

Correspondence

EDITED BY LOUISE HOWARD

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Commenting on neuroimaging

With regard to Professor Crow's stimulating commentary (Crow, 2000) on our recent paper (Spence *et al*, 2000), we write to correct some errors of fact and interpretation which appeared in his article.

In our paper we demonstrated that during word generation people with schizophrenia exhibited a 'functional disconnection' between neural activity in dorsolateral prefrontal and anterior cingulate cortices relative to controls, as stated by Crow. People with schizophrenia also exhibited relative overactivity of the precuneus compared to controls and those at genetic risk (not only to controls, as stated by Crow).

Crow criticised our choice of an *a priori* hypothesis, based as it was on previous studies of word generation (summarised in Table 1 of our paper). We examined the hypothesis that focal or distributed brain dysfunction might provide a trait marker for schizophrenia, specifically implicating the left superior temporal gyrus, and a proposed frontotemporal 'disconnection' (Friston *et al*, 1995). Crow suggested that we should have specified a dysfunction of right prefrontal cortex, despite the absence of such a finding from previous studies or statistical confirmation of such 'dysfunction' in our data-set. Indeed, despite many papers on the relevance of language to schizophrenia, Crow has never previously hypothesised such a specific region of dysfunction. In fact, although he has provided diagrams of how language 'must' be organised in the brain (e.g. Crow, 1998), it is notable that they exist in isolation from contemporary cognitive neurobiological accounts of the functional anatomy of language; and despite his emphasis on modelling the 'first rank symptoms' of schizophrenia, he has ignored those studies which have specifically addressed the neural correlates of these phenomena (e.g. Spence *et al*, 1997).

Failure to address contemporary developments exposes Professor Crow's theories

to the risk of appearing increasingly anachronistic.

When neuroimaging studies are published in psychiatric journals there is a particular responsibility incumbent on referees to be cautious in their interpretation of these data (Brodie, 1996) and on authors to be rigorous in their application of statistics, lest a false impression be given to clinicians not used to examining such analyses (Spence, 1999). Such responsibilities should also extend to those invited to comment on others' work.

Brodie, J. D. (1996) Imaging for the clinical psychiatrist: facts, fantasies, and other musings. *American Journal of Psychiatry*, **153**, 145-149.

Crow, T. J. (1998) Nuclear schizophrenic symptoms as a window on the relationship between thought and speech. *British Journal of Psychiatry*, **173**, 303-309.

— (2000) Invited commentary on: Functional anatomy of verbal fluency in people with schizophrenia and those at genetic risk. The genetics of asymmetry and psychosis. *British Journal of Psychiatry*, **176**, 61-63.

Friston, K. J., Herold, S., Fletcher, P., et al (1995) Abnormal fronto-temporal interactions in schizophrenia. In *Biology of Schizophrenia and Affective Diseases* (ed. S. J. Watson), pp. 449-481. New York: Raven.

Spence, S. A. (1999) More stringent threshold needed. *American Journal of Psychiatry*, **156**, 803-804.

—, **Brooks, D. J., Hirsch, S. R., et al (1997)** A PET study of voluntary movement in schizophrenic patients experiencing passivity phenomena (delusions of alien control). *Brain*, **120**, 1997-2011.

—, **Liddle, P. F., Stefan, M. D., et al (2000)** Functional anatomy of verbal fluency in people with schizophrenia and those at genetic risk. Focal dysfunction and distributed connectivity reappraised. *British Journal of Psychiatry*, **176**, 52-60.

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Further comments on Jerusalem syndrome

We were interested to read the report by Bar-El *et al* (2000), describing the various manifestations of Jerusalem syndrome and

in particular the prediction that the passing of the millennium may have been accompanied by a surge in presentations.

