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Wolfgang G. Jilek

Emil Kraepelin and comparative sociocultural psychiatry

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Abstract Emil Kraepelin, well known as the principal designer of modern psychiatric nosology, is less well known for his pioneering work in comparative sociocultural psychiatry. This paper is trying to document Kraepelin's role as the inaugurator of systematic investigations into culture-dependent differences in psychopathology. Despite his many responsibilities as clinician, teacher, hospital administrator and scientific author, Kraepelin considered cross-cultural comparison of such importance that he spent considerable time on the preparation of then very cumbersome overseas expeditions. His first research journey in 1904 to Southeast Asia led to the programmatic formulation of comparative psychiatry as a scientific endeavour designed to contribute to the better understanding of psychopathological processes and to a comprehensive comparative ethnopsychology ("Voelkerpsychologie"). Kraepelin's main cross-cultural research project, planned to extend to seven non-European countries and to involve many foreign colleagues, was prevented by World War I and postwar complications. One year before his unexpected death, Kraepelin conducted comparative studies with American Indian, Afro-American and Latin American patients at psychiatric institutions in the United States, Mexico and Cuba in 1925. In his writings Kraepelin commented on certain differences in the incidence and presentation of psychopathological phenomena that he considered to be due to ethnic-cultural characteristics or social conditions. This paper discusses in detail Kraepelin's observations on the pathoplastic and pathogenic effects of cultural and social factors, and demonstrates the influence of his ideas on the development of modern social and transcultural psychiatry.

W. G. Jilek (✉)
Department of Psychiatry, University of British Columbia, Vancouver, B.C., Canada V6T 2A1

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Kraepelin's conception of comparative psychiatry

Ninety years ago Emil Kraepelin's article "Vergleichende Psychiatrie" was published on the front page of the famous "Centralblatt fuer Nervenheilkunde und Psychiatrie" (Kraepelin 1904a). This contribution was based on Kraepelin's concise communications at the 39th Meeting of Southwest German Neurologists and Psychiatrists in Baden-Baden, 28–29 May 1904, and at the Annual Meeting of the Association of Bavarian Psychiatrists in Ansbach, 27 May 1904, also published in the "Centralblatt" (Kraepelin 1904b). What on the first glance appears to be a matter-of-fact report of clinical findings and impressions obtained by Kraepelin during his research trip to Java is the proclamation of a new discipline of *comparative psychiatry* focussed on ethnic and sociocultural aspects of the human mind in health and disease:

"If the characteristics of a people are manifested in its religion and its customs, in its intellectual and artistic achievements, in its political acts and its historical development, then they will also find expression in the frequency and clinical formation of its mental disorders, especially those that emerge from internal conditions. Just as the knowledge of morbid psychic phenomena has opened up for us deep insights into the working of our psychic life, so we may also hope that the psychiatric characteristics of a people can further our understanding of its entire psychic character. In this sense comparative psychiatry may be destined to one day become an important auxiliary science to comparative ethnopsychology ("Voelkerpsychologie"; Kraepelin 1904a, p. 437).

In his memoirs, published 57 years after his death (Hippius et al. 1983), Kraepelin restated his view that the characteristics of a people will be expressed in the frequency and in the peculiar shaping of mental disorders. He also reaffirmed his confidence that comparative psychiatry will make it possible to gain valuable insights into

the psyche of nations and, in turn, contribute to the understanding of psychopathological processes.

Letters and notes Kraepelin left behind were recently made accessible through the research of Christoph Bendick at the Institute for the History of Medicine, Cologne University (cf. Bendick 1989). They reveal that in his later life Kraepelin became increasingly convinced of the important role played by sociocultural factors in psychopathology. He assumed that significant differences exist between populations of different ethnic backgrounds and different stages of modernisation, in terms of presentation and prevalence of mental illness, i.e. that sociocultural factors exert *pathoplastic* as well as *pathogenic* effects, as we would phrase it today. Kraepelin's impression that national-cultural characteristics are reflected in psychotic manifestations, and his assumption that therefore the psychiatric profile of a people would help us to understand its psychological make-up, shows that he was more than a biologist with little understanding of psychology, as he has sometimes been portrayed even by those, who appreciate his importance for cultural psychiatry (e.g. Lauter 1965). After all, Kraepelin had been a student of the pioneer of ethnopsychology, Wilhelm Wundt, whose studies of language, myth and religion have been published in the voluminous opus "Voelkerpsychologie" (Wundt 1900–1909).

