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Disease Etiologies
in Non-Western Medical Systems

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This paper argues that disease etiology is the key to cross-cultural comparison of non-Western medical systems. Two principal etiologies are identified: personalistic and naturalistic. Correlated with personalistic etiologies are the belief that all misfortune, disease included, is explained in the same way; illness, religion, and magic are inseparable; the most powerful curers have supernatural and magical powers, and their primary role is diagnostic. Correlated with naturalistic etiologies are the belief that disease causality has nothing to do with other misfortunes; religion and magic are largely unrelated to illness; the principal curers lack supernatural or magical powers, and their primary role is therapeutic. [disease, religion, and magic; ethnomedicine, medical anthropology, non-Western medical systems, shamans]

IMPRESSIVE in ethnographic accounts of non-Western medicine is the tendency of authors to generalize from the particulars of the system(s) within which they have worked. Subconsciously, at least, anthropologists filter the data of all exotic systems through the lens of belief and practice of the people they know best. Whether it be causality, diagnosis, the nature and role of the curer, or the perception of illness within the wider supernatural and social universe, general statements seem strongly influenced by the writers' personal experiences. Glick, for example, in one of the most interesting of recent general essays, notes that in many cultures religion and medical practices are almost inseparable, and he adds that "We must think about how and where 'medicine' fits into 'religion'. . . . In an ethnography of a religious system, where does the description of the medical system belong; and how does it relate to the remainder?" (Glick 1967:33).

Yet in many medical systems, as, for example, those characterizing mestizo villagers and urbanites in Latin America, medicine would have the most minimal role in an ethnography of religious beliefs and practices. Illness and curing are dealt with largely in nonreligious terms. In Tzintzuntzan, for example, in many hours of recording ideas about origins and cures of illness, not once has religion been mentioned—even though most villagers, if asked, would certainly agree that illness ultimately comes from God.

The ethnologist analyzing medical beliefs and practices in an African community can scarcely avoid dealing with witchcraft, oracles, magic, divining, and propitiation, all of which are categories of only modest concern to the student of Indian Ayurvedic medicine. In short, there has been all too little dialogue between anthropologists who have studied dramatically different non-Western medical systems. So striking is the parochialism at times that one is tempted to agree with the medical sociologist Freidson who notes the existence of a "very large body of sociological and anthropological information" about popular knowledge of and attitudes toward health and disease, but finds most of it to be "grossly descriptive." "Aside from cultural designations like Mexican, Subanun, and Mashona," he writes, "there is no method by which the material is ordered save for focusing on knowledge about *particular* illnesses. Such studies are essentially catalogues, often without a classified index" (Freidson 1970:10).

Yet if we can successfully classify kinship, political and economic systems, and witchcraft and sorcery beliefs, and find the significant behavioral correlates associated with each, then certainly we can do the same with medical systems. We are, after all, dealing with limited possibilities in each of these cases. In this paper I am concerned with the cross-cultural patterning that underlies non-Western medical systems, and with identifying and explicating the primary independent variable—disease etiology—around which orbit such dependent variables as types of curers, the nature of diagnosis, the roles of religion and magic, and the like. This is, then, an essay on comparative ethnomedicine, a term Hughes aptly defines as "those beliefs and practices relating to disease which are the products of indigenous cultural development and are not explicitly derived from the conceptual framework of modern medicine" (Hughes 1968:99).

THE PROBLEMS OF TERMINOLOGY

Throughout most of anthropology's brief history ethnologists have labeled the institutions of the peoples they have studied as "primitive," "peasant," or "folk," depending on the basic societal type concerned. Until relatively recently we investigated primitive religion, primitive economics, primitive art—and, of course, primitive medicine. The seminal writings of the ethnologist-physician Ackerknecht during the 1940s display no uncertainty as to what interested him: it was "primitive medicine," a pair of words that appeared in the title of nearly every article he published (Ackerknecht 1971). Caudill, too, in the first survey of the new field of medical anthropology spoke unashamedly of "primitive medicine" (Caudill 1953).

