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A Comparison of Academic and Lay Theories of Schizophrenia

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This study investigated lay subjects' theories of schizophrenia. A questionnaire examining the five identified main academic theories of schizophrenia (medical, moral-behavioural, social, psychoanalytic, and conspiratorial) along various dimensions (aetiology, behaviour, treatment, function of the hospital, and the rights and duties of both patients and society) was constructed for use in the study. The results from 106 lay respondents showed that no single model was favoured exclusively but seemed to point to a synthesis of several academic theories. The lay subjects stressed the importance of patient environment in the aetiology of schizophrenia rather than a physiological malfunction, but tended to stress the personal rights of the schizophrenic. The differences between lay and the currently dominant psychiatric models are discussed in terms of the function these models serve for each group.

Attempts to integrate the mentally ill into the community will undoubtedly be affected to some degree by the reception society accords the mentally ill, which is in turn dependent on popular attitudes and beliefs. It is, therefore, important to understand lay theories of schizophrenia and other mental illnesses. Farina & Fisher (1982) have distinguished between the public's attitudes (subjective feelings) and beliefs (objectively verifiable knowledge), as research has shown them to have many different properties, the most important being that while attitudes have a rather weak relationship to behaviour, the relationship between belief and behaviour is much more comprehensible, useful, and promising (Furnham, 1988).

There is an extensive but diffuse literature on attitudes towards mental disorder (Sarbin & Mancuso, 1971, 1978; Crocetti *et al*, 1971, 1972; Norman & Malla, 1983; Prins, 1984; Eker, 1985; Malla & Shaw, 1987). One of the most exhaustive and important reviews was that of Nunnally (1961), who found that the mentally ill are regarded with "fear, distrust and dislike" across social groups, with only a little variation with age, sex, or education.

Nunnally (1961) factor analysed questionnaires concerning what the general public knew about mental illness (containing statements such as "nervous breakdowns seldom have a physical origin" and "the insane laugh more than normal people") and found ten interpretable factors, suggesting fairly complex beliefs. In contrast to the attitudinal findings, there were marked differences between the beliefs of older and younger people, and between the more and less educated, but lay persons' views were not very different from those of the 'experts', a finding which may be interpreted either positively or negatively.

Rabkin (1972) reviewed studies of the US public's attitudes towards mental health and found similar rejecting attitudes in the majority of cases. An example of these 'closed ranks' was found by Cumming & Cumming (1957), who tried to promote more accepting attitudes towards the mentally ill. They found that people agreed with two propositions: that the range of normal behaviour is wide and that deviant behaviour is not random but has a cause and thus can be understood and modified. However, the respondents totally rejected the idea that normal and abnormal behaviour lie on a continuum and are not qualitatively different.

Attitudes to the mentally ill are related to demographic and psychographic factors. Clark & Binks (1966) found that the younger and better educated respondents in their survey had more liberal attitudes towards the mentally ill. In a cross-cultural context, Shurka (1983) surveyed Israeli Arabs and replicated both the general findings of negative attitudes to the mentally ill and the general lessening of stigmatisation with greater education. Furthermore, the fact that these attitudes are related in some way to belief systems was demonstrated by Christian respondents who showed less negative attitudes than the other religious groups tested. However, in a test of the attitudes of Swedish university students Arn *et al* (1971) found few prejudiced attitudes, again showing a link between education and more positive opinions. They also discovered more positive attitudes among women, political radicals, and those with a family history of mental disorder. Psychiatric training also led to more benevolent attitudes, with an increase in tolerance and a reduction in social distance. Gelfand & Ullman (1961) also found that psychiatric training led to a more liberal, humanitarian outlook, with more emphasis on treatment than control.

A difficulty arises in the interpretation of some of the studies described above in that the beliefs studied are those about mental illness in general, instead of a particular disorder. It seems unlikely that beliefs about such distinct disorders as schizophrenia, depression, and neurosis would be highly homogeneous. Therefore, some researchers have investigated attitudes and beliefs concerning a single disorder, such as depression, while ignoring others, such as schizophrenia.

