

## EDITORIAL

### Diseases of civilization?<sup>1</sup>

Almost as long as civilization has been recognized in the English language, there have been voiced suspicions that diseases could be caused as well as cured by it. Benjamin Rush (1794) hinted at this, and Esquirol (1830) was so convinced of it by data from Norway and Spain that he argued that those who benefited from civilization should pay recompense to those who were made mad by it. In the later nineteenth century people like Jarvis, Tuke and Krafft-Ebing echoed that concern, with Freud joining them from his own special viewpoint in the 1920s, and today the same concern persists. Torrey's *Schizophrenia and Civilization* claims that there is 'a close correlation between (schizophrenia's) prevalence and degree of civilization' (Torrey, 1980, p. 75), while in their *Western Diseases, Their Emergence and Prevention* Trowell & Burkitt (1981) make a similar claim respecting a wide range of endogenous somatic diseases, from hypertension to appendicitis, even though they quarrel with the 'civilization' label for historical reasons. While both these books conclude that it is an incidental rather than an essential aspect of our civilization that is to blame – Torrey favours a viral infection theory of schizophrenia, and the other authors blame diet – their conclusions leave room for doubt and the question remains whether there is anything essential about our civilization, or about civilizations in general, which is pathogenic.

#### CHARACTERISTICS OF CIVILIZATION

In considering what are essential as opposed to incidental features of civilization, it is Freud who may come first to mind for many readers here. His answer is a very personal one, philosophical rather than observational, but not irrelevant. Conceiving civilization (*Kultur*) as a process rather than a state, he declares its most essential quality or purpose is 'to combine single human individuals...into one great unity, the unity of mankind' (Freud, 1961, p. 122). Historians and anthropologists rarely mention anything similar as a distinguishing feature, but if we take it as meaning that civilizations promote identification with large numbers of mankind in contrast to a folk society's promotion of identification through a differentiation from the rest of mankind, we have a thought which is both central and psychological.

Turning to more conventional criteria, one finds the historians tending to stress the possession of writing, cities, occupational specialization and a broad political structure as characteristics of civilizations, while anthropologists tend to focus rather on the possession of complex social structures and a wide variety of cultural content. Of these features it was the social complexity which Esquirol had most in mind, while medical historians have tended to focus on city life. Some of the features which the latter attributed to the city – slums, dark factories, faulty sanitation, air pollution – can be recognized as not at all essential to a civilization and as being overcome in our best cities today. High population density, on the other hand, could be a fairly essential urban characteristic of civilizations even though futurologists tell us that it may not be, and might contribute to pathology, both through the transmission of infections and through psychological pressures. However, there is less infectious disease in a civilized city (although not in Third World 'bidonvilles') than in primitive villages, and the evidence for psychopathology being linked to population density is weak. High density can certainly be pathogenic for laboratory rats and prison inmates deprived of all control over their environments, but the same is not true when high-density living is freely chosen and controllable. Hence civilization's possession of cities does not seem essentially pathogenic.

<sup>1</sup> Address for correspondence: Professor H. B. M. Murphy, 64 York Avenue, Westmount, P.Q., Canada H3Z 1N9.

The social complexity of civilization is less easy to exonerate. The nineteenth-century psychiatrists saw this as imposing more demands on men's minds, and felt that increasing numbers of minds were breaking down under the extra demands. The logic underlying their conclusions was faulty, since they tended to assume that the frequency with which cases became known to the authorities reflected the frequency of insanity in the population. However, the theory remains plausible and hence the two main types of evidence they were relying on – change over time, and cross-cultural comparisons – invite re-examination in the light of more recent knowledge.

## HISTORICAL EVIDENCE

The syndromes which earlier scholars saw as becoming increasingly common with the development of Western civilization were general paresis, peptic ulcer and schizophrenia, while contemporary medical historians are inclined to add coronary infarction. Krafft-Ebing (1894) marshalled considerable evidence indicating not only that general paresis (GPI) had been increasing during the nineteenth century, but that its increase was much greater in the more educated, i.e. 'civilized', strata of Western society than in the less educated, despite the fact that syphilis was commoner in the latter. Lacking reliable indicators for both GPI and latent syphilis, he recognized that some of his higher-class dements might have been misdiagnosed while some of their lower-class equivalents might never have reached diagnosis at all; but he still held that GPI was a product of 'civilization and syphilization' rather than the latter alone. Today it is certainly not possible to say that GPI is being produced by our civilization, but an examination of the spread of that condition in Asia suggests that it might formerly have been so. Not only did the earliest Asian cases tend to occur in Westernized individuals, but the ratio of GPI to *tabes dorsalis* in different population samples seems to have varied in association with the contact which they had with Western society. An association with a particular stage in the process of modern civilization remains possible, therefore, even if aborted by penicillin.

