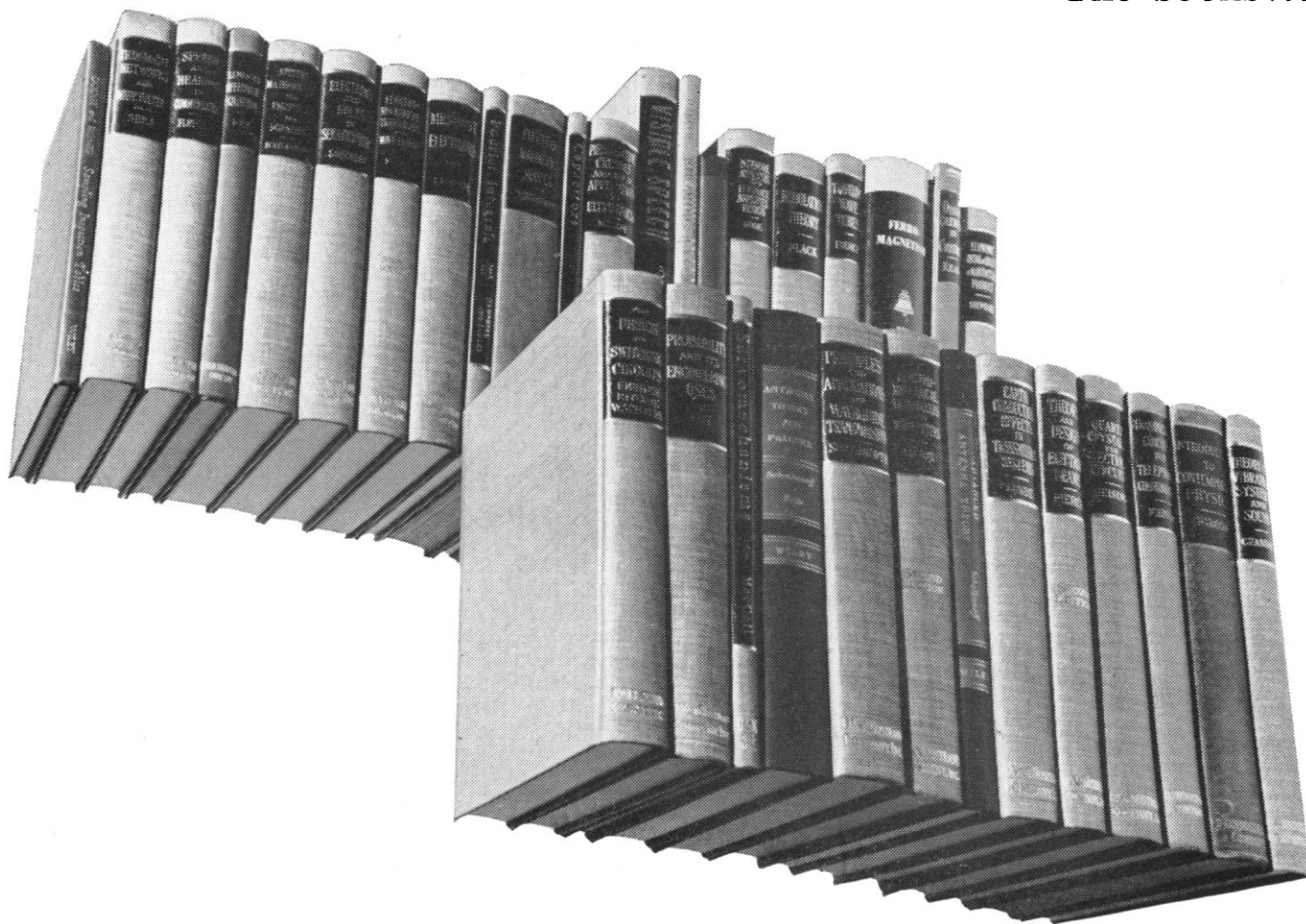


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manifest his difficulties may not be a function of his physiological status." Certainly in psychiatry there is a wide divergence of opinion whether schizophrenia is a single entity or whether it is a disease characterized by the uniqueness of the individual or a reaction formation. To the psychiatrist, each patient is unique. But this has little bearing on the problem whether a single biochemical factor is present.

