absolute difference between the rates is almost similar in both cases.

Our main comment, however, relates to Frisoni and colleagues' concluding comments. Although we agree that prospective studies are needed, we do not agree that the epidemiological relevance of e4 in determining Alzheimer's disease may be lower than suggested by others. This is certainly plausible. Although we have no extensive clinical data on Alzheimer's disease available in our cohort, the proportion of men with the disease in our population based sample of elderly men was probably very low. Since despite this low proportion e4 predicts cognitive decline, the role of e4 in dementia and disorders related to dementia in general might instead be larger than expected.

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Referral of women with breast lumps

EDITOR,—I disagree with J M Dixon and R E Mansel's suggestion that general practitioners should not aspirate breast lumps.¹ Firstly, aspirating a cyst in the surgery provides instant relief for the patient and avoids an agonising wait before she is seen at hospital. Secondly, in my experience, the first thing that the surgeon will do is attempt to aspirate the cyst.

Breast cysts are seen fairly commonly in general practice, and I suspect that if all cysts were referred to hospital the consultants would experience a considerable increase in their workload.

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1 Dixon JM, Mansel RE. ABC of breast diseases: symptoms assessment and guidelines for referral. *BMJ* 1994;309:722-6. (17 September.)

Positive predictive value of tests for breast disease

EDITOR,—J M Dixon and R E Mansell attempt to clarify the utility of various diagnostic tests for symptomatic breast diseases.¹ Unfortunately, their use of the positive predictive value in this context is misleading since it can refer only to the situation in a specialist breast clinic and is not applicable to other settings.

The positive predictive value is a function not only of a test but also of the prevalence of the disorder in the group of patients subjected to the test. Back calculation from the figures for sensitivity, specificity, and positive predictive value presented shows that the prevalence of malignant disease was 69% in the patients subjected to clinical examination and mammography, 62% in those subjected to ultrasonography, and 96% in those subjected to fine needle aspiration cytology. Such high prevalences would be unlikely in a non-specialist setting such as general practice.

A useful illustration of the effect of prevalence on the positive predictive value can be derived from data presented in another article by Dixon and Mansel.² Consider a woman aged 31-40 with a breast lump. According to the graph in the article, the prevalence of malignant disease in such women is about 10%; if this woman were subjected to fine needle aspiration the positive predictive value of

the test would be less than 68%. In other words, if the test suggested the presence of malignant cells the woman would have a one in three chance of having benign disease.

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- 1 Dixon JM, Mansel RE. ABC of breast diseases: symptoms, assessment, and guidelines for referral. *BMJ* 1994;309:722-6. (17 September.)
- 2 Dixon JM, Mansel RE. ABC of breast diseases: congenital problems and aberrations of normal breast development and involution. *BMJ* 1994;309:797-800. (24 September.)

Psychotic illness in ethnic groups

Data on Surinamese patients in the Netherlands support study results

EDITOR,—Michael King and colleagues reported increased incidences of psychosis, including schizophrenia, in all ethnic minority groups and not just African Caribbeans.¹ Interestingly, study of the Dutch psychiatric register shows a high incidence of schizophrenia in Surinamese and Antillean immigrants to the Netherlands.

The 1980 census in Surinam distinguished Afro-Surinamese (44%), Hindustanis (whose ancestors emigrated in the 19th century from British India to become contract labourers on Surinamese estates; 34%), and others (Indonesians, Chinese, etc; 22%).² Large scale migration of all ethnic groups from Surinam to the Netherlands occurred between 1974 and 1981. The percentages of Hindustanis and Afro-Surinamese in the Netherlands are estimated to be about 43% and 37%, respectively.³ The Dutch psychiatric register records data on country of birth but not ethnic group, so I collected data on the ethnic background of Surinamese patients admitted to this hospital, one of three psychiatric hospitals in the Hague. It is a teaching hospital and diseases are carefully diagnosed. The municipality of the Hague estimated the numbers of Hindustanis and Afro-Surinamese to be 19059 and 6944 respectively, a ratio of about 2.7 to 1. This ratio is unlikely to have changed significantly over recent years, and the age structure of both ethnic groups is similar. The number of patients who had been born in Surinam and were treated for schizophrenia (according to the criteria of the *Diagnostic and Statistical Manual of Mental Disorders, third edition, revised*) from January 1991 to December 1994 was 105. Almost all had schizophrenia for the first time. Seventy six were Hindustani and 25 Afro-Surinamese, with four others. Thus, the ratio of Hindustanis to Afro-Surinamese in the hospital (about 3 to 1) was similar to that in the city.

These findings support the conclusion of King and colleagues that the current focus on black people is misleading. I suggest that the race and ethnic background of the immigrants are not causally related to the high incidence of schizophrenia and that some other factor is of critical importance.

