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THE IMPACT OF CULTURE ON THE COGNITIVE STRUCTURE OF ILLNESS

ABSTRACT. This paper presents a theoretical framework for understanding the impact of culture on the processes of symptom recognition, labeling, and help-seeking and consequently on large-scale epidemiological studies involving different ethnic groups. We begin with the assumption that the subjective experience of illness is culture- bound and that the cognitive and linguistic categories of illness characteristic of any culture constrain the interpretative and behavioral options available to individuals in response to symptoms. We hypothesize the existence of learned cognitive structures, through which bodily experiences are filtered, that influence the interpretation of deviations from culturally-defined physical and mental health norms. Certain contradictory findings concerning the self-reported health of Mexican Americans are discussed in order to illustrate the impact of culture on perceived health status.

The impact of culture on the perception of physical and emotional states, on their interpretation, and on help-seeking has been documented by numerous researchers (e.g., Velimirovic 1981; Kleinman 1980, 1982; Zborowski 1952; Zola 1964, 1966; Mechanic 1980; Fabrega 1974; Fabrega and Schwartz, and Wallace 1968; Fabrega and Silver 1973; Clark 1970; Nichter 1981). This literature clearly documents the fact that culture constrains the perceptual, explanatory, and behavioral options that individuals have at their disposal for understanding and responding to illness. Accompanying this extensive empirical anthropological and sociological literature, numerous illness-definition and help-seeking models have been developed to explain the process through which individuals identify and evaluate illness, and seek medical care (e.g., Rosenstock 1966; Becker and Maiman 1983; Mechanic 1978; Suchman 1965a, b; Fabrega 1974; Chrisman and Kleinman 1983). Sociological models identify sociocultural variables, including ethnicity, as important factors that influence the identification of and response to illness (Suchman 1965a, b; Becker and Maiman 1983; Mechanic, 1978), while models that are informed by an anthropological perspective (e.g., Fabrega 1974; Chrisman and Kleinman 1983) place the entire process of illness definition and help-seeking within a cultural context that comprises the symbolic system through which decisions concerning health and illness are made by individuals and groups.

In addition to these ethnographic and descriptive studies, a cross-cultural epidemiological tradition in the study of physical and emotional illness has developed in recent years (Andersen et al. 1981; Madsen 1969;

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Mirowsky and Ross 1980, 1984; Roberts 1980; Vernon, Roberts, and Lee 1982). This literature employs traditional epidemiological techniques for studying the differential incidence and prevalence of disease in an attempt to identify those sociocultural factors which influence rates of illness. The aims of these two traditions — we will call them the ethnographic and the epidemiological — are different. The first seeks a detailed understanding of the illness-labeling and help-seeking process, while the second is oriented to understanding the etiology, progress, and consequences of disease in different populations.

What has been lacking in the epidemiological approach to the study of the impact of culture on illness is an understanding of the cognitive structures that mediate the illness-labeling and help-seeking process at crucial points. As Fabrega (1974) notes, this tradition tends to disregard the perspective of the actor. Even when the formidable methodological problems in cross-cultural research are acknowledged by researchers in this tradition the identification of the disease state is, for the most part, treated as nonproblematic. On the other hand, while ethnographically-based models embed the individual in complex symbolic meaning systems they have focused primarily on localized or traditional societies. In this paper we examine a set of issues in epidemiology that arise as the result of an incomplete understanding of the perspective of the actor and offer some suggestions for using the ethnographic tradition to inform epidemiological studies. In order to provide a focus for the discussion, we employ Mexican Americans as an example and review the literature dealing with the interpretation and reporting of health status for this ethnic group.

We have two purposes in developing a model of the impact of culture on the cognitive structures which mediate the interpretation of physical and emotional states by the individual. First, numerous studies reveal that there is only an imperfect correspondence between the clinical fact of disease and the subjective experience of illness and that, while the clinical characteristics of a disease are culturally invariant, the phenomenological experience of illness is highly variable (Fabrega 1974; Kleinman 1980; Pennebaker 1982; Mechanic 1978; Eisenberg 1977; Tessler and Mechanic 1978; Good and Good 1981; Obeyeskere 1978). One obvious explanation for this variability is that culture influences the experience of illness. We argue, however, that the subtle effects of culture on the cognitive structures which inform each stage of the illness-labeling process have not been elaborated adequately, especially when traditional beliefs and practices become confounded with biomedically-based beliefs and practices as part of the process of a group's assimilation into modern industrialized society.

