in aggressive, violent, and suicidal behaviour. We would like to point out a preliminary study which investigated the effects of cholesterol-reducing agents on the serotonin-related behaviour *in vivo* (Dursun, 1992).

Rather high doses of cholesterol-lowering agents, gemfibrozil and cholestyramine, both significantly blocked the inhibitory action of a serotonin-1A receptor agonist ligand on the serotonin-2 receptor-mediated-behavioural response (head-shakes), while gemfibrozil significantly potentiated this behavioural response and cholestyramine showed a trend towards potentiation of the same behaviour in rodents (significantly low plasma cholesterol levels compared with control animals have been confirmed by biochemical studies after behavioural studies) (Dursun, 1992). These preliminary results show that cholesterol-lowering agents can indeed alter both serotonin-2 receptor-mediated behaviour and a serotonin-1A/serotonin-2 receptor interaction *in vivo*. Therefore, alterations of the functional state of the serotonin receptor subtypes and their interactions by the cholesterol-lowering agents may be implicated in understanding the involvement of serotonin in the relationship between low serum cholesterol and suicidal behaviour. However, further preclinical and clinical research is needed to understand the mechanisms of this relationship.

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Concepts of illness and disease

SIR: Is there any stronger a *prima facie* case for linking the abuse of psychiatry for political reasons in the former USSR with difficulties about the concept of mental illness than there is for, say, linking the abuse of surgery for financial reasons in capitalist countries with difficulties with the concept of physical illness? A simpler, and perhaps less self-deprecatory, view is that the particular susceptibility of psychiatry to totalitarian abuse is merely a consequence of the practical, rather than conceptual, opportunity provided by the need to treat psychiatric patients on occasion without their voluntary consent.

In their article (*Journal*, June 1993, **162**, 801–810), Fulford *et al* build on the notion (Fulford, 1989) that there is a distinction to be made between biological-scientific and social-evaluative concepts with a claim that "disease really is an evaluative concept". We are therefore asked to allow priority to the latter paradigm of a binary 'is-ought' dichotomy between process and praxis.

An alternative model, tripartite rather than binary, could be based on Popper's three 'worlds' (e.g. Popper & Eccles, 1977). Popper's 'world 1', or physical world, was distinguished from the world of subjective experiences (world 2), and from what he called "the products of the human mind" (world 3).

Adapting this model, medicine can be conceived as being continuously involved in three interactive realms. The first, or objective realm, is concerned with disease as dysfunction, with medicine functioning as an essentially scientific enterprise. In the second, or subjective realm, illness is perceived as distress, with medicine responding as an empathic art. In the third, or social realm, sickness becomes an enacted role, with medicine engaged as a social or political activity. For medicine to be practised appropriately, it is necessary to identify honestly which realm, or realms, are being inhabited at which times, and to be able to move accurately and flexibly between them.

It seems uncontentious that there will be political implications if social evaluative judgements (realm 3) are rationalised as scientific ones (realm 1), and that this applies equally to physical illness. No doubt this is often done with benevolent intent, as, for instance, when invalidity status is granted to unemployed miners with relatively mild chronic obstructive airways disease. However, if psychological medicine has a special vulnerability, apart from legal questions of consent and competence, this could be found in the particularly disgusting and disturbing nature of its subjective realm (realm 2). Thus, psychiatrists may be especially liable to use scientific concepts defensively, not in order to deny that ethical judgements are being made in the interests of social expediency, but principally to protect themselves from states of aesthetic 'disease'.

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Neurological complications of anorexia nervosa

SIR: The recent review of the medical complications of anorexia nervosa by Sharp & Freeman (*Journal*, April 1993, **162**, 452–462) made compelling reading. One factor that did not receive attention, however,

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