prevalence of malignant neuroleptic syndrome with this class of drugs. Although an equal binding pattern to D1 and D2 receptors has been demonstrated *in vitro*, to my knowledge the *in vivo* research using PET scan technology has shown preferential binding to D2 type receptors with only 20% to 25% D1 receptor occupancy (Farde *et al*, 1988).

CLIVE BALLARD

Walsgrave Hospital
Clifford Bridge Road
Walsgrave
Coventry CV2 2DX

Reference

FARDE, L., WIESEL, F. A. & HALLDIN, C. (1988) Central dopamine receptor occupying in schizophrenia. *Archives of General Psychiatry*, **45**, 71–78.

Schizophrenia, season of birth, and maternal age

SIR: Dalen (*Journal*, December 1988, **153**, 727–733) demonstrates, with British and Swedish data, increased seasonal variation of births associated with raised maternal age. He thus provides a possible explanation for the season of birth effect in schizophrenia, given the previous observations that maternal age at birth is raised in samples of schizophrenic patients. In addition, he suggests that the observed excess of births by older women in the early months of the year is due to age-related decline in their fertility. The essence of this argument is that a cohort of such women will be older, and hence less fertile, in the later part as compared to the earlier part of the year. Although true, this is concerned with a cohort, not an age class, and is therefore not directly relevant. His example of a cohort of women born in 1935, who will be in the age class 15–19 from 1951 to 1954, demonstrates an apparent seasonal effect only because the time interval considered begins at the beginning of one year and ends at the end of another year. However, the arbitrary convention that January is the first month of the year is irrelevant to age calculations, and more appropriate time intervals to consider would be those which begin on the 15th birthdays and end on the 20th birthdays of the cohort. These time intervals are precisely when the cohort will be in the age class 15 to 19, but can begin and end at any time of the year. When a time interval begins at the beginning of one year, and ends at the end of another year, then the rising fertility in this age-range results in an excess of births in the later months of the year. However, when a time interval begins in the middle of one year, and ends in the middle of another year, the rising fertility produces the opposite effect – an excess of births in the earlier months of the year. Considering the entire cohort, there will not be an obvious overall seasonal effect.

The increased seasonality of birth associated with raised maternal age is probably related to the decline in fertility in a different way. Consider fertility to be composed of two additive components: the first representing the level of fertility, which is relatively stable but changes with age; and the second representing the superimposed fluctuations which occur regularly at one cycle per year. The ratio of the amplitude of the seasonal fluctuations to the level of fertility will then be a determinant of the apparent magnitude of the seasonal variations of births. It is possible that this ratio increases as fertility level falls with advancing age, and results in the increased seasonal variation of births in the older age groups as demonstrated by Dr Dalen. This explanation does not have the difficulty raised by Dr Dalen with his argument that southern hemisphere studies of schizophrenia show an excess of births which is not at the beginning of the year.

PAK SHAM

Genetics Section
Institute of Psychiatry
Denmark Hill
London SE5 8AF

Homosexual erotomania

SIR: We were interested to read Dunlop's account (*Journal*, December 1988, **153**, 830–833) of two cases of female homosexual erotomania. This has been reported before (Lovett Doust & Christie, 1978; Signer & Cummings, 1987).

Dr Dunlop equates erotomania with de Clérambault's syndrome, but we feel that her cases do not meet the criteria for de Clérambault's syndrome. De Clérambault formulated the 'fundamental postulate' which describes the essential characteristics of the condition: the conviction within the patient (the subject) of being in amorous communication with a person of higher social status (the object), who has been the first to fall in love and the first to make advances (Enoch & Trethowan, 1979). Neither of Dr Dunlop's cases appear to hold the delusional belief that the other person (in both cases another woman) is in love with her. Her first patient's love object "approached her first, expressing concern and wishing to be helpful". There is no evidence that the patient believed the object to have had any amorous interest in her. Her second patient experienced the abrupt onset of "something special"between herself and the object and developed an obsessional attachment to her. She hinted at "more than platonic" feelings for the object, but no mention is made of belief in reciprocation by the object.

In Dr Dunlop's Table I she omits Ellis & Mellsop's (1985) criterion (C): "The other person had been the first to fall in love". Had this been applied, it would perhaps have been made clear that neither patient believed the object to be in love with her.