Horwitt has recognized this by his statement that it "may not" be a function of his physiological status—conversely it "may." In medicine, it is not at all unusual to find that diseases with fairly simple biochemical defects express themselves in terms of personality in unique ways. I am convinced that, if the factors of hyperthyroidism were unknown today, we would argue about it in the same way. During the latter part of the last century, there were many passionate arguments regarding the causes of paresis.

I am disturbed at the expression "the patient chooses to manifest." This implies again the entire concept of reaction formation with subconscious selection of the type of reaction. Apparently, Horwitt uses psychiatric hypothesis as fact when it may in fact be artifact [P. Bailey, *Am. J. Psychiat.* 113, 387 (1956)].

The first recommendation that estimation of tension and anxiety be made would be useful if this were possible. I have searched in vain for a test that will reliably measure this variable. One can often decide whether a person is anxious or not. To quantify this will be a major achievement. To ask one to measure a variable without telling him which measure to use is the counsel of futility. The second recommendation, that no research be done until patients have balanced at least 3 months, removes pretty effectively from biochemistry the vast majority of acute schizophrenics, leaving a residue of chronic hospitalized patients. Perhaps this is desirable, but one should know clearly the result of one's recommendation.

Finally, regarding urine collections, overnight samples from patients and controls may lead to erroneous conclusions. I fear that 24-hour samples will do the same. One ought to combine the best of both methods and make measurements on urine collected at given intervals over the 24-hour period.

Finally, in contrast to Horwitt's, it is my belief that psychiatrists use too freely the concept of cause and effect and that biochemists usually are not preoccupied with these matters. This falls within the realm of philosophy. Writing about Galileo, Newman states: "As we read his writings we instinctively feel at home: we know that we have reached the method of physical science which is still in use. Galileo's primary interest was to discover 'how' rather than 'why' things work" [J.

R. Newman, *The World of Mathematics* (Simon and Schuster, New York, 1956), vol. 2, p. 726]. Science deals with the rational explanation of observable phenomena. In the area of schizophrenia, it is of no utility to discover what may be the cause—there are undoubtedly many "causes." We are concerned with the factors that transform a set of causes into a set of clinical symptoms and signs. In medicine, we do not treat causes—we treat those variables most easily modified, and these may be physiological, psychological, electric, or combinations of these.

The paper by Horwitt will make many biochemists aware of controllable factors which they should have learned in college. But the biochemist must not be seduced by analytic dogma that depends solely on the word of the master. In psychiatry today we need more of the cold breath of reason.

A. HOFFER

*University Hospital,
Saskatoon, Saskatchewan*

I am pleased by A. Hoffer's reaction to my article "Fact and artifact in the biology of schizophrenia"; after 20 years of close association with psychiatrists and their patients, one learns to recognize defensive reactions.

As for the particulars with which Hoffer chose to disagree, I am sure that they are less important than the generalization that too many papers are published in this field which do not meet the accepted standards of the scientific method. It is time that some biologists (including psychiatrists attempting to be biochemists and biochemists attempting to be psychiatrists) stop beclouding the literature with reports of poorly controlled experiments that often catalyze extensive and expensive reinvestigations, because the factors of stress, nutritional state, relative physical activity, and of liver function are not controlled. Some day it will be possible to differentiate with greater accuracy the stresses of schizophrenia from those of other diseases by means of biochemistry. This day will come sooner if we improve our methods of controlling the variables under discussion.

M. K. HORWITT

Elgin State Hospital, Elgin, Illinois

No Visa Difficulties

In confirmation of Walter M. Rudolph's letter to Thomas J. Killian, quoted in the editorial "Scotching a damaging rumor" [*Science* 125, 7 (4 Jan. 1957)], I should like to report that at least six (Western) European scientists who had made one or more visits to Rus-

sia or the satellite countries during 1954 and 1955 were admitted to our country in August 1956 to attend the meetings of the sixth Congress of the International Society of Hematology. These six individuals had all been concerned regarding possible difficulty in obtaining visas for our country, but no such difficulties materialized. The various people in the State Department (including Rudolph) were very helpful. The entrance of these and of 17 "Iron Curtain" delegates was facilitated by recourse to the Exchange Visitors Program, a mechanism which seems to be of considerable value for the entrance of foreign scientists to our country for international gatherings.