Our model focuses primarily on the earliest stages of the symptom recognition and evaluation process and we argue that the lack of predictive power of most large-scale surveys of illness behavior (Mechanic 1979) is due, to a large extent, to the subtle influences of culture on these early stages of the illness labeling process, and the cumulative effects of these early impacts on individuals' subsequent evaluations of their health status and help-seeking behavior. We begin our examination, therefore, prior to the point at which symptoms become medically relevant, and develop a model of the impact of culture and reference groups on the likelihood that physical sensations and mood changes are perceived and labeled as "symptoms." In this discussion reference groups refer to individuals similar to oneself in major social statuses such as gender, occupation, social class, and ethnicity. We employ the term "symptom" in its medical sense, as an indicator of an underlying disease. The crucial point for our discussion, though, is that not all experienced physical or emotional changes are interpreted as symptoms. Indeed, the vast majority of such changes are treated in a cognitively routine manner and ignored or accorded little importance. The likelihood that any one change will be labeled a symptom depends upon both individual and social factors. In this paper we elaborate the impact of culture on this likelihood.

Our second purpose for elaborating the impact of culture on illness labeling stems from practical concerns. While the impact of culture on reports of health or illness is of interest in and of itself since it illuminates the influence of learning on cognitive processes, illness vocabularies, and on the structure of individuals' phenomenological worlds, cultural influences on the perception and reporting of health status have practical implications for the cross-cultural study of the incidence and prevalence of disease. From the perspective of the epidemiologist attempting to assess relative levels of objective health, cultural differences in the perception and reporting of health status result in biased estimates. The assessment of differential health levels in representative samples frequently involves self reports of physical and psychological symptoms (Aday, Andersen, and Fleming 1980; Andersen, Kravits, and Anderson 1975; Wolinsky 1978; Vernon and Roberts 1981; Mirowsky and Ross 1980). The phenomenological and cognitive equivalence of such self reports across groups which differ in culture and socioeconomic status is a matter of great concern (Angel and Cleary 1984; Roberts 1980; Salber and Beza 1980; Vernon and Roberts 1981; Vernon, Roberts, and Lee 1982; Berkanovik 1980; Aday, Chiu, and Andersen 1980). In order for comparisons using self reports to be valid, the measures used must tap similar dimensions of pathology in different populations. Yet, establishing cognitive equivalence across cultures presents formidable difficulties.

Similarities between populations in objective physiological signs such as blood pressure, height, and weight can be reliably established with the appropriate instruments. A sphygmomanometer produces accurate readings regardless of the cultural orientation of the researcher or subject. At a more subjective level one can, in a fairly straightforward manner, establish linguistic equivalence as well; it is usually, though not always, possible to translate from one language to another so that similar denotations are retained. Even with acceptable linguistic equivalence, however, subjective experience remains elusive; at some point one is in the position of inferring cognitive equivalence from data at other levels of analysis.[1]

Assuming phenomenological equivalence based on behavior or reports of symptoms, therefore, requires rather large inferential leaps, since culture in its manifold forms, but especially as language, intervenes between the investigator and whatever objective reality he or she attempts to assess. The researcher is faced, therefore, with the necessity of interpreting self reports of physical or mental status in terms of the cognitive categories of the culture under study *or* of translating those reports into the categories of the researcher's own culture. Whether either of these goals is possible has been a matter of debate among cultural anthropologists and linguists for decades (e.g., Basso and Selby 1976; Winch 1958, 1964; Ulim 1984). Whatever the outcome of this debate, however, it is clear that in order to assess the prevalence of symptoms across cultures one must understand the meaning-shaping vocabularies and cognitive structures through which perceptions are filtered (Geertz 1973, 1984; Ulim 1984). In order to assess differential health levels then, we must in some way combine the cultural sensitivity of ethnography with the epidemiologist's desire for population-level rates of mental and physical pathology. Attempts to establish cognitive equivalence between Mexican Americans and non-Hispanics provide concrete examples of these difficulties.

AN APPARENT PARADOX: MEXICAN ETHNIC CULTURE

There is little debate that individuals in traditional cultures are quite different in their health and illness behavior than middle class Americans (Kleinman 1980, 1982; Nichter 1981; Fabrega and Silver 1973). However, the extent to which perceptions of health and responses to illness are significantly influenced by ethnic culture within the contemporary United States is less clear. Although the majority of middle class Americans interpret their bodily states in accordance with modern medical and scientific conceptions of disease and illness (Andersen et al. 1981), in the not too distant past folk beliefs and practices were an important part of Mexican ethnic culture (Saunders 1954; Clark 1970), and folk medicine continues to play a limited role for certain members of this group (Velimirovic 1978). In addition, a number of sociologists have documented ethnic differences in the importance attached to various symptoms by other American ethnic groups (Zborowski 1952; Zola 1964, 1966).