When, following World War II, studies of peasant communities became fashionable, these peoples were described as possessing a "folk culture." Not surprisingly their medical beliefs and practices were labeled "folk medicine," a frequent source of confusion since the popular medicine of technologically complex societies also often was, and is, so described.

In recent years, however, this traditional terminology has come to embarrass us. In a rapidly changing world, where yesterday's nonliterate villagers may be today's cabinet ministers in newly independent countries, the word "primitive"—initially a polite euphemism for "savage"—is increasingly outmoded. Ackerknecht himself recognizes this change, for in the 1971 collection of his classic essays most titles have been edited to eliminate the word "primitive." "Peasant" and "folk" are less sensitive words, but they too are being replaced by "rural," "agrarian," or something of the kind. The extent to which we have been troubled by terminology is illustrated by the circumlocutions and quotation marks found in the major review articles of recent years: "popular health culture," "indigenous or folk medical roles," "nonscientific health practices," "native conceptual traditions about illness," "culture specific illness," "the vocabulary of Western scientific medicine," "indigenous medical systems," and the like (e.g., Polgar 1962; Scotch 1963; Fabrega 1972; Lieban 1973).

ETIOLOGY: THE INDEPENDENT VARIABLE

Yet the greatest shortcoming of our traditional medical terminology—at least within the profession itself—is not that it may denigrate non-Western people, but rather that, by focusing on societal types it has blinded us to the basic characteristics of the medical systems themselves. There is more than a grain of truth in Freidson's comments, for many accounts *are* "grossly descriptive," with lists of illnesses and treatments taking precedence over interpretation and synthesis. So where do we start to rectify the situation? Glick (1967:36), I believe, gives us the critical lead when he writes that "the most important fact about an illness in most medical systems is not the underlying pathological process but *the underlying cause*. This is such a central consideration that most diagnoses prove to be statements about

causation, and most treatments, responses directed against particular causal agents" (emphasis added).

A casual survey of the ethnomedical literature tends to confirm Glick's statement. In account after account we find that the kinds of curers, the mode of diagnosis, curing techniques, preventive acts, and the relationship of all these variables to the wider society of which they are a part, derive from beliefs about illness causality. It is not going too far to say that, if we are given a clear description of what a people believe to be the causes of illness, we can in broad outline fill in the other elements in that medical system. It therefore logically follows that the first task of the anthropologist concerned with medical systems is to find the simplest taxonomy for causality beliefs. Two basic principles, which I call *personalistic* and *naturalistic*, seem to me to account for most (but not all) of the etiologies that characterize non-Western medical systems. While the terms refer specifically to causality concepts, I believe they can conveniently be used to speak of entire systems, i.e., not only causes, but all of the associated behavior that follows from these views.

A personalistic medical system is one in which disease is explained as due to the *active, purposeful intervention* of an *agent*, who may be human (a witch or sorcerer), nonhuman (a ghost, an ancestor, an evil spirit), or supernatural (a deity or other very powerful being). The sick person literally is a victim, the object of aggression or punishment directed specifically against him, for reasons that concern him alone. Personalistic causality allows little room for accident or chance; in fact, for some peoples the statement is made by anthropologists who have studied them that *all* illness and death are believed to stem from the acts of the agent.

Personalistic etiologies are illustrated by beliefs found among the Mano of Liberia, recorded by the physician Harley, who practiced medicine among them for 15 years. "Death is unnatural," he writes, "resulting from the intrusion of an outside force," usually directed by some magical means (Harley 1941:7). Similarly, among the Abron of the Ivory Coast, "People sicken and die because some power, good or evil, has acted against them. . . . Abron disease theory contains a host of agents which may be responsible for a specific condition. . . . These agents cut across the natural and supernatural world. Ordinary people, equipped with the proper technical skills, sorcerers, various supernatural entities, such as ghosts, bush devils, and witches, or the supreme god *Nyame*, acting alone or through lesser gods, all cause disease" (Alland 1964:714-715).