Rippere (1977, 1981) looked at common-sense notions of depression and found that there is much understanding and consensus as to the cause and treatment of depression. This is presumably due to the widespread nature of the disorder and the increased ability of lay persons to empathise with those suffering depression, having experienced similar problems at some point in the past. If this reasoning is correct, then similar research into schizophrenia is unlikely to find any such consensus, since the disorder is less common and less understood. Furnham & Rees (1988) surveyed lay theories of schizophrenia (both beliefs about schizophrenia and causal explanations) and found a misconception about what the disease actually was, most of the respondents adhering to the view that it meant that the patient was suffering from 'split personality'. Four factors emerged from the belief questionnaire, the first concerning the dangerousness of the schizophrenic, especially the unpredictable nature of the disorder. The other three factors dealt with the amorality, egocentricity, and vagrant nature of the schizophrenic. The factor analysis of the questionnaire dealing with causes revealed implicit theories which showed a link between explicit academic and lay theories. Factors emerged alluding to attentional deficits, stress, biology, genetics, and brain damage. Supporting the views of Sarbin & Mancuso (1971, 1972), subjects tended to adhere to a psychosocial model – social stresses and family conflicts were seen as the causes rather than the organic disorders postulated by the medical model. However, the study was limited to investigation of only the medical (or organic) and social explanatory models.

It was the purpose of this study to extend previous research and investigate the public acceptance of the full range of academic theories currently put forward to explain the schizophrenic disorder. In their paper "Models of madness", Siegler & Osmond (1966) attempted to sort the plethora of theories categorising schizophrenia into models, described along several dimensions which could then be compared. What these models provide is a summary of modern scientific theories of schizophrenia, and they are described briefly below, using the Siegler & Osmond (1966) dimensions most relevant to the study of lay theories. It should not be assumed that those planning the treatment of schizophrenics always adhere to a single model and that models are mutually exclusive.

Academic models of schizophrenia

The medical model

This is the dominant organic conceptual model for the understanding of the somatic illness, and has a similar although less marked dominance in the treatment of mental illness. Schizophrenic persons are in most cases called 'patients', reside in 'hospitals', and are 'diagnosed', given a 'prognosis', and 'treated', all a reflection of this dominance.

Aetiology. The medical model regards mental malfunction such as that found in the schizophrenic patient as a consequence of physical and chemical changes, primarily in the brain. The aetiology of schizophrenia is unknown at present, but there has been much research during the past half-century, with modern workers using a variety of brain-imaging techniques such as computerised tomography (CT), regional cerebral blood flow (rCBF), and positron emission tomography (PET). Twin (Gottesman & Shield, 1972) and adoption studies (Kety *et al*, 1968) have convinced most researchers that a genetic factor is involved. Other researchers have concentrated on brain biochemistry, and there is evidence that excess dopamine (a neurotransmitter which plays an important role in arousal and reinforcement) may cause schizophrenic symptoms (Miller, 1984; McKenna, 1987). Finally, some researchers hypothesise the existence in schizophrenics of brain abnormalities such as enlarged cerebral ventricles (Waddington, 1985), possibly caused by a virus (Machon *et al*, 1983).

Behaviour. The behaviour of schizophrenics is a symptom of their illness, and it has no real interpretative value except as a rough index of the severity of the disorder.

Treatment. Treatment consists primarily of medical and surgical procedures, such as use of neuroleptic drugs.

Function of the hospital. The function of the hospital is to provide an environment which facilitates the care and cure of those suffering from the disease.

Rights and duties of the patient. The schizophrenic has the right to the 'sick' role, an

ancient and respectable role. The full load of adult responsibility is reduced and patients are regarded with sympathy, as the condition is no fault of their own. Equally schizophrenics have the duty to cooperate with the staff (taking medication and reporting to the psychiatrist when required) in working towards the goal of their own improvement.

Rights and duties of society. Society has the right to restrain those suffering from schizophrenia who may be temporarily dangerous, but it is the duty of society to be sympathetic to the schizophrenic.

The moral–behavioural model

The moral–behavioural model is best known in the treatment of phobias and other neurotic disorders and is most concerned with the overt behaviour of the schizophrenic. Schizophrenics are seen as suffering for their 'sinful' behaviour in the past.

Aetiology. The aetiology of schizophrenia is to be found in the process of learning from others with similar behaviour, or other inappropriate learning experiences.

Behaviour. All schizophrenic behaviour is to be taken at face value, and requires evaluation instead of interpretation. Much schizophrenic behaviour contravenes moral or legal principles, and this is the key to both understanding and curing the disorder.