In light of the immigration history and geographical isolation of Mexican Americans (as well as of other groups such as Puerto Ricans and Vietnamese), one might expect to find a continuing impact of ethnic culture on perceptions of bodily states and upon reported health status among recent immigrants. During the course of cultural assimilation the individual adopts the vocabulary and meaning system of the host society (Keefe 1980) so that, at any one time, we find a gradient in health-related beliefs and practices from more traditional orientations retained by the culturally unassimilated to less traditional, more biomedically-informed orientations characteristic of longer-term residents who are further along in the process of social, economic, and cultural assimilation (Angel and Cleary 1984; Keefe 1980). Such differentials are evident when Mexican Americans are compared to non-Hispanic Americans or when more recent immigrants are compared to longer-term residents within the Mexican American population (Angel and Cleary 1984).

However, more complex and puzzling patterns which cause substantial interpretive difficulties have been observed. One intriguing example involves attempts to assess the prevalence of psychological distress among Mexican Americans. The epidemiological evidence is based primarily upon general distress inventories such as the Langner, MacMillan, Zung, and other non-specifc scales of depressive affect (Antunes, Gaitz, and Scott 1974; Gaitz and Scott 1974; Quesada, Spears, and Ramos 1974; Thoits and Hannan 1979; Mirowski and Ross 1980, 1984; Burnam, Timbers, and Hough 1984; Wheaton 1982; Vega et al. 1984; Vega, Warheit, and Palacio 1985) and the Center for Epidemiological Studies Depression Scale, or CES-D (Roberts 1980; Vernon and Roberts 1981; Vernon, Roberts, and Lee 1982; Frerichs, Aneshensel, and Clark 1981). These studies provide inconclusive and contradictory evidence concerning the prevalence of depressive symptomatology within the Mexican American population. Studies employing the Langner and similar psychophysiological scales often find that Mexican Americans are significantly *less* distressed than non-Hispanics (e.g., Antunes, Gaitz, and Scott 1974; Gaitz and Scott 1974; Mirowsky and Ross 1980).[2] On the other hand, certain studies employing such psychophysiological scales as well as investigations using the CES-D indicate that Mexican-Americans are *as* distressed or *more* distressed than non-Hispanics (e.g., Burnam, Timbers, and Hough 1984; Vega et al. 1984; Frerichs, Aneshensel, and Clark 1981). The reasons for these contradictory findings are difficult to discern, although the Langner and other psychophysiological scales differ from the CES-D in important respects. Most importantly, while the CES-D consists of purely affective items, the other scales contain a significant number of symptoms which conflate physiological and psychological status.

The contradictory findings concerning the prevalence of depression among Mexican Americans suggest that the content of scales, the wording of items, and the characteristics of the samples employed exert important influences on responses to questions concerning symptoms of mental health. In addition to problems of instrumentation and sampling, however, self-reported health may well consist of more than one dimension, and culture may influence each differently. Mirowsky and Ross (1984) present evidence that Mexican culture may have an opposite impact on anxiety and depression, decreasing the former and increasing the latter. We believe that this may be the case with respect to psychophysiological versus affective symptoms among Mexican Americans and that Mexican culture may, in certain contexts, decrease the number of self-reported psychophysiological symptoms and have less of an impact on purely affective symptoms.

Unfortunately, the results of existing research are too inconclusive to allow us to test this hypothesis. An additional difficulty in the assessment of the impact of culture on reported health results from the fact that its impact is confounded with that of social class. Less assimilated Mexican Americans, especially those who are not fluent in English, are overrepresented among the lower social strata in which their exposure to the risk factors associated with poverty is high (Schreiber and Homiak 1981; Angel 1984; Angel and Cleary 1984). Since recent immigrants, especially the undocumented, are most likely to be members of the lowest social classes, the influence of Mexican culture is probably greatest at the bottom of the social class hierarchy. Interestingly, in contrast to the findings of certain studies that the least assimilated Mexican Americans report the fewest physical and psychological symptoms, lower class individuals in the general population tend to report *most* physical and psychophysiological symptoms than individuals in higher social classes (Dohrenwend and Dohrenwend 1969). Reports of fewer psychophysiological symptoms by Mexican Americans, therefore, most likely reflect a cultural artifact. This leads us to suspect the self-reports of physiological symptoms by Mexican Americans are, to an unknown extent, invalid and that the impact of Mexican ethnic culture may be to reduce reports of illness for individuals at greatest risk of poor health.[3]

Another cultural explanation for differential reports of health by Mexican Americans and non-Hispanics has centered on the possibility that various groups differ in the tendency to view certain symptoms and behaviors as socially undesirable and to adjust their reports of them accordingly (Dohrenwend and Dohrenwend 1969; Vernon, Roberts, and Lee 1982; Ross and Mirowsky 1983). Clearly, such tendencies would lead to different rates of reported illness or distress. Studies concerning this issue are, again, contradictory.