Kraepelin's choice of the term "vergleichende Psychiatrie" may have been inspired by the subtitle "vergleichende Rassenpsychopathologie" (comparative psychopathology of races) in a report on mental disorders of the population of the Netherlands East Indies, present-day Indonesia, by Van Brero (1897a) who worked at Buitenzorg (Bogor) hospital in Java before Kraepelin's visit. Van Brero, like several other physicians in the 19th century, reported psychiatric observations made among non-European peoples. However, these previous authors did not formulate tasks and objectives of a systematic cross-national and cross-cultural comparison as Kraepelin did, nor did they undertake travels to far-off lands for the express purpose of comparative psychiatric research. Neither Van Brero nor previous authors of anecdotal reports from exotic lands can therefore be cited to dispute Kraepelin's role as inaugurator of comparative or transcultural psychiatry, as has been attempted (cf. Friessem 1980).

Despite overwhelming responsibilities for clinical work and teaching, administrative burdens and many editions of his textbook, Kraepelin considered comparative psychiatric research of such importance that he spent considerable time on the detailed preparation of then-cumbersome overseas journeys. Kraepelin's travels in the service of comparative psychiatric research have been reconstructed in detail from hitherto unpublished personal correspondence and notes by Bendick (1989). Kraepelin also used his congress and vacation trips abroad to visit mental hospitals, and whenever possible he examined and discussed patients to explore culture-dependent differences in psychopathology. Kraepelin's motivation was to find out "whether certain forms of insanity that provide the main content of our institutions, occur in like manner and frequency as among us also under entirely different conditions of living and among entirely different ethnicities ('Volksstaemme')", as he wrote in 1903 to the Bavarian Ministry of the Interior in preparation for his famous research trip to Southeast Asia (cit. Bendick 1989, p. 58).

Kraepelin's 4-month journey in 1904 took him to Java via Ceylon (Sri Lanka), southern India and Singapore. A visit to the insane asylum in Colombo, Ceylon, was disappointing for Kraepelin, because of the apparent ignorance of the physician in charge. However, Ceylon offered him an opportunity to pursue his interest in Buddhism, which he admired as a peak achievement of the human spirit (cf. Hippius et al. 1983). He went to see Buddhist temples and a sacred grove of "bodhi" trees. Kraepelin expressed his sentiments in a poem that was posthumously published in his poetic legacy (Kraepelin 1928). At a time when the "Zeitgeist" was dominated by a Eurocentric world view, Kraepelin's lines document his appreciation of non-European cultures and religions. "Buddha" (cit. Bendick 1989, p. 183, trans. Jilek):

"In high trees' solemn silence
Buddhas enigmatic image thrones, seeing into far-off worlds.
In devotion Asia's pilgrims deeply bow,
adorned with festive colours.
Their earnest rows lead to the bodhi tree
where once the Buddha
from this world removed,
listened to sacred voices
in the boughs,
enthralled in the enlightenment's bliss.
The tree is greening still,
faithfully through millenia
guarded by the master's disciples.
His work still towers high
above superstition's murky flood,
defying hostile forces.
And in the tree the voices old
they whisper as before:
Be wise and be good!"

Kraepelin, a determined fighter against alcoholism, to which he felt the Germanic nations were especially inclined, repeatedly commented on the absence of mass alcohol abuse in South Asia. He emphasized the psychohygienic advantage of cultural discouragement of alcohol consumption such as among Islamic populations. In all editions of his textbook Kraepelin suspected alcohol abuse to play a role in the aetiology of many disturbances and deficiencies of mental functioning. He also assumed that noxious effects of alcohol on the central nervous system facilitate the development of general paresis in syphilitic infections.

