Psychopathology and Clinical Course of Schizophrenia: A Cross-Cultural Perspective

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Abstract

The authors critically review the existing literature on the outcome of schizophrenia in non-Western countries. Compared to studies conducted in Europe and North America, the majority of these non-Western longitudinal followup studies indicated significantly better outcome. Such cross-national variations in the outcome of schizophrenia have been substantiated by two large-scale multicentered studies sponsored by the World Health Organization. Along with this literature review, the authors also discuss potential methodological problems of these studies and examine in detail several key hypotheses concerning mediating factors that could differentially influence the fate of schizophrenic patients in divergent cultural settings. Finally, specific suggestions are made for future research directions.

Since the late 19th century, the applicability of the concept of “dementia praecox” and later “schizophrenia” in non-Western cultural settings has been repeatedly debated (Leighton et al. 1963; Wittkower and Prince 1974; Leff 1981, Murphy 1982). As far back as 1904, Kraepelin reported observing typical cases of dementia praecox in Java during a trip to the Far East made specifically for such a purpose. In the subsequent decades, an increasing number of psychiatrists working in non-Western societies convincingly demonstrated that patients with classic schizophrenic symptoms and progressively deteriorating course exist in all corners of the earth. Patients with chronic nonorganic psychotic and asocial behavioral patterns have not only been identified in contemporary Western and non-Western urban societies, but also in mountainous Laotian villages (Westermeyer 1980), extremely isolated Micronesian islands (Wilson 1980), and small-scale hunter-gatherer societies in Papua New Guinea (Burton-Bradley 1985), suggesting that schizophrenia may be a universal phenomenon.

Concurrently, a number of psychiatrists with extensive clinical experiences in various parts of Asia and Africa have reported that the majority of psychotic patients they treated in these “Third World” countries tended to suffer from a disease process that was characterized by acute onset, fulminant but typically short clinical course, and, more often than not, complete remission (Seligman 1929; Berne 1949; Smartt 1956; Field 1968; Rin and Lin 1962). These observations have led to suggestions that the course of schizophrenia in the so-called “developing” countries may not be as malignant as that observed in industrialized Western settings (Murphy 1968), and have generated useful hypotheses about the impact of sociocultural forces on the manifestation and outcome of schizophrenia (e.g., Cooper and Sartorius 1977; Waxler 1977).

Despite recent progress in cultural psychiatry, there has as yet been no consensus about the cross-cultural comparability of the clinical course of schizophrenia: some regard it as more benign in developing societies; others, as basically similar worldwide. Contributing significantly to the divergence of opinion is the fact that proponents on both sides have

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based their arguments mostly on cross-sectional observations rather than on longitudinal data (Warner 1985). Fortunately, in recent years, longitudinal followup studies with varying degrees of sophistication in research design and involving patients from non-Western countries have started to emerge, including the International Pilot Study of Schizophrenia (IPSS) (World Health Organization 1973). In this article, we first critically review studies conducted separately in different countries. Because of its unique design and its special importance, the IPSS is reviewed in a separate section, as is the more recent Determinants of Outcome Study, also conducted by the World Health Organization (WHO). We then examine in detail several key hypotheses about mediating factors that could significantly influence the fate of schizophrenic patients in different cultural settings. Finally, we make specific suggestions for future research directions.

**Followup Studies From Non-Western Countries**

**Studies Conducted in South Asia.** Murphy and Raman (1971) conducted a 12-year (1956–68) followup study of 90 schizophrenic patients on the island of Mauritius in the Indian Ocean (population: 600,000; 50 percent Hindu Indians, 17 percent Muslem Indians, and 33 percent Creole Africans). These patients represented 98 percent of all first admission schizophrenic patients treated in 1956 in the psychiatric ward of the only hospital on the island. Supervised by one of the authors, who is a psychiatrist, two psychiatric nurses conducted interviews with these patients and/or their relatives to evaluate their outcome and clinical course since discharge. The outcome criteria were similar to those specified by Brown et al. (1966), which took into consideration a variety of factors including rehospitalization, current symptoms, employment, financial status, and level of social functioning. The study revealed that at the time of followup, 64 percent of the subjects had maintained a complete, symptom-free recovery. Most of the remaining subjects (32 percent), however, had remained continuously symptomatic and disabled since discharge. Only 9–11 percent fell in between the two extremes in their outcome status. In contrast to this, the 5-year followup study conducted by Brown et al. (1956–61) in England indicated that 49 percent of a group of schizophrenic patients in London were symptom-free, 28 percent were severely sick, and 23 percent were symptomatic and disabled although not overtly psychotic. Statistical analysis revealed that the differences between the Mauritius and the British findings were highly significant at .001 level.