Gove and Geerken (1977) report little evidence of ethnic bias resulting from yea-saying/nay-saying tendencies, trait desirability, or need for approval in responses to a mental health scale for a combined group of 68 Puerto Ricans and Mexican Americans. However, since as mentioned earlier, Mexican Americans report fewer symptoms on Langner-type scales than non-Hispanics and since Puerto Ricans report more symptoms on such scales (Dohrenwend and Dohrenwend 1969), the pooling of these two groups probably cancels any ethnic effects which exist. An attempt to assess the reliability of the CES-D net of response bias has also been reported (Roberts 1980; Vernon and Roberts, 1981; Vernon, Roberts, and Lee 1982). In general, these investigators find no systematic bias associated with Mexican ethnicity in scales of depressive affect. Unfortunately, these results are based on small samples which suffer from differential response rates. Additionally, the sample of Mexican Americans who were interviewed in Spanish is very small, making the assessment of the impact of language of interview (a proxy for degree of assimilation) tentative.

Moreover, Vernon, Roberts, and Lee (1982) note the possibility that conventional measures of trait desirability and acquiescence typically employed in investigations of ethnic bias are subject to the same problems of reliability and validity that beset mental health status measures, making them potentially inappropriate correction criteria. This is especially true when trait desirability and symptoms are ascertained in the same instrument. Both sets of questions may be influenced by attitudinal and belief factors that bias each similarly. Contradicting these studies which find no greater tendency by Mexican Americans to respond in a socially approved manner, Ross and Mirowsky (1983) find that Mexican ethnicity is associated with a tendency to give socially approved responses, as measured by a short version of the Crowne-Marlowe social desirability scale. The possibility of an ethnic bias in responses to health probes, therefore, remains open.

These problems are made more troublesome by the possibility that health is not unidimensional, but consists of different dimensions each of which might be influenced by culture differently. Vernon, Roberts, and

Lee (1982) report low internal consistency for their mental health scales, leaving open such a possibility. Further evidence of the existence of different dimensions in the interpretation and reporting of health is presented by Angel and Cleary (1984) who focused on physical health symptoms. Comparing non-Hispanic whites and blacks with Mexican Americans, these investigators found that less culturally assimilated Mexican Americans reported poorer overall health than non-Hispanic whites or more assimilated Mexican Americans, but paradoxically reported lower levels of pain, worry, or concern about their health and fewer disability days or symptoms than members of these other groups with similarly poor self-reported overall health.

These findings indicate that Mexican culture may influence reporting of various dimensions of physical health differently and suggest that survey probes do not tap health in an unmediated manner. Responses by Mexican Americans appear to be highly sensitive to the specific health measure or construct employed. If probes concerning health were tapping one underlying dimension of health or illness in a fairly unmediated manner we would expect greater agreement between responses to those probes. We interpret the discrepancy between probes of physical health and between the two sets of studies of distress using different instruments as suggesting the possible existence of different, culturally-influenced cognitive structures through which affective and physical states are filtered and through which symptoms are interpreted. In the next sections we elaborate a model of the role of culture in the content of these structures and in the evaluation and labeling of abnormal physical and psychological states. First, let us present a capsule overview of the basic ideas which inform the model.

OVERVIEW

The curative practices of a society constitute a cultural system involving at least three levels: (1) the popular beliefs and practices of lay persons, (2) folk medicine as it is practiced by indigenous healers, and (3) modern technical medicine (Chrisman and Kleinman 1983). We will focus heavily on the impact of culture on the popular sector of the system of health care for the remainder of this discussion. Popular medical care by individuals, their families, friends, and other lay persons in the local community comprises a significant, if not the major, part of most treatment for illness (Demers et al. 1980; Hulka, Kupper, and Cassel 1972; Kleinman 1980; Chrisman and Kleinman 1983; Fabrega 1974; Fabrega and Silver 1973; Young 1980). The initial identification of illness and decisions concerning appropriate action are made at this level. Home diagnoses and home remedies continue to play an important role even in modern societies. However, as we have argued earlier, the cognitive processes through which lay persons come to define themselves as ill and select curative options have been poorly elaborated.