In Singapore Kraepelin was impressed with the mental hospital under the direction of Dr. William G. Ellis, whose psychiatric expertise he rated highly. Ellis discussed cases of "amok" with Kraepelin and introduced him to a "latha" performance by a Malayan orderly. The cases of chronic mental illness in the Singapore hospital generally resembled those in European institutions. The most important station of Kraepelin's Asian journey was the mental hospital at Buitenzorg in Java, presently the State Mental Hospital of Bogor near Jakarta, Indonesia (see a recent

description by Boroffka 1988). At this hospital Kraepelin spent 3 work-filled weeks as guest of Dr. J.H. Hofman, a Dutch psychiatrist with considerable experience in what was then the Netherlands East Indies. Kraepelin examined 225 patients with the help of a Javanese physician and a German nursing orderly. Among the Indonesian patients he examined, Kraepelin diagnosed "dementia praecox" (schizophrenia) in 67%, epilepsy in 7% and mania in 4%. There was no alcohol-associated mental disorder and no case of general paresis in the Indonesian patient population, at that time common conditions in European hospitals and also present among the European patients in Java. In the Indonesian patients Kraepelin noted differences from Europe in the presentation of affective and schizophrenic disorders, and in the outcome of dementia praecox.

By the outbreak of World War I, Kraepelin had in all details planned a 9-month expedition for comparative psychiatric research in Siberia, Japan, China, Singapore, Burma, India and Egypt with the assistance of several foreign colleagues. It was to start 1915, but was prevented by war and postwar complications. One year before his death in 1925, Kraepelin undertook a 3-months journey to the United States, Mexico and Cuba, accompanied by the neuroserologist Felix Plaut. The objectives of this venture were to conduct comparative psychiatric studies and to investigate the incidence of general paresis in American Indian and Afro-American patients as compared with Euro-Americans. An untimely death prevented Kraepelin from evaluating and publishing his North American findings, of which we have information only from his private correspondence (cf. Bendick 1989). The journey itself has been described in Plaut's report on his general paresis studies (Plaut 1926). Clinical and serological examinations were performed on 75 Afro-American patients at St. Elizabeth Hospital in Washington, D.C., and 40 American Indian patients at a federal hospital for American Indians in South Dakota (probably Yankton). Kraepelin diagnosed dementia praecox in the majority of these hospitalized Afro-Americans and American Indians. Cases of general paresis were the exception among black patients at St. Elizabeth Hospital, Washington, D.C., and at the Mazorra mental institute near Havana, Cuba, despite the then-ubiquitous occurrence of syphilitic infections. General paresis was also not verified in any of the American Indian patients in South Dakota. Kraepelin found that in American Indians, dementia praecox (schizophrenia) presented without systematized delusions, rarely with hallucinations, more often with stuporous states, violent and bizarre behaviour. Remarkably, many of the American Indian hospital patients suffered from seizure disorders. Prior to these investigations Kraepelin had visited Professor Franz Boas at Columbia University, New York, who provided him with information on American Indian cultures. This historical encounter between the founder of modern psychiatry and the founder of cultural anthropology was sought by Kraepelin and again demonstrates his awareness of the importance of cultural factors in psychopathology. Kraepelin saw the North American Indians as a once-proud race now in a deteriorated condition after having been deprived of the natural basis of their previous existence and exposed to tuberculosis, infectious diseases, syphilis and alcoholism. As a result of this the North American Indians, according to Kraepelin, "sunk into fatalistic apathy"; this anticipates the anomic depression described by Jilek (1974) in alienated American Indians suffering from cultural-identity confusion and relative deprivation.