In December 1999, we wrote to over 60 general psychiatrists in the North-Western Region, requesting that they provide details of all of their patients who appeared to be affected clinically by the millennium. A sizeable proportion described having encountered one or more patients within this category, although none reported a noticeable increase in workload. There were no reports of patients with new onset of psychosis in whom content appeared to have been strongly influenced by the millennium. However, a number of patients with established psychiatric disorders were reported to have incorporated millennial themes into their psychopathology. These included patients with psychoses of both schizophrenic and affective types. Examples of delusions with a millennial content included becoming the Messiah, being destined to change the world on New Year's Day and the belief that the world would change irrevocably at midnight. Several patients with psychoses appeared to have taken warnings regarding the 'millennium bug' rather literally, describing this in terms of physical infestation. Non-psychotic conditions, including both affective and personality disorders, also appeared to have been coloured by the millennium, for example, with ruminations and overvalued ideas regarding the effects of the millennium bug and the possibility of breakdown in the running of society in general.

The influence of social and cultural variables on the content of psychopathology is well-recognised (Fish, 1985) and, it would seem, the 'millennium effect' is merely the most recent example. Given our local experience, Bar-El *et al* were right to expect an increase in cases of Jerusalem syndrome over the millennium period.

Bar-El, Y., Durst, R., Katz, G., et al (2000) Jerusalem syndrome. *British Journal of Psychiatry*, **176**, 86-90.

Fish, F. (1985) The content of delusions. In *Fish's Clinical Psychopathology: Signs and Symptoms in Psychiatry* (2nd edn) (ed. M. Hamilton), p. 47. Bristol: John Wright and Sons.

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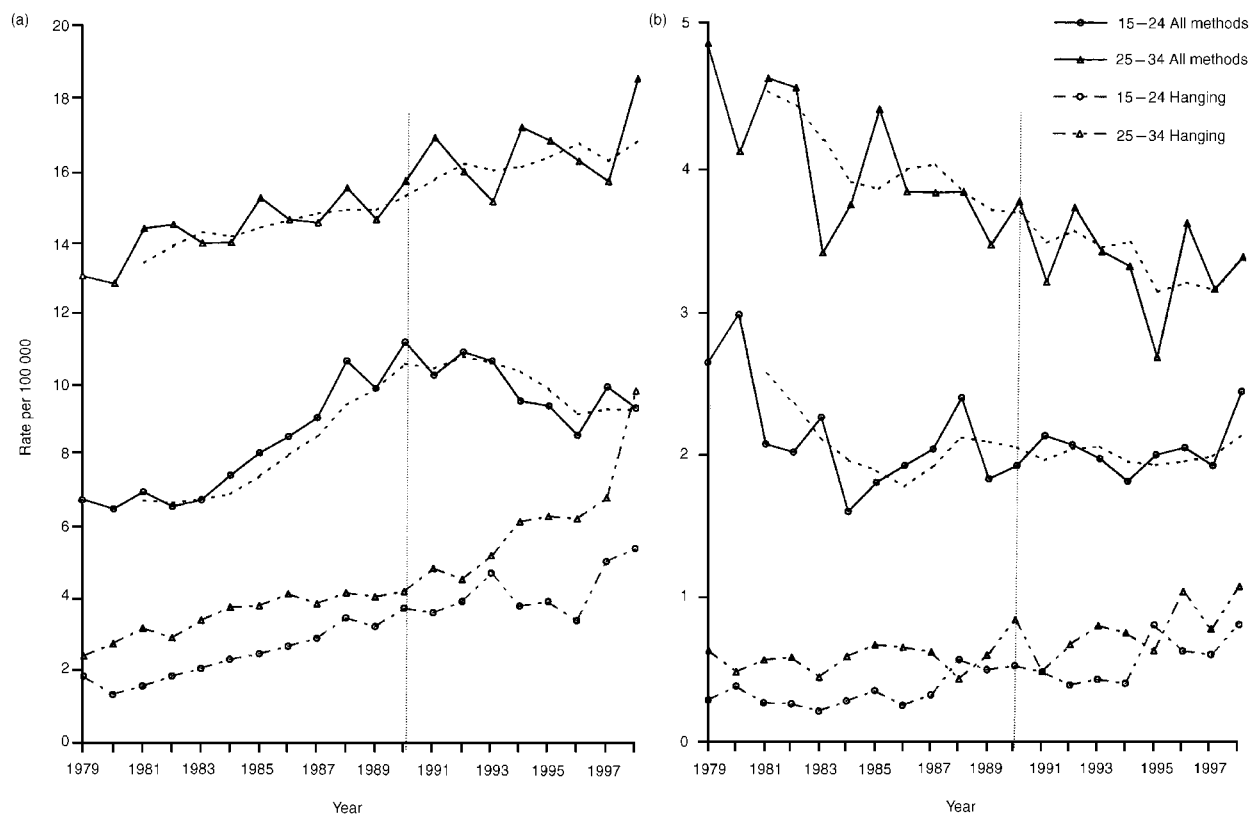