Treatment. Treatment is by far the most important aspect of the moral–behavioural model. Whether behaviour is seen as sinful, irresponsible, simply maladjustive, or socially deviant, the crucial thing is to change it so as to make it socially acceptable. The methods used range from simple moral exhortations to complex behavioural techniques, such as token economies, verbal control of behaviour, and social-skills training (Turner *et al*, 1981).

Function of the hospital. The hospital acts as a correctional institution, differing from a prison only in that the patient has broken social rules rather than laws. Inside, the atmosphere may be one of a 'total institution' that facilitates the changing of behaviour.

Rights and duties of the patient. Schizophrenics have the right to be released as soon as their behaviour is acceptable to society, but are expected to cooperate with the treatment and take responsibility for their actions: there is no 'sick' role.

Rights and duties of society. Society has the right to impose such sanctions as incarceration on those whose behaviour violates current social rules, and the duty to provide places for the treatment of such deviance.

The psychoanalytic model

The psychoanalytic model of schizophrenia differs from the others in that it is interpretative, treating the patient as an agent capable of meaningful action. Rather than seeing patients as 'acted on' by various forces (both biological and environmental) which cause them to behave in certain ways, the psychoanalytic conception of schizophrenia is concerned with patients' intentions, motives, and reasons (Ingleby, 1981).

Aetiology. Unusual or traumatic early experiences or the failure to negotiate some critical stage of emotional development are the cause of schizophrenia.

Behaviour. The behaviour of the schizophrenic is to be interpreted symbolically; it is the therapist's task to decode it. This interpretative approach attaches meaning to the patient's behaviour.

Treatment. Long-term, one-to-one therapy with a trained psychoanalyst is the primary treatment offered by this model.

Function of the hospital. The hospital is used to facilitate recovery through maximal contact with the psychotherapist, and also to remove the schizophrenic from the home environment, where the problems originated.

Rights and duties of the patient. Schizophrenics have the right to be spared moral judgement for their actions and to be treated sympathetically, but have the duty to cooperate with the analyst.

Rights and duties of society. Society has the duty to provide services to deal with the schizophrenic and to show sympathy to the sufferers.

The social model

All social models in psychiatry have the fundamental premise that the wider influence of social forces are more important than other influences as causes or precipitants of mental disorder (Rack, 1982). Mental illness is seen as a symptom of a 'sick' society, others being a high divorce rate, juvenile delinquency, increased drug addiction, and so on. The pressures of the modern world fall more heavily on the poor and disadvantaged, and thus they seem to suffer more of what is described as 'illness'.

Aetiology. Schizophrenic patients are driven to their form of madness by the social, economic,

and familial pressures on them. For example, Vaughn & Leff (1976) found that relapse in schizophrenics was higher in families where there was a high degree of expressed emotion (i.e. negative, critical attitudes and emotion-laden statements directed towards the schizophrenic).

Behaviour. The behaviour of the schizophrenic is a symptom of the wider problems of society.

Treatment. There is no individual treatment in the social model. Instead what is required is large-scale social change to reduce the stresses on individuals and thus reduce the incidence of mental illness.

Function of the hospital. The social model sees the hospital as a 'dumping ground' for the poor and others unable to live in the world outside. This is reflected in the practices of some hospitals that seem to be orientated less to providing a cure than to providing shelter.

Rights and duties of the patient. The schizophrenic has the right to sympathy.

Rights and duties of society. Society must change so as to reduce the stresses on people and thereby provide a cure for mental illness.

The conspiratorial model

The conspiratorial theory, in the form put forward by Szasz (1987), is perhaps the most radical conceptual model of schizophrenia in that it denies the existence of mental illness (as a physical disorder) and stands in direct opposition to the medical model.

Aetiology. Since there is no physical disease, there is no physical cause. Mental illness is not "something someone has", but "something someone does or is". Psychiatric diagnoses are stigmatising labels applied to persons whose behaviour offends or annoys others, and are used to control eccentric, radical, or politically harmful activity.

Behaviour. The behaviour of the schizophrenic is a direct consequence of the way the person has been treated by others.

Treatment. The conspiratorial model denies any 'treatment' or 'cure' in the normal sense. To deal properly with schizophrenics, one must respect their right to behave as they wish (within legal limits). If the individual seeks help, then it should be provided, but there should be no coercion.

Function of the hospital. Despite its outward appearance, the hospital serves as an establishment to imprison and control persons dangerous to society.

Rights and duties of the patient. The schizophrenic has the right to privacy, personal freedom, and treatment suitable for a responsible adult.