With a prospective design and more sophisticated methodology in followup evaluation, including structured interviewing techniques, the use of objective rating scales, and clearer definition of outcome criteria, Wexler (1979) drew similar conclusions from a 5-year followup (1970–75) study of 44 consecutively admitted schizophrenic patients in Sri Lanka. Thirty-eight out of the original 44 patients were successfully recontacted at the time of the followup. Among these, 45 percent (17 cases) were completely functional and symptom-free, 24 percent (9 cases) revealed only nonpsychotic symptoms, and the remaining 31 percent (12 cases) manifested overt psychotic symptoms. All of the 12 cases in the last category had been continuously and seriously ill for the entire followup period. Compared with the outcome of the patients from the industrialized countries included in the IPSS (see below), the clinical outcome from this series was significantly better.

Around the same time, however, Kulhara and Wig (1978) reported less favorable results from a retrospective cohort study in a rapidly industrializing city in the Northwest region of India. One hundred out of 174 schizophrenic patients consecutively admitted in an inpatient ward (1966–67) were identified for outcome evaluation 4.5–6 years later. All subjects were personally interviewed by one of the authors during the index admissions, and reevaluated by the other author at followup. In 86 percent of the cases, other reliable informants were also interviewed in addition to the patients. Only in 5 percent of cases did the outcome information derive solely from the patients, and in 9 percent of cases, patients were not available for interview, but data were provided by relatives. The authors reported that 29 percent were symptom-free, 16 percent suffered from minor personality and/or neurotic difficulties, 23 percent continued to experience episodes of relapse along with clear periods of remission, and 32 percent remained schizophrenic throughout the followup period. Since these results were more similar to those reported from England by Brown et al. (1966) than Murphy and Raman’s (1971) data from Mauritius, the authors concluded that the clinical course of schizophrenia in urban Indian settings may be comparable to that observed in Western societies.

**Studies Conducted in Chinese Societies.** Lo and Lo (1977) reported
a retrospective cohort study which was able to recontact and evaluate 82 out of 133 schizophrenic patients 10 years after their first admission to the Hong Kong Psychiatric Center. Those patients evaluated and those missing to followup did not differ significantly in demographic variables and clinical characteristics such as chronicity, type of onset, and symptom patterns. However, the former group had significantly more supportive relatives as compared to the latter. The study did not clearly specify how the clinical conditions of the patients were determined at followup and was similarly vague about outcome classification criteria. The results indicated that 21 percent achieved lasting remission, 44 percent had had episodes of relapse but no or only mild personality deterioration, 22 percent had had relapses along with moderate deterioration and/or residual psychotic symptoms, and 12 percent had had persistent or incapacitating psychotic symptoms throughout the followup period. In terms of social functioning at followup, 43 percent were independent, 23 percent were "somewhat dependent" (defined as requiring supervision), 26 percent were dependent, and 7 percent were hospitalized.

Tsoi et al. (1985) conducted a similar study in Singapore with 557 consecutively hospitalized first admission patients. All subjects were originally diagnosed by the first author in 1975 with guidelines specified by Slater and Roth, and were reassessed with various methods including review of records, re interview by the treating psychiatrists, and home visits by the medical social worker of the hospital. Out of the 557, 424 were successfully rated for their outcome status. Factors considered in the outcome rating included symptom severity, personality deterioration, need for medication, and employment status. The results revealed that 35 percent were completely recovered, 28 percent manifested only minimal illness, 20 percent were moderately sick, 9 percent were severely disabled, and 8 percent had died (4 percent from natural causes, 4 percent from suicide). The authors regarded these results as comparable to those of Murphy and Raman (1971) and Lo and Lo (1977), with outcome better than in the Western studies.

From Shanghai, China, Hsia et al. (1958) reported their results on an extremely ambitious undertaking, in which attempts were made to assess the outcome of all the schizophrenic patients hospitalized in their inpatient wards in the previous 21 years. Out of a total of 1,758 such patients, they were able to evaluate 879 (50 percent) by a variety of methods including letter inquiries, home visits, telephone interviews, and information from relatives. They reported that 46 percent were "completely cured," 17 percent "significantly improved," 2 percent "moderately improved," 29 percent "still incapacitated," and 6 percent hospitalized. Despite significant methodological problems, including the low intensity and apparent inconsistency in the method of followup and the absence of specific criteria for original diagnosis and outcome assessment, the findings from this study should not be neglected. The study is important not only because of its remarkably large sample size, but also because the researchers involved in the project had been responsible for the care of all the patients throughout the two decades of the study period.

In a more recent study from the same institution, Hsia and Chang (1978) analyzed the clinical course of 100 schizophrenic patients with a history of chronic deterioration (mean duration = 14 years) and multiple hospitalizations (mean = 5 1 years). They found remarkable stability in the clinical pictures of these patients between the first and the last admissions. This was particularly true for the prevalence of delusions, hallucinations, and signs of formal thought disorder. However, agitation and affective symptoms became less prominent over time, and dramatic contrasts existed in manifestations of emotional blunting (38 percent in the first admission, 65 percent in the last) and personality defects (22 percent in the first, 70 percent in the last). Paralleling these changes in clinical manifestations, significantly more patients were classified as undifferentiated in their last admission (64 percent), as compared to their initial hospitalization (11 percent). Whereas 75 percent of these patients responded to treatment administered in their first hospitalization, only 30 percent were responsive to psychiatric intervention when last evaluated. Since this study deliberately included only cases with chronic dysfunction, these results are not generalizable to less selected patient groups and cannot be used for cross-cultural outcome comparisons. However, they do convincingly indicate that chronic deterioration does occur in a portion of "Third World" schizophrenic patients. Further, when this happens, patients may follow similar patterns of deterioration to those in the West.