Fig. Age-standardised suicide rates for (a) males and (b) females aged 15–34, England and Wales 1979–98, all methods (ICD-10 E950–959) and hanging (E953.0). Trend lines for 'all methods' plots are three-year moving averages centred on 1999.

Trends in suicide in England and Wales

McClure's (2000) review of trends in suicide in England and Wales, 1960–1997, provides a timely update of changes in patterns of suicide since Government health targets were set for its reduction (Secretary of State for Health, 1992, 1999). There are, however, two issues relating to his interpretation of trends that require clarification.

First, we were surprised with the suggestion that there have been reductions in suicide rates in all age/gender groups since 1990. Suicide rates in 25- to 34-year-old males have continued to increase in recent years (see Fig., updated to include data for 1998). In 1998, this was the group with the highest suicide rate of all age/gender categories. The trend in 15- to 24-year-old women is less clear-cut, but adding 1998 data indicates that there has been, if anything, an increase in the underlying rate. Thus, while overall suicide rates are declining, these reductions mask rising trends in younger age groups, the very groups which contribute most to premature life-years lost. From the public health perspective,

age-specific suicide reduction targets might be more relevant than the overall targets currently set.

Second, McClure's figures are based on suicide rates (ICD-10 cause of death coded E950–959) alone. However, the Government's targets refer to suicide and undetermined deaths (E950–959 and E980–989, excluding E988.8). We confirmed that the age- and gender-specific trends described above are also seen when rates are calculated to include undetermined deaths. These analyses indicate a 6% increase in 15- to 24-year-old women and a 7% increase in 24- to 34-year-old men between 1990–1992 and 1996–1998.

We share the author's concern about the increasing popularity of hanging, a method whose availability cannot easily be controlled. In 15- to 34-year-old males, hanging (ICD E953.0) accounted for more deaths in 1998 than all other methods together. Since 1979, its use has increased three-fold in young (15- to 34-year-old) men and two-fold in young women. The increase has been especially pronounced in men aged 25–34, in whom the rates doubled in the past eight years (see Fig.).

Similar increases have been observed in Australia (Wilkinson & Gunnell, 2000). Whether such trends represent a shift away from methods that have become less lethal in recent years (such as poisoning and gassing) to more lethal methods is not clear (Gunnell *et al*, 1999). Alternatively, rises may reflect a true deterioration in the mental health of young people.

Gunnell, D., Wehner, H. & Frankel, S. (1999) Sex differences in suicide trends in England and Wales. *Lancet*, **353**, 556–557.

McClure, G. M. G. (2000) Changes in suicide in England and Wales, 1960–1997. *British Journal of Psychiatry*, **176**, 64–67.

Secretary of State for Health (1992) *The Health of the Nation: A Strategy for Health in England*. London: HMSO.

— (1999) *Saving Lives: Our healthier nation*. London: Stationery Office.

Wilkinson, D. & Gunnell, D. (2000) Comparison of trends in method-specific suicide rates in Australia with trends in England and Wales between 1968 and 1997. *Australian and New Zealand Journal of Public Health*, in press.