In contrast to personalistic systems, naturalistic systems explain illness in impersonal, systemic terms. Disease is thought to stem, not from the machinations of an angry being, but rather from such *natural forces or conditions* as cold, heat, winds, dampness, and, above all, by an upset in the balance of the basic body elements. In naturalistic systems, health conforms to an *equilibrium* model: when the humors, the yin and yang, or the Ayurvedic *dosha* are in the balance appropriate to the age and condition of the individual, in his natural and social environment, health results. Causality concepts explain or account for the upsets in this balance that trigger illness.

Contemporary naturalistic systems resemble each other in an important historical sense: the bulk of their explanations and practices represent simplified and popularized legacies from the "great tradition" medicine of ancient classical civilizations, particularly those of Greece and Rome, India, and China. Although equilibrium is expressed in many ways in classical accounts, contemporary descriptions most frequently deal with the "hot-cold dichotomy" which explains illness as due to excessive heat or cold entering the body. Treatment, logically, attempts to restore the proper balance through "hot" and "cold" foods and herbs, and other treatments such as poultices that are thought to withdraw excess heat or cold from the body.

In suggesting that most non-Western etiologies can be described as personalistic or naturalistic I am, of course, painting with a broad brush. Every anthropologist will immediately think of examples from his research that appear not to conform to this classification. Most troublesome, at least at first glance, are those illnesses believed caused by

emotional disturbances such as fright, jealousy, envy, shame, anger, or grief. Fright, or *susto*, widespread in Latin America, can be caused by a ghost, a spirit, or an encounter with the devil; if the agent *intended* harm to the victim, the etiology is certainly personalistic. But often accounts of such encounters suggest chance or accident rather than purposive action. And, when an individual slips beside a stream, and fears he is about to fall into the water and drown, the etiology is certainly naturalistic.

The Latin American *muina*, an indisposition resulting from anger, may reflect a disagreeable interpersonal episode, but it is unlikely that the event was staged by an evil doer to bring illness to a victim. In Mexico and Central America the knee child's envy and resentment of its new sibling-to-be, still in the mother's womb, gives rise to *chipil*, the symptoms of which are apathy, whining, and a desire to cling to the mother's skirt. The foetus can be said, in a narrow sense, to be the cause of the illness, but it is certainly not an active agent, nor is it blamed for the result. Since in a majority of emotionally explained illnesses it is hard to identify purposive action on the part of an agent intent upon causing sickness, I am inclined to view emotional etiologies as more nearly conforming to the naturalistic than to the personalistic principle. Obviously, a dual taxonomy for phenomena as complex as worldwide beliefs about causes of illness leaves many loose ends. But it must be remembered that a taxonomy is not an end in itself, something to be polished and admired; its value lies rather in the understanding of relationships between apparently diverse phenomena that it makes possible. I hope that the following pages will illustrate how the personalistic-naturalistic classification, for all its loose ends, throws into sharp perspective correlations in health institutions and health behavior that tend to be overlooked in descriptive accounts.

Before proceeding, a word of caution is necessary: *the two etiologies are rarely if ever mutually exclusive* as far as their presence or absence in a particular society is concerned. Peoples who invoke personalistic causes to explain most illness usually recognize some natural, or chance, causes. And peoples for whom naturalistic causes predominate almost invariably explain some illness as due to witchcraft or the evil eye. But in spite of obvious overlapping, the literature suggests that many, if not most, peoples are committed to one or the other of these explanatory principles to account for a majority of illness. When, for example, we read that in the Venezuelan peasant village of El Morro 89% of a sample of reported illnesses are "natural" in origin, whereas only 11% are attributed to magical or supernatural causes (Suárez 1974), it seems reasonable to say that the indigenous causation system of this group is naturalistic and not personalistic. And, in contrast, when we read of the Melanesian Dobuans that all illness and disease are attributed to envy, and that "Death is caused by witchcraft, sorcery, poisoning, suicide, or actual assault" (Fortune 1932:135, 150), it is clear that personalistic causality predominates.