Japanese Studies. Over the last half century, at least a dozen major followup studies of schizophrenia outcome have been conducted in
Japan, virtually the only fully industrialized non-Western society. Unfortunately, the findings of these studies have rarely been reported outside of the Japanese psychiatric literature and have so far remained unavailable to Western researchers. We review two recent studies.

Miya et al. (1984) and Ogawa et al. (1987) reported a 16- to 21-year retrospective followup study of the clinical course and outcome of 140 schizophrenic patients consecutively hospitalized in a 5-year period (1958-62). Out of the 140, only 10 (7 percent) were lost to followup. Unfortunately, inconsistency in the methodology of followup seriously limited the robustness of the findings: while 46 percent of the patients were personally interviewed, information about the rest was obtained through review of various records and from patients’ family members, relatives, and friends. Despite this methodological flaw, however, the authors apparently were able to gather sufficient information to reconstruct the clinical course of these patients over time. According to them, following the index admission, most patients’ conditions were initially unstable, fluctuating, and unpredictable. As time progressed, the number of patients who remained in such a “transitional” state gradually decreased. Although a portion of these patients progressively deteriorated, an increasing number of them also entered stable remission. At followup, this trend resulted in a large percentage of patients who were essentially symptom-free and socially functional (41 percent were completely independent and 9 percent were semi-independent), as well as a significant proportion of patients who were severely dysfunctional (26 percent were hospitalized; another 2 percent were “seriously disabled”). In contrast, only 6 percent remained in the gray area.

Ichimiya et al. (1986) reported the results of a study of 129 schizophrenic patients over a 20- to 44-year period. Among these patients, 66 were first seen between 1940 and 1957, and 63 were first evaluated between 1957 and 1963. The initial diagnosis of the patients was made according to both Bleuler’s and Schneider’s criteria. Outcome ratings were also clearly described with specific criteria. The method of followup was not clearly specified. Although the authors implied that this was a prospective on-going followup study with a design similar to that of Manfred Bleuler (1978), the initial recruitment of subjects was not consecutive, and the dropout rate was quite substantial between first evaluation and outcome assessment (e.g., out of 283 patients admitted in the period 1957-63, 146 dropped out of treatment; no attempts were made to contact these patients). This study reported that at the end point of the followup, 17 percent were in complete remission, 27 percent were employed and experienced only mild nonpsychotic symptoms, 25 percent were symptomatic but socially adjusted, 17 percent were significantly disturbed, and 14 percent remained gravely disabled.

In the discussion section, Ichimiya et al. (1986) also reported the findings of a 1978 study conducted by Yuasa. This was a 10- to 14-year followup study which successfully traced 110 of 114 consecutively admitted patients. On the basis of information derived from review of records, they rated 52 percent of the patients as completely independent, 10 percent as semi-independent, 10 percent as unemployed but adjusted at home, 3 percent as moderately disabled, 12 percent as gravely disabled, and 11 percent as having died. These findings were quite similar to the two studies reviewed above.

Critique. Considering the remarkable differences in the cultural and geopolitical milieus in which these studies took place, the similarities in their methodology and results are quite striking. Conducted in the last three decades, these studies benefited from experiences of earlier investigations performed in the Western countries. Their study design was either prospective (Waxler’s study) or retrospective cohort in nature, and included consecutively all patients who met the diagnostic criteria. With the possible exception of Kulhara and Wig’s study, most of the investigators recruited patients who were fairly acute at the index admission, and some of the studies limited their research samples to first-admission patients.

Compared to the more recent, thoroughly designed followup studies, such as those conducted by Tsuang et al. (1979) and McGlashan (1984), some of the limitations of these studies become apparent. These have to do with issues of diagnosis, criteria of outcome assessment, the method and intensity of followup, and attrition of cases through the followup period. Since the psychiatrists involved in these studies were all influenced by the European—especially British—tradition, and subscribed to a more narrowly defined concept of schizophrenia, the discrepancy in diagnosis across these as well as some of the Western studies with similar diagnostic practices is probably not too enormous. However, since acute psychoses with rapid reconstitution are reported as the
commonest psychoses in most non-Western societies, there remained a possibility that in the above-mentioned non-Western studies some of those presumably more benign conditions were misidentified as core schizophrenic disorders. So long as diagnostic criteria are not objectively described, the issue of whether diagnostic differences contribute to differences in outcome remains unsettled. Similarly, the absence of more substantial discussions of operationalized criteria of various aspects of outcome makes comparison of outcome across studies questionable. The personnel involved in followup also varied significantly among studies: the outcome evaluators were the treating psychiatrists in four studies, research nurses in one, and not specified in the rest. The intensity of the followup also differed from study to study. At one end, Waxler attempted to interview all the patients as well as their relatives, and also reviewed hospital and clinic records. At the other extreme, some studies attempted to gather information from any source and rated patients' outcome on such information. Finally, the relatively higher rates of attrition in some of these studies also pose a serious problem in the interpretation of the data reported (Edgerton 1980).