Relevance of Kraepelin's ideas and observations to contemporary comparative sociocultural psychiatry

The 8th edition of Kraepelin's *Psychiatrie*, volume I (1909) is certainly the first major textbook of psychiatry introducing the reader to comparative data obtained in field research by its author who devotes considerable space to the discussion of the psychiatric implications of ethnic character ("Volksart") and of general living conditions ("Allgemeine Lebensverhaeltnisse"). Kraepelin conceived of comparative psychiatry as a research endeavour focussing on sociocultural factors and not on racial differences in a biological sense. This is evident from his writings, which also refer to comparisons between European peoples and notably also between Germanic tribes ("Volksstaemme"); such as differences in the ratio of manic-to-depressive phases in affective disorders, suicidal tendency (Saxons high, Bavarians low), tendency to act out violently (high in Bavarian, low in Saxon patients). The observed cultural differences in illness behaviour among Germanic peoples led Kraepelin to conclude: "It seems quite possible to me that the different nature of the Volksstaemme" will be revealed to us also in their different tendency towards distinct illness forms" (Kraepelin 1899, p. 87). In the context of his data from Java he later stated: "It will certainly be a rewarding task to systematically investigate such differences [in psychiatric symptom formation] in as many peoples as possible" (Kraepelin 1909, p. 159).

Kraepelin used the German terms "Kultur" and "Kulturentwicklung" to denote civilization and modernizing development of a society – as in Freud's use of "Kultur" for civilization in the German edition of *Civilization and its Discontents* (*Unbehagen in der Kultur*, Freud 1930). Modern German language has retained the alternative meaning of "Kultur" as civilization or level of societal development (Langenscheidt 1974, p. 964), which incidentally is the reason why "cultural psychiatry" cannot be directly translated as "Kulturpsychiatrie", which could be understood as psychiatric critique of civilized society. On the other hand, Kraepelin's usage of the German terms "Volk", "Volksstamm", "Nation" and "Race/Rasse" corresponds to the predominant meaning of these terms in 19th century German literature as denoting mainly ethnic–cultural–linguistic entities. This was recognized by those scholars who acknowledged Kraepelin as the originator of comparative cultural psychiatry and who formulated this discipline in the decades since 1950 under three headings:

(1) comparative psychiatry (Yap 1951, 1974; Lenz 1964; Petrilowitsch 1967; Murphy 1982); (2) transcultural psychiatry (Wittkower 1965 [the first to organize a transcultural psychiatry division at a university]; Pfeiffer 1971, 1994; Kiev 1972); (3) ethnopsychiatry (Ellenberger 1965, 1967).

H.B.M. Murphy (1982), in his comprehensive overview and analysis of research findings in comparative cultural psychiatry, provided us with an operational definition that adequately reflects the ultimate concern of most contemporary workers in this field, and also comes closest to Kraepelin's notion of "Vergleichende Psychiatrie": "By Comparative Psychiatry is here meant the study of the relations between mental disorder and the psychological characteristics which differentiate nations, peoples, or cultures. Its main goals are to identify, verify, and explain the links between mental disorder and these broad psychosocial characteristics, and its main tool is explicit comparison" (Murphy 1982, p. 2). Murphy further noted: "The assumption implicit in my definition of Comparative Psychiatry is that nations and cultures differ in their broad psychosocial 'climates', and the same assumption appears to have been implicit in Kraepelin's desire to compare mental disorder among the French, British, Italians, and Germans" (Murphy 1982, p. 8). Murphy's term psychosocial climate, which he conceived of as a shared mental state, is reminiscent of *Climate and Culture* by Watsuji Tetsuro (1935, English trans. 1971), an early attempt to examine the combined effects of ecological and cultural factors on the human psyche.