This diagnostic confusion stems from ambiguous usage of the term 'erotomania' to include a wide variety of types of pathological attachment behaviour. It is sometimes taken to indicate delusional love by the patient for another person, although in the de Clérambault syndrome the belief is of a love which is in precisely the opposite direction, i.e. from the object to the subject.

Enoch & Trethowan (1979) remarked on the importance of distinguishing erotomania from everyday infatuation, normal passion, and nymphomania on the one hand, and paranoid schizophrenia on the other, but in the absence of clear definitions it becomes impossible to make these distinctions. Seeman (1978) pointed out that there is much overlap in the literature as to what is meant by the terms phantom lover syndrome, erotomania, and de Clérambault's syndrome. The resulting uncertainty is amply demonstrated in Ellis & Mellsop's (1985) review of 58 cases, supposedly of de Clérambault's syndrome, of which only 11 (19%) fulfilled the 'fundamental postulate' criteria (A, B, C, and D) which they adopted.

SIMON EMINSON

Cherry Knowle Hospital
Ryhope, Sunderland
Tyne & Wear SR2 0NB

TIM GILLETT
FUAD HASSANYEH

St Nicholas Hospital
Gosforth
Newcastle

References

ELLIS, P. & MELLSOP, G. (1985) De Clérambault's syndrome – a nosological entity? *British Journal of Psychiatry*, **146**, 90–95.

ENOCH, M. D. & TRETHOWAN, W. H. (1979) *Uncommon Psychiatric Syndromes* (2nd edn). Bristol: John Wright.

LOVETT DOUST, J. W. & CHRISTIE, H. (1978) The pathology of love; some clinical variants of de Clérambault's syndrome. *Social Science and Medicine*, **12**, 99–106.

SEEMAN, M. V. (1978) Delusional loving. *Archives of General Psychiatry*, **35**, 1265–1267.

SIGNER, S. F. & CUMMINGS, J. L. (1987) De Clérambault's syndrome in organic affective disorder. *British Journal of Psychiatry*, **151**, 404–407.

Post-traumatic stress disorder

SIR: McFarlane's account of a bushfire (*Journal*, February 1989, **154**, 221–228), while elegant in its methodology, is perhaps not capable of generalisation to post-traumatic stress disorder (PTSD) as a whole. He points out that most of the recent literature focuses on Vietnam veterans and victims of disaster. These groups, however, differ significantly from Dr McFarlane's. Vietnam veterans were an unmotivated, socially disadvantaged group of draftees who were hardly prepared for what they faced, and victims of a disaster are a more heterogeneous group and are, by definition, completely unprepared for the trauma they experience. Dr McFarlane describes his group as large, trained and volunteer. They were recruited into the traumatic event after it started, were well motivated, and possibly had previous experience. It thus, by definition, lacked the element of surprise and unfamiliarity experienced by the other PTSD groups examined.

It may well be that this element of unpreparedness would account for the development of PTSD in some sufferers.

JON KENNEDY

Reaside Clinic
Bristol Road South
Rubery, Rednal
Birmingham B45 9BE

Neuronal misconceptions

SIR: Goodman (*Journal*, March 1989, **154**, 292–299) has set himself the difficult task of suggesting that anomalous neural connections underlie some psychiatric disorders. He has commendably suggested tests for his hypothesis. Nevertheless, it suffers from inherent difficulties. Firstly, it incorporates a two-stage pathogenesis: a primary lesion (e.g. brain damage) followed by maladaptive neuronal repair. The dual abnormalities would be more difficult to test in the clinical setting than more simplistic explanations, such as 'neuro excess' theories. Secondly, his attempts to explain a range of psychiatric abnormalities on the basis of misconnections have forced him to make simplistic generalisations, e.g. the dichotomisation between focal and diffuse misconnections, and their likely consequences. If, as he implies, abnormal (and by inference, *random*) misconnections lead to behavioural abnormalities, it is unlikely that such abnormalities take the form of consistent syndromes. Finally, a misconnection theory need not exclude other hypotheses. Indeed, 'misconnections' could lead to 'neuroexcess' or 'neurodeficiency'.

The relationship between temporal lobe epilepsy (TLE) and schizophrenia illustrates the difficulty of proving or disproving hypotheses of the sort proposed by Dr Goodman. While TLE has been associated with a number of psychiatric states (Vasquez, 1952), its link with schizophrenia has been debated (Small *et al*, 1986). Dr Goodman focuses on the increased prevalence of schizophrenia among