In five of these studies, the authors claimed that their patients showed significantly better outcome than those studied in Western settings. As reviewed by Warner (1985), however, the 30 Western followup studies conducted during a similar time period revealed extremely wide variability. For example, those rated as completely recovered in these Western reports ranged from 9 to 52 percent. In contrast, the non-Western data as reviewed above showed a range of 17 to 46 percent. Thus, while patients in most non-Western studies did appear to enjoy better outcome than their counterparts in the Western settings, no definitive conclusion can yet be drawn from these findings because, depending on the Western studies selected for comparison, the results differ. This is especially so for reports of more recent Western studies (Bleuler 1978; Bland 1982), which disclose better long-term outcome than previous ones from similar cultural settings.

International Pilot Study of Schizophrenia (IPSS)

Begun in 1968, and carried out through the early 1970's in nine countries, the IPSS represented a major advance in the cross-cultural research on the phenomenology and clinical course of schizophrenia (World Health Organization 1973, 1979). Using prospective design, identical protocols, standardized interviewing instruments, and rating scales, this study was performed by researchers in nine field centers who had been previously trained and shown to be reliable in their diagnostic and rating practices. All together, 1,202 patients were admitted to psychiatric centers in Aarhus (Denmark), Agra (India), Cali (Colombia), Ibadan (Nigeria), London (UK), Moscow (USSR), Prague (Czechoslovakia), Taipei (Taiwan), and Washington, DC (USA). Only young patients (25-44) with functional psychosis of recent onset who consistently resided in the predetermined catchment areas were included. Various exclusion and inclusion criteria further ensured that all the patients could be objectively identified as psychotic, not in a chronic, deteriorated state, and not psychotic secondary to other reasons (e.g., substance abuse, epilepsy). Among the 1,202 patients, 811 were diagnosed as schizophrenic. The rest included 164 affective psychoses, 29 paranoid psychoses, 73 other psychoses, and 125 with other diagnosis.

The results of the initial examination revealed that the diagnostic practices leading to the classification, as well as the symptom manifestations, of the above-mentioned psychiatric categories were quite similar across all research centers. Such similarities were demonstrated in the clinical profiles that were constructed from the item scores of the Present State Examination (PSE) and also from the application of a computerized classification program (CATEGO; Wing et al. 1974).

Followup assessments at 2 and 5 years were carried out in all the centers, again with standard instruments including the PSE and other followup scales. At the 2-year followup, 609 (75 percent) of the 811 original schizophrenic patients were successfully reevaluated. However, reinterview rates varied markedly from center to center, ranging from 53 percent in Ibadan to 97 percent in Agra.

Detailed, objective criteria were used to rate the following characteristics: symptomatic outcome, length of episode of inclusion, percentage of time spent in a psychotic episode, pattern of course, type of subsequent episodes, degree of social impairment, and length of time out of hospital. In addition, on the basis of information derived from three of these variables (percentage of followup period spent in a psychotic episode, presence or absence of severe social impairment, and type of remission after episodes), overall outcome for each
For the whole study, 26 percent belonged to the best outcome group, while 18 percent fell into the worst group. These outcome ratings were significantly different across the nine study centers: Agra (India) and Ibadan (Nigeria), both representing developing countries, had the highest proportion of best outcome subjects (48 percent and 57 percent, respectively), whereas the study centers located in Western industrialized countries uniformly manifested a remarkably low percentage of best-outcome patients (6-23 percent). Conversely, while very few patients from Agra and Ibadan were rated as having the worst outcome (15 percent and 5 percent, respectively), a much larger proportion of the patients from the industrialized societies were assigned to this group (11-31 percent). Although the 5-year followup data have not been reported, Sartorius (personal communication, April 1986) indicated that the contrast in outcome of schizophrenic patients between developing and developed countries continued to exist. Thus, this large-scaled, prospective, multinational study provided strong evidence of cross-cultural variability in the outcome of schizophrenia. These data are congruent with findings from most of the earlier reports suggesting that schizophrenic patients in Third World countries tended to enjoy better outcome than those living in industrialized nations.

Despite the apparently high level of sophistication in the study design of the IPSS, unfortunately, major methodological problems were not completely avoided. The wide variation in the attrition rate at 2-year followup across centers, and especially between Ibadan and some of the Western sites, is particularly troublesome. It is not inconceivable that, due to geographic or other reasons, researchers in Ibadan could have reached proportionally more of the better outcome patients, whereas those patients who had remained dysfunctional could have been kept in remote villages and become less accessible to followup. At the same time, patients with poor outcome were more likely to remain in psychiatric institutions, and could conceivably be overrepresented at the 2-year followup in developed country sites with low rates of reevaluation (e.g., 58 percent in London and 66 percent in Washington, DC). However, this still would not explain the sharp contrast in outcome between Agra (3 percent attrition rate) and Aarhus (7 percent attrition rate).

