT IS TO BE DONE?

Since its inception in 1949, NIMH has needed no convincing that basic behavioral science research is critical to its mission, and for almost half a century it has acted

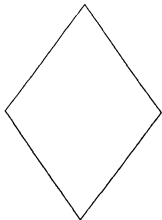
on its convictions by supporting a vigorous program of basic research in behavioral, cognitive, emotional, motivational, and sociocultural processes. This commitment has not been reduced by politicians' questioning of the virtues of behavioral and social science or calls to shift resources from basic to applied research. However, the recent threat to the behavioral and social science programs at the National Science Foundation shows that political forces can affect an agency's ability to fulfill its commitments. If NIMH is to succeed in maintaining and strengthening its portfolio of basic behavioral research, and if psychological science is to continue as a major beneficiary of NIMH support, we must help. We should all grasp the opportunity afforded by the task force report to promote basic psychosocial research, to remind the public of how much we have learned, and of how much remains to be discovered, about mind and behavior, and about individuals and society.

—JOHN F. KIHLSROM

American Psychological Society

The American Psychological Society was founded in 1988 as an independent, multipurpose organization to advance the discipline of psychology, to preserve the scientific base of psychology, to promote public understanding of psychological science and its applications, to enhance the quality of graduate education, and to encourage the "giving away" of psychology in the public interest.

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