improvement in her awareness, attention, speech, and interpersonal relationships. Oral diazepam resulted in a recordable improvement in her behaviour and level of activity over several weeks, and in a longitudinal cross-over study with placebo over several months the improvement was deemed attributable to the diazepam. Intermediate memory (recording and recall of verbally and visually represented material) improved slightly with diazepam and amytal.

We do not understand the mechanism of this finding in our patient or in Aynsworth's patient. The fact that improvement occurs in catatonic states with barbiturate or diazepam infusion should not necessarily lead clinicians to suspect hysterical mechanisms. In the female patient we report, the benefits of diazepam gradually wore off over six months. Although environmental changes have resulted in further improvements in her condition she remains in sheltered accommodation.

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**Similar Incidence Worldwide of Schizophrenia: Case not Proven**

SIR: The article by Sartorius *et al* (*Psychological Medicine*, November 1986, **16**, 909–928) is a summation of a prodigious amount of work and contains invaluable data. The two important conclusions reached, however, must be examined closely in the light of the diagnostic criteria and population cohorts which were used.

Firstly, we consider the significance of the "central" (by which they mean 'nuclear', Schneiderian) schizophrenia syndrome that the authors state occurs with approximately equal frequency worldwide. To study incidence data, the authors include all individuals in a given catchment area who made a first lifetime contact with any helping agency, hospital, clinic, or religious or traditional healer over the one-year collection period of the study with a disorder that met either broad (ICD–9 or CATEGO S, P, O) or narrowly defined (CATEGO S+, Schneiderian, nuclear) criteria for schizophrenia. The problems with these definitions are well known: neither the ICD–9 definition nor the Present State Examination (PSE)-based CATEGO classification requires a minimum duration of symptoms for diagnosis of schizophrenia. This appears to have led to the considerable diversity of the schizophrenic samples collected in participating countries, as illustrated by the large differences in age-specific incidence rates in them. For example, in their Table 6 it is evident that the percentage of first-contact schizophrenic patients in the 15–24 age group in Cali (70.8%) is more than three times that in Moscow (21.8%). Among 25–34 year olds, Ibadan (42.3%) has twice the percentage of Cali (21.4%). For 35–44 year olds, the range is even wider: 3.6% of the sample of first contact schizophrenics in Rochester falls in this age-group, compared with 6.5% in Agra, 19.4% in Dublin, and 22.3% in Moscow. Finally, Moscow reports that 20.4% of their total sample of first-contact schizophrenic patients fell in the oldest age-group (45–54 years), while only 1.2% of first-contact schizophrenic patients in Agra and 3% of the Cali sample fell in this range – a nearly 20-fold difference.

With respect to the clinical syndrome, again the differences are as striking as the similarities: while only 26% of patients in developed countries had acute onset, 49% had such onsets in developing countries. A diagnosis of acute schizophrenic episode was made in 40% of patients in less developed countries, but only 10% in developed countries, and the catatonic subtype was 10 times more common in developing countries. Indeed, inspection of their Fig. 2 indicates that in the developing countries more than 30% of all patients in the survey had been ill less than one month and 50% for only two months! While the differences in clinical presentation, such as more violence and excitement in developing countries and more paranoia and depression from developed lands, might be attributed to cultural differences, the great differences in mode of onset and age distribution between centres indicates that the schizophrenia defined by the authors presents great differences between the places studied. Indeed, what would be designated by RDC or DSM–III criteria as *acute reactive*, *brief* or *schizophreniform* psychosis is characteristic of a majority of admissions to psychiatric facilities in the developing countries. If diagnosed as schizophrenia, this may lead to the false conclusion that the same disorder has an equal prevalence around the world. Clearly, inclusion of this large number of acute psychoses of less than two months' duration, predominantly from the developing countries, will also bias the statistics by indicating a more favourable course for schizophrenia in developing countries. Inclusion of alcohol and drug-related psychoses by the authors will further blur the data, and may account in part for the large differences in age of first-contact schizophrenic patients between the centres.

The incidence data, claimed to show a similarity in all populations studied, are flawed in two respects. Firstly, only 8 of the 13 areas studied had sufficient

case-finding coverage and base population data to derive incidences; Ibadan, Cali, Agra, Prague, and Rochester were excluded. Exclusion of the first three means that the incidence data from developing countries derive solely from Chandigarh – a rather unique 'model city' in the Punjab and the site of one of India's major medical centres. With all of South America, Africa, and most of Asia excluded, the incidence data should not really be referred to the *worldwide* prevalence question. Secondly, the similarity of incidence worldwide which is claimed by the authors holds only for their S+ category, i.e. 'nuclear', Schneiderian schizophrenia; this category shows poor specificity, especially in early cases (Silverstein & Harrow, 1978), and very poor predictability for subsequent outcome diagnosis (Brockington *et al*, 1978). Furthermore, Schneider's first-rank symptoms are frequently found in mania, in addition to schizophrenia (Carpenter & Strauss, 1974). The S+ category is thus of doubtful validity for the diagnosis of schizophrenia. Yet it is only with this narrow, S+ definition that the author's claim of equal incidence and prevalence holds, for there is a large variation in incidence between centres with their broad (CATEGO S, P, O) definition of schizophrenia, with e.g. rural Chandigarh women having four times the incidence of women in Aarhus. This suggests either an epidemic-like pocket of schizophrenia in the rural Punjab, or more likely reflects the high incidence of culturally-based brief psychosis that would probably have been found in the other traditional societies, had they been included in the incidence survey.

The greater prevalence of acute reactive psychosis in developing countries has been long and widely recognised by psychiatrists working in these regions (Dembovitz, 1945; Carothers, 1953; German, 1972). During a three-month period in which JRS served as Consultant Psychiatrist at the School of Medicine of the University of Zimbabwe, it was found that more than half the patients admitted to the psychiatric ward of the Harare Hospital with a diagnosis of schizophrenia failed to meet either RDC or DSM-III criteria for duration of the illness, and that onset was often close to an emotionally traumatic event. Using DSM–III criteria, their diagnosis was acute brief or reactive psychosis (Stevens, 1987).

There is no doubt that typical schizophrenia, meeting RDC, DSM–III, Bleulerian, and Kraeplinian criteria, exists in all parts of the world where it has been looked for. In the absence of some duration criteria, however, the greater incidence of acute, reactive, culturally-based psychoses in developing countries is likely to make an important contribution to the conclusion by the authors that schizophrenia has a better prognosis in developing countries. For the three reasons mentioned – the questionable validity of the CATEGO S+ category for diagnosis of schizophrenia, the exclusion of all but one developing country in the incidence study, and the inclusion of brief (including culturally-related, drug, and alcohol) psychoses in their study – the authors' conclusion of worldwide similarity of schizophrenic incidence also seems premature.

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SIR: The recently released WHO multi-centre study of the incidence of schizophrenia was said by the authors to lend "support to the notion that the 'central' schizophrenic syndrome may be occurring with approximately equal probability in different populations" (Sartorius *et al*, 1986). The WHO study, however, does not shed much light on the comparative incidence of schizophrenia because all seven centres utilised in the incidence study were located in areas in which previous prevalence studies would suggest no more than a two-fold to three-fold difference; that is exactly what the WHO incidence study found.

The centres utilised in the WHO study and prevalence of schizophrenia per 1000 population reported in previous studies in those countries (Torrey, 1987) included: Nagasaki (2.1-2.3), Nottingham (2.1-3.4),