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Numbers are small

EDITOR,—We were not surprised that Michael King and colleagues found that the rates of psychosis were higher among the African Caribbean population than among the white population¹—a finding well established by previous research. We would take issue with their assertion that rates are higher among all minority ethnic groups when they found only a limited number of cases. To conclude from seven Asian cases that rates are high among the Asian community is perilous. In a comparable study in Ealing conducted over a similar period we found 31 cases of first onset psychosis among Asians and that the rate of broad schizophrenia did not differ significantly from that of the white population of the same catchment area. Research into ethnic group and mental illness is beset with complexities, and generalisations on the basis of small numbers are not likely to clarify our understanding of this difficult subject.

A second issue that raises our concern is the inclusion of European patients of Turkish-Cypriot origin in the white group. We would anticipate that their experiences of racism and cultural conflict would be different from those of the indigenous population. Therefore it is more appropriate to treat them as a separate minority ethnic group for the purpose of calculating incidence rates.

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Study did not deal with "category fallacy"

EDITOR,—The paper by Michael King and colleagues¹ should be seen in the context of three important issues studied and explored in several publications.²⁻⁴

(1) Concepts inherent in the model of mental illness used in Western psychiatry are unlikely to be meaningful in a crosscultural setting.

(2) Neither schizophrenia nor psychosis as illnesses have been validated for use in crosscultural study.

(3) The race of a person as perceived by the psychiatrist making a diagnosis seems to play an important part in assigning the category of schizophrenia, irrespective of the race of the psychiatrist.

King and his colleagues refer to the influence of racism in determining the diagnosis of schizophrenia but ignore the issue in their methodology. They seem to assume that the problem of using Western categories of illness is avoided by using a Western structured interview schedule (the present state examination) and a computer program. However, the main criticism of this study is its failure to deal with "category fallacy," which is the imposition of one culture's diagnostic categories on to patients of another culture and was described by Kleinman as "the most basic and certainly the most crucial error one can make in cross-cultural research."⁵ The authors deal with this problem by a slippage of language. They start by referring in the introduction to people from one ethnic group who "receive a diagnosis of schizophrenia more often than do members of other ethnic groups," then write in the results about the "incidence of psychotic illness," and end in the conclusions section with the remarkable statement, "Members of all ethnic minority groups are more likely to develop a psychosis...."

I suggest that the title of their paper should have been: "Psychiatric diagnostic practice in London.

Why are people from ethnic minority groups designated 'psychotic' more often than white people are?" At least that would have shown what their study is all about and allowed researchers and clinicians to benefit from the findings.

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2 Fernando S. *Mental health, race and culture*. London: MIND/Macmillan, 1991.
3 Kleinman A. *Rethinking psychiatry. From cultural category to personal experience*. New York: Free Press, 1988.
4 Loring M, Powell B. Gender, race and DSM-III: a study of the objectivity of psychiatric diagnostic behavior. *Journal of Health and Social Behavior* 1988;29:1-22.
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Biological is not synonymous with genetic

EDITOR,—The finding by Michael King and colleagues that the incidence of schizophrenia is as high in the Asian as in the African Caribbean population in north London is intriguing.¹ They should perhaps be cautious in making this assertion as it is based on only seven Asian patients with schizophrenia and is not replicated by larger (although less methodologically satisfactory) previous studies.

I find their interpretation of their results rather puzzling. They quote my paper,² which says that biological rather than psychosocial factors may account for the higher incidence of schizophrenia among African Caribbean immigrants. They seem to assume that biological is synonymous with genetic or constitutional. My argument was that environmental biological factors, notably obstetric complications and intrauterine infections, could be implicated in raising the risk of schizophrenia among African Caribbeans. By contrast, King and colleagues say that if the increased risk arises through environmental factors this means such things as discrimination, racism, and cultural change. Unlike obstetric complications and intra-uterine infections, there is no evidence that psychosocial factors can cause schizophrenia.

Indeed, most psychiatrists now regard schizophrenia as a brain disease, while agreeing that psychosocial stress can contribute to precipitating relapses, just as it can in multiple sclerosis. To extend the analogy between schizophrenia and multiple sclerosis, Dean *et al* found that African Caribbean and Asian immigrants to London had significantly lower rates of multiple sclerosis than did the indigenous white population.³ Proposed explanations related to biological risk factors. No one suggested that racial discrimination was protective. Why do we think so differently about schizophrenia?

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2 Eagles JM. The relationship between schizophrenia and immigration: are there alternatives to psychosocial hypotheses. *Br J Psychiatry* 1991;159:783-9.
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Census categories of ethnic group are limited

EDITOR,—Michael King and colleagues address the issue of ethnic minority group and schizophrenia.¹ Their work raises questions both about

social class and schizophrenia and about the Office of Population Censuses and Surveys' ethnic groupings.