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Non-attendance, non-residence, non-acceptance

Killaspy *et al* (2000) is one of several studies that demonstrate that non-attendance at psychiatric services is an index of increased pathology and greater need (Swofford *et al*, 1996; Crawford & Wessely, 1998) and serves as a corrective to earlier suggestions that non-attenders are not usually worthy of being seen (Robin, 1976). Although the authors suggest that the first episode of non-attendance "may be an important time to intervene to attempt to prevent loss to follow-up of those with serious mental illnesses" the trends in psychiatric services are increasingly moving in the opposite direction. The growth in geographical sectors covered by community teams has many advantages (Johnson & Thornicroft, 1993), but has naturally led to the dangers of preferentially looking after easier patients who belong within the area rather than difficult ones who might (with luck) go away if they are not seen. Although this behaviour might be considered ostrich-like in view of the fact that Killaspy *et al* found that patients who did not attend were more likely to be readmitted, they also noted that 27 (7%) of their patients were untraceable. I suspect that most of these were extremely ill, highly geographically mobile patients who would have absorbed a significant proportion of psychiatric resources if they had been contacted proactively and who would have been seen as imposing an additional burden on services that should be primarily involved in caring for the 'real' residents in the catchment area.

We have considerable evidence of this in the inner-city area of Paddington, where there are high rates of continuous psychiatric morbidity and more than 1 in 50 of the population is referred annually (Shipley *et al*, 2000). This is largely because so many of the population are geographically mobile and would normally stay only briefly in the area. Even when there is intervention by the psychiatric services in the form of admission there is a five-times greater chance that such patients will be admitted to a hospital outside their area (Lamont *et al*, 2000) and not taken on by mainstream services. The general consequence of this is that those services that are specifically focused on the most geographically mobile population (e.g. homeless people with mental illnesses and street outreach projects) often find it difficult to arrange transfer of their patients when they eventually settle to a more

permanent base because the services in the area concerned do not regard them as proper residents. I have found that patients who have transiently lived in the Paddington area are often returned there by other services on the grounds that their care belongs in the area and the patients wish to return.

In practice it is unlikely that the sound recommendation of Killaspy *et al* that services be more active in seeing non-attenders would be followed because it is likely to lead to the growth of imported psychopathology of severe mental illness and increased psychiatric morbidity in the areas concerned. We have recommended elsewhere (Lamont *et al*, 2000) that the best way forward in tackling this problem is to create regional teams not preoccupied with catchment area boundaries, who could provide consistent and appropriate care for this forgotten non-attending population.

Crawford, M. J. & Wessely, S. (1998) Does initial management affect the rate of repetition of deliberate self harm? A cohort study. *British Medical Journal*, **317**, 985.

Johnson, S. & Thornicroft, G. (1993) The sectorisation of psychiatric services in England and Wales. *Social Psychiatry and Psychiatric Epidemiology*, **28**, 45–47.

Killaspy, H., Banerjee, S., King, M., et al (2000) Prospective controlled study of psychiatric out-patient non-attendance. Characteristics and outcome. *British Journal of Psychiatry*, **176**, 160–165.

Lamont, A., Ukoumunne, O., Tyrer, P., et al (2000) The geographic mobility of severely mentally ill residents in London. *Social Psychiatry and Psychiatric Epidemiology*, in press.

Robin, A. (1976) Rationing out-patients: a defence of the waiting list. *British Journal of Psychiatry*, **129**, 138–141.

Shipley, K., Hilborn, B., Hansell, A., et al (2000) Patient satisfaction: a valid index of quality of care in a psychiatric service. *Acta Psychiatrica Scandinavica*, **101**, 330–333.

Swofford, C. D., Kasckow, J. E., Scheller Gilkey, G., et al (1996) Substance use: a powerful predictor of relapse in schizophrenia. *Schizophrenia Research*, **20**, 145–151.

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Cigarette smoking in patients with schizophrenia

We read the article by McCreadie & Kelly (2000) with interest. The study indicates a high rate of cigarette smoking in patients with schizophrenia. It concluded that typical patients who smoke return 18–31% of their state benefits to the Treasury in the

form of taxes on the purchase of cigarettes. However, the authors have not taken into consideration the cost of smoking-related diseases such as ischaemic heart disease and chronic obstructive airways disease. Inevitably, patients suffering from such diseases require expensive cardiorespiratory investigations and medication, which results in substantial expenditure by the National Health Service. Thus, perhaps the Treasury would be better off if patients did not smoke.

A review article by Felker *et al* (1996) has outlined various studies which indicate increased morbidity in psychiatric patients due to various medical conditions, including cardiovascular and respiratory problems. It is difficult to show the extent to which these diseases are caused by cigarette smoking, but we all know that there is a strong association between cigarette smoking and cardiorespiratory problems.