Our central thesis is that individuals inherit from their cultures structured vocabularies of health and illness which limit the possibilities for the interpretation of physical and psychological states and structure help-seeking options. As with other aspects of culture, these vocabularies are "overlearned" such that they acquire the status of unquestioned objective reality. Kleinman (1980, 1982) provides a compelling example of the impact of culture on the labeling of health status in the professional medical sector. In a study of Chinese medical practices, he reports that while no formal diagnosis of depression exists in the Chinese diagnostic lexicon, the majority of patients diagnosed "neurasthenic" in that culture present what can be recognized as the physiological concomitants of depression, such as dizziness, headaches, appetite and sleep disturbances and lethargy. Even if the actual phenomenological experiences of individuals in the two cultures remains inaccessable, it is clear that the identification of what would be labeled depression in the United States is labeled rather differently among the Chinese medical professionals that Kleinman observed. In a later paper Kleinman and Kleinman (1984) observe that among traditional Chinese, culture, and perhaps a political system which discourages expressions of disaffection, establishes limits to the vocabularies of distress with which individuals report their physical and emotional experiences; among traditional Chinese depression is expressed somatically, while in the U.S. it is expressed affectively as well.

We argue that the labels one attaches to symptoms as well as to constellations of symptoms (illnesses) influence their evaluation and determine the actions one takes in response to perceived deviations from physical or emotional normality. Moreover, we hypothesize that such structured cognitive categorizations of symptoms and illness are revealed empirically as lexical categories reflecting phenomenological groupings of symptoms, illnesses, and other more general characteristics of physical and mental states (e.g., cause, contagiousness, curability). The discussion which follows constitutes an elaboration of this thesis.

A MODEL OF ILLNESS LABELLING: THE INFLUENCE OF CULTURE

The processes by which individuals (a) notice physical or emotional changes; (b) label and evaluate them as psychological or physical, serious or trivial; and (c) decide upon a course of action can be conceived of as occurring in stages. These are summarized in Table 1. As we conceive it, complex processes that involve ongoing self-monitoring and evaluation occur at each stage. Culture (and reference groups) influence each stage in this process. Let us now proceed through this process stage by stage.

TABLE 1
Summary of the impacts of culture on the cognitive processes which determine the interpretation of physiological and psychological events.

Event	Cognitive Processes	Cultural Influences
Initial Occurrence: Objective Physiological or Affective Change		
1. Attend to or Ignore the Change	First-order Categorization Normal vs. Abnormal	(a) Socialization of attention to internal states (sensitization) (b) Prevalence of state in one's reference group
2. Interpretation and Evaluation of the Change	Second-order Categorizations: (a) Symptom or not (b) Physical vs. Psychological (Preliminary Diagnosis) (c) Seriousness (d) Chronicity, Cause, Responsibility, Prognosis	(a) Prevalence (b) Social desirability (c) Beliefs and knowledge (d) Advice from significant others
3. Acting on Symptoms		Cultural and structural barriers to treatment-seeking
4. Relabeling and Reevaluation	Altered Second-order Categorizations	Contact with experts and experience with the illness

I. *Attending to Physiological Sensations*

Our model of human cognition begins with the observation that because of the sheer quantity of sensory input available at any one moment it is necessary for the individual to actively select information to attend to amidst the welter of background. This filtering of perceptual input does not occur in a random fashion, but is directed by specific cognitive structures which allow the individual to attend only to that information which is relevant at any particular moment. As Marcus (1977) notes, these structures have been variously labeled "frames", "scripts" and "schema." In this discussion we will avoid the use of such terms and their implication of rigid structure. Though we are dealing with similar template-like cognitive categories, we see them as more culturally-specific, malleable, and less structured than might be implied by the notion of schema. One very important point is that we see such cognitive categories as composed of both cultural aspects that are common to a group and ideosyncratic, individual aspects that are the result of individual experience.

One subset of sensory input is that originating in bodily experience. Internal sensory input provides information concerning one's physical and emotional state at any one moment and the process we shall elaborate constitutes a mapping of unmediated physical and emotional stimuli into culturally relative and learned interpretive categories concerning one's state of health or illness. We assume that automatic processing allows the individual to deal with the majority of internal sensory input in a routine manner and to identify those feelings or changes which are nonroutine and require further attention.

The first stage in processing information concerning bodily experience, then, is selecting relevant information from the mass of internal sensory input. It is fairly clear that the body is experienced holistically; one experiences an overall sense of well-being or lack of well-being and is less aware of specific physiological changes. In fact, considerable research shows that individuals are aware only of gross changes in physiological state and that they are remarkably inaccurate in perceiving objective, and especially small, physiological changes (Zillman 1978; Pennebaker 1982). Moreover, this inaccuracy is complicated by the fact that while the individual may be accurate in perceiving one type of physiological change, he or she may inaccurately perceive or report other changes. Thus, in summary, raw sensory input is experienced in a fairly global, undifferentiated, and imprecise way and only with time is it partitioned cognitively into its relevant components. Consequently, in this first stage only relatively gross changes in physiological or emotional state are noticed and attended to by individuals. Those changes perceived to be abnormal will receive further evaluation and processing.