Another major methodological issue has to do with the comparability of patients initially recruited across different study centers. The application of specific inclusion and exclusion criteria resulted in a high degree of similarity in the symptomatology, severity, and chronicity among patients from different sites. This should guard against flagrant disparity in sampling across centers. Nevertheless, at followup, the rediagnosis of 6 of the 21 schizophrenic patients (28 percent) at Agra who suffered from relapses was either affective psychosis or reactive psychosis (World Health Organization 1979, pp. 153-155). A similarly high proportion of changes in diagnosis occurred at Ibadan (3 of 17, or 18 percent), Cali (7 of 29, or 28 percent), and Moscow (10 of 31, or 39 percent), but not in the other centers (5 of 79, or 6 percent). Such a contrast in the diagnostic consistency over time points to the possibility that a significantly larger proportion of the non-Western patients initially identified as schizophrenic may indeed have been misclassified (i.e., the prognosis of the non-Western patients appeared to be better because a significant number of them actually suffered from affective or reactive psychosis and recovered after the index episodes). Some support for this thesis comes from the finding that acute onset was characteristic of a higher proportion of patients included in the nonindustrialized study centers.

There may be other less conspicuous and as yet unidentified disparities in the initial sampling that could have contributed to the cross-cultural outcome differences, since these are not population-based samples with local controls. Also, many previous studies have indicated that nonclinical factors such as premorbid personality characteristics, as well as premorbid social and occupational adjustment, are more powerful prognostic forces than diagnostic and symptomatic considerations (Strauss and Carpenter 1979; Bland 1982). It is unclear to what extent these factors are comparable across the IPSS study centers, and to what degree some of these differences may be responsible for the outcome differential between developing and developed centers (Edgerton 1980).

Some of these methodological issues, however, have been more adequately addressed by a more recent World Health Organization Determinants of Outcome Study (Sartorius et al. 1986). Conducted in 12 research centers in 10 countries (Aarhus, Denmark; Agra and Chandigarh, India; Cali, Colombia; Moscow, USSR; Nagasaki, Japan; Nottingham, UK; Honolulu and Rochester, USA, and Prague, Czechoslovakia) over 2 years, this
newer study used diagnostic and outcome assessment criteria comparable to those used in IPSS. Unlike the IPSS, this study attempted to identify all patients with psychotic symptoms who had made a first-in-lifetime contact with any type of "helping agency," either modern or indigenous. The results indicated that patients in different cultures meeting the ICD (World Health Organization 1978) and CATEGO (Wing et al. 1974) criteria for schizophrenia had remarkably similar symptom profiles. However, the 2-year illness course was considerably more favorable in patients in developing countries compared to patients in developed countries. Furthermore, this difference could not be fully explained by the higher frequency of acute onsets among the former. This study thus confirmed the earlier IPSS findings of better prognosis in less industrialized societies, and also clarified some of the methodological problems clouding the interpretation of the IPSS data.

Speculations on Underlying Mechanisms for Better Prognoses in Non-Western Schizophrenic Patients

In an analysis of the material reviewed in the previous two sections, it is reasonable to conclude that, although none of the studies are perfect, the more rigorous studies strongly support the hypothesis that schizophrenic patients in non-industrialized societies enjoy significantly better prognosis than do their Western counterparts. The issue is not entirely settled, however, for two reasons: (1) because acute onset psychoses predominate in the non-Western world, there is still the question of whether better outcome is due to a particular type of schizophrenia or a (nonschizophrenic) psychogenic psychosis; and (2) the most recent very long-term outcome studies in the West show a more benign outcome than has heretofore been considered usual for the core schizophrenia syndromes (Bland 1982). Nonetheless, an assertion such as this, if proved, would have a profound impact on the theories and practices in regard to the treatment and rehabilitation of schizophrenic patients throughout the world. Moreover, it has received more consistent support than almost any other finding in cross-cultural psychiatry and indeed constitutes the single most important cross-cultural finding. Possible underlying mechanisms that could be responsible for such differences must be examined. In what follows, we discuss several plausible hypotheses to explain this datum, several of which are based on recent findings, others of which are more speculative.