Pathoplastic effects of sociocultural factors

"Culture-bound" disorders

Kraepelin (1909, p. 157) recognized a "wide diversity in the distribution of mental disorders among the various peoples", but did not assume that entirely new forms could be found in other cultures. On his Asian tour he encountered the "culture-bound" syndromes "amok" "latah" (fright reaction triggered by specific startle stimuli and associated with echolalia, echopraxia, pornolalia, automatic obedience and sometimes aggressive behaviour), and "koro" (Chinese: "suk-yang", "shrinking manhood"; panic anxiety with somatic delusions of shrinking and retraction of external genitalia into the abdomen, which is believed to cause death). Kraepelin (1904a, 1909) rated none of these as separate disease entities; he assumed "amok" to belong to the epileptic disorders and "latah" to hysteria, and considered "koro" an obsessive–compulsive idea. These exotica had already been described in publications referred to by Kraepelin in his writings: Gilles de la Tourette (1884) cited reports from Malaya on "latah" (O'Brien 1883), from Maine, USA, on the "jumping Frenchmen" (Beard 1880), and from eastern Siberia on "miryachit" (Hammond 1884) to claim these reactions as variants of the famous neuropsychiatric syndrome named after Gilles de la Tourette by Charcot. An account of "latah" was then published by Ellis (1897) in Malaya, who thought it was not a psychiatric disorder but perhaps petit mal, and by Van Brero (1895) in Indonesia who labelled it "provoked imitatory impulsive myospasia", a "cerebral neurosis". Ellis (1893) classified "amok" as "masked epilepsy"; he may have influenced Kraepelin's diagnostic opinion of "amok" being an epileptic phenomenon, which also appeared histologically confirmed in one case by Professor Alzheimer (Kraepelin 1913, p. 1105). Van Brero (1897a) disputed the epileptic nature of "amok" and its uniformity as a disorder. Van Brero (1897 b) further wrote about the "strange compulsive idea" *koro*, first reported by Blonk (1895) from Celebes (Sulawesi), Indonesia. The debate about the nosological status of these three conditions was already under way at the time of Kraepelin and has intensified in recent decades, because they serve as prototypes for transcultural research and theorizing about "culture-bound reactive syndromes", a term coined by Yap (1967). The recent discussion focusses on the issues of culture specificity of behaviour vs human universality, cultural behavioural variants vs psychopathology, and on the changing character and frequency of "culture-bound" phenomena (cf. Murphy 1973; Jilek and Jilek-Aall 1985; Littlewood and Lipsedge 1985; Simons and Hughes 1985; Pfeiffer 1994).

Affective disorders

In his examinations at Buitenzorg-Bogor, Indonesia, Kraepelin (1904a, b, 1909) found that manic–depressive illness was infrequent, but not absent among hospitalized Javanese patients. Long lasting, deep depressions were missing and depressive states were rare, shallow and transient in comparison with manic attacks. Periodic states of confused maniform excitement of short duration were frequent, but their diagnostic classification remained unclear. Suicide attempts were practically unknown. Self-accusations of being a sinner were never expressed, a remarkable finding in the light of European clinical experience according to which ideas of sinfulness were prominent symptoms of endogenous depression (Kraepelin 1921). Pfeiffer's (1967) data from Indonesia revealed that depressions were not rare, but were rarely hospitalized, they were characterized by decreased vitality and functioning, not by feelings of sinfulness or worthlessness, as in tradition-directed Indonesian society a person's worth is not determined by achievement. In the same vein Murphy (1982) referred to the related traditional Malayan society as an example of a culture protecting from affective disorders, because it exerts little pressure for individual striving, but affords warm interpersonal nurturance. Comparative psychiatric studies in recent decades have shown that depressive guilt feelings characterized by ideas of sinfulness and worthlessness are not a transcultural phenomenon. Such symptoms appear to be contingent upon an internalized value system of Judaeo-Christian provenance, and especially in their extreme individualistic expression as "existential guilt" are only manifested by the inner-di-

rected Western individual. This sociocultural personality type (cf. Riesman 1961) is nowadays less frequently encountered than in Kraepelin's time when such guilt feelings were common in depressed patients of Western societies and hence considered quasi-pathognomonic, which in turn led to the assumption that depression was rare in non-Western cultures. While self-reproach with feelings of being sinful and worthless, associated with suicidal tendencies, appears to be rare in non-Western cultures, especially among depressed patients in Islamic societies (cf. Murphy et al. 1964; Sartorius et al. 1983), depressions in non-Western cultures may be accompanied by different guilt feelings according to specific sociocultural pathoplastic influences, e.g. guilt about neglected obligation towards family or ancestors and violation of group solidarity in cultures imbued with Confucian ethics; guilt about failure to keep religious observances in Islamic and Hinduist societies (cf. references in Pfeiffer 1994). In sub-Saharan Africa, accusations of witchcraft and sorcery, not guilt feelings, often accompany the vegetative symptoms of depression, but witchcraft accusations by depressed African patients may also be made against oneself (Field 1960). Feelings of reduced vitality with vegetative and somatic symptoms are in the foreground of clinical depression in most non-Western cultures, just as in mediaeval melancholia before the Protestant ethos and Cartesian mind–body dualism gained dominance over Western thinking (Murphy 1978, 1982).