It is uncertain whether the low social class of those with diagnosed schizophrenia is a cause or a consequence of their illness.^{2,3} This potential confounding factor has received scant attention in research on schizophrenia and ethnic group despite the association of certain ethnic minority groups with low social class as determined by occupation.⁴ King and colleagues' focus on first presentation to psychiatric services is the ideal epidemiological framework to examine social class and schizophrenia. However, they do not discuss how typical their cases were in terms of social class in comparison with the local population (which scores highly on the Jarman indices) or the national population.

They may have had insufficient cases to comment on the possible correlation of ethnic group and social class in their sample. This weakens their assertion that belonging to any ethnic minority group predisposes to schizophrenia and other non-affective psychosis. It also reduces the power of their explanation that the "personal and social pressures of belonging to any ethnic minority group . . . are important determinants of the excess of psychiatric disorders. . . ."

Office of Population Censuses and Surveys' categories are an unsatisfactory description of ethnic group. King and colleagues ignore this difficulty and follow the office's guidelines, even when subjects "were unable" to categorise themselves in this system. Intracultural differences can be as important as intercultural differences, which is ignored by the Office of Population Censuses and Surveys' categories. They are administratively convenient, but their interrater reliability is not routinely considered. If this were true of other research instruments they would be discarded on methodological grounds. The degree to which the categories are of doubtful validity as indicators of subjects' self concept has not been examined. Our unpublished research in a court population addresses this.

One hundred subjects were asked to indicate their ethnic group. This generated 31 categories, including seven people who refused to ascribe themselves a category, indicating that they thought it an inappropriate concept; a further seven people said that they were unable to understand the concept. Office of Population Censuses and Surveys' categories assigned by the researcher were occasionally wildly at odds with the subjects' unrestricted assertions. If mental health research is

truly concerned with cultural rather than political categories it must do better than to reduce cultural diversity to eight choices, one of which encompasses an entire continent.

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Some ethnic groups may be more vulnerable to extremes of social deprivation

EDITOR,—Michael King and colleagues report a strikingly increased risk of psychotic disorders of new onset across all ethnic minority groups.¹ Their data do not allow an examination of the relative risks of long term psychotic illness within these groups. By analysing data from a register of long term users of services we are able to estimate the relative risk of receiving diagnosis of a long term psychotic disorder for white (United Kingdom/Irish), black (African/African Caribbean), and Asian (Indian/Pakistani/Bangladeshi) groups living in two London boroughs.

Pathfinder provides a locality based specialist mental health service to most of the inner London borough of Wandsworth (Jarman index 23.1) and all of the outer London borough of Merton (Jarman index 13.4). For the past five years an annual census of people aged 16-75 who are currently in contact with the service and who had their first psychiatric contact two or more years ago has been completed by one of us (RP). This long term case register includes the psychiatric diagnosis and ethnic group in addition to data on accommodation, role disturbance, and use of services.

We have analysed the data for the past five years to give estimates of the prevalence and relative risk, by ethnic group, of schizophrenia (table). Overall, the data for chronic psychosis parallel the findings of King and colleagues. The relative risk of being a long term service user with a diagnosis of

Numbers of white, black, and Asian people with schizophrenia on long term case register in Wandsworth and Merton

Year	White		Black			Asian		
	No	No/1000	No	No/1000	Relative risk* (95% CI)	No	No/1000	Relative risk* (95% CI)
Wandsworth								
	<i>n</i> = 113 211			<i>n</i> = 15 631			<i>n</i> = 8290	
1990	205	1.8	111	7.1	3.92 (3.1 to 4.9)	41	4.9	2.7 (1.9 to 3.8)
1991	248	2.2	136	8.7	3.97 (3.2 to 4.9)	41	4.9	2.26 (1.6 to 3.1)
1992	266	2.3	141	9.0	3.84 (3.1 to 4.7)	45	5.4	3.31 (1.7 to 3.2)
1993	248	2.2	152	9.7	4.4 (3.6 to 5.4)	43	5.2	2.37 (1.7 to 3.3)
1994	257	2.3	150	9.6	4.23 (3.5 to 5.2)	51	6.2	2.71 (2.0 to 3.7)
Merton								
	<i>n</i> = 105 001			<i>n</i> = 6270			<i>n</i> = 6387	
1990	182	1.7	26	4.1	2.39 (1.6 to 3.6)	31	4.9	2.80 (1.9 to 4.1)
1991	205	2.0	34	5.4	2.81 (2.0 to 4.0)	35	5.5	2.78 (1.9 to 4.0)
1992	196	1.9	44	7.0	3.76 (2.7 to 5.2)	31	4.9	2.60 (1.8 to 3.9)
1993	205	2.0	34	5.4	2.78 (1.9 to 4.0)	33	5.2	2.65 (1.8 to 3.8)
1994	179	1.7	27	4.3	2.53 (1.7 to 3.8)	33	5.2	3.03 (2.1 to 4.4)

CI=Confidence interval.
*Risk relative to that of local white population.