A similar relationship to a particular stage in the process has been claimed (Susser & Stein, 1962) for peptic ulcer, a stage they call 'early urbanization'; and some medical historians are asking whether the same could be true of coronary infarction. Peptic ulcer exhibited a sudden rise in Western females in the nineteenth century and in Western males during the early twentieth century, but has been declining in frequency for the past 30 years or so. The term 'early urbanization' is not appropriate, evoking ancient Mesopotamia or the Indus valley, and the timing of the female and male waves has received an alternative explanation (Murphy, 1978*a*). However, the rise of coronary infarction as ulcer was declining leads one to ask whether these could constitute different psychosomatic expressions of a more general, underlying stress disorder which modern civilization is generating, one which will assume yet another form when coronary infarction declines, as it seems now to be doing.

Schizophrenia is not showing signs of declining, if one allows for diagnostic fashion, and the evidence linking it to modern civilization thus needs closer scrutiny. Torrey (1980) has argued that this disease was not clearly described earlier than the nineteenth century, must therefore have been rare or absent before then, and vastly expanded in prevalence during that century. Altschule (1975) interprets the same evidence as indicating not the appearance of a new disease but the slow development of a new concept in physicians' minds. Neither author gives much consideration to the possibility that the symptomatology changed around 1800, although such a change appears to have occurred in the seventeenth century for depression (Murphy, 1978*b*), or to the fact that prior to 1800 chronic insanity was the concern of families, religious shelters and poor-law administrators rather than physicians. Whether the increase in *reported* insanity throughout the Western world during the nineteenth century represented an increase in true incidence, therefore, remains in doubt, and the same applies to how much of it was schizophrenic. Unlike GPI and peptic ulcer, the disease's reported increase was much greater in the lower than in the higher classes, but that does not unquestionably argue against the 'civilizational' hypothesis. Favouring that hypothesis is the fact

that there has been no decline in reported incidence in the West (allowing for shifts in diagnostic fashion and for out-patient treatment) despite what were expected to be substantial improvements in preventive and curative mental health care.

## CONTEMPORARY EVIDENCE

The firmest contemporary evidence for an association between modern Western civilization and disease relates to easily measurable somatic disorders. However, the favoured explanations for these associations relate to incidental rather than essential features of our society, and it is mental disorder (including alcoholism) that is more frequently alleged to be linked to these features. In some instances the accusation seems easily refutable. Psychological alcoholism was almost certainly less in twentieth-century Britain than in the early eighteenth and mid-nineteenth centuries (Glatt, 1977). Freud's (1961) belief that sexual restrictions would be weaker and neuroses fewer in primitive than in civilized societies has been frequently found untrue on both counts. A modern city imposes fewer restrictions than most non-literate tribes, and neuroses can be rife in some of the latter even though they may have a more somatic or religious character than we are used to. A more plausible case can be made regarding GPI, since it can be virtually absent in some peoples with quite high levels of syphilis; but here also the matter remains doubtful since these peoples could have experienced fevers high enough to kill spirochaetes (Jacobowsky, 1965), or a partial immunity transferred from other spirochaetal diseases. Also, data are few.

For schizophrenia the data are more abundant but also more ambiguous. With some notable exceptions, such as the rural Irish, it seems true that its prevalence is higher in more civilized societies than in more primitive ones, but chronicity is also greater in the former than in the latter (WHO, 1979; Murphy & Raman 1971), and whether the incidence should be taken as higher or not thus depends considerably on whether duration of illness is made one of the diagnostic criteria. In some peoples, notably in the Tallensi (Fortes & Mayer, 1966), brief contact with Western civilization is what appears to have been pathogenic, rather than the participation in it, and Torrey has claimed that the Papua New Guinea tribes most recently brought into contact with the outside world have much lower rates than those longer in contact, making a viral infection theory plausible. However, whereas he found 'over a 20-fold difference in schizophrenia prevalence among districts' (Torrey, 1980, p. 76) using official sources of information, I myself could find only a two to three-fold difference when I conducted a key-informant village survey in various highland and coastal districts. Comparing peoples of shared genetic origin but different rates of reported schizophrenia, what appears to explain the latter variance best is not the duration of contact with Western civilization but the attitudes towards what the civilization offers, the lower rates occurring in the groups that are least tempted by the offer, or least driven by circumstances to come to terms with it. Thus, the Palauans of Micronesia have much higher schizophrenia rates than their Ponapean neighbours, despite similar genetic origins and histories of Western contact (Dale, 1981); and anthropologists tell us that they are much more ambitious, complex and distrustful than the latter.