WILLIAM DAMESHEK

New England Center Hospital,
Boston, Massachusetts

EQUIPMENT NEWS

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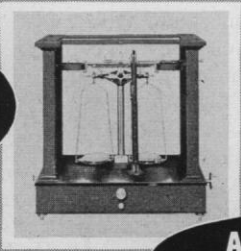
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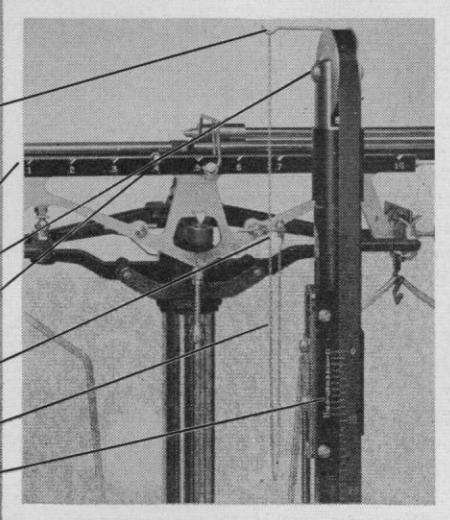
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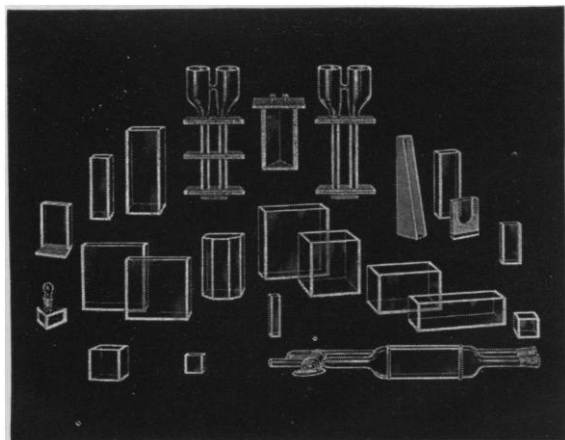