Rights and duties of society. Society must respect the rights of the schizophrenic individual.

The dimensions of any single model are not independent but inter-related, and are normally a direct consequence of the aetiological stance taken by the model's proponents. For example, in the medical model described above, the organic cause leads to the need for physical treatment, behaviour is seen simply as a symptom caused by the physical malfunction, the patient's rights and duties are the same as those of anyone who suffers from a somatic illness, and the rights of society are similar to those applicable in the case of a possibly dangerous organic disease. Thus, the model shows internal coherence.

This study was therefore concerned with the acceptance by lay people of the various academic theories of schizophrenia, the internal coherence of the responses of lay people to the questions dealing with dimensions of the same model, and the demographic variables such as age, sex, and experience (with schizophrenia and other mental illness) that might correlate with the acceptance or rejection of certain models. A questionnaire was constructed with items describing the five models along the eight dimensions listed above. Furthermore, because Furnham & Rees (1988) have found that most people still believe that schizophrenia means the patient has a 'split personality', it was decided to include a brief description of the symptoms and behaviour of schizophrenics in the questionnaire so as to avoid confusion with the multiple personality syndrome.

Method

A total of 106 subjects completed the questionnaire, of whom 59 were female (55.7%). There were 36 full-time university students, 16 student nurses, 40 people in full-time occupation, and 14 unemployed people. They were part of a university subject panel of volunteers. Ages ranged from 18 to 60, with an average of 23; 33% of respondents were in the age range 17–20, and 33% in the range 21–30. Thirty-one of the sample claimed to have some experience of any mental illness. It should be recognised that the sample was probably skewed towards people with some previous knowledge of mental illness. This was neither a representative nor a large sample; however, checks were carried out to determine whether the results might be atypical because of this.

Entitled "Common beliefs about schizophrenia", the questionnaire consisted of a description of the main characteristics of the disorder followed by 72 questions, each to be answered on a seven-point scale (see Appendix). It was designed by both authors and based on previous measures. Extensive pilot work ensured that it was

Table 1
Means on the eight dimensions for the five models[1]

Dimension	Medical	Moral–behavioural	Psychoanalytic	Social	Conspiratorial
Aetiology	3.33	2.20	3.60	3.43	2.94
Behaviour	3.59	2.67	4.03	3.11	3.04
Treatment	2.84	2.73	4.76	4.17	4.55
Function of hospital	5.26	4.03	4.50	4.10	3.33
Patient rights	5.58	5.67	5.56	5.47	5.37
Patient duty	4.66	3.93	4.66	-	3.19
Society rights	3.72	2.84	-[2]	-	-
Society duties	5.79	6.08	5.79	5.49	5.69

1. Scale: True 7 6 5 4 3 2 1 False.
2. No use of the dimension in the description of the model.

unambiguous and interpretable. These descriptions of the disorder and the questions pertaining to each dimension of the five models being tested were derived from textbooks and journals, especially the Siegler & Osmond (1966) and Furnham & Rees (1988) papers. In some cases there were two or more questions dealing with each dimension, and some models were described using fewer than the full eight dimensions. Where necessary, the questions were adapted to lay language for ease of understanding. When all 72 questions had been gathered, the order was randomised on the questionnaire, except that questions pertaining to the same model never appeared consecutively. The questionnaire had both face and content validity.

The first page of the questionnaire contained a description of the main characteristics of schizophrenia. It included items describing thought disorder (delusions and hallucinations), speech (with an example of schizophrenic discourse), and behaviour, together with a note explaining that the disorder was not a case of split personality. It could be argued that this information, to some extent, guided the respondents' responses in a particular direction; however, it was thought necessary in order to ensure that lay people were actually considering schizophrenia itself rather than some other mental illness.

Most subjects filled out the questionnaires in their own time and returned them to the researcher by hand or through the post. The data were collected in 1989/90. Fewer than 5% failed to respond or handed in incomplete questionnaires.

Results

The mean scores on the seven-point scale of all 72 questionnaire items are given in the Appendix. The scores from questions describing the same dimension of each model were averaged, and the mean values for each dimension for all five models are given in Table 1.