Noticeable alterations in one's global sense of well-being, then, are first cognitively differentiated into the categories of normal or abnormal. This categorization we term "first-order information processing." Abnormality, at this stage, refers to a general sense that "something is wrong." Abnormality is usually inferred when the physical or emotional change is unpleasant, and either intense, prolonged, unexpected, unfamiliar, or recurrent. Examples are sudden pain or prolonged lack of appetite, or behaviors such as crying for no apparent reason.

There is some evidence that the probability of attending to physical and emotional changes is influenced by culture. A number of studies suggest that cultural groups differ in the extent to which they teach members to monitor bodily states (Zola 1964, 1966; Zborowski 1952; Tessler and Mechanic 1978). For example, Zola found that Italians were much more likely to report a number of symptoms while the Irish mention only a few. Zborowski found significant ethnic differences in the interpretation of and response to pain and speculated that culturally-specific childrearing practices influence an individual's attention to and interpretation of bodily states. Byrne, Steinberg, and Schwartz (1968) showed that symptom reporting and health center visits were related to an individual's sensitization to internal states. Sensitizers were more likely than repressors to report symptoms and to visit health centers. Hansell and Mechanic (1983) found that tendencies toward introspection — a construct highly correlated with self-awareness — were more common among females and Jews than among males or non-Jewish individuals, and that these tendencies were linked to earlier socialization experiences. In short, then, culturally and sub-culturally specific socialization may influence an individual's attention to or monitoring of bodily states. We hypothesize that attention to emotional states is affected similarly by these sociocultural factors (Thoits 1984). Because physiological arousal is a crucial component of emotion (Schachter and Singer 1962; Cotton 1981; Reisenzein 1983), groups that monitor physical symptoms more closely may be more likely to monitor emotional states as well.

In addition to sensitizing individuals to bodily sensations, we hypothesize that culture influences categorizations of experienced states as normal or abnormal. Here the influence of culture interacts with that of other social factors which we will conceptually summarize as a reference group influence. Normality is assessed through comparisons with the average health status of one's reference group. We hypothesize that the more prevalent an objectively abnormal physical or emotional condition is in one's reference group, the less likely one is to attribute great significance to it. The reference group, then, essentially establishes standards for the obtrusiveness and persistence of any particular condition. Because reference groups are more ethnically homogeneous among the lower classes than among the middle class, the role of culture in self-perception is no doubt greater for groups such as Mexican Americans who are overrepresented at the lower end of the social hierarchy than for those groups whose members are predominantly middle class.

In summary, then, attention to physical and emotional changes is influenced by cultural socialization, and the prevalence of those changes in one's reference group influence first-order attributions of normality or abnormality. The subtle effects of culture at this *pre*-symptom stage are largely overlooked in the medical sociological literature. Yet, these influence whether physical or emotional changes are noticed and accorded any significance at all.

II. *Labeling and Evaluating Symptoms*

The significance accorded to a physiological or emotional change once it is noticed and viewed as abnormal is central to the illness labeling process as we conceive it here. Almost immediately after noting an abnormal state, the individual begins to interpret and evaluate it. These interpretations and evaluations we term "second-order categorizations."

As a first step, an abnormal change may be interpreted as inconsequential or as a "symptom," at least tentatively. While a physical or emotional change may be seen as abnormal it need not be interpreted as a sign of an underlying pathology. For example, a stomach ache, while abnormal, may not be interpreted as a symptom of a disorder such as ulcers. One factor which influences whether or not an abnormal change will be interpreted as a symptom is its occurrence as part of a constellation of abnormal changes; an isolated change is less likely to be seen as a symptom unless it is particularly obtrusive or persistent.[4] Some abnormal changes are so well associated in past experience, such as those accompanying flu, that the occurrence of one causes the individual to engage in an active search for accompanying conditions. In the presence of other changes, there is less ambiguity in the assessment of any one as a symptom. Whitt and Meile (1985) describe the phenomenon of "snowballing" in which abnormal behaviors build upon one another until they can no longer be ignored. The same process no doubt occurs with physical symptoms. Clearly, this process takes place in a cultural and social context that determines which constellations of behaviors or physical changes are seen as abnormal and indicative of illness, either by the person experiencing the changes him or herself, or by the family.

