on the sociology of lost ideas in schizophrenia research and the watering of gardens

E. Fuller Torrey

What follows is the third in a series of guest editorials that we plan to publish in the Schizophrenia Bulletin. Other readers are encouraged to submit short commentaries on schizophrenia-related topics that they feel merit attention and discussion. Responses to the issues raised in the editorial below will also be welcome.

Although written by an NIMH staff member, the editorial does not necessarily reflect the opinions, official policy, or position of the National Institute of Mental Health.—The Editors.

Just as there are fashions in etiquette, sexual mores, and dress styles in our culture, so there are also fashions in schizophrenia research. Some research ideas are in fashion, while others are considered unfashionable or old fashioned. The fashion cycle runs not in 2- to 3-year trends, like women’s dresses, but rather in 10- to 15-year trends, like men’s ties. A psychiatric Rip Van Winkle, asleep for 20 years, could quickly update himself on the current fashions by skimming the psychiatric journals or by sitting in a grant-review committee meeting. Unfashionable ideas draw scathing barbs from the anonymous reviewers of potential journal articles, and the wise men of the review committees say, “Yes, the methodology is sound but (furrowing their collective brow) the idea isn’t very good.” Low marks. Rejected. Approved but unfunded.

One consequence of these fashions is that potentially valuable research ideas get discarded for years at a time, stored away in the attic with old-fashioned narrow ties. Often the discarding process is sanctioned by a prestigious textbook of psychiatry which declares the idea disproven and therefore dead, when in fact it may not be so at all. But once the obituary of the research idea has been put into print, it gets passed from textbook to textbook and everyone knows it is Truth.

Let me illustrate. Virtually all textbooks of psychiatry say that it is a proven fact that schizophrenia is universal and occurs in approximately equal incidence.
in all cultures of the world. In a previous article I reviewed the inadequate evidence on which this statement had been based and concluded that it is still very much an open question (Torrey 1973). Another example is the idea that there is a seasonality in the births of people who become schizophrenic, which in the United States was said to have been "disproven" by two (methodologically very poor) studies in the early 1960s. In 1974 Woodruff, Guze, and Clayton published an article in the American Journal of Psychiatry purporting to further disprove this idea with a schizophrenia N of 22 patients (to be divided into 12 months) and then proceeded to ridicule the idea completely by dividing the year into signs of the zodiac instead of calendar months. I find it both intriguing and remarkable that the article was accepted for publication. Imagine what chances a similar article would have of being accepted if it claimed to disprove the dopamine hypothesis, or family interaction theories, or the genetic hypothesis. Since the publication of that article, the work of Dalen (1974), Ødegård (1974), Videbech, Waeke, and Dupont (1974), Hare, Price, and Slater (1974), and our own research (Torrey, Torrey, and Peterson, in press) have shown (based on a schizophrenia N of over 150,000 patients) that there is indeed a real seasonality in schizophrenic births.

These are only two of a long list of ideas in schizophrenia research which are not in fashion. There are many other interesting ideas in the past literature which need to be followed up and either proven or disproven definitively. Some of these ideas are:

- The possibilities that cancer, clinical rheumatoid arthritis, and myasthenia gravis occur less often in schizophrenics.
- Possible lower histamine sensitivity and altered response to allergy among schizophrenics.
- The chemical pathway of pellagra psychosis.
- Possible elevations of magnesium.
- Possible alterations in skin melanin and/or the pineal gland.
- Alterations of dermatoglyphics.
- Possible elevations in minor physical stigmata.
- Elevations in stillbirths and congenital malformations in the offspring of schizophrenic mothers.
- The observation that when schizophrenic women become pregnant with a female child, their condition worsens, but with a male child, their condition improves.
- Reported alterations in the cardiovascular system, including smaller hearts and abnormal capillary formations.
- Neuropathological changes which have been reported, including Fisman's (1975) recently reported work on the brain stem of schizophrenics.
- Altered chromatin in the neutrophils of schizophrenics.

I am sure that the readers could help compile a much longer list. The point I want to make is that there is a sociology of lost ideas in our research field, and probably in all research fields. There are certain ideas which are socially acceptable within the research community and others which are not acceptable. Acceptability is only partly determined by objective evidence or evaluation of the idea. It also hinges in large part on fashions in the field, and on the etiological paradigms which are shared by the major researchers who, because of our grant review committee system, also become the major decision makers on funding research. Proposed research which is contrary to the shared paradigms, whether its contrariness is explicit or implicit, is threatening to and uncomfortable for those who hold the paradigm. They tend to ignore, neglect, or ridicule the idea or research proposal—for example, the attempt to ridicule the seasonality data referred to above. Thomas Kuhn (1962) in The Structure of Scientific Revolutions describes the process of paradigm building and then the desperate intellectual efforts to shore them up as they crumble. I think much of what he describes is applicable to the field of psychiatry today. The schizophrenia research field may be suffering from premature closure of the paradigms. Like its analogue, premature closure of the epiphyses, the outcome is stunted growth. Ideas are lost before they have an opportunity to grow.

There are several things which might be done about this situation. Two of them are:

1. Establish a privately or Federally funded small-grants research program specifically for schizophrenia, with a limit of $15,000 per grant per year, and a review committee of people from outside the current major research paradigms. A specific effort would be made to encourage potential schizophrenia researchers who feel intimidated by the present grants system and/or who want to do part-time research. A reasonable budget would be $150,000 (10 to 15 grants) per year initially with a maximum increase to perhaps $300,000 (20 to 30 grants) per year.

2. Further open up the Schizophrenia Bulletin to divergent opinions. Have a special section soliciting research ideas or unusual observations as an extension of AT ISSUE. Perhaps a regular feature might be included called "What Ever Happened To . . .?" with specific research observations from the past. The outcome of such an effort could be
a reopening of the flow of ideas in schizophrenia research which I believe is badly needed. We would be admittedly watering a garden that is full of weeds, but among the weeds may be found growing some very pretty and valuable flowers. The response of readers is invited. ¹

¹ Reader responses should be sent to AT ISSUE, Center for Studies of Schizophrenia, NIMH, ADAMHA, Rm. 10C-26, 5600 Fishers Lane, Rockville, Md. 20857.

References


The Author

E. Fuller Torrey, M.D., was on the staff of the Center for Studies of Schizophrenia, National Institute of Mental Health, Rockville, Md. when he wrote the guest editorial. He joined the staff of St. Elizabeths Hospital, Washington, D.C., in early 1977.

new nimh publication

A new leaflet, “Treatment of Schizophrenia”—one in a series on Trends in Mental Health—has been published by the National Institute of Mental Health, of the Alcohol, Drug Abuse, and Mental Health Administration. The 12-page leaflet is an interview with Dr. Loren R. Mosher, Chief of NIMH’s Center for Studies of Schizophrenia, by Dr. A. David Axelrad, a consulting psychiatrist at Fort Ord, Calif. It is reprinted from the March 1975 issue of a medical journal, Hospital Physician.

Twenty-five questions of major importance are discussed, ranging from whether schizophrenia is an illness (“it doesn’t fulfill the usual criteria”) and whether stress is a cause (“psychiatric illness is precipitated by stressful life events”) to parental and social responsibility and approaches to treatment. Use of drugs such as phenothiazines and other pharmacological approaches also are discussed. In general, Dr. Mosher probes both the mysteries and myths of schizophrenia and makes a prediction as to the future uses of phenothiazines and psychotherapy.

The leaflet, GPO Stock No. 017-024-00528-2, may be obtained at 35¢ a copy at U.S. Government bookstores, or ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. There is a minimum charge of $1.00 for each mail order.