Although in the present context I am not concerned with problems of evolution, I believe the personalistic etiology is the more ancient of the two. At the dawn of human history it seems highly likely that *all* illness, as well as other forms of misfortune, was explained in personalistic terms. I see man's ability to depersonalize causality, in all spheres of thought, including illness, as a major step forward in the evolution of culture.

ETIOLOGIES: COMPREHENSIVE AND RESTRICTED

We now turn to the principal dependent variables in medical institutions and health behavior that correlate with personalistic and naturalistic etiologies. The first thing we note is that personalistic medical etiologies are parts of more comprehensive, or general, explanatory systems, while naturalistic etiologies are largely restricted to illness. In other words, in personalistic systems *illness is but a special case in the explanation of all misfortune*. Some societies, to quote Horton (1967) have adopted a "personal idiom" as the basis of their attempt to understand the world, to account for almost everything that

happens in the world, only incidentally including illness. In such societies the same deities, ghosts, witches, and sorcerers that send illness may blight crops, cause financial reverses, sour husband-wife relationships, and produce all manner of other misfortune. To illustrate, Price-Williams states "The general feature of illness among the Tiv is that it is interpreted in a framework of witchcraft and malevolent forces" (1962:123). "In common with a great many other people, Tiv do not regard 'illness' or 'disease' as a completely separate category distinct from misfortunes to compound and farm, from relationships between kin, and from complicated matters relating to the control of land" (1962:125).

Similarly, the Kaguru of Taznazia "believe most misfortunes, however small, are due to witchcraft. Most illness, death, miscarriages, sterility, difficult childbirths, poor crops, sickly livestock and poultry, loss of articles, bad luck in hunting, and sometimes even lack of rain are caused by witches" (Beidelman 1963:63-64).

In contrast, naturalistic etiologies are restricted to disease as such. Although a "systemic idiom" may prevail to account for much of what happens in the world, a humoral or a yin-yang imbalance which explains an illness is not invoked to explain crop failure, disputes over land, or kin quarreling. In fact, the striking thing is that while in naturalistic systems disease etiologies are disease specific, other areas of misfortune, such as personal quarrels are, not surprisingly, explained in personalistic terms. In Tzintzuntzan, for example, misunderstandings between friends may be due to natural-born trouble makers, who delight in spreading rumors and falsehoods. Financial reverses, too, may be accounted for by bad luck, or dishonesty and deceit on the part of false friends. But these explanations are quite divorced from illness etiology, which has its own framework, exclusive to it.

DISEASE, RELIGION, AND MAGIC

When Glick (1967:32) writes that "it is common knowledge that in many cultures, ideas and practices relating to illness are for the most part inseparable from the domain of religious beliefs and practices," he is speaking only of those systems with personalistic etiologies. Jansen (1973:34) makes this clear in writing of the Bomvana (Xhosa) that "religion, medicine and magic are closely interwoven, . . . being parts of a complex whole which finds its religious destination in the well-being of the tribe. . . . The Bomvana himself does not distinguish between his religion, magic and medicine." When curers are described as "priests" and "priestesses," as is often the case in Africa (e.g., Warren 1974-75:27), we are clearly in the domain of religion.

In contrast, in naturalistic systems religion and magic play only the most limited roles *insofar as we are dealing with etiology*, and to the extent that religious rituals are found, they are significantly different in form and concept from religious rituals in personalistic systems. For example, in those Latin American societies whose etiological systems are largely naturalistic, victims of illness sometimes place votive offerings on or near "miraculous" images of Christ, the Virgin Mary, or powerful saints, or light votive candles for these supernatural beings, asking for help. These are certainly religious acts. But it is important to note that in personalistic systems the beings supplicated, and to whom propitiatory offerings are made, are themselves held responsible for the illness. It is to appease their anger or ill will that such offerings are made. In contrast, in Catholic countries the beings to whom prayers are raised and offerings made *are not* viewed as causes of the illness. They are seen as merciful advocates who, if moved, can intervene to help a human sufferer. It should be noted, too, that most of these acts conform to a general pattern in which aid of supernaturals is sought for any kind of misfortune, such as financial reverses or the release of a son from jail, as well as illness or accident.