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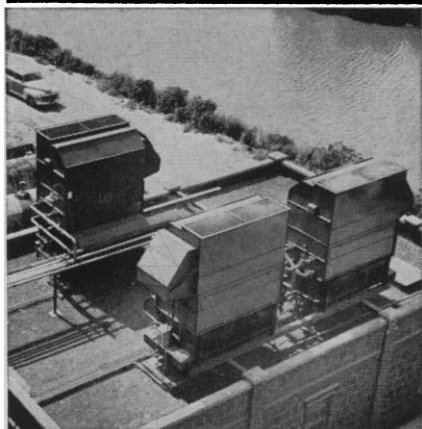
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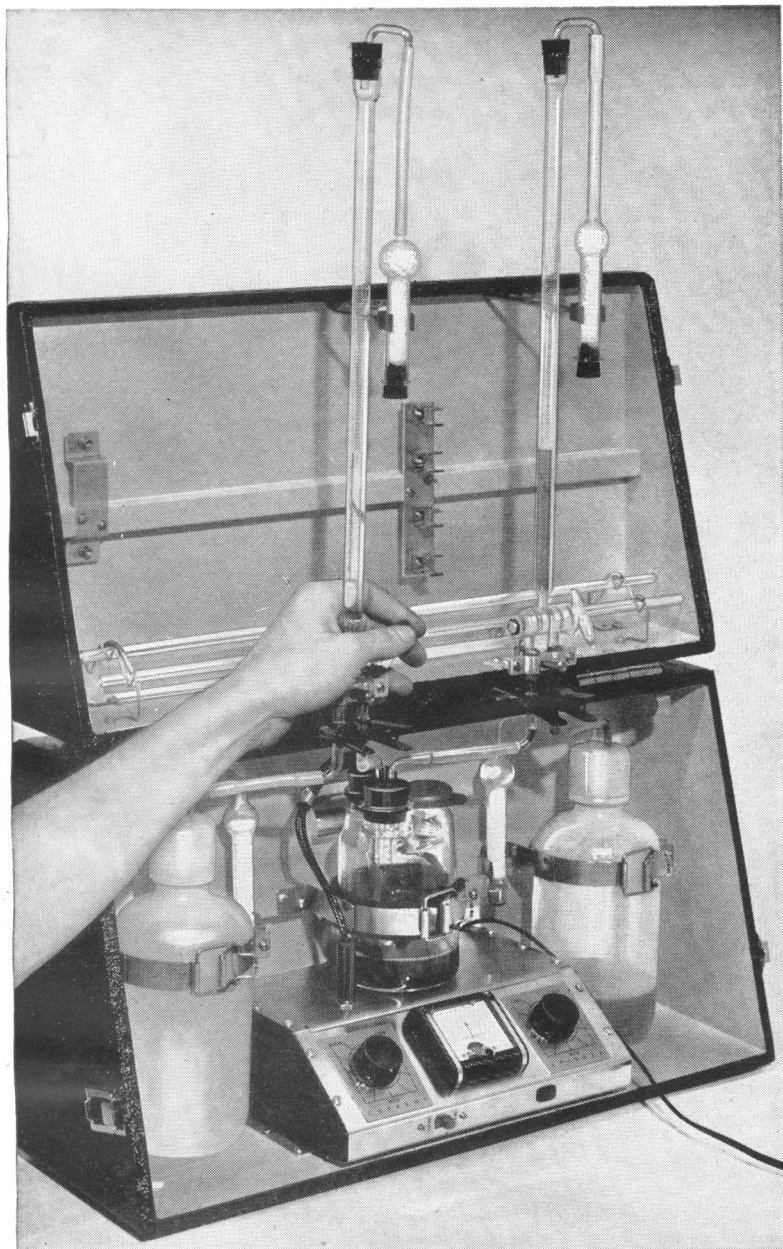
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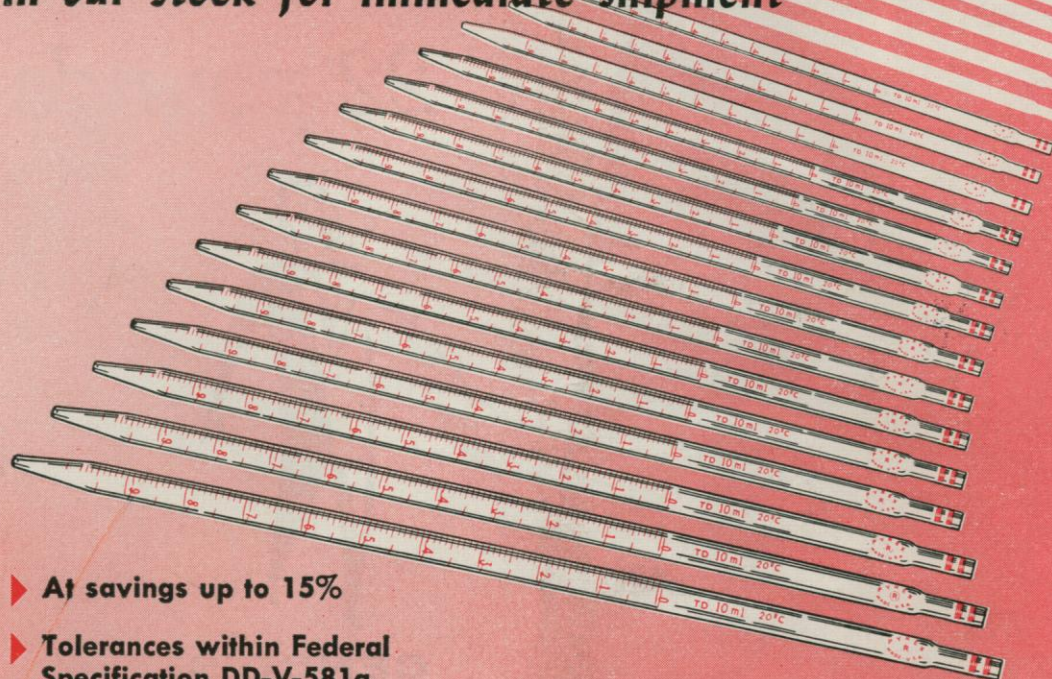
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