identity, appearing one day dressed as a male and another dressed as a female. After six months he had fully recovered from his psychosis and the phenothiazines were discontinued. At this stage the transsexual feelings had been re-established and he again believed that he was a female trapped in a male body.

Walker (1976) suggests that transsexualism is not altered in depression, psychosis or psychopathic disorders, but this has been disproved in this case. During the patient's hypomanic episodes one of his delusional ideas was that he was an antichrist. One could speculate that he saw himself as a male because an antichrist is generally considered male. This was not obvious clinically: the patient saw no connection between his gender identity and his role as an antichrist but did refer to himself as masculine when talking about this role.

A number of changes in the neurotransmitter substances have been reported to be associated with psychotic illness, including hypomania. Everitt *et al* (1975) and Soulairac and Soulairac (1975) reported that sexual behaviour is influenced by a number of neurotransmitters, but it is not possible at this stage to develop a biochemical model that would explain the changes seen in this case.

ETHNA C. O'GORMAN
The Queen's University of Belfast,
Department of Mental Health,
68 Fitzwilliam Street,
Belfast BT9 7AB

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TARDIVE DYSKINESIA AND THE MENTALLY HANDICAPPED

DEAR SIR,

Most surveys have been carried out among long-stay psychiatric hospital populations of chronic schizophrenics where phenothiazines have frequently been used for long periods of time.

So far few studies have involved the equally long-stay populations of mental handicap hospitals where chronic shortage of staff, inadequate diversional activities and inappropriate environments have frequently necessitated the non-specific use of antipsychotic medication to reduce behaviour disturbances. Routine review of prescriptions in mental handicap hospitals has not always been adequate; it has been our experience that prescriptions may be repeated at infrequent intervals with little thought for their continuing need. In the past anticholinergic drugs were often given routinely, and the mentally handicapped, because of the supervision of their drug taking, probably reach a high degree of compliance. Many mentally handicapped have congenital or long-standing brain damage, and because of the increasing life span the geriatric population of mentally handicapped individuals is increasing so that between 10 per cent and 24 per cent of patients in most long-stay hospitals are over 65 years.

Surveys for abnormal movements in these patients should therefore yield fruitful results, although such surveys will challenge our diagnostic skills as by no means will all the movement disorders be tardive dyskinesia: the involuntary movements of the cerebral palsies must be distinguished.

In a small survey of the total population in one long-stay female ward in a mental handicap hospital where ages ranged from 42 to 87 years (mean of 65 years) and time spent in hospital ranged from 2 to 50 years (mean of 32 years) and mental ages ranged from less than 5 years to dull normality, 9 had received antipsychotic medication in the past 7 years. Obvious movements suggestive of tardive dyskinesia were found in 49 per cent and mild abnormal movements of the face, tongue, jaws and hands were found in a further 37 per cent. All 9 who had received antipsychotic medication, and 25 out of 31 who had not received medication had abnormal movements; in this small number there was no significant relationship to medication history, nor to age. This survey was primarily a pilot scheme to assess the level of co-operation one could expect from such a population. With appropriate techniques and much encouragement all patients in the survey completed the examination, based on the technique described by Sovner (1978), using the Abnormal Involuntary Movements Scale (NIMH, 1975) with appropriate simplification assuming low cognitive abilities (Blowers and Bicknell, 1979).

With the slight improvements in the mental handicap services and the greater emphasis on daily activity programmes, many of the behaviour disturbances formerly treated by medication are being successfully dealt with by methods not requiring medication. Many mentally handicapped people are being maintained in the community in more appropriate environments than were hitherto available in

long stay wards. Those who are admitted to hospital are experiencing a service that continues to improve. We believe therefore that further work could usefully be done with this group of mentally handicapped individuals who are with us now, as with a more progressive philosophy of care and increased resources the opportunity to study such a group should fortunately disappear.

D. J. BICKNELL
A. J. BLOWERS

Botleys Park Hospital,
Chertsey, Surrey

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PSYCHIATRIC MORBIDITY IN INDIA

DEAR SIR,

In their paper on psychiatric morbidity in India (*Journal*, January, 1980, **136**, 78–85) Professor Nandi and his colleagues compare patterns of family morbidity in different groups: 'Over 53 per cent of the Brahmin families and over 27 per cent of Scheduled Caste families had *more than one affected member*, while the tribal community had one affected member in 12 per cent of its families. Considering the differential rates of individual morbidity in the Brahmins, Scheduled Caste and Tribes it appears that morbidity in families occurs in the same pattern in each group' (page 80, my italics). Is it possible they are referring here to the total percentage of affected families in each community and not the percentage of families with more than one affected member? There appears to be a certain ambiguity between the figures here, and between these and those on page 76.

The morbidity for the Brahmins (average family size 6.6) is 115 per 1,000; for the Scheduled Castes (average family 5) it is 72 per 1,000 and for the Tribes (average family 4.7) it is 25 per 1,000. The average Brahmin family is thus likely to have 0.76 members psychiatrically ill, the Scheduled Caste family 0.36 and the Tribal family 0.12 (calculated from Table IV). Assuming independent genesis of psychopathology in each individual, the chances of there being two affected individuals in the Brahmin family are 0.58, for the Scheduled Castes 0.13 and for the Tribes 0.01. If the figures quoted on page 80 do relate to families with more than one affected member, which appears unlikely given the total number of cases, then there seems to be more 'bunching' of cases in the Scheduled Castes and Tribes than for the Brahmins. This would suggest that intra-community differences are less significant among the Brahmins, although the authors suggest Brahmin society is less homogeneous. In fact *occupation* among the Tribes, but not among the Brahmins or Scheduled Castes, appears related to psychopathology (Table VIII), which is somewhat at variance with the view of 'tribal societies' as ones which do 'not have social stratification and occupational specialization'.

ROLAND LITTLEWOOD

Institute of Social Anthropology,
Wolfson College, Oxford OX2 6UD

LANGUAGE LATERALIZATION AND UNILATERAL ECT

DEAR SIR,

A report by Levy and Reid (1976) indicates that it is possible to identify cerebral lateralization for speech by an examination of the way in which an individual holds a pen. In 72 out of 73 cases, Levy and Reid correctly identified the hemisphere specialized for language by discerning whether the individual's pen grip during writing was inverted or non-inverted.

A non-inverted grip describes the way of holding a pen such that the hand is mainly below the line of writing; whereas a person whose hand is mainly above the line of writing has an inverted grip.

Left hemisphere language specialization was found to correspond to non-inversion in right-handed writers and to inversion in left-handed writers. Conversely, right hemisphere specialization for language was found in right handers with an inverted grip and in non-inverted left-handers.

Because of the speed and simplicity with which a person's pen grip may be observed, Levy and Reid's results may be readily adopted for clinical purposes. One such application is in the choice of hemisphere to which unilateral ECT should be administered. Using Levy and Reid's method it should be possible to minimize any deleterious effects of ECT given to the hemisphere responsible for speech.

G. S. ALLEN

All Saints Hospital,
Lodge Road,
Birmingham B18 5SD

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