that this incidence was unexpectedly high, and the findings of Dr Cooper *et al* confirm this.

The overall incidence of psychiatric disorder in their study was 151/1000 in the post-natal year, which is only 14% higher than in a rather unsatisfactory Edinburgh control group aged 18–65 (not many women give birth after 50). However, as the authors concede, "there was a tendency for the onset of psychiatric disorder to arise in the first 3 months after delivery rather than evenly throughout the postpartum year". Indeed there was: 24% of the incidence was within a month of childbirth, 40% within 3 months and only 27% in the last 6 months of the post-natal year.

On the evidence presented it would be premature to write the obituary of post-natal depression.

BRICE PITT

St Mary's Hospital Medical School
Paddington
London W2

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SIR: Without doubt the study by Cooper *et al* (*Journal*, June 1988, **152**, 799–806) is one of the most thorough into the vexed question as to whether childbirth contributes to a genuine increase in non-psychotic morbidity. The results in fact showed no significant difference between the level of such morbidity in a group of puerperal women and that in a non-puerperal control group. The controls were not studied directly by the authors but were a subset of a general population sample of women studied by Surtees *et al* (1983) in Edinburgh. They were non-puerperal in that they had had no pregnancy or delivery during the previous year. The problem with this control group is that it may have contained women in their second or even third postnatal year still suffering from disorders which had had a post-natal onset.

The authors themselves acknowledge that such disorders may pursue a chronic course, and they refer to Pitt (1968), who found that 3.9% of his total sample of 305 women had depressive disorders which showed little or no improvement a year after initial assessment. Of particular relevance for an Edinburgh population is the finding reported by Wrate *et al* (1985) of a 3-year follow-up study of 103 mothers. Of 11 with postnatal depression, 7 (6.8% of the total sample) had disorders which lasted at least until the end of the first postnatal year and 2 mothers had disorders lasting for more than two years. Furthermore, Dr Cooper *et al* show that about one-third of their own puerperal cases are detectable at twelve months postpartum, and they presumably remained cases for at least part of the second postpartum year.

In clinical practice one certainly does see women in the second or, to a lesser extent, third year postpartum with non-psychotic disorders which have pursued a chronic persistent or relapsing course since delivery. Such women should be excluded from the control group in order to derive a better estimate of the psychiatric morbidity among the general female population of childbearing age; one which is independent of the effect of childbirth, although not independent of the effect of the stresses of childcare, and hence suitable for use as a control value.

PAUL-ALLAN DEWSNAP
GEORGE STEIN

Farnborough Hospital
Farnborough Common
Orpington
Kent BR6 8ND

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'Biological' Treatment

SIR: In his letter (*Journal*, September 1988, **153**, 405) commenting on my use of the word 'biological' in my article (*Journal*, May 1988, **152**, 657–659) on the prediction of response of depressed patients to treatment, Dr Van Kempen asks the question, "why not 'drug' or 'pharmacological' treatment?" The answer is to be found in the first paragraph on page 659, where it is indicated that 23 patients received ECT either alone or in combination with drugs. Perhaps I could have used the word 'physical' to cover this combination of treatments, but in considering the aetiology and treatment of psychiatric disorders it is accepted practice to categorise the factors as psychological, social, and biological.

On the broader issue of the meaning of the word 'biological', I take the point that it is generally held to imply a relation to the science of life in general, but the *Shorter Oxford English Dictionary* (3rd edition, 1973) gives two meanings: (a) "the study of human life and character", which is indicated as obsolete,