Felker, B., Yazel, J. & Short, D. (1996) Mortality and medical comorbidity among psychiatric patients: a review. *Psychiatric Services*, **47**, 1356–1363.

McCreadie, R. G. & Kelly, C. (2000) Patients with schizophrenia who smoke. Private disaster, public resource. *British Journal of Psychiatry*, **176**, 109.

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McCreadie & Kelly (2000) highlight the enormous financial cost of cigarette smoking to patients with schizophrenia and extrapolate from their data that those who smoke return 18–31% of their benefits to the Treasury, thus substantially contributing to the cost of their care. We directly measured the cost of smoking to a group of patients in Waterford and found that those who smoke spend an average of 29% of their income on cigarettes (McDonald & Sheppard, 1996). They thus contributed 24% of their income back to the Treasury in Ireland through this source alone, a proportion more akin to income tax for most people. This confirms the calculations of McCreadie & Kelly.

Aside from a curiously reduced risk of lung cancer (Gulbinat *et al*, 1992), patients with schizophrenia have increased mortality from heart and lung disease (Mortenson & Juel, 1993) and it is likely that cigarette smoking contributes largely to this. In addition to such adverse health effects, cigarette

smoking clearly represents a huge financial burden on patients with schizophrenia. Money spent on cigarettes is not being spent on clothing, leisure pursuits and personal possessions, which could help to increase the quality of life of these patients. Smoking may be intimately associated with pathophysiological aspects of schizophrenia and further research should be done to clarify the relationship between nicotine consumption and the neurochemistry of schizophrenia. However, health care professionals should be aware of the extent of the financial disadvantage associated with this habit in order to help those patients who might wish to quit through encouragement and support and through prescription of nicotine supplementation where appropriate.

Gulbinat, W., Dupont, A., Jablensky, A., et al (1992) Cancer incidence of schizophrenic patients. Results of record linkage studies in three countries. *British Journal of Psychiatry*, **161** (suppl. 18), 75–85.

McCreadie, R. G. & Kelly, C. (2000) Patients with schizophrenia who smoke. Private disaster, public resource. *British Journal of Psychiatry*, **176**, 109.

McDonald, C. & Sheppard, N. (1996) Smoking in chronic psychiatric illness: is it worth it? *Psychiatric Bulletin*, **20**, 533–535.

Mortensen, P. B. & Juel, K. (1993) Mortality and causes of death in first admitted schizophrenic patients. *British Journal of Psychiatry*, **163**, 183–189.

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Imaginal exposure or cognitive therapy in the treatment of post-traumatic stress disorder

Tarrier *et al* (1999) report no significant difference in outcome for patients with post-traumatic stress disorder who received either imaginal exposure or cognitive therapy. They conclude that “clinical benefits for both treatments were maintained”.

In the absence of a control group such a conclusion is not warranted. Their findings are open to a number of interpretations, including significant improvement in spite of harmful effects of either or both treatments – supposing, that is, that there were two treatments. Meanwhile, their suggestion that more research is needed does merit support.

Tarrier, N., Sommerfield, C., Pilgrim, H., et al (1999) Cognitive therapy or imaginal exposure in the treatment of post-traumatic stress disorder. *British Journal of Psychiatry*, **175**, 571–575.

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Induction of manic symptoms by novel antipsychotics

There have been scattered reports of mild states of agitation induced by novel antipsychotic agents, in particular disturbed affect during a switch study of risperidone (Ashleigh & Larsen, 1998) and doubtless other cases which have never been reported. At least 19 cases have been reported of risperidone-induced mania (Lane *et al*, 1998; Zolezzi & Badr, 1999). Fitzgerald *et al* (1999) reported a case of olanzapine-induced mania and state that only one similar report existed previously. A Medline search revealed six other cases in the past five years (further details available from the author upon request) and to this series we now add an eighth.