Thus, there is a significant contrast in structure and style between the two systems. In societies where personalistic etiologies predominate, all causality is general and comprehensive, and not specific to illness; but paradoxically, when ritual supplications and sacrifices are

made, usually they are narrowly limited in scope, specific to a particular illness, or to prevent feared illness. In contrast, in societies where naturalistic etiologies predominate, illness causality is specific to illness alone, and does not apply to other kinds of misfortune. But, insofar as religion is a part of curing, it is comprehensive or general, conforming to the same patterns that characterize a pious person in the face of any misfortune.

LEVELS OF CAUSALITY

Personalistic and naturalistic etiologies further differ importantly in that, for the former, it is necessary to postulate at least two levels of causality: the deity, ghost, witch, or other being on whom ultimate responsibility for illness rests, and the instrument or technique used by this being, such as intrusion of a disease object, theft of the soul, possession, or witchcraft. In the literature on ethnomedicine the first level—the being—is often referred to as the *efficient* cause, while the second level—the instrument or technique—is referred to as the *instrumental*, or *immediate* cause. A few anthropologists recognize three levels of causation. Goody (1962:209-210), for example, describes both efficient and immediate causes, to which he adds a final cause, an ancestor or earth shrine that withdraws its protection from a person so that he falls victim to a sorcerer. In Honduras Peck (1968:78) recognizes essentially the same three levels: an instrumental cause ("i.e., what has been done to the patient, or what is used"), an efficient cause ("i.e., who or what has done it to the patient"), and a final, or ultimate, cause ("i.e., an attempt to answer the question, 'why did *this* happen to *me* at *this time*?' ").

Naturalistic etiologies differ significantly in that levels of causation are much less apparent; in most cases they tend to be collapsed. Although it can be argued that a person who willfully or through carelessness engages in activities known to upset his bodily equilibrium is the efficient cause of his illness, in practice this line of argument has little analytical value.

It was failure to recognize levels of causality that limited the value of Clements' pioneering study of disease etiology (1932), a defect first pointed out by Hallowell (1935). This distinction, as we are about to see, is critical to an understanding of basic differences in curing strategies found in the two systems.

SHAMANS AND OTHER CURERS

The kinds of curers found in a particular society, and the curing acts in which they engage, stem logically from the etiologies that are recognized. Personalistic systems, with multiple levels of causation, logically require curers with supernatural and/or magical skills, for the primary concern of the patient and his family is not the immediate cause of illness, but rather "Who?" and "Why?" Among the Bomvana (Xhosa) Jansen (1973:39) puts it this way: "They are less interested to know: *How* did it happen? rather than: *Who* is responsible?" Similarly, in Mali we read that "In general the Bambara want to know *why* they are ill and not how they got ill" (Imperato 1974-75:44). And in the Indian village studied by Dube the Brahmin or a local seer is essential to find out what ancestor spirit is angry, and why (Dube 1955:128).

The shaman, with his supernatural powers, and direct contact with the spirit world, and the "witch doctor" (to use an outmoded term from the African literature), with his magical powers, both of whom are primarily concerned with finding out who, and why, are the logical responses in personalistic, multiple causality, etiological systems. After the who and why have been determined, treatment for the immediate cause may be administered by the same person, or the task may be turned over to a lesser curer, perhaps an herbalist. Thus, among the Nyima of the Kordofan mountains in the Sudan, the shaman goes into a trance and discovers the cause and cure of the disease. But he himself performs no therapeutic acts;

this is the field of other healing experts, to whom the patient will be referred (Nadel 1946:26).

