to negligence. We accept full responsibility for our recommendation and stand by it: it would be deplorable if the *Journal* succumbed to pressure to exercise the type of censorship advocated by Dr Goodwin.

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Ganser Syndrome

SIR: Carney *et al* (*Journal*, November 1987, **151**, 697–700) quoted Professor Whitlock's finding that Ganser syndrome is not confined to prisoners. In the Western world the number of people claiming compensation for health problems following somatic or emotional trauma in industry or traffic is increasing at a rapid pace; hence the proportion of patients presenting with this disorder (which I place on a hysterical-malingering dimension) has risen.

In 1956 I published my observations on a series of patients claiming disability pensions and presenting with the clinical picture of Ganser (Tyndel, 1956). In 1973 I coined the term 'nomogenic disorder', in analogy with the notion of iatrogenic disorders, defined as psychopathological disorders in whose development or maintenance the law and its implementation play a significant role (Tyndel, 1977). Ganser is listed as one of the paradigms of nomogenic disorders.

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Age of Onset of Schizophrenia

SIR: Verghese *et al* (*Journal*, November 1987, **151**, 707) suggest that age of onset of schizophrenia is not later in women in India. Our experience is different.

In a retrospective study conducted at the out-patient psychiatric unit of the All India Institute of Medical Sciences, New Delhi, 539 patients with schizophrenia were studied regarding sex differences in age of onset during a two-year period (1981–83). Of these, 328 were males and 211 were females. The diagnosis of schizophrenia was made clinically using ICD–9 guidelines; however, controversial sub-types (simple, latent, and schizoaffective) were excluded. The age at which immediate family members noticed psychotic symptoms for the first time was considered to determine the age of onset of schizophrenia. The age of the patient at the time of consultation was documented in each chart by a junior research officer who was specifically deputed to record the socio-demographic variables of psychiatric out-patients. The age at first treatment and the age at first admission were not considered. The mean age at onset for males was 23.39 years (s.d. = 6.92) and that for females was 25.77 years (s.d. = 7.97) giving a gender gap of 2.4 years. The results were statistically significant ($t = 3.56$, $P < 0.001$). The sex difference persisted when the patients were divided into paranoid and non-paranoid sub-groups.

We are not able to offer any explanation as to why there is such a difference in findings from the same country.

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Anthropology and Psychiatry

SIR: Kleinman (*Journal*, October 1987, **151**, 447–454) raises some important questions concerning the validity of diagnosis and the search for "accurate representation" in contemporary psychiatric research. While various diagnostic instruments have no doubt achieved a degree of success in the area of reliability, Professor Kleinman's argument is a timely reminder that this does not imply that their validity is assured. One senses that many

psychiatrists have indeed been involved in a 'category fallacy', and have confused these two issues.

The questions posed for psychiatry by anthropology are paralleled in many ways by questions raised in contemporary philosophy of science. This has recently undermined the treasured notion that natural science leads to the revelation of the natural world as it is 'in itself'. In particular, post-empiricist philosophers such as Thomas Kuhn and Paul Feyerabend have seriously questioned the possibility of a neutral objective epistemological framework from which we can assess competing theories or paradigms. Applying such an analysis to psychiatry, one is led to the conclusion that researchers commit a fundamental mistake when they seek to explain all experiences of madness and distress by reference to a single western paradigm. Furthermore, one suspects, with Professor Kleinman, that there is a "tacit professional ideology" at work when attempts are made to universalise western diagnostic concepts. The American philosopher Richard Rorty says that "the notion of 'accurate representation' is simply an automatic and empty compliment which we pay to those beliefs which are successful in helping us do what we want to do" (Rorty, 1980).

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The Dopamine Hypothesis, Viral Theory of Schizophrenia, and Season of Birth

SIR: Crow (*Journal*, October 1987, **151**, 460–465) thinks that the relative lack of psychotic potency of direct dopamine agonists remains something of an embarrassment for the dopamine theory of psychosis. The differential effect of the dopamine agonists on the several central dopaminergic pathways (nigrostriatal, mesolimbic, mesocortical and tuberoinfundibular) and dopamine receptors (D1, D2, D3) may be able to explain this observation. Bromocriptine and apomorphine have a relatively weak effect on the D2 receptors, making them less psychogenic. When given in high doses they do produce hallucinations and other psychotic symptoms.

Regarding the antiviral effects of psychotropic drugs, it reminds one of amantadine, an antiviral agent as well as a dopamine agonist. Hence the antiviral property is not confined to dopamine antagonists, but is more prominent in dopamine agonists.

The excess winter births of schizophrenics has for a long time puzzled research workers who have tried to formulate a theory for the aetiology of schizophrenia. The viral theory was one way to account for such a phenomenon. An alternative view might come from the recent findings in neuroscience research, which shows that there are critical periods in the development of the brain, e.g. perinatal androgenisation of the rat nervous system. Perinatal sex hormone secretion influences the developing central nervous system by altering the pattern of nerve connection, and affects the normal development and expression of the adult function proper to the genetic sex of the animal. Steroid receptors are intracellular receptor proteins. The hormone-protein complex then enters the cell's nucleus and interacts with specific genes, thereby altering gene expression in the target cell.

The central nervous system remains plastic in adult animals, capable of substantial structural reorganisation in response to altered levels of circulating steroids and seasonal changes. Adult male canaries exhibit seasonal differences in the volume of two telencephalic song control nuclei, suggesting an annual cycle of synaptic degeneration and regeneration. In mice, the gonads grow and regress seasonally in response to changing day length. Steroid levels and reproductive behaviour covary with these gonadal changes. One consequence of these seasonal alternations in circulating steroids could be changed dendritic structure.

There are thus two actions of the gonadal steroids on the central nervous system; one is lasting and occurs in a restricted time window early in development; the other is rapid and reversible and may occur throughout the adult life according to seasonal changes. Hence the excess winter births of schizophrenics, besides a possible increased susceptibility to virus infections, could be the result of changes in steroid hormones with season and day length which in turn affect nerve connections. Obviously different quarters of the year will give rise to different patterns, but adequate information as to the outcome is still lacking, except that speculated by astrologers.

There are other phenomena that may be related to a cycle of hormonal changes. Suicides tend to be high from March to October, a pattern that is reversed in Australia but is less marked in tropical countries, where the seasonal difference is not significant. Seasonal affective disorder may be another condition that is related to these hormonal changes.

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