A 55-year-old woman with a 20-year history of chronic anxiety and recurrent depressive episodes developed subjective excitement, increased psychomotor activity, insomnia, irritability and racing thoughts within three days of being prescribed olanzapine 2.5 mg nocte. Her condition rapidly normalised on cessation of olanzapine. There were no features suggestive of

akathisia. It should be noted that this case may be slightly weakened by a previous manic episode some 20 years previously.

There have been a small number of reports to the manufacturers' adverse-events database (manufacturers' personal communications) for sertindole, quetiapine and amisulpride where the induction of manic-type symptoms following commencement of the drugs has been a possibility but direct causal effect could not be established with certainty. No such reports could be found in the literature or by application to the manufacturers in respect of clozapine. Clozapine has been cited as having mood-stabilising properties in bipolar affective states (Suppes *et al*, 1999).

The attribution of manicogenic properties to risperidone, olanzapine, sertindole, quetiapine and amisulpride suggests some shared pharmacological characteristics between these agents and most antidepressants, although amisulpride does not bind to serotonin receptors. We conclude that states of agitation, sometimes severe enough to resemble mania, although infrequent, may be a complication of some, if not all, novel antipsychotic agents with the possible exception of clozapine.

Ashleigh, E. A. & Larsen, P. D. (1998) A syndrome of increased affect in response to risperidone among patients with schizophrenia. *Psychiatric Services*, **49**, 526–528.

Fitzgerald, M. J., Pinkofsky, H. B., Brannon, G., et al (1999) Olanzapine-induced mania. *American Journal of Psychiatry*, **156**, 1114.

Lane, H. Y., Lin, Y. C. & Chang, W. H. (1998) Mania induced by risperidone: Dose related? *Journal of Clinical Psychiatry*, **59**, 85–86.

Suppes, T., Webb, A., Paul, B., et al (1999) Clinical outcome in a randomised 1-year trial of clozapine versus treatment as usual for patients with treatment resistant illness and a history of mania. *American Journal of Psychiatry*, **156**, 1164–1169.

Zolezzi, M. & Badr, M. G. (1999) Risperidone-induced mania. *Annals of Pharmacology*, **33**, 380–381.

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One hundred years ago

The results of masturbation

To the Editors of THE LANCET

SIRS, – I shall be much obliged if you or any of your readers will assist me with advice in the following case. A patient, now aged 27 years, was in the habit of practising masturbation from the age of 16 to 20 years, at which latter period he abandoned the habit. From that time he was accustomed to have nocturnal emissions in connexion with sexual dreams, and though he often attempted intercourse could never succeed, erection not being sustained. Since the age of 24 years up to now the emissions have been numerous, quite unattended by any sexual sensations, and occur two or three times a week and occasionally more often. He is getting seriously alarmed and

looks and feels bad. I have exhausted every method of treatment with which I am acquainted and should be glad to hear any suggestions as to treatment from those who have had similarly bad cases.

I am, Sirs, yours faithfully,
F. HARRIS, L.R.C.P. Lond., M.R.C.S. Eng.
Cape Town, March 13th, 1900.

Some of our readers may have met with cases the treatment of which will suggest some useful point to our correspondent. These cases are very difficult to manage for many reasons, but in our experience they are quite capable of recovery. 1. The patient must abstain absolutely from all attempts at sexual intercourse and avoid carefully all that stimulates sexual desire. 2. He should take all the usual means to secure

good general health. 3. He must carefully avoid constipation. 4. He should sleep lightly clad and should bathe the genitals with cold water before going to bed. 5. A tonic of iron and strychnine may be prescribed with advantage. 6. The patient must be encouraged to anticipate with confidence a complete recovery and he must as far as possible dismiss all thoughts about the whole subject. 7. The recovery will be slow. – ED. L.

REFERENCE

Lancet, 28 April 1900, 1256.

Researched by Henry Rollin, Emeritus Consultant Psychiatrist, Horton Hospital, Epsom, Surrey

Corrigendum

Three-year prognosis of depression in the community-dwelling elderly. *BJP*, 176, 453–457. The authors have discovered an error in their analysis of the data, due to the misclassification of some subjects. After

reanalysis, the data differ slightly from those published, but the significant results stand and the authors' original conclusions are unchanged. Amended tables of results are available upon request from Dr Aisling

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