Naturalistic etiological systems, with single levels of causation, logically require a very different type of curer, a "doctor" in the full sense of the word, a specialist in symptomatic treatment who knows the appropriate herbs, food restrictions, and other forms of treatment such as cupping, massage, poultices, enemas, and the like. The curandero or the Ayurvedic specialist is not primarily concerned with the who or why, for he and the patient both usually are in complete agreement as to what has happened.

DIAGNOSIS

Personalistic and naturalistic etiological systems divide along still another axis, the nature of diagnosis. In personalistic systems, as we have just seen, the shaman or witch doctor diagnoses by means of trance, or other divinatory techniques. Diagnosis—to find out who and why—is the primary skill that the patient seeks from his curer. Treatment of the instrumental cause, while important, is of secondary concern.

In contrast, in naturalistic systems diagnosis is of very minor importance, as far as the curer is concerned. Diagnosis usually is made, not by the curer, but by the patient or members of his family. When the patient ceases treatment with home remedies and turns to a professional, he believes he knows what afflicts him. His primary concern is treatment to cure him. And how is diagnosis done by the layman? The answer is simple, pointed out many years ago by Erasmus (1952:414), specifically for Ecuador. When an individual whose disease etiology is largely naturalistic feels unwell, he thinks back to an earlier experience, in the night, the day before, or even a month or a year earlier, to an event that transpired, or a situation in which he found himself, that is known to cause illness. Did the patient awaken in the morning with swollen tonsils? He remembers that on going to bed the night before he carelessly stepped on the cold tile floor of his bedroom in his bare feet. This, he knows, causes cold to enter his feet and compress the normal heat of his body into the upper chest and head. He suffers from "risen heat." *He* tells the doctor what is wrong, and merely asks for an appropriate remedy.

Does a woman suffer an attack of painful rheumatism? She remembers that she had been ironing, thereby heating her hands and arms, and that without thinking she had washed them in cold water. The cold, to her vulnerable superheated arms and hands, caused her discomfort. She needs no diviner or shaman to tell her what is wrong. The striking thing about a naturalistic system is that, in theory at least, the patient can, upon reflection, identify *every* cause of illness that may afflict him. So powerful is this pattern today in Tzintzuntzan that when people consult medical doctors, their standard opening statement is "Doctor, please give me something for — — — — —," whatever their diagnosis may be. Doctors, traditional or modern, are viewed as curers, not diagnosticians.

To summarize, we may say that in personalistic systems the primary role of the shaman or witch doctor is *diagnostic*, while in naturalistic systems it is *therapeutic*.

PREVENTIVE MEASURES

Preventive medicine, insofar as it refers to individual health-oriented behavior, can be thought of as a series of "dos" and "don'ts," or "shoulds" and "shouldn'ts." In contemporary America we "should" get an annual physical examination, our eyes and teeth checked regularly, and make sure our immunizations are up to date when we travel abroad. We "should not" smoke cigarettes, consume alcohol to excess, breathe polluted air, or engage in a series of other activities known or believed to be inimical to health. Our personal preventive measures are, perhaps, about equally divided between the "dos" and "don'ts."

In all other societies similar "shoulds" and "shouldn'ts" can be identified. Although my

grounds are highly impressionistic, I rather have the feeling that naturalistic etiologies correlate predominantly with "don'ts," while personalistic etiologies correlate with "dos." In naturalistic systems a personal health strategy seems to consist of avoiding those situations or not engaging in behavior, known to produce illness. In Tzintzuntzan, and many other Latin American communities, the prudent person doesn't stand on a cold floor in bare feet, doesn't wash hands after whitewashing a wall, doesn't go out into the night air immediately after using the eyes, and a host of other things. In theory, at least, a hypercautious individual should be able to avoid almost all illness *by not doing certain things*.

