Mental Illness, Biology, Culture and Altered States of Consciousness:

An interdisciplinary field of research.

Erika Bourguignon

The papers in this section present several stages in the thinking of anthropologists about the relationship between behavior and biology.

The anthropological study of mental illness and of altered states of consciousness involves both biology and culture and their linkage. Indeed, reading these papers it is quite clear that the old dichotomy between body (biology) and mind (culture, behavior) is quite obsolete. Unfortunately, we have not developed a language to think and talk about the interconnected whole, the psychobiological system that is situated in a cultural environment. Although they recognize cultural diversity, all of the authors represented in this section also accept the existence of a common human nature. Edgerton stresses questions concerning deviancy and conformity. He argues that deviancy is part of human nature, and that it, like conformity, is grounded in human biology.

In formulating his hypothesis that so-called “arctic hysteria” may involve calcium deficiency, A.F.C. Wallace was one of the first to draw our attention to the interaction between biology and bizarre behavior in a cultural context. Since we must look to the sources of calcium deficiency, this involves the study of the ecological as well as the socio-cultural environment. Research to test this hypothesis has, however, turned out to be very difficult. So far, a clear and definitive answer to this question has not been found.

Another biological perspective is suggested by Raymond Prince, who explores the hypothesis that changes in levels of endorphins are related to “shamanistic” behavior.
Bourguignon, on the basis of a statistical analysis of data drawn from a large sample of societies, distinguishes between several forms of altered states (or trance) according to their cultural explanations and is able to show correlations between them and various features of society. These states, which are found in ritual contexts, may have various biological or psychological characteristics. Some are caused by the ingestion of psychotropic substances. Most involve dissociation, a psychological mechanism in which particular behaviors and experiences are split off from ordinary consciousness. Sometimes this occurs together with a mental illness, but it is not in itself pathological.

Most altered states used in a ritual context involve learning of some kind. Bourguignon confirms an observation which has been made frequently in ethnographic reports, namely that where trance involves a belief in possession and the acting out of the identities of possessing spirits, the trancers are more likely to be women. Where visions and spirit journeys are concerned, the trancers are more likely to be men. Also, in the latter case, trance is more likely to be induced by the use of hallucinogenic drugs.

Winkelman has taken this research a step further, differentiating among types of healers. On the basis of ethnographic descriptions of their trance behavior, he argues that, in the case of possession trance, abnormal processes in the temporal lobe region of the brain (epileptoid phenomena) are involved. This is in contrast to the notion in the older literature, discussed by Wallace, that attributed trance behavior to the disease category of hysteria. The differential diagnosis between hysteria and epilepsy has been facilitated by modern technological means, but these have not been available to ethnographic researchers. Winkelman uses only ethnographic descriptions, that is, behavioral criteria. In this study he has no diagnostic tests available to him.
Freska and Kulcsar build on the work of Prince, and the importance of endorphins (endogenous opioids) in the healing process. They consider forms of trance that occur in a social context, and suggest that opioid production, which enhances healing, is facilitated in a communal context. This is a fruitful area for empirical research, which is however complicated by the fact that the necessary testing (e.g., taking blood specimens) may be tabooed in a ritual context and may interfere with the altered states. Research in the growing interdisciplinary field of psychoneuroimmunology seems to have great promise in this connection.

Jilek distinguishes between true mental illness (such as epilepsy or hysteria) and ritual behavior that seems to imitate these states and which he refers to as “psychomimetic.” The interesting question of why ritual behavior so often appears to imitate psychopathology, however, remains to be addressed more fully. These states, which Jilek observed in the rituals of the Salish Indians, are intentionally induced and serve therapeutic ends.

We see in these papers the evolution of a perspective on both mental illness and ritual states of altered consciousness: from “hysteria” to calcium deficiency, and from mental illness to behavior that is stylized, learned and intentionally induced (“pathomorphic”). There is also a sequence from considering altered states as pathological to seeing them as ritual performances which may be therapeutic or even prophylactic.

Ritual is then seen as utilizing pathomorphic behavior for social ends, as well as attending to the needs of the individual. Moreover, these rituals reflect the stresses in the society, which differ for men and for women.