Social Isolation and Social Support. As would have been predicted by most psychiatric clinicians, social isolation has been identified in the IPSS and the Determinants of Outcome study (Leff et al. 1987) as one of the few strong predictors of the outcome of schizophrenic patients. Most developing societies are "sociocentric," with a primary emphasis on social relations and a range of conventions, rules, and roles that tend to sustain long-term relationships, and make isolation unusual even for the disabled. In contrast, Western societies have been labeled by anthropologists as "ego-centric." In these societies, relationships are more likely to be bilaterally defined, contractual in nature, and subject to constant reevaluation and revocation. In such settings, even those without significant disability may find themselves isolated, alienated, and alone. It is reasonable to speculate that there is a relative advantage for patients in the less fully industrialized societies in regaining adequate social support as compared to those residing in urban Western settings (see Lin and Lin [1981] for evidence from Chinese society). This, of course, would lead to better ratings of social functioning in the IPSS as well as in other similar studies. In addition, lower levels of social isolation would also facilitate patients' recovery in other aspects of their lives, and thereby result in a better overall outcome. Some indirect evidence for this comes from the Determinants of Outcome study, where many more patients lived alone in several of the industrialized society centers. Thus, it appears reasonable to hypothesize that weak or absent social supports are responsible for poor outcome.

It is thus plausible that the intense individualism characteristic of modern Western societies is, in general, not conducive to the recovery of schizophrenic conditions. Along with their heavy emphasis on independence, self-reliance, and personal freedom, individualistic value orientations also tend to foster fierce competition, frequent life changes, and alienation, and they do not usually provide the kind of structured, stable, and predictable environments that allow schizophrenic patients to recuperate at their own pace and to be reintegrated into the society.

Family Milieu. Confirming earlier clinical observations, recent research has consistently demonstrated that schizophrenic patients are particularly vulnerable to exces-
sive emotional demands and/or criticisms within the family (Brown et al. 1972). With the ascendency of the nuclear family structure over the more traditional extended kinship ties, family members forced to take care of schizophrenic patients often have to face the task alone with few familial resources to rely upon. This frequently results in unrealistic expectation and heighten ed disappointment, leading to excessive demands and criticism. Supporting such a hypothesis, El-Islam (1979) reported that in Qatar schizophrenic patients with extended families showed better outcome than those who resided in nuclear family households. A more recent study by Jenkins et al. (in press) quantitatively measured and compared the amount of “expressed emotion” (EE) in Mexican-American and Anglo-American families with schizophrenic patients, and demonstrated that Mexican-American families were significantly less likely to be classified as belonging to the high EE group. Concurrently, they demonstrated that these Mexican-American patients were much less likely to suffer from a relapse during followup as compared to their Anglo counterparts. Data from the Determinants of Outcome study (Leff et al. 1987) show (1) that EE can be reliably and validly measured in a non-Western society (India) and (2) that lower rates of EE (especially negative and critical affective responses of family members) were found in one Indian center compared with a Danish center and correlated with better outcome. EE seems to be a measure closely related to social support. Hence, family relations may not be an alternative hypothesis but a component of the previous one.

The Nature of Employment and the Sociopolitical Milieu. That “work” is an important force in facilitating the recovery of schizophrenic patients is a major thesis which is hardly disputed by any students of schizophrenia. Unfortunately, the resumption of the work role for the recovering schizophrenic patient or even the “ex-schizophrenic” patient in modern industrialized societies can be quite problematic. A substantial portion of the work force in all capitalistic societies is perennially unemployed (some social scientists as well as political activists argue that is deliberately kept so for the purpose of wage control) (Warner 1985). The process of seeking reentry into the job market for anyone in the Western societies with a substantial disruption in work record is typically frustrating and disheartening, and can be especially traumatic for recovering schizophrenic patients who, as a rule, do not take rejection well, do not tolerate high levels of ambiguity, and are further handicapped by having a history of mental illness and psychiatric hospitalizations that have a negative effect on employers. In contrast, in the traditional village or tribal settings, “jobs” are more often assigned than sought. When patients recover from their active psychotic symptoms, they are far more likely to find work waiting for them and often find it much easier, relative to patients living in urban settings, to reassume the work roles they had before the onset of their illnesses.

Further, in industrialized societies, the work environment is typically impersonal and can be intensely competitive. Thus, even when a recovering psychiatric patient finds a job, the profound sense of marginality and insecurity lingers on. Also, work relationships are more distant, less “protective,” and under more bureaucratic regimentation. Again, this is less likely to be the case for patients returning to traditional communal settings, since their work roles are more integrated with other aspects of their lives and are less likely to be taken away simply because of questions about their performance. Also, they are more likely to work with friends or relatives in a more permissive and protective setting.

In a recently published book, Warner (1985) extensively reviewed evidence suggesting that differences in the political and domestic economy may significantly affect the course of schizophrenia in different societies. These bits of evidence include: (1) increases in spending on psychiatric hospital care during economic depression; (2) lower rate of recovery from schizophrenia during the Great Depression era, (3) better outcome in female schizophrenic patients; (4) worse outcome in lower social class schizophrenic patients; and (5) better schizophrenic outcome in societies with full employment than in societies with perennial unemployment problems. Although controversial and at times an inferential leap from available data, Warner’s review raises important questions about how social, political, and economic forces influence psychiatric afflictions. This important subject deserves more careful scrutiny in the future.