In contrast, in personalistic systems the basic personal health strategy seems to emphasize the "dos," and especially the need to make sure that one's social networks, with fellow human beings, with ancestors, and with deities, are maintained in good working order. Although this means avoiding those acts known to arouse resentment—"don'ts"—it particularly means careful attention being paid to the propitiatory rituals that are a god's due, to positive demonstrations to ancestors that they have not been forgotten, and to friendly acts to neighbors and fellow villagers that remind them that their good will is valued. In short, recognizing major overlapping, the primary strategies to maintain health in the two systems are significantly different. Both require thought. But in one—the personalistic—time and money are essential ingredients in the maintenance of health. In the other—the naturalistic—knowledge of how the system works, and the will to live according to its dictates, is the essential thing; this costs very little, in either time or money.

THE LOCUS OF RESPONSIBILITY

With respect to personal responsibility for falling ill, do the two etiological systems differ? To some extent I think they do. In Tzintzuntzan, as pointed out, the exercise of absolute care in avoiding disease-producing situations should, in theory, keep one healthy. Hence, illness is *prima facie* evidence that the patient has been guilty of lack of care. Although illness is as frightening as in any other society, and family members do their best to help a sick member, there is often an ambivalent feeling that includes anger at the patient for having fallen ill. I have seen worried grown daughters losing a night's sleep as they sought medical care for a mother they feared was suffering a heart attack. When the mother confessed that she had not taken her daily pill to keep her blood pressure down (and after she was back to normal, the crisis past), the daughters became highly indignant and angry at her for causing them to lose sleep.

In personalistic systems people also know the kinds of behavior—sins of commission and omission—that may lead to retaliation by a deity, spirit, or witch. To the extent they can lead blameless lives they should avoid sickness. But personalistic causality is far more complex than naturalistic causality, since there are no absolute rules to avoid arousing the envy of others, for doing just the right amount of ritual to satisfy an ancestor, for knowing how far one can shade a taboo without actually breaching it. Consequently, in such systems one has less control over the conditions that lead to illness than in the other, where the rules are clearly stated. Spiro (1967:4) makes this contrast clear among the Burmese. Since suffering (including illness) is the "karmic" consequence of one's demerits accumulated in earlier incarnations, the responsibility for suffering rests on the shoulders of the sufferer himself. But, says Spiro, to accept this responsibility is emotionally unsatisfying. On the other hand, if one subscribes to a supernatural-magical explanatory system, in which all suffering comes from ghosts, demons, witches, and *nats*, in at least some cases the sufferer is entirely blameless. He simply happens to be the victim of a witch who, from malice, choses him as victim. "In other cases he is only inadvertently responsible—he has unwittingly offended or neglected a nat who, annoyed by his behavior, punishes him." Spiro sees this reasoning as underlying the juxtaposition of Buddhism and supernaturalism—of personalistic and naturalistic etiologies—in Burma.

SUMMARY

By way of summary the two systems of disease etiology and their correlates may be tabularized as follows:

System:	Personalistic	Naturalistic
Causation:	Active agent	Equilibrium loss
Illness:	Special case of misfortune	Unrelated to other misfortune
Religion, Magic:	Intimately tied to illness	Largely unrelated to illness
Causality:	Multiple levels	Single level
Prevention:	Positive action	Avoidance
Responsibility:	Beyond patient control	Resides with patient

REFERENCES CITED

Ackerknecht, Erwin H.
1971 Medicine and Ethnology: Selected Essays. Baltimore: Johns Hopkins Press.

Alland, Alexander, Jr.
1964 Native Therapists and Western Medical Practitioners among the Abron of the Ivory Coast. Transactions of the New York Academy of Sciences. Vol. 26. Pp. 714-725.

Beidelman, T. O.
1963 Witchcraft in Ukaguru. *In* Witchcraft and Sorcery in East Africa. J. Middleton and E. H. Winter, eds. Pp. 57-98. London: Routledge and Kegan Paul.

