

Reshaping Behavioral Science at NIMH

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Every Institute within the National Institutes of Health (NIH) supports basic science research with the well-founded belief that it will ultimately payoff in improvements to the public health. The National Institute of Mental Health (NIMH) is no exception, and is proud of its long-standing investment in basic behavioral science, one that has resulted in significant work in such areas as cognition, emotion, personality, interpersonal interactions, and social and societal processes.

Of course, the Institute also invests in basic biological science, and an historical priority has been to ensure rapid and effective translation of basic information in molecular and cellular biology, neuroscience and basic pharmacology into interventions for mental disorders. In contrast, I have been struck at how little organized effort NIMH has made until now to build bridges between basic behavior science and other areas of research. Research that would benefit from an infusion of ideas from basic behavioral science include clinical neuroscience, where, for example, many otherwise careful imaging studies are vitiated by lack of cognitive or psychophysiological expertise.

Similarly, in studies of psychopathology, symptoms involving cognition, social cognition, emotion, and motivation are often still assessed with rating scales or other tests that date back 30 to 40 years. Intervention development for behavior change, such as improved adherence to treatment, and development of new interventions to treat symptoms of mental disorders, especially in the young and in the elderly, have attracted few new investigators. The inability to attract investigators may be partially a reflection of the absence of new conceptual frameworks and ideas that could be provided by basic science.

Yet another fertile ground for applications of basic science is in health services research, where many barriers to appropriate treatment are behavioral. Parents do not bring depressed children, and depressed adults do not bring themselves for evaluations, in part because of shame and fear. These same attitudes greatly compound the difficulty providers continue to have in identifying depression and suicide risk; one tragic end result of this difficulty is reflected in findings that more than 70 percent of elderly males who kill themselves have seen a primary care provider within a month of their suicide.

There are important ideas and ways of thinking within the basic behavioral science community that are critically needed for progress in the areas that I have highlighted above and in many others. At the same time, I am certain that, as is true for any discipline in our field, basic behavioral science will gain greater vitality through interactions with various disciplines of neuroscience, clinical and prevention research, and health services research. Much of my confidence about the potential impact of basic behavioral science on the public health is based on the NIMH experience with research on the behavioral prevention of HIV transmission. In this case, the prevention research community has used theoretical approaches derived from basic behavioral science to develop several types of interventions. These now have been tested in rigorous clinical trials and have made an enormous difference in slowing infection rates in the United States and in many other countries.

To my dismay, however, outside of our HIV portfolio, there remains an enormous Gulf between basic behavioral and many other disciplines. In response to my concern about this “disconnect,” the National Advisory Mental Health Council initiated a Workgroup led by Drs. Anne Peterson and Robert Levenson, with staff direction from Dr. Jane Steinberg. The Council charged the Workgroup with identifying the barriers to research aimed at bringing basic behavioral science to bear on other scientific areas, and most notably on public health issues relevant to the NIMH portfolio. The Council also asked the group to draft a plan for overcoming identified obstacles and for moving swiftly to bring the best of basic behavioral science to bear on NIMH’s more clinically oriented clinical research.

The Workgroup has done an exceptional job in outlining what NIMH must do to reshape its portfolio. While I was aware of the essential disconnect, the panel’s findings truly surprised me. They determined that some of the most creative and productive basic behavioral scientists do not see any possibility of applying their work to mental disorders. Further, among those who have considered such translational research, there are concerns over the inability to access clinical populations, a lack of expertise in clinical issues, and the conviction that translational applications would do poorly in the peer review process.

Whether these perceptions are correct or not, the result, of course, is an enormous loss for science and for the public health. I hear repeatedly from our constituency groups that the stigma confronting people with mental illness in their families is a priority issue. Fortunately NIMH has invested in work on stereotyping over the last three decades. This research has achieved considerable insight into the psychological processes involved on the part of people who hold gender, age, and minority stereotypes, and contributed to our understanding of how those stereotypes affect the individual. Given these strides, how disappointing it is that we have next to nothing on understanding and dealing with the stereotyping associated with mental illness. What would it take to lure effective basic behavioral scientists into the realm of mental illness to explore the generalizability of theories and findings about stereotyping to the problems of stigma?

In other areas, given the impressive progress of cognitive science in recent years, there are enormous gaps in what we know about the cognitive deficits of schizophrenia, which ultimately may be more disabling than symptoms such as hallucinations. Our attempts at translating the fruits of cognitive science to the attentional problems in attention deficit disorder are equally in need of revitalization. Regrettable gaps exist, too, in the extent to which we have failed to apply basic behavioral science to the issue of treatment adherence problems in individuals with depression or with psychotic disorders.

The NIMH Council Workgroup identified at least five minimal requirements of basic researchers that must be met if we are to address effectively these and other needs. These requirements include: 1) intrinsically interesting research questions; 2) a clinical partner in the translational effort; 3) new venues for conducting the research; 4) an expectation of a fair and expert peer review; and 5) a sense that NIMH will remain committed to investing in this area over a sustained period

NIMH staff is ready to act on the Council Workgroup’s ideas. Examples of steps that the Institute is considering include research centers focused on translation of basic behavioral science; specific RFAs; new programs that would provide support needed specifically to gain access to clinical populations and collaborators; workshops where basic researchers can explore the interface with public health issues and form relationships with clinical investigators; and, finally, peer review procedures that ensure

representation of expertise from both clinical and basic perspectives.

The Workgroup also was quite straightforward in telling NIMH how to incorporate the best behavioral principles into our own business practices. Workgroup members encouraged us not to take their recommendations on faith but to monitor and assess whether areas targeted for reinvigorated attention to behavioral science areas actually demonstrate more progress in the future than areas not so targeted by our staff.

While much path-breaking research will continue to be conducted within one discipline at one level of analysis, there are many important problems at the core of the NIMH mission that cannot be addressed without bringing together disciplines concerned with behavior, brain research, clinical investigation, health services research, and the field of public health. Clearly, the ultimate success of this strategy will demand the full and enthusiastic participation of multiple disciplines, including all of those that comprise the broad field of behavioral science. Working effectively together, I am confident that we will conquer the challenge of mental illness and enhance the potential of public mental health for all people.