In the medical model, the highest mean value was for items describing the patient's right to sympathy and the duty of society in caring for the schizophrenic. However, subjects tended to disagree with this aetiology dimension in the medical model (mean score of 3.33). The moral–behavioural model was the one with which subjects had most disagreement. The mean scores for the behaviour and treatment dimensions were only 2.67 and 2.73, respectively, and the largest mean values were for items pertaining to the rights of the schizophrenic and the duty of society to provide places for treatment.

All the mean values of the seven dimensions of the psychoanalytic model were above midpoint except aetiology, which had a mean score of 3.60, the highest mean value for aetiology of all five models. The highest values concerned the right of patients to be spared moral judgements regarding their condition and to be accorded sympathy, and the duty of society to show sympathy and respect to sufferers. Of the six dimensions used to describe the social model, four had mean values above midpoint, with the highest again concerning the rights of patients to sympathy and respect, and the duties of society to respect these rights. Seven dimensions were used to describe the conspiratorial model, and three mean values were rated above the midpoint, those referring to schizophrenics' right to proper treatment (i.e. to be allowed to run their own lives) and society's duty to respect these rights. The aetiology dimension had a mean value of only 2.94, indicating disagreement.

To test whether the respondents replied to the questionnaire items concerning one particular theory as an internally coherent model, correlations were computed between the scores of each model's dimensions. Of the 28 intercorrelations of the various dimensions of the medical model, *nine* (32%) were statistically significant ($P<0.05$). Only the treatment and behaviour dimensions were significantly correlated with aetiology.

The moral–behavioural model yielded 16 significant results out of 28 (57%). Taking the behaviour dimension to be most relevant to internal coherence, the researchers correlated it significantly with the treatment, rights, and duties of the patient and rights of society. There were nine significant results out of 21 intercorrelations of the psychoanalytic model (42%). The aetiology dimension was significantly correlated with only the behaviour and patients' rights dimensions. The social model yielded 11 significant results out of 15 intercorrelations (73%). The aetiology factor was significantly correlated with the behaviour, treatment, hospital function, and societal duty dimensions. There were 21 intercorrelations of the conspiratorial dimensions, of which 16 were significant (76%).

The aetiology dimension was significantly correlated with all the dimensions except societal duty.

A factor analysis was performed in order to investigate the underlying structure of the lay beliefs examined in this study. By the scree test, five factors emerged which accounted for over 38% of the variance. The first factor to emerge from the analysis (factor 1) accounted for 11.6% of the variance, and contained items referring to *stress* as a causal factor in the pathogenesis of schizophrenia, in childhood development (questions 18, 25, and 37), interpersonal relations (questions 44, 55, 60, and 64), or everyday social life (questions 21, 52, and 69). The highest mean value was for question 18 "Traumatic experiences in early childhood can cause schizophrenia". Factor 2 accounted for 9.7% of the variance and was concerned with the *right* of schizophrenic patients to be accorded sympathy for the condition (questions 12 and 46 concerning this had the highest mean values, 6.09 and 5.64), to be provided with proper care, and to be spared moral judgement for their actions (question 52).

Factor 3, which accounted for 6.4% of the variance, dealt with the schizophrenic's *right to respect* (questions 5 and 45) and personal freedom (questions 6, 8, 50, and 70). The highest mean value (5.82) was for question 8, "Schizophrenics have the right to personal freedom if they do not break the law". Factor 4 was concerned with what may be called the 'hidden' function of the hospital, in that the items loading on this factor dealt with uses of the hospital that may be different from the professed aims of the institution. There were items alluding to the use of the mental hospital as a shelter for the poor rather than a medical institution (questions 11 and 26), as a place to punish society's deviants (questions 34, 48, and 65), and as a degrading 'total institution' (question 39). The highest mean value was for question 11, "Whatever the aim of the mental hospital, it often ends up becoming a dumping ground for the poor and disadvantaged".

The final factor (factor 5) accounted for 4.9% of the variance and was concerned with the sort of *treatment* suggested by the moral–behavioural model, with items dealing with the right of society to punish offending schizophrenics (question 59) in correctional institutions (question 22), and punishment being assumed to be an effective form of treatment (question 14). The highest mean value was just 1.95 for question 59, and the mode response for all three questions was 1.

A series of one-way ANOVAs was computed item by item in order to see whether any of the three demographic variables (sex, age, and previous experience with the mentally ill in general and schizophrenics in particular) were significant determinants of responses to the questionnaire. There were no more significant differences in any of the variables than would have been expected by chance, indicating that the subject demographic and experience factors in this sample did not relate systematically to the schizophrenia questions.