Caudill, William
1953 Applied Anthropology in Medicine. *In* Anthropology Today. A. L. Kroeber, ed. Pp. 771-806. Chicago: University of Chicago Press.

Clements, Forrest E.
1932 Primitive Concepts of Disease. University of California Publications in American Archaeology and Ethnology, Vol. 32, Part 2. Pp. 185-252.

Dube, S. C.
1955 Indian Village. London: Routledge and Kegan Paul.

Erasmus, Charles J.
1952 Changing Folk Beliefs and the Relativity of Empirical Knowledge. Southwestern Journal of Anthropology 8:411-428.

Fabrega, Horacio, Jr.
1972 Medical Anthropology. *In* Biennial Review of Anthropology: 1971. Bernard J. Siegel, ed. Pp. 167-229. Stanford: Stanford University Press.

Fortune, Reo F.
1932 Sorcerers of Dobu: The Social Anthropology of the Dobu Islanders of the Western Pacific. London: George Routledge.

Freidson, Eliot
1970 Professional Dominance: The Social Structure of Medical Care. New York: Atherton.

Glick, Leonard B.
1967 Medicine as an Ethnographic Category: The Gimi of the New Guinea Highlands. Ethnology 6:31-56.

Goody, Jack
1962 Death, Property and the Ancestors: A Study of the Mortuary Customs of the Lodagas of West Africa. Stanford: Stanford University Press.

Hallowell, A. Irving
1935 Primitive Concepts of Disease. American Anthropologist 37:365-368.

Harley, George Way
1941 Native African Medicine: With Special Reference to Its Practice in the Mano Tribe of Liberia. Cambridge: Harvard University Press.

Horton, Robin
1967 African Traditional Thought and Western Science. Africa 37:50-71, 155-187.

Hughes, Charles C.
1968 Ethnomedicine. *In* International Encyclopedia of the Social Sciences. Vol. 10. Pp. 87-93. New York: Free Press/Macmillan.

Imperato, Pascual James
1974-75 Traditional Medical Practitioners among the Bambara of Mali and their Role in the Modern Health-Care-Delivery System. *In* Traditional Healers: Use and Non-Use in Health Care Delivery. I. E. Harrison and D. W. Dunlop, eds. Rural Africana 26:41-53.

Jansen, G.
1973 The Doctor-Patient Relationship in an African Tribal Society. Assen, The Netherlands: Van Gorcum.

Lieban, Richard W.
1973 Medical Anthropology. *In* Handbook of Social and Cultural Anthropology. John J. Honigmann, ed. Pp. 1031-1072. Chicago: Rand McNally.

Nadel, S. F.
1946 A Study of Shamanism in the Nuba Mountains. Journal of the Royal Anthropological Institute 76:25-37.

Peck, John G.
1968 Doctor Medicine and Bush Medicine in Kaukira, Honduras. *In* Essays on Medical Anthropology. Thomas Weaver, ed. Pp. 78-87. Southern Anthropological Society Proceedings, Vol. 1.

Polgar, Steven
1962 Health and Human Behavior: Areas of Interest Common to the Social and Medical Sciences. Current Anthropology 3:159-205.

Price-Williams, D. R.
1962 A Case Study of Ideas Concerning Disease among the Tiv. Africa 32:123-131.

Scotch, Norman A.
1963 Medical Anthropology. *In* Biennial Review of Anthropology. Bernard J. Siegel, ed. Pp. 30-68. Stanford: Stanford University Press.

Spiro, Melford E.
1967 Burmese Supernaturalism: A Study in the Explanation and Reduction of Suffering. Englewood Cliffs: Prentice-Hall.

Suárez, María Matilde
1974 Etiology, Hunger, and Folk Diseases in the Venezuelan Andes. Journal of Anthropological Research 30:41-54.

Warren, Dennis M.
1974-75 Bono Traditional Healers. *In* Traditional Healers: Use and Non-Use in Health Care Delivery. I. E. Harrison and D. W. Dunlop, eds. Rural Africana 26:25-39.

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