Once interpreted as a symptom, the focus of attention shifts to the nature of the underlying disorder. Further evaluation is made in terms of the disorder rather than in terms of the symptom(s) alone. One of the first judgments is whether the disorder is physical or psychological in nature. Members of traditional cultures may differentiate less between psychological and physical symptoms, such that these are experienced in a unitary or global fashion. For example, physical *and* emotional symptoms may be viewed as indications of spirit possession. Alternatively, both physical and emotional symptoms may be viewed as physical disorder. The traditional Chinese mentioned earlier who experience, or at least express, what we recognize as depression as physical illness are a prime example. Individuals who hold more scientific orientations differentiate between these types of disorder to a greater degree. We posit that emotional changes are likely to be interpreted as symptoms of psychological disorder in the absence of any reasonable alternative attributions in both traditional and modern societies (Thoits 1985). However, because physiological changes are involved in emotion, individuals initially may identify psychological disorder as physical illness, only later revising their definition.

Once seen as indicative of physical or psychological disorder, more detailed evaluations follow. The disorder, whether physical or psychological, must be evaluated in terms of a number of dimensions, such as seriousness, cause, responsibility, and prognosis. At this point, perhaps the most important dimension on which a disorder must be assessed is seriousness. One's reference group, again, has an effect on this assessment.

The prevalence of similar symptoms within one's reference group influences perceptions of seriousness (Koos 1956; Jemmott, Croyle, and Ditto 1984). Symptoms which are relatively common are accorded minor significance, whereas atypical symptoms are viewed as serious. Jemmott, Croyle, and Ditto (1984) have experimentally demonstrated this phenomenon. Students led to believe that they had a pancreatic disorder rated that disorder as less serious when they thought that four out of five students also had the disorder than when they thought only one out of five had it. If among the lower classes a large number of one's reference group suffers back pains and intestinal problems, such symptoms may not seem noteworthy or serious. In the middle class, on the other hand, where such symptoms are less common, they may be viewed as more serious. In short, then, the prevalence of specific symptoms within one's reference group provides norms against which symptoms are not only attended to, but also are evaluated as trivial or serious.

It is important to recognize that culture plays a second role at this stage of the illness-labelling process. Although physical or emotional experiences may be privately regarded as significant and problematic, willingness to report or express them publicly (e.g., to a researcher) may be low. Hochschild (1979, 1983) has demonstrated the existence of expression norms, which guide the disclosure and display of feelings to others. In American society, for example, men do not cry publicly, and public demonstrations of affection are still considered inappropriate by many.

In short, the social desirability of various physical and emotional states may influence individuals' willingness to admit them (Dohrenwend and Dohrenwend 1969; Ross and Mirowsky 1983). Despite the evidence mentioned earlier, that variations in social desirability by ethnicity and social class do not appear to affect symptom-reporting significantly, sufficient contradictory evidence exists to preclude discounting differential social desirability as a factor in self reports of health status.[5]

Perhaps the most important aspect of culture for our present discussion is its impact on more detailed labelling and evaluation of symptoms and disorders. Individuals evaluate physical or emotional states in accordance with fairly elaborate learned dimensions of health and illness. There is a good deal of evidence to indicate that individuals cognitively order their interpretations of internal states in a structured fashion (Marcus 1977; Pennebaker 1982; Linz et al. 1982; Leventhal, Meyer, and Nerenz 1980). Investigators in behavioral medicine have recently identified at least three factors in terms of which individuals cognitively organize physical diseases: chronicity, acute infectious cause, and personal responsibility for cause and prevention (Linz et al. 1982). In a study of hypertensives, cancer patients, and coronary bypass patients, Leventhal, Meyer, and Nerenz (1980) identified very similar evaluative dimensions. Unfortunately, little research has examined dimensions of psychological disorder in ways parallel to those for physical disorder. Such an examination would seem warranted.

There is ample evidence that these evaluative dimensions are significantly influenced by cultural and social class beliefs concerning anatomy, physiology, and the etiology of disease (Kleinman 1979; Nichter 1981; Young 1980). D'Andrade et al. (1972), in a detailed comparison of American-English and Mexican-Spanish respondents found that the lexical categorizations of diseases among traditional Mexicans differed from those of English-speaking American respondents. Non-Hispanics organized diseases in two major groupings dealing with contagiousness and seriousness. Mexicans, on the other hand, revealed very different categorizations based upon a "hot" versus "cold" dimension typical of Latin culture. They also grouped diseases in terms of whether they were children's diseases or old people's diseases (D'Andrade et al. 1972:42—3). While each culture structured their conceptions of diseases in terms of specific cognitive dimensions, these dimensions differed significantly between cultures.