Schizophrenic disorders

Kraepelin (1904a, b, 1909, 1913) stated that in Javanese patients with dementia praecox (schizophrenia) all classical clinical features were found, but with different accentuation and frequency: Initial depression was very infrequent, the psychosis started usually with confused agitation; auditory hallucinations played a minor role; delusions were not systematized, thought-influence and hypochondriac delusions were not encountered; catatonia with negativistic stupor was exceedingly rare. Kraepelin (1904a, p. 435) reported that "the most severe forms of deterioration ("Verbloedung") that fill our institutions and that also occur frequently among [hospitalized] Europeans there, were ordinarily not developed" in Indonesian schizophrenics. Half a century later Pfeiffer (1967) observed that in Indonesian schizophrenics systematized delusions of the type encountered in Europe were found only in at least partly Westernized patients; hallucinations were present but were accepted by the tradition-directed patient with equanimity and not reflected upon with delusional elaboration. Chronic residual states were well integrated in traditional society.

Discussing the relatively frequent occurrence of transient, rather than chronic, psychosis in Africans as evident 30 years ago, Jilek and Jilek-Aall (1970) speculated that modern Western society has developed responses towards psychotic reactions that favour chronicity, such as social stigmatization and expectation of remaining in the mentally ill role. Considering then-available data indicating a more favourable prognosis of schizophrenic illness in developing countries with predominantly rural nonindustrial societies, Cooper and Sartorius (1977) suggested that the social and family structures of preindustrial societies exert a benign effect on schizophrenic patients, and that these effects are lost with industrialization and rapid urbanization, so that severe chronic forms become more prominent. On a global scale, the multinational studies on schizophrenia undertaken since 1969 by the Division of Mental Health, World Health Organization, have demonstrated significantly more favourable outcome and remitting patterns among patients in developing countries than among patients in highly developed countries. Analysis of the data indicates a pathoplastic effect of sociocultural factors in determining course and outcome of schizophrenic disorders (cf. Jablensky 1987; Jablensky et al. 1992).

Pathogenic effects of sociocultural factors: modern Western civilization and mental health

Kraepelin continued the line of prominent psychiatrists of the 19th century who perceived an overall negative effect of Western civilization on mental health. Already in 1820 Georget, in a much-used medical dictionary, postulated a positive correlation between industrial development and other attributes of modern civilization, and the frequency of nervous disorders (Georget 1820). Esquirol (1830) assumed that the progress of civilization was mainly responsible for the increasing number of the mentally ill. De Boismont (1839) wrote a long article about the influence of civilization on the development of insanity; he quoted reports on the rarity of mental disorders among "primitive" people, and his statistics tried to demonstrate the more favourable mental health situation in then relatively "underdeveloped" nations such as Italy and Spain as compared with France. Morel (1859, 1860) held modern civilization responsible for the physical, mental and moral degeneration of people, especially in the industrialized centres of Western nations. Griesinger, who is known as the founder of an organically oriented psychiatry in Germany, also acknowledged that the increase in mental illness in western Europe was real and connected with the "conditions of modern society", such as the "demoralizing influence of the big cities", the "estrangement from simple customs" and the "feverish hunt for money and pleasure", social conditions that engender a "half intoxicating state of brain stimulation ("Gehirnreizung") that is far removed from natural and normal behaviour, and that must create a disposition to psychic disorder" (Griesinger 1867, pp 142–143). This notion was later elaborated in a monograph by a colleague of Kraepelin's, Buschan (1906), who tried to prove that progress in civilization increases brain volume and thereby heightens intellectual capacity, but renders the central nervous system more vulnerable to overwhelming cultural stimuli, reacting to these with mental illness. Koch (1879) concluded on the basis of census figures of western European countries that there

had been a substantial increase in mental disorders, which he linked to the impact of modern civilization, citing authorities such as Guislan, Jarvis and Tuke. The rarity of major mental disorders among "primitive" peoples was widely held notion in 19th century psychiatric thinking, explicitly stated by Tucker (1887) in his overview of insanity in many regions of the world, and in Hirsch's (1886) Handbook, which reports the occurrence of hysterical manifestations in many "primitive" societies, as in North Africa, Ethiopia and among the Hottentots, but rarely of psychotic manifestations.

