small study (Hall and Smith *et al*, 1974) suggested that electrosleep was as effective in the relief of neurotic anxiety as tranquillizers and/or hypnosis, and I have continued using it in my own Unit in the treatment of anxiety states (some extremely intractable and 'placebo-proof') despite my own and my staff's basic scepticism.

As Gomez and Mikhail indicate, the actual technique of electrosleep is almost ludicrously simple to administer (Hall, 1973). The possibilities seem to be that the current may simply act on the scalp hair follicle receptors, producing an electronic 'cradle rocking' effect, that the monotonous repetitive stimuli may produce light hypnosis, that an induced alpha EEG rhythm may be produced (much as in biofeedback techniques), or that the whole technique is simply electronic mumbo-jumbo.

Nevertheless, there seem to be recurrent suggestions that the presence or absence of 'alpha type' ten hertz electrical microcurrents in the head are related to the presence or absence of subjective anxiety (e.g. Smith, 1973), and Lippold and Redfearn (1964) found under double blind controlled conditions that resistant depression may respond to treatment with microcurrents. Since Victorian times there have been numerous swings of fashion's pendulum regarding 'electrotherapy' of various types in psychiatry, and particularly as electroplexy, hitherto considered 'respectable' appears to be under increasing attack, I feel that some rigorous research studies of electrosleep are overdue.

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SCHIZOPHRENICS WHO WEAR EARPLUGS

DEAR SIR,

Dr Frith's paper (*Journal*, March 1979, **134**, 225) is an interesting addition to the recent literature on the possible relationship between primary cognitive abnormalities and the secondary development of schizophrenic symptoms. It is refreshing in a speculative paper of this sort to have the predictions deriving from the theory spelt out so explicitly. However, I wonder if, in formulating his first prediction (that reducing the ambiguity of stimuli should reduce hallucinations), he has too readily dismissed the idea that schizophrenics may experience some temporary beneficial effects from a reduction in sensory input. Faced with the problem of information overload (Hemsley, 1977) it has been postulated that schizophrenics may utilize one of a number of different strategies in their attempts to cope. They may for example minimize their contact with arousal-heightening stimuli by total social withdrawal (Venables and Wing, 1962). Alternatively they may employ less drastic methods to lessen perceptual input. One such case I have seen recently.

Case Report

A 20-year-old single man of West Indian origin was undergoing a day hospital rehabilitation programme following recovery from an acute psychotic illness. His breakdown had been of sudden onset, had had certain affective features and there were no residual signs of a definite schizophrenic process. His phenothiazines were therefore cautiously stopped. He fared well initially, but after a few weeks became unsociable, refused to attend groups and began to neglect his personal appearance and hygiene. His mother complained that when she visited him in his flat she found that he was no longer coping with his day-to-day household chores. In some respects his behaviour became decidedly odd. For example, he would attempt to memorize pages in the Bible and then tear them out and throw them away. Shortly after this he began to wear cotton-wool earplugs. When interviewed he denied hearing voices but said that extraneous sounds bothered him and made him feel ill-at-ease in a way which was difficult for him to describe. These sounds included the ticking of clocks and 'certain notes' in the music which was played almost continuously over the radio in the day hospital workrooms. Wearing earplugs, however, improved his sense of general well-being and helped him to 'hear

things clear'. He refused to consider restarting antipsychotic drugs and over the course of the next three weeks, with earplugs in situ, he improved socially in his work and in his relationship with his parents. This amelioration proved but temporary, however. His decline was heralded by the announcement 'Half of my brain is linked to the Moon'. Following this he developed bizarre quasi-religious ideas and delusions of control by outside influences. It was necessary to readmit him to an in-patient ward where he eventually improved again on phenothiazines.

In addition to this man I have personally seen two other male schizophrenics who have worn earplugs during exacerbation of their illnesses and who claimed they felt better for doing so. Both of these differed from the case I have described in that auditory hallucinations formed a prominent part of their complaints. Conversations with colleagues who mention similar cases suggest that the phenomenon is not rare.

It may well be that the wearing of earplugs is a product of the disordered logic of the schizophrenic. Auditory hallucinations are perceived as arising from outside the head and cotton-wool plugs are used to keep them out. The reason for a non-hallucinated patient wearing earplugs comes less readily, but it could perhaps be explained away as simply another example of a pointless irrational schizophrenic affectation. The phenomenon, however, bears an alternative explanation which would make the exercise seem less futile. It may be that the schizophrenic, during the early stages of his illness or during an exacerbation, finds himself overwhelmed by sensory input from his surroundings. He seeks ways to reduce this and may temporarily succeed in relieving his subjective distress and in improving his performance. It is tempting to suggest that this was true of the patient I have described as well as others like him who adopt the seemingly eccentric habit of pluggings up their ears.

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OMISSION

Unfortunately, in the paper by Drs Bond, Cundall and Falloon entitled 'Monoamine Oxidase (MAO) of Platelets, Plasma, Lymphocytes and Granulocytes in Schizophrenia' (*Journal*, April 1979, **134**, 360–5) both the address for reprints and the authors' address were omitted from the end of the paper. Drs Bond and Cundall are working at St John's Hospital, Stone, Aylesbury, Buckinghamshire and this is the address for reprint requests.