Stigma, Self-Attribution, and Sick Role. Several authors (Murphy and Raman 1971; Waxler 1977, 1979; Warner 1985) have argued eloquently and have substantiated, with admittedly limited empirical data, that the stigma of mental illness is much less prominent in many of the less industrialized cul-
tutes. In traditional societies, psychiatric problems are often conveyed through physical (medical) and/or supernatural idioms of distress, patterns of help seeking, and interpretations. Patients suffering from these conditions are thus not regarded as personally responsible for their predicament. In contrast, modern psychiatric theories tend to equate mental illness with personality and psychodynamic defects that are integral parts of the patients and hence may not be easily remediable. This sets the stage for stigmatization and rejection from the outside, and self-attribution and self-blame from the inside. The expectation of others and self is more pessimistic. Waxler (1977, 1979) argues that expectations of schizophrenia in Sri Lanka are that it is like any other acute illness, and the societal reaction is in keeping with this view. In contrast, the societal expectancies of many in Western society are that insanity is a hopeless, incurable, and lifelong affliction, and the response of care givers and laity is to treat the mentally ill as lifelong deviants. In a comparison between German and American patients and providers, Townsend (1978) showed that a major difference in attitudes can be shown even in two Western societies, with German patients and psychiatrists being more pessimistic about the outcome of schizophrenia than their American counterparts. (Alternatively, Chinese society is an example of at least one non-Western society with very strong stigma attached to the mentally ill and their families.)

While the "chronic" psychiatric sick role has not been systematically investigated, there can be little doubt that the extensive bureaucratization of the modern mental health and social welfare systems, as well as the West's adversarial legal system involved in the determination of the disability of and benefits for the patients, retards giving up sick role behavior, quelling passive dependency on the disability system, and normalizing one's behavioral aberrations. This is not to say that modern psychiatric care necessarily fosters chronicity or to agree with the politically conservative in their reactionary position about welfare. Well-orchestrated mental health and social services systems are certainly essential in the care of a large number of psychiatric patients in the industrialized societies. However, the role of these institutions in exaggerating and perpetuating the sick role behavior of at least some schizophrenic patients in urban societies still awaits further clarification.

Differential Survival of Vulnerable Individuals. Recent research findings derived from several areas have converged to suggest that a high proportion of schizophrenic patients may have suffered from perinatal and/or neonatal brain damage. Although no objective data are yet available, it is plausible to speculate that in nonindustrial cultures most of these "vulnerable" individuals fail to survive into their second or third decades to experience schizophrenic breaks (Cooper and Sartorius 1977). In contrast, these "biologically disadvantaged" children in the modern urban societies would be more likely to survive into maturity. Such biological vulnerability may be associated with signs (e.g., enlarged ventricles, negative symptoms) that are associated with chronicity in schizophrenia (Andreasen et al. 1982; Pogue-Geile and Harrow 1985).

Conclusions and Future Research Directions

Despite the caveats indicated earlier in this article, the literature does provide fairly convincing evidence in support of the assertion that schizophrenic patients in developing societies often have better outcome as compared to those residing in industrialized countries. This hypothesis is further supported by as yet unpublished data from the Determinants of Outcome study (Sartorius et al. 1986) that finds outcome remains better in developing societies even when acute onset is controlled in statistical analysis. On the surface, it may appear preposterous that patients living in economically disadvantaged parts of the world and with less mental health resources should experience better outcome. Nevertheless, on closer scrutiny, one finds sociocultural forces characteristic of the technologically advanced societies that could possibly complicate or retard the recovery of schizophrenic patients. Thus, clinical observations, research findings, and theoretical considerations converge to indicate that sociocultural factors exert significant influences on the clinical course of schizophrenia. Indeed, we would argue that this finding of better outcome in less developed societies, though a very crude measure of societal difference, is arguably the single most important finding of cultural differences in cross-cultural research on mental illness. It is as important as the finding that the core schizophrenic syndrome can be diagnosed in patients from virtually every society in which researchers have looked for it.

However, much remains to be clarified for an issue with so many profound theoretical as well as
practical implications. In fact, we believe that the understanding of this finding should head the agenda of future cross-cultural research of schizophrenia. The following list of suggestions, we believe, will be particularly useful for future research efforts.

- Much more information needs to be accumulated on the clinical manifestations, longitudinal course, and prognostic indicators in non-Western countries. Compared to the more than 100 followup studies that have been conducted in Europe and North America, the followup projects focusing on cultures outside of the Western World are few and far between. These kinds of studies are needed not only for the purpose of cross-cultural comparison but, more important, because they provide the most basic material for the establishment of culturally appropriate psychiatric practices. Multicenter designs evidently are advantageous for many reasons as discussed above, but they are expensive. Thus, not many such comparisons are likely to be funded. Bilateral and trilateral comparisons and intracountry long-term outcome data based on population surveys may be more feasible. It is not the outcome data, per se, but the examination of hypotheses on sources of presumed better outcome that should distinguish this next generation of studies.