Discussion

This study dealt with lay beliefs about schizophrenia. The results indicate that the complete medical model could be split into two submodels forming coherent models in themselves. The first deals with aetiology, behaviour, and treatment, and the second with the 'sick' role and its attendant rights and duties. In the case of somatic illness, these two submodels form a complete guide to the pathogenesis and management of the disorder, yet it seems the lay respondents wished to confer the benefits of the 'sick' role on the schizophrenic patient without necessarily agreeing that the disorder has an organic origin.

The mean values of the dimensions of the moral–behavioural model showed that the respondents disagreed with the aetiology, behaviour, *and* treatment dimensions, but agreed with those items dealing with the duties of society in providing places to deal with schizophrenics. The clearest statement of the respondents' dissatisfaction with this model was the high mean response given to the item suggesting that schizophrenics should not be judged morally for their actions (question 52), a suggestion which is contrary to the fundamental proposals of this model. The high mean value accorded to the hospital-function dimension may seem incongruent with the 'sick' role factor described above, since the moral–behavioural model sees the hospital as a kind of prison, but analysis of the scores for the individual hospital-function questions showed that 73% of respondents totally disagreed with the contention that the hospital should be a correctional institution and that the high mean value was mainly due to the other questions pertaining to the hospital function of this model, such as those concerned with facilitation of recovery.

In general, the psychoanalytic model received a favourable reception from the subjects in this study. Subjects agreed that schizophrenic behaviour had some meaning and was neither random nor simply a symptom of an illness (Cumming & Cumming, 1957). They also thought that psychotherapy was more likely to help these patients than any treatment offered by the other models. Items pertaining to the psychoanalytic model loaded on both factor 2 (the 'sick role') and factor 1, which dealt with stress as a causal agent and accounted for more variance than any other factor. The two items with the highest mean values on this factor were the psychoanalytic explanation of the cause of schizophrenia as traumatic experiences in childhood and the interpretation of the behaviour of schizophrenics as in some way symbolic of their problem.

Only six dimensions were used to describe the social model, and analysis of the mean values showed that subjects most agreed with items dealing with the right of schizophrenics to sympathetic treatment and the duty of society to reduce social pressures on these patients. The social aetiology was correlated with

behaviour, treatment, hospital function, and duties of society, showing that the subjects responded to these items as a relatively coherent model. Social items were also contained in the stress factor and factor 4, which dealt with the 'hidden' function of the hospital.

The dimensions that received most positive responses in the conspiratorial model were concerned with the treatment and rights of the schizophrenic. Although some of these items were included in the 'sick role' factor, they made up a significant proportion of factor 3, which dealt with the right to personal freedom of schizophrenics. The item with the highest mean value in factor 3 was that dealing with the wrongfulness of commitment to an asylum when a patient had not committed a crime. Items from the conspiratorial aetiology were also included in factor 1, relating to interpersonal stress, and in factor 4, dealing with the function of the hospital as a prison for deviants and other unwanted members of society. Correlations between the aetiology and other dimensions yielded significant results for behaviour, treatment, hospital function, and rights and duties of the patient, showing that the subjects responded to this as an internally coherent model.

It is clear from the results that the subjects' responses did not conform neatly to any one of the academic models, but the results can be used to see what sort of model was favoured by the subjects. The aetiology dimension dealt with by factor 1, which was made up of items from the social, psychoanalytic, and conspiratorial models, showed that stress in childhood, stress at the interpersonal level, and stress from life situations are all seen by lay people as important causal agents. It is unclear what the most effective treatment is in this lay model. Analysis of the means shows that one-to-one psychotherapy is regarded most favourably, and any reduction in the stresses would presumably be seen to help the sufferers (Furnham & Wardley, 1990).

Factor 3 is concerned with civil liberties and showed that schizophrenics should be accorded basic human rights and freedoms despite their condition, and this can be interpreted as a rejection of society's right to commit schizophrenic patients when they have broken no law. The function of the hospital is dealt with by factor 4, which indicates that people are aware of the fact that mental hospitals can often be used in ways that have little to do with care and cure, even if these are the professed and correct aims. Thus, subjects in this study seemed to hold a view close to that of the conspiratorial theorist, Szasz (1987). Finally, the remainder of the dimensions of this lay model seems to be summed up in factor 2 as the 'sick role', which in the form found in this study is important to some degree in all models except the moral–behavioural. Subjects had strong beliefs that there should be little difference between the treatment of schizophrenics and people suffering from somatic disorders.