Regarding endogenous somatic diseases, there is general agreement among research workers that, although rates increase among pre-literate peoples as they become involved with Western civilization, it is not the degree of contact in itself which is the key, but related factors such as a change in diet. Some research workers (Trowell & Burkitt, 1981; Page, 1980) attribute almost the whole variance to diet – consumption of salt, sugar, fat, fibre and total calories – but a closer examination shows that this is only part of the story. The Palauans have a much higher rate of hypertension than the Ponapeans (Murphy, 1982) as well as a higher rate of schizophrenia, despite a similar diet. Fat consumption and cholesterol levels do not account for Japanese-Americans experiencing a lower rate of coronary disease when they retain a Japanese cultural orientation than when they adopt an American orientation (Marmot & Syme, 1979); but neither does civilization account for it, since we cannot say that the former are less civilized than the latter.

## CONCLUSIONS

Most of the so-called 'diseases of civilization' prove either to have no consistent relation to civilization as such, or to relate only to inessential elements such as diet and defective sanitation. Of those which remain in doubt, such as chronic schizophrenia, the feature of civilization most likely to be harmful could be its complexity. Esquirol's idea of vulnerable minds being overwhelmed by the extra work needed to handle that complexity remains unrefuted, although also unproven, and Lipowski (1974) even extends that idea to cover the stress disorders such as hypertension. However, whether an individual feels obliged to handle that complexity may depend less on what were earlier listed as the essential features of civilizations than on how he has been taught to perceive his relationship to society. Civilization probably cannot be maintained unless men strive, but there are different types of striving, some quite individualist and competitive, others non-competitive and cooperative. Both with schizophrenia and with the stress disorders, the data suggest that when striving is competitive and at longer term, so that failure to succeed produces continuing distress, the risk of morbidity increases. The question is whether such a state of affairs should be considered an essential feature of civilization or one which we can help the more vulnerable members of society to avoid.

H. B. M. MURPHY

## REFERENCES

- Altschule, M. D. (1975). Historical perspective – evolution of the concept of schizophrenia. In *The Biology of the Schizophrenic Process* (ed. S. Wolf and B. B. Berle), pp. 5–21. Plenum Press: New York.
- Dale, P. W. (1981). Prevalence of schizophrenia in the Pacific island populations of Micronesia. *Journal of Psychiatric Research* **16**, 103–112.
- Esquirol, J. E. D. (1830). *Annales d'Hygiène* (first series) **4**, 348. Quoted by Jarvis, E. (1851). On the supposed increase of insanity. *Journal of Insanity* **8**, 333–364.
- Fortes, M. & Mayer, D. (1966). Psychoses and social change among the Tallensi of Northern Ghana. *Cahiers d'Études Africaines* **6**, 5–40.
- Freud, S. (1961). Civilisation and its discontents. In *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, Vol. 21 (ed. J. Strachey), pp. 59–145. Hogarth: London.
- Glatt, M. M. (1977). The English drink problem through the ages. *Proceedings of the Royal Society of Medicine* **70**, 202–206.
- Jacobowsky, B. (1965). General paresis and civilisation. *Acta Psychiatrica Scandinavica* **41**, 267–273.
- Krafft-Ebing, R. (1894). *Die progressive allgemeine Paralyse*. Vienna.
- Lipowski, Z. J. (1974). Sensory overloads, information overloads, and health. *Psychotherapeutics and Psychosomatics* **23**, 264–271.
- Marmot, M. G. & Syme, S. L. (1979). Acculturation and coronary heart disease in Japanese-Americans. *American Journal of Epidemiology* **104**, 225–247.
- Murphy, H. B. M. (1978a). Historical changes in the sex ratios for different disorders. *Social Science and Medicine* **12B**, 143–149.
- Murphy, H. B. M. (1978b). The advent of guilt feelings as a common depressive symptom; a historical comparison on two continents. *Psychiatry* **41**, 229–242.
- Murphy, H. B. M. (1982). Blood pressure and culture; the contribution of cross-cultural comparisons to psychosomatics. *Psychotherapy and Psychosomatics* **38**, 244–255.
- Murphy, H. B. M. & Raman, A. C. (1971). The chronicity of schizophrenia in indigenous tropical peoples. *British Journal of Psychiatry* **118**, 489–495.
- Page, L. B. (1980). Hypertension and atherosclerosis in primitive and acculturating societies. In *Hypertension Update* (ed. E. Hunt), pp. 1–12. Health Learning: Bloomfield, N.J.
- Rush, B. (1794). *Medical Enquiries and Observations*. Dobson: Philadelphia.
- Susser, M. & Stein, Z. (1962). Civilisation and peptic ulcer. *Lancet* **i**, 115–119.
- Torrey, E. F. (1980). *Schizophrenia and Civilisation*. Aronson: New York.
- Trowell, H. G. & Burkitt, D. P. (eds.) (1981). *Western Diseases: Their Emergence and Prevention*. Harvard University Press: Cambridge, Mass.
- World Health Organization (1979). *Schizophrenia; an International Follow-up Study*. John Wiley & Sons: New York.