the smaller head size and lower birthweight in the preschizophrenic group were independent of one another or were both reduced in the same individuals at birth.

We found the birthweight findings particularly interesting as we have recently completed a study of maternally recalled birthweight in a consecutive series of 73 DSM–III schizophrenic patients compared with 43 affective psychosis patients. Mean birthweight in our schizophrenic sample was reduced by 7.1%, compared with McNeil *et al*'s finding of 6.4%. McNeil *et al* matched for sex, maternal age and social class; we entered sex, ethnicity and parental social class into a four-way ANOVA. After controlling for these variables, mean birthweight was significantly lower in the schizophrenic group ($f=8.9$; $P=0.004$), a finding which remained significant ($P=0.01$) when all preterm births (<37 weeks) were excluded from the analysis.

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WOERNER, M. G., POLLACK, M. & KLEIN, D. F. (1973) Pregnancy and birth complications in psychiatric patients: a comparison of schizophrenic patients with their siblings. *Acta Psychiatrica Scandinavica*, **49**, 712–721.

LARRY RIFKIN
SHON W. LEWIS
ANN STEWART
ROBIN M. MURRAY

Institute of Psychiatry
Denmark Hill
London SE5 8AF

A social atmosphere which tolerates eccentrics

SIR: Some end-of-year figures in Supplement 19 (Leff, *Journal*, April, **162**) for patients resident in mental hospitals (pp. 7–8) show a decline from 350 per 100 000 in 1954, to 155 in 1981 and to 133 from a 1988–89 report. On page 8 there is a reference to Tooth & Brooke (1961) that the:

> "longstay population resident in 1954 would run down at a rate which would eliminate it by 1975. The authors warned of a potential new longstay population but advocates of community care were convinced that community care would ameliorate such a trend."

In 1962 I wrote a letter to the *Lancet* (Lindsay, 1962) drawing attention to a statistical misinterpretation. I recalculated their data to generate their findings and then predicted that half of the resident long-stay population would remain in 10 years, a third in 16 years, a quarter in 20 years, and so on. I noted that Hailey (1971) (pp. 10–11)

> "concluded that a curvilinear model of declining bed need would provide a more realistic projection than the linear downward trend of the Tooth & Brooke study."

Tooth & Brooke (pp. 711–712) wrote about the potential new long-stay population and arrived at figures for short-stay beds at 343 per million population, for medium stay at 503 beds per million population, and for long-stay over two years at 890. The total is 1762 beds per million population, or 176 beds per 100 000. Rates for the decline of the figures above can be calculated from 350 to 133 per 100 000 in 35 years with a geometric mean of 0.9727 (2.73% decrease each year). Tooth & Brooke's 176 per 100 000 would occur after 25 years, the 155 per 100 000 after 31 years, and 133 in the 35th year. The rates of decline slowed between 1954 and 1981 (0.97, 3% per annum), and 1981 to 1988–9 (0.981, 1.19%).

Tooth and Brooke (1961) noted the likely increase for older patients to develop cerebral deterioration, and the hard core of organically deteriorated patients in rehabilitation programmes. They addressed their concerns about the future:

> "Maintenance in the community will depend upon the existence of a social atmosphere which tolerates eccentrics and an economy which enables them to be largely self-supporting." (p. 711)

The TAPS Project 7 (O'Driscoll, *Journal*, April 1993, **162** (suppl. 19), 7–17) starts with a comment that most outcome studies have concluded that a new long-stay group will replace the old long-stay patients and that a residual group of ageing patients, mostly with organic syndromes, is difficult to accommodate in the community.

Are the advocates of community care suggesting that this is just a relocation of the hospital treatment, or is there some special therapeutic community advantage for tolerating the eccentrics outside the former institutions? Moore *et al* (*Journal*, December 1992, **161**, 802–808) have recorded some opinions about staff members working with long-term adult mentally ill in terms of research orientated to the human information processing, with the computer adopted as the model and their expressed emotions construct. In their discussion they stated that "an analysis of the organisational structure of the setting and its effect on the staff might also be indicated" (p. 806). They report that:

> "Only 13 of the staff (37%) said they hoped to remain in their jobs, at least for the time being; 11 (31.4%) were uncertain about their intentions and 11 definitely

intended leaving their job in the near future ... six months later ... eight staff members (23%) have left their jobs in the day hospital and two hostel staff retired." (p. 805)

Main (1980) has put the social perspective in:

"Every human organisation is a social and interpersonal setting that either extends or cramps the personality of those within it, and is variously therapeutic or anti-therapeutic, creating increased or decreased health".