The lay model appears to defy reduction or classification into any one of the five main academic models. The vocabulary used to describe schizophrenia is almost entirely medical, yet lay people do not seem to understand the academic implications of this and are not aware of the incongruence between their labels and implicit theories. However, some everyday expressions about the causes of mental illness ('driving me mad') are not medical expressions. If a lay person uses a term such as 'illness' to describe a psychological disorder, the definition of illness appears to include such semantic attributions as 'self-centredness', 'harmful', 'impairment', 'undesirable', and 'unexpected' (Furnham, 1988) without any belief that the cause has to be physical. This suggests that the use of medical language is simply convenient and stems from experience of expert usage rather than any implicit agreement with the medical model.

Possibly, the popularity of the proposals of the psychoanalytic model is due to the fact that they are similar to the forms of understanding used by lay people. Explanations of human behaviour often proceed by showing that the behaviour is rational in light of the subject's beliefs and desires, so it seems that the psychoanalytic approach is closest to everyday theories in its understanding of individual behaviour and thus is rated as most useful (Ingleby, 1981). Yet, lay people are often perplexed and repelled by some psychoanalytic interpretations of their behaviour which go beyond people's own understanding of themselves (through so-called 'depth hermeneutics') to provide explanations of the observed behaviour. What is being hypothesised is that both lay and psychoanalytic approaches use the same method of interpretation and that this may account for the relative popularity of the psychoanalytic model as a key to understanding schizophrenia.

It seems that lay people have not been converted to the medical view and prefer psychosocial explanations. However, it also seems that the subjects in this study accorded the schizophrenic the 'sick role' despite the social aetiology. One of the main aims of the proponents of the medical model was to see that the mentally ill receive the same sympathetic treatment as the physically ill, and the hope was that a belief in a physical aetiology would facilitate this. However, in trying to equate the rights

of the physically and mentally ill, it looks as though the proponents of the medical model may have been pushing through an open door.

There may be considerable resistance to changing the public's beliefs about the nature of the disorder. If the hypothesis about the relationship between the function of lay beliefs and their content given above is true, then there may well be problems in converting the public's views to a medical-model perspective if the new beliefs are less useful to the lay person in ordering and making sense of the behaviour of others in the social world.

Clearly, there are many other issues to investigate in this area. For instance, one could investigate how the public develops its beliefs about the nature of schizophrenia (and other disorders), or, more specifically, how different the results of this study would have been if one was investigating a neurotic, as opposed to a psychotic, disorder.

Appendix

Questionnaire items

	Mean score[1]
1. Schizophrenia is caused by having blood relatives who are schizophrenic.	2.86
2. Schizophrenics have the right to be left alone as long as they do not break the law.	4.96
3. Mental hospitals are best used to remove schizophrenics from stressful homes to quieter settings.	3.44
4. Society has the right to protect its people from schizophrenics.	3.71
5. Schizophrenics have the right to be treated as responsible adults.	5.37
6. The best way to treat schizophrenics is to respect their liberty and right to lead their own life.	4.74
7. There are more schizophrenics in some cultures and countries than others.	4.06
8. Schizophrenics have the right to personal freedom if they do not break the law.	5.82
9. The duty of society is to change and reduce the stresses and strains on schizophrenics and others.	5.31
10. Schizophrenic behaviour is so odd it shows how ill they are.	3.11
11. Whatever the aim of a mental hospital, it often ends up becoming a dumping ground for the poor and disadvantaged.	5.34
12. Schizophrenics have the right to be treated sympathetically.	6.08
13. Schizophrenia is caused by learning strange and bizarre behaviour from others.	1.83
14. Schizophrenics can be treated by punishing their bad behaviour.	1.77
15. Schizophrenic behaviour is symbolic of the problems encountered by the individual.	3.90
16. Making schizophrenics more responsible for their behaviour is the best way of treating them.	3.58

Appendix (*continued*)