In successive editions of his textbook Kraepelin (1893, 1899, 1909) emphasized the association between the rapid social changes of modern urban civilization and the steadily rising numbers of psychiatric hospital patients. While he questioned the validity of comparing low psychiatric hospitalization rates in the then predominantly rural eastern European countries with the high rates in industrialized western Europe, he felt he could trust the German statistics, due to similar practices and regulations governing mental hospital admission. These figures clearly demonstrated significant increases much beyond population growth, and a clear overrepresentation of patients from metropolitan centres that were often not the location of the hospitals. Kraepelin accepted this as undeniable evidence of a growing psychiatric morbidity in modern society. He interpreted the increase of mental disorders as a "necessary consequence of rapidly proceeding development" and saw modern big cities as "making by far the largest contribution to the rapid increase of mental illness and suicide" (Kraepelin 1893, pp 56–57). He specifically stated that "big cities not only increase the need for the institutional care of our patients, they have to be considered directly as pernicious breeding places of mental illness....[At risk are] in particular those persons, who coming from a simpler environment, are thrown into the hustle and bustle of the big city" (Kraepelin 1909, p. 167). Kraepelin cited several factors inherent in modern urban conditions that he perceived as contributing to increasing rates of mental disorder and suicide, notably modern urban life styles conducive to alcohol abuse. He mentioned commonly observed features of city life such as general restlessness and nervosity due to exciting entertainments and lack of sleep (already before horror movies on late TV shows!), but also the aggraviation of living conditions in the big cities with increasing demands of a more and more complicated and competitive existence beyond the coping limit of many people. Kraepelin accepted the basic premise of Morel's (1859) hypothesis of "dégénérescence" in assuming that "degeneration" ("Entartung") was a "perhaps not absolutely necessary yet actual concomitant phenomenon of the development of our civilization" (Kraepelin 1909, p. 203). He did not conceive of "degeneration" in a racist sense as due to racial mixture. Kraepelin (1909) considered as main civilization-bound causes of "degeneration" noxious influences on embryogeny ("Keimschaedigung") predominantly through alcohol – an anticipation of the fetal alcohol syndrome.

Mental disorders in a big city was the topic of the pioneering ecological study of schizophrenia and other psychoses conducted in Chicago, USA, in the 1930s by Faris and Dunham (1960), who concluded that conditions producing extended isolation of persons are frequent in socially disorganized communities, and that under these conditions abnormal behaviour and mentality develops – the big city as a breeding ground of psychopathology, as Kraepelin had suggested. However, the possibility of migration of mentally disturbed persons into socially disorganized urban areas was raised as an alternative explanation. Research by Hare (1956a, b) in Bristol, UK, did indeed show that this "social drift" may in part account for high rates of psychopathology in inner-city areas, but social disorganization and social isolation remain relevant as contributing factors. The Midtown Manhattan Study in the 1960s (Srole et al. 1962; Langner und Michael 1963) added further insight into stress factors causing psychosocial strain in city dwellers, of whom a very high percentage was considered in need of psychiatric assistance by the investigators. Comprehensive epidemiological research projects conducted by Leighton and coworkers first in Nova Scotia, Canada, then in Nigeria and Sweden, supported Leighton's hypothesis that communities with high indicators of sociocultural disintegration are fostering psychiatric disorder. Among the indicators of particular relevance were cultural confusion and widespread secularization, related to "anomie" in Durkheim's (1897) sense: breakdown of accepted societal norms guiding behaviour (cf. Leighton 1959; Leighton et al. 1963). Reviewing epidemiological data worldwide, Murphy (1982) saw as main psychosocial determinants of suicide risk a combination of "anomie" and egocentric individualism as well as a lack of sociocultural integration. Analyses of suicidal behaviour among North American Indian populations under rapid Westernizing culture change also showed the relevance of these factors (Jilek 1974; Hochkirchen and Jilek 1985). Situations of sociocultural change have often been implicated with causing psychopathology; this has been confirmed for tradition-directed populations rapidly undergoing transformations in the direction of modern Western society or, as Kraepelin would have termed it, modern civilization. Evaluating the data available in 1959 on the effects of rapid social change on mental health, Murphy (1961) concluded that an increase in psychopathology is clearly demonstrated in the situation of rapid Westernizing of non-Western peoples.