Their described situation cramp staff and patients, is anti-therapeutic, and creates decreased health. The social atmosphere does not tolerate the eccentrics, their staff, nor their interpersonal relationships.

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TOOTH, G. C. & BROOKE, E. M. (1961) Trends in the mental hospital population and their effect on future planning. *Lancet*, 1 April, 710–713.

JOHN LINDSAY

Unit 1, 60 Broadway
Nedlands, 6009
Western Australia

Depression of old age

SIR: Baldwin *et al* (*Journal*, July 1993, **163**, 82–90) challenge the notion that cerebral disease is an indicator of poor prognosis in the depression of old age. They report only a trend for those with putative cerebral disease to do worse than those assumed not to have cerebral disease.

Cognitive impairment has long been equated with cerebral disease but the reverse cannot be said to be true. Kobari *et al* (1990) found 21.6% of cognitively normal volunteers to have leuko-araiosis. When cardiovascular risk factors are excluded, this figure falls dramatically (Kozachuck *et al*, 1990).

Steingart *et al* (1987) report that cognitively normal people with leuko-araiosis are significantly more likely to have neurological soft signs than those that have none. Fein *et al* (1990) have reported normal cognitive functioning of elderly subjects with extensive white matter lesions over a period of seven years.

Neuroimaging is clearly the gold standard in this area. If this is impractical then a detailed neurological assessment with an eye to soft signs needs to be undertaken and reported. There is also a suggestion that cardiovascular risk factors should be investigated in a similar way. Without taking these into account it is likely that a considerable number of subjects will be wrongly allocated to a functional rather than an organic group. It may be that this failure explains why the results do not bear out those of previous studies.

The important point to emerge from this study is, however, that the treatment of depression in the elderly, of both a functional and organic aetiology, is a worthwhile exercise and should be pursued vigorously within the patients' tolerance.

FEIN, G., VAN DYKE, C., DAVENPORT, L., *et al* (1990) Preservation of normal cognitive functioning in elderly subjects with extensive white-matter lesions of long duration. *Archives of General Psychiatry*, **47**, 220–223.

KOBARI, M., MEYER, J. S. & ICHIJO, M. (1990) Leuko-araiosis, cerebral atrophy and perfusion in normal aging. *Archives of Neurology*, **47**, 161–165.

KOZACHUK, W. E., DECARLI, C., SCHAPIRO, M. B., *et al* (1990) White matter hyperintensities in dementia of Alzheimer type and in healthy subjects without cerebrovascular risk factors. *Archives of Neurology*, **47**, 1306–1310.

STEINGART, A., HACHINSKI, V. C., LAU, C., *et al* (1987) Cognitive and neurological findings in subjects with diffuse white matter lucencies in computed tomographic scan (leuko-araiosis). *Archives of Neurology*, **44**, 32–35.

CHRISTOPHER BALL

Hither Green Hospital
Hither Green Lane
London SE13 6RU

Ageing as a risk factor for lithium neurotoxicity at therapeutic serum levels

SIR: In their recent report of patients with lithium-induced neurotoxicity, Bell *et al* (*Journal*, May 1993, **162**, 689–692) discussed several factors known to increase the risk of toxicity with therapeutic levels of lithium. However, the authors did not mention older age as a possible predisposing factor.

Since ageing alters receptor-site sensitivity, it is hypothesised that the elderly are more sensitive to the side-effects of lithium. Indeed, there are data to support this hypothesis: firstly, the prevalence and severity of hand tremor in lithium-treated patients increases with age (Murray *et al*, 1983); secondly, Roose *et al* (1979) and Smith & Helms (1982) found that, at therapeutic blood levels, people 60 years and over had more lithium toxicity, including neurotoxicity, than younger patients. However, these two studies did not control for confounding variables, such as concomitant psychotropic use. There have also been several reports (for example, Lafferman *et al*, 1988; Austin *et al*, 1990) of cognitive impairment, ataxia, extrapyramidal signs, disabling tremor, peripheral nerve palsy, and aphasia developing in