	Mean score[1]
17. Mental hospitals are used to keep schizophrenics away from society and have little interest in cure.	3.36
18. Traumatic experiences in early childhood can cause schizophrenia.	4.05
19. Schizophrenics have the right to be released when their behaviour is acceptable to society.	5.66
20. Schizophrenics can be treated by making them act 'properly' by using rewards.	2.82
21. Stressful life events such as losing one's job can lead to schizophrenic behaviour.	3.53
22. Mental hospitals should act like correctional institutions (prisons).	1.55
23. The behaviour of schizophrenics is related meaningfully to their problems.	3.99
24. The best way to treat schizophrenics is with drugs.	3.28
25. The cause of schizophrenia is unusual early experience.	3.26
26. Mental hospitals sometimes end up simply providing shelter for the poor and other unfortunates and do little to get these people out of the hospital and back into society.	4.43
27. Schizophrenic behaviour is a way of dealing with the problems in the modern world.	3.11
28. Schizophrenia is caused by a chemical imbalance in the body.	4.50
29. It is society's duty to provide people and places to treat schizophrenics.	6.07
30. The behaviour of schizophrenics is an indication of a diseased mind.	3.30
31. The most effective way of helping schizophrenics is to create a society truly fit for them to live in.	4.10
32. The schizophrenic individual must cooperate fully with those treating him/her.	4.66
33. It is possible to help schizophrenics with long-term therapy with a trained counsellor.	5.52
34. Whatever the reason for the building of mental hospitals, they are often used to punish people who do not follow the rules of society.	4.01
35. A cause of schizophrenia is brain damage due to a virus.	2.63
36. Schizophrenic behaviour is nearly always bad and wrong.	2.45
37. The cause of schizophrenia is problems in emotional development as a child.	3.47
38. It is possible to help schizophrenics by simply talking to them about their problems.	3.79
39. A mental hospital is a kind of concentration camp, where people are subdued and degraded in order to make them easier to control.	3.22
40. It is possible to treat schizophrenics by surgery.	2.38
41. The schizophrenic has the duty to take responsibility for his/her actions and their outcomes.	3.18
42. It is the right of the schizophrenic to be cared for by society.	5.63
43. Producing a more comfortable and less stressful society is the best way to treat schizophrenics.	4.22
44. Schizophrenic behaviour is caused by harsh and unsympathetic treatment by others.	3.07
45. Privacy is the right of all schizophrenics.	5.33
46. Society has the duty to show sympathy to schizophrenics.	5.63
47. The best way to treat schizophrenics is to respect their right to lead their own lives.	4.35

Appendix (*continued*)

	Mean score[1]
48. Mental hospitals are often used to remove troublemakers from society.	4.01
49. The behaviour of schizophrenics is often sinful.	2.28
50. Society has the duty to respect the rights of the schizophrenic individual.	5.65
51. The behaviour of schizophrenics is a symptom of their illness.	5.65
52. Schizophrenics should not be judged morally for their actions, since they have little control over what they do.	5.23
53. Schizophrenia is caused by nothing more than problems in daily living.	2.51
54. The main function of the mental hospital is to provide an atmosphere for care and cure.	5.53
55. Schizophrenic behaviour is a result of dreadful treatment by other people.	2.78
56. Society has the duty to provide places where schizophrenics can go for help with their problems.	6.04
57. The most effective way of treating schizophrenics is to improve the society in which they live.	4.18
58. Mental hospitals should be used to teach schizophrenics to act responsibly so they can fit in with society.	4.10
59. Society has the right to punish or imprison those, like schizophrenics, whose behaviour breaks moral standards even if they don't break the law.	1.95
60. Treating people in an unpleasant manner can lead to schizophrenic behaviour.	3.02
61. The way schizophrenics act is a 'code' which tells us about the way they are feeling.	4.18
62. People are called schizophrenic when those around them can no longer cope with the way they behave.	3.21
63. Schizophrenic behaviour often violates the moral rules by which we live.	3.53
64. If lots of people treat someone badly, that person often displays schizophrenic behaviour.	3.12
65. The function of the hospital is to rid society of those who threaten it.	2.06
66. Most of the behaviour of schizophrenics is immoral.	2.00
67. Schizophrenia is caused by learning from others with similar behaviour.	2.00
68. A one-to-one relationship with a skilled therapist is the best way to treat schizophrenics.	4.96
69. The cause of schizophrenia is the 'sick' society in which we live.	2.69
70. Society has the duty to respect the liberty of the schizophrenic.	5.35
71. The function of the mental hospital is to make the recovery of schizophrenics quicker.	4.99
72. Schizophrenia is caused by a person's feeling guilty for his/her past actions.	2.76

1. Scale 7 = completely true to 1 = completely false.

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