- The methodology of followup studies has gone through vast improvement in the past several decades. Instead of "reinventing the wheel," future studies conducted in developing countries should capitalize on such advances in research methodology to ensure that they will be as methodologically rigorous as studies currently being conducted in the Western countries. Uncertainty in diagnostic equivalence across cultures has been one of the most difficult issues confronting cross-cultural comparative studies. Whereas the definition and the diagnosis of schizophrenia remain problematic for the psychiatric profession, recent development of operationalized criteria for psychiatric diagnostic criteria (e.g., Feighner's criteria [Feighner et al. 1972], DSM-III [American Psychiatric Association 1980], Research Diagnostic Criteria [Spitzer et al. 1978a]) and structured interviewing instruments (e.g., Schedule for Affective Disorders and Schizophrenia [Spitzer et al. 1978b], Diagnostic Interview Schedule [Robins et al. 1981], Structured Clinical Interview for DSM-III [Spitzer et al. 1985]) have provided reliable mechanisms for ensuring that patients being studied are comparable to one another. Similar criteria and instruments should be used in future cross-cultural studies to achieve a higher level of comparability among patients belonging to divergent cultural groups.

- Future studies should go beyond simply contrasting "Western" with "non-Western" cultures, or "industrialized" with "nonindustrialized" societies, and be more specific about the sociocultural characteristics of the groups being investigated. Communities influenced by the same cultural tradition often vary greatly in their degree of urbanization and industrialization. The contrast between Taiwan and China provides an interesting example. The clinical course of Chinese schizophrenic patients in Taiwan seems to be as unfavorable as of those residing in Western countries, yet Chinese patients in mainland China tend to enjoy better outcome. Is the difference related to different levels of industrialization? Or is it determined by variations in sociopolitical structures (Livingston and Lowinger 1983)? Supporting the thesis that industrialization is the key issue, the World Health Organization data from urban and rural India showed some important differences in schizophrenic outcome. However, much more needs to be done to clarify this issue.

- It is also important to expand our knowledge of the clinical course of schizophrenia in various cultural settings. We need to know, for example, whether there are differences between Western societies, and whether these differences correlate with economic or cultural indices. Conversely, there may be societies which are less industrialized where schizophrenic patients suffer from poor outcome. If this is true, then we need to look into specific parameters beyond economic issues which determine the poor outcome in these communities. For future investigations, we suggest that attention should be focused on specific aspects of societal differences in social organizations, universe of symbolic meanings, and behavioral norms that may profoundly influence the response to the mentally ill.

- A substantial proportion of schizophrenic patients studied recently in the Western countries demonstrated soft neurological signs, enlarged cerebral ventricles, predominantly "negative" schizophrenic symptoms (withdrawal, apathy, blunted affect, and personality defects) and possibly a more chronic clinical course. It would be important to find out whether such patients are less often seen in non-Western settings, as would have been predicted by the theory linking better schizophrenic prognosis with lower perinatal survival rates.
On the other hand, the presence of concurrent tropical disease could make rates comparable or even greater in the non-Western world. We simply do not know the answer to this question.

To answer not only the question of whether there are cross-cultural differences in recovery from schizophrenia, but also why, outcome studies should be conducted simultaneously with studies investigating various specific socio-cultural hypotheses that have been modeled as underlying reasons for the cross-cultural differences. These should include detailed, quantitative, and ethnographic information about employment, job performance, work relationships, social support, alienation, family structure, family interactions (e.g., EE), stigma, and illness behavior. Operationalized definitions and clinically meaningful instruments for the measurements of some of these variables (e.g., stigma, illness behavior) may still not be available. However, recent developments in the study of EE as a measurement of the nature of family interactions and of social support provide encouraging examples for future research involving these previously poorly operationalized variables.

In conclusion, the cross-cultural data base suggests that (1) outcome seems to be better in less developed societies and (2) socio-cultural factors may be the chief (though perhaps not the only) determinants of this differential outcome. These findings are yet another example of many in the schizophrenia field (and in mental health generally) indicating that models of disorder need to be interactive or dialectical between biology and culture, that sources of differential course and disability are as important as those that are etiological, and that rehabilitation and secondary/tertiary prevention are crucial additions to the still dominant curative model. Perhaps with all the attention to what differentiates schizophrenia from other chronic disorders (e.g., heart disease, diabetes, arthritis, and chronic pain syndrome), we also need to look at those more generalizable factors that contribute to disability and retard normalization in all disorders. Finally, the findings reviewed here point to some problems in the systems of care and of societal response to patients in our own society and that of other industrialized societies which may be more important to identify and change than any specific individual treatment intervention. It will be a great mistake if future research on schizophrenic disorder does not pay at least as much attention to socio-cultural factors as it does to the biological dimensions of the condition. Cross-cultural settings would seem to provide a crucial opportunity for studying the specific effects of the social world on schizophrenia.

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Acknowledgments

The authors thank Mrs. Sharon Kajoka-Hom for her secretarial help. The authors also thank Yoko Sugihara, M.A., and Koichi Hanada, M.D., for their assistance in the review of the Japanese literature.

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