With regard to schizophrenic psychoses, transcultural psychiatric investigations have proved Kraepelin (1909) right in his assumption that dementia praecox is found all over the world, and have disproved those who claimed the absence of schizophrenia among "primitive" peoples and who defined it as the "ethnic psychosis of Occidental society" (Devereux 1980, p. 235). However, statements that the frequency of schizophrenic disorders is nearly the same everywhere have also been proven wrong. Such a statement was never made by Kraepelin, who in the 8th edition of his textbook wrote, "We know nothing about the relative frequency of dementia praecox among the

various peoples and under different living conditions" (Kraepelin 1913, p. 918). By that time he no longer thought of the development of schizophrenia exclusively in terms of an endogenous cerebro-organic pathogenesis; he then assumed schizophrenia to represent a common human reaction to a variety of noxious events (Kraepelin 1920). In an editorial overview on "Culture and Schizophrenia", Jablensky and Sartorius (1975) remarked that differences in the occurrence of this disorder have led to a revival of interest in the old question about "diseases of civilisation". Murphy (1982) documented differences in prevalence rates for schizophrenia which, between the highest and the lowest, vary at the ratio of 4:1. People with low schizophrenia rates have in common that they live in societies the dominant ethos of which is communalistic and tradition-directed, rather than individualistic and competitive (Max Weber's "Gemeinschaft" vs "Gesellschaft"). In a letter to this author, Murphy (personal communication, 1980) wrote "Schizophrenia in the most correct sense of the term involves a neurological impairment in the ability to handle complex data... in all but the most severe degrees it will not result in any manifest pathology as long as the handling of complex information and decisions is avoided". From the comparative research data at hand, Murphy (1982) tried to define, on the one hand, schizophrenia-precipitating and aggravating societal factors such as strict and contradictory social expectations, absence or complexity of guidelines; and on the other hand, schizophrenia-protecting and relieving societal factors such as modest social expectations, simplicity and completeness of rules for action. Jablensky (1987, p. 167), in a paper read to the Royal Society of Medicine, suggested that the multicultural studies conducted by WHO "have only pointed to a possibility that in technologically less complex cultures the chronic deteriorating forms of schizophrenia may be less frequent than in societies imposing upon their members complex, conflicting and potentially disorienting cognitive requirements". Reviewing the pertinent findings from cross-cultural comparison studies up to date, Pfeiffer (1994) also concludes that sociocultural factors are indeed involved in the manifestation and in the chronification of schizophrenia; stabilization and integration of schizophrenic patients is promoted by a society with easily comprehensible structure, clear but moderate social expectations and unambiguous behavioural rules.

From what has been presented in this section it appears evident that Kraepelin's assumptions about the negative effects of modern civilization and its concomitants have largely been confirmed by the comparative psychiatric research he first inaugurated: Conditions are more favourable to mental health in tradition-directed preindustrial societies than under the rapid sociocultural transformation induced by modern Western civilization.

In conclusion; We have seen that towards the end of his career Emil Kraepelin, whose writings shaped generation of psychiatrists, was well on the way to reformulate psychiatric theory by fully taking into account the role of sociocultural factors both in the presentation and in the development of mental illness. It is not presumptuous to say that his sudden death in 1926 delayed for 30 years the flourishing of comparative cultural psychiatry from the seeds he planted in 1904.

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