There is evidence that cognitive categories are malleable and change as the result of experience and education. Linz et al. (1982) found that in the course of medical education students' cognitive categorizations of diseases change. Indeed, we might conceive of the essence of education as a restructuring of cognitive categories or the creation of new cognitive dimensions. We can similarly view the changes that occur in the world views of immigrants as involving the restructuring of these same cognitive categorizations. From this point of view, new arrivals reorder their cognitive structures to conform to those which are consensually validated in the host society. The immigrant experience of the United States in the 19th and early 20th centuries suggests that such change is rapid and extensive. Within one generation of arrival most immigrant groups become acculturated to the host society and the effect of culture is diminished. Although folk beliefs and practices continue to play a role in health care in the United States, they are decreasing in importance even among fairly isolated groups (Andersen et al. 1981; Velimirovic 1979; Harwood 1980; Weaver 1976).

The result of the process of assessment and interpretation of symptoms which we have been discussing is a much more elaborate categorization of the underlying disorder. By now the label, e.g., sick, disturbed, or possessed, is informed by detailed assessments concerning each of the dimensions along which the symptoms of the disorder are arrayed. However, it is crucial to note that the labelling and evaluation stage may be significantly influenced by the input of family and friends. Individuals often seek the advice of others in evaluating their conditions. These informal labelling and evaluation processes appear to precede the use of medical or mental health care for a large majority of individuals (Kadushin 1969; Horwitz 1977; Kessler, Brown, and Broman 1981; Veroff, Hulka, and Douvan 1981; Yokopenic, Clark, and Aneschensel 1983). Inputs from others are likely to reinforce cultural conceptions and evaluations of the individual's symptoms, since family and friends generally share the same culture. The decisions that individuals make and the actions that they take with regard to health are, therefore, culturally dependent. The outcome of these labelling and evaluative processes determines whether help will be sought and from whom.

SEEKING HELP

The response to disorder depends upon the prior evaluations made concerning nature, severity, chronicity, cause, contagiousness, personal responsibility, prognosis, futility, and so on. Obviously, and most simply, if the disorder is interpreted as serious physical disease, help would be sought from a physician; if interpreted as psychological disturbance, help will be sought from a mental health professional. If no concept of contagiousness exists in the culture, the health of others may be placed at risk (as with tuberculosis, historically). Similarly, people may delay seeking treatment for culturally undesirable disorders, such as venereal disease or psychiatric disturbance. In short, these dimensions influence the actions people take (or do not take) with regard to illness, and those actions may be inappropriate and dangerous, at least from the perspective of Western technical medicine.

We believe that insufficient attention has been paid to the cognitive interpretations and evaluations of symptoms and disorders made by individuals prior to the point of help-seeking. Medical sociologists generally recognize that some initial labelling and evaluation occurs prior to help-seeking, and they especially recognize that the advice and information of family and friends is relevant in the decision to seek help, but the potential complexity of the cognitive processes and the subtle impacts of culture on these processes have not been adequately conceptualized or dealt with. Not only are an individual's cognitive assessments likely to influence symptom reporting and the types of treatment sought, but they may affect the communication of symptoms to professionals, diagnoses made by those professionals, adherence to treatment regimens, and, consequently, the health of others who come into contact with the individual.

The indirect and subtle impact of culture through cognitive dimensions may explain why the literature on the health care behavior of Mexican Americans remains so inconclusive and contradictory. It seems obvious that structural barriers to health care (availability, transportation, cost, etc.) influence an individual's propensity to seek treatment. Numerous small scale ethnographic studies reveal that sociocultural barriers such as communications problems and discordant belief systems, as well as structural barriers to medical care for Mexican Americans, decrease their medical care utilization (see Newton, Olmedo, and Padilla 1982; Schreiber and Homiak 1981, for numerous examples). Yet, large scale studies employing multivariate techniques reveal little impact of sociocultural factors on medical care utilization (Andersen et al. 1981). For example, Andersen et al. (1981) examined the impact of what they hypothesized to be several culturally influenced barriers to medical care for the Spanish-heritage population of the Southwestern United States. These included the use of folk practitioners and home remedies, familism, residential mobility, and language problems. None of these sets of variables significantly influenced utilization by Mexican Americans. For example, in these data not a single respondent reported that a lack of Spanish-speaking personnel prevented their seeking medical care. While this may be true, the lack of language barriers for even one of the least acculturated Mexican Americans seems implausible. As noted by Mechanic (1979), the insignificance of sociocultural factors in large-scale surveys may reflect inadequate conceptualization, insensitive measures, inappropriate aggregation of data, and inadequate analytical techniques. But the lack of