Correspondence

"Alleged Model Psychoses"

To The Editor, Canadian Psychiat. A.J.

In an article on azocyclonal hydrochloride in your issue of April, 1956, Doctors Sarwer-Foner and Koranyi make some observations on what they oddly call the 'alleged model psychoses'. Fischer's terms seems useful to us. It is euphonious and accurate so that we can only conclude that neither of his critics is acquainted with the use of models in science. No reasonable person expects a model to be identical with the original which is being studied. Indeed, if this were so, one would no longer be using a model, but a copy or facsimile. Models are usually simplifications and sometimes distortions of the original whose function is to broaden and develop and concentrate the artist's or scientist's conception of his subject. Chemists, physicists and astronomers are not so naive as to confuse the numerous models which they use with the 'real thing' for this would vitiate the whole purpose of constructing and observing models whether in clay or thought.

The model psychoses are models of psychotic conditions which can be produced in various ways. Mescaline and LSD 25 are admirable psychotomimetics (mimickers of psychoses) since they reproduce fairly constantly changes in thought, mood and perception with the consequent disturbances in behaviour found in psychotic conditions. Although their article could be interpreted in that way, we can hardly credit that Doctors Sarwer-Foner and Koranyi no longer classify toxic confusional states and deliria as psychoses. Possibly they have some new terminology which has not yet reached us in the West.

They consider that mescaline and LSD 25 model psychoses resemble toxic confusional states (deliria), rather than schizophrenia. They apparently bolster up their viewpoint by saying that the older and European literature put forward this suggestion. We do not see that if an error has been made in the past there is the slightest excuse for perpetuating it. However, had they consulted the most substantial of the older authorities Louis Lewin (whose Phantastica (1) is so hard to get, and which surely would never have been allowed to go out of print), they would have found on page 103 of this classical work that he refers to the peyote phenomena as "a psychosis". He adds "It is significant that in all these abnormal perceptions due to functional modifications in the cerebral life the individual preserves a clear and active consciousness, and the concentration of thoughts takes place without any obstacle. The subject is fully informed as to his state".

Nevertheless, there can be few experienced clinicians who have not been hard put to distinguish very acute schizophrenic illnesses from toxic confusional states.

Some time ago, we came to the conclusion that in some cases any distinction is only possible in retrospect. However, leaving aside these very difficult and rather infrequent cases, the toxic confusional states are, as their name implies, noteworthy for confusion, by which we mean disorientation in time and space combined with a clouding of conciousness. According to Drs. Sarwer-Foner and Koranyi, this then should be a feature of the model psychoses produced

by LSD 25 and mescalin. In fact, however, most of our subjects are very well orientated in time and space and show no clouding of consciousness.

We do not believe that anyone has ever suggested that these model psychoses, which to a greater or lesser degree resemble schizophrenia, *are schizophrenia.* This mistake must surely arise from incapacity to recognize the value and use of models in science. Five years ago, we (2) emphasized that it was very unlikely that we would be able to reproduce clinical schizophrenia experimentally. We have noted this repeatedly. It is disheartening to find this same misunderstanding, which we then encountered, still being echoed with the same sense of righteous conviction. It is a pity to be forced to quote what one might have hoped would by now have become common-place knowledge, but there seems to be no alternative. We then wrote—"It is highly unlikely that the unheralded schizophrenic psychosis of indefinite duration in an unprepared victim and the experiences of a voluntary mescalin taker who knows what to expect and how long his ordeal will last, would be exactly similar. The remarkable thing is that these acute reactions have so much in common. In the accompanying table it will be seen that mescalin reproduces every single major symptom of schizophrenia although not always to the same degree. Subacute and chronic schizophrenia cannot be compared legitimately with acute mescalin poisoning, but should be compared with chronic mescalin intoxication. Very little seems to be known about this condition ..... The objection that all symptoms of schizophrenia are not found in acute mescalin poisoning is not valid. So far as one can judge from little evidence available, the effects of mescalin vary as much, but not more than the symptoms of schizophrenia, which unhappily for psychiatrists, allows a wide variability".

Drs. Sarwer-Foner and Koranyi may have been unable to do experimental work themselves, but a survey of the literature shows very clearly that insight is not always preserved in working with psychotomimetics. This seems to be especially true of the more subtle and unobtrusive ones such as adrenochrome (2) and adrenolutin (3, 4). It is certainly true that some psychotomimetics, such as the poisons present in amanita pantherina and paneolus, the solinaceous poisons derived from datura and henbane and the fierce virola snuff of the Amazon, seem to be more like toxic confusional states; on the other hand, the effects of adrenochrome, adrenolutin and ololiuqui are much more like various aspects of schizophrenia. This, however, simply shows that these model psychoses are likely to help us in studying a wide variety of psychological illnesses.

A critical approach to these important matters is to be commended. But one expects a critic to be aware of the use and value of hypothesis in scientific inquiry. It is often impossible to say whether a hypothesis is "right" or "wrong", many "wrong" hypotheses have been enormously fruitful in encouraging and stimulating research. The hypothesis that model psychoses and the psychotomimetic agents which produce them may increase our understanding of schizophrenia, mental illness generally and the nature of the mind itself, seems from the enormous amount of work which has been recently published, to be one of these fruitful hypotheses (5, 6, 7, 8, 9, 10). Furthermore, we can surely ask a critic to dispose of published evidence by some more sophisticated method than that of asserting that he cannot believe it to be true. Some flaw in the argument, a more illuminating hypothesis or fresh evidence is the usual way of indicating the reasonableness of critical disagreement. A public con-

fession of imaginative limitations though revealing and sometimes even endearing is hardly germane to scientific discussion.

We are, sir,

Yours,
Abram Hoffer, M.D.
Humphry Osmond, M.D.
Saskatchewan Hospital, Weyburn, Saskatchewan.

REFERENCES

(1) Lewin, Louis. "Phantastica, Narcotic and Stimulating Drugs" E. P. Dutton, New York, 1931.

(2) Osmond, H., and Symthies, J. R., "Schizophrenia, a New Approach" Jnl. Ment. Sci. Vol. 98, No. 411, April, 1952.

(3) Hoffer, A., Osmond, H., Symthies, J. R., "Schizophrenia, A New Approach ii", Jnl. Mental Sci. Vol. 100, No. 418.

(4) Osmond, H., "Neuropharmacology: Transactions of the Second Conference" Josiah, Macy, Jr., Foundation Publications, New York, 1956.

(5) Hoffer, A., and Agnew, N., "Nicotinic Acid Modified LSD 25 Psychoses" Jnl. Ment. Sci. Vol. 100, No. 422, Jan., 1955.

(6) Pennes, H. H., "Clinical Experiences with New Hallucinogens" paper presented at the A.P.A. annual meeting Chicago, 1956.

(7) Rinkel, M., Hyde, R. W., and Soloman, H. C., "Experimental Psychiatry iii" A chemical concept of psychosis. Dis. Nerv. Syst. 15, 259, 1954.

(8) Schwarz, B. E., Wakim, K. G., Bickford, R. G., Lichtenheld, F. R., "Archives of Neurology and Psychiatry", 75, 83-90, 1956.

(9) Federoff, S., "Growth Promotion and Growth Inhibition in Tissue Culture". Doctors Thesis University of Saskatchewan, 1955.

(10) Schneider, J. A., and Sigg, E. B., "Neuropharmacological Studies on Ibogaine". Conference on the Pharmacology of Psychotomimetic and Psychotherapeutic Drugs. The New York Academy of Sciences, April, 1956.

Reply to the Foregoing

To: The Editor "Canadian Psychiatric Association Journal".

I have read Doctors Hoffman and Osmond's comments with care. May I be permitted to make the following comments:

That part of our paper concerned with the "alleged model psychoses" referred to Fabing's research on the blocking action of Frenquel on the L.S.D.-25 and mescaline psychoses. We therefore commented on the use of this action (not by Fabing, but in some quarters) in advertisements which implied that the blocking action of Frenquel in these experimental toxic psychoses was evidence in favour of a specific action in schizophrenia (1). Our differentiation is between the "model psychoses" as experimental toxic psychoses, and as "models" of schizophrenia, which we believe are entirely separate clinical entities. Our insistence that the term "model psychoses," taken to mean a model of schizophrenia, is inaccurate and extremely misleading, was in reference to the above context. Nowhere did we say that Doctors Hoffer and Osmond did not differentiate between the two. Doctor Hoffer and Osmond carry the issue much beyond the scope of our original paper. The following comments are therefore in order:

Their apology for using the term "model psychoses" is not one that I can agree with. I prefer to consider the L.S.D.-25 and mescaline psychoses as experimental toxic psychoses, and to use this accurate and unambiguous term which is therefore free from all possible unwarranted inference or implications. It is not