Schizophrenia : 10 cases.

Recovery	1
Temporary improvement	3
No change	6

Paraphrenia : 2 cases.

Both showed temporary improvement.

Conclusions.

Prolonged narcosis with somnifaine in a considerable number of cases produces marked improvement in the patient's condition. In a certain number of these cases the duration of the illness is shortened by the treatment.

In a large proportion of the cases the improvement is only temporary, but there are others in which permanent improvement, not reasonably to be expected to occur, has resulted from the treatment.

Treatment is of value in benign types of psychoses. It is of doubtful value in well-established cases of dementia præcox, and even in the benign types of psychoses it is impossible to predict the result of the treatment.

We found that typical cases of mania, in which recovery eventually occurred, did not react so well to the treatment as certain other cases of excitement in which the clinical picture suggested schizophrenia.

The treatment involves some risk to the patient's life.

Psychological Aspects.

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It was with some diffidence that I agreed to contribute towards this discussion because I felt that, having had no personal experience of the use of hypnotic drugs in the modern method of prolonged narcosis, anything I might say might be held by some to be spoken without authority.

As the result, however, of my reading of various reports that have been published, and of conversations with physicians who had actually employed the method, I had already formulated in my mind some notions regarding the possible psychological mechanism involved in those cases where beneficial results have accrued.

I felt that I might take the opportunity of airing my views here in the hope that they might lead to discussion and probably some clarification. Looking to the great variety in the chemical composition of the numerous other drugs besides somnifaine that have been employed by different clincians, I felt that some explanation other than, or should I say rather, in addition to, one based purely upon biological chemistry, was necessary.

I had arrived at the conviction that any beneficial results obtained by this method could and should find a rational explanation in the physiological and psychological laws of "habit" and "resistance". Certainly there are no other laws more profoundly influential in regulating the functioning of the nervous system.

Briefly put, my view was that prolonged sleep interfered with, or, if you like, inhibited for the time being, habitual modes of thought and action, resistance to which, in the wakened state, had been weak and futile. The enforced period of quiescence and rest allowed the patient, under favourable circumstances, to acquire new habits of thought and action, or rather, to select and make better use of ideas already acquired but more appropriate to the vital needs of the moment, more appropriate because more likely to lead to successful issue, being less interfered with, less inhibited by ideas and tendencies which formerly held sway in an almost

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compulsive or obsessive fashion. Most of us have had experience of the distressful interference with the ordinary course of thought induced by the temporary dominance in consciousness of some ideative intrusion, let us say a verse, a rhythm, a catchy air, sometimes even a vulgar, perhaps obscene, expression. Try as we will to banish it from consciousness we fail and we may be much disturbed. All our efforts are useless. Let something happen, however, which demands and commands our attention in a compulsory manner and the intruder is vanquished and banished. Again, if to-day I am much worried and disturbed by some problem which has unsuccessfully demanded solution " I sleep over it ", as the common saying is, and to-morrow I attack the problem successfully—resistances are less, other nervous pathways are more open.

Herein I venture to suggest lies the secret of success that is obtained after prolonged narcosis. The depressed patient who for weeks, or perhaps months, has had his consciousness occupied and dominated by depressive ideas, has acquired a habit which may be difficult to break down. The affective tone has become the predominant factor in the process of association of ideas. The same argument applies equally to those patients in whom the grandiose tone prevails. The schizophrenic who lives in his own little world of daydreams, who is out of contact with the realities of the world, has likewise formed habits of thought that inhibit the course of more appropriate mental activity. Habit, inhibition and resistance are, in him, the order of the day. It is not to be wondered at if, after nine, ten or eleven days of sleep—in other words, of freedom from habitual and compulsive modes of thought—the patient wakens in a new environment, more ready to receive stimuli from the outer world in a more physiological manner, with less automatism. At this period the efforts of the nurse and the physician give greater promise of restoring the mental mechanism to normal functioning. If now the patient's interest can be aroused—if healthy thoughts and reactions can be encouraged—the physician has an opportunity of making more fruitful use of all the curative means at his disposal.

I am indebted to Dr. Ford Robertson for having put into my hands, among several papers on this subject, one by Drs. Palmer and Paine, of Philadelphia, on " Prolonged Narcosis as Therapy in the Psychoses ". I wish to quote from it, not merely because I find the views expressed therein accord very closely with those which I had already formed, but also because the entire contribution with its review of the work of others seems to me to present the subject in a clear and logical fashion.

I think it is a great pity, however, that these authors have felt themselves constrained to make use of terms that are unnecessarily obscure and involved. (This would seem to be unavoidable on the part of those who follow the modern psychoanalytical trend of thought.) The authors quoted say :

" It will be noted in Chart IV that the highest recovery-rate occurred among those patients subjected to the most heroic method of treatment, namely, luminal or sodium luminal administered intravenously and orally, and fortified by hyoscine, plus hyperpyrexia and chills induced by intravenous typhoid vaccine. In other words, that form of treatment which was most debilitating and produced the greatest degree of toxæmia and physical prostration resulted in the largest number of recoveries. In addition to a possible chemical interpretation this result has a very definite psychological significance. It would seem that the degree of forced dependence upon the environment is directly related to the prognosis. The amount of activity of the physicians and the nursing staff and their constant presence in the picture, both during active treatment and the convalescent phase, appear to be important factors in the recovery. The degree of energetic interference with the psychosis may determine the rate of recovery."

Here I would like to draw your attention to the fact that, whilst we are dealing to-day particularly with " somnifaine " therapy, it is clear that the authors quoted, like several others, have made use of drugs other than somnifaine to produce narcosis. They claim to have got their best results by the administration of

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sodium luminal plus hyoscine plus hyperpyrexia and chills induced by intravenous typhoid vaccine. One might reasonably ask which of these elements in treatment has been the most important. Having regard, however, to the findings of various investigators in this field it is reasonable to assume that the important thing is the prolonged narcosis, however induced. I agree that a chemical interpretation should be possible, but I leave that to the bio-chemist who is to contribute to this discussion. At the moment I am interested only in the psychological interpretation. If it is true that the degree of forced dependence upon the environment is directly related to prognosis and that the amount of activity of the physicians and nursing staff are important factors in the recovery, does that not really mean that the important thing is to break down inhibitions and resistances in the nervous pathways and to encourage the patients by all possible means to make use of those nervous circuits which are more likely to lead to healthier thought and conduct? Why transcend the limits of ordinary physiological phraseology?

The authors go on to state:

"One of the greatest obstacles to the use of psychotherapy in schizophrenics is the defence which in the phase of narcosis is more or less completely broken through. A transference relationship is forced and serves as an avenue for the psychotherapeutic approach.

"Verbatim records of the productions of patients who have been subjected to this form of treatment have been of great value in understanding the dynamics of their psychoses. The apparent relaxation of the censorship produced by the drug allowed a free flow of significant material which later could be utilized for efforts at re-integration in the convalescent phase. We have been able to obtain from otherwise mute catatonics a history of significant precipitating factors which could be understood and correctly evaluated. Jelliffe applied the term 'drug analytic method' to this most helpful portion of the therapeutic scheme. He regards the technique as a valuable extension of our capacities for getting at and understanding repressed unconscious material.

"The stupor can be looked upon as an enforced or induced regression to the stuporous (or ante-natal) level. This deep regression furnishes the patient with the goal of his regressive yearnings. Once the avenue is opened, re-living in a friendly and protective environment can be promoted through successive phases of development and objects more in keeping with the demands of reality can be substituted."

Surely all that involved language simply means that prolonged narcosis may serve as a means of breaking down inhibitions and overcoming habits of thought and conduct which have been harmful; and that everything possible should be done to encourage readaptation to the environment with more successful modes of behaviour. It is clear, from all that has been written on the subject, that treatment by prolonged narcosis is not without its dangers; but it seems to me that it is in the possibility of readaptation to the environment which it affords that this method is worthy of consideration. It may succeed where attempts to attain the same end by other methods have failed. After all, is it not the case that recreations, games, outdoor employments, frequent and prolonged interviews and all methods of occupational therapy, to which we have long attached much importance, have the same end in view—viz., healthier adaptation to the real circumstances of life?

Biochemistry.

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I WANT to speak of the work we have been doing in Cardiff on the metabolism of the nervous system. The work was carried out there because of the importance of the narcosis treatment. It seemed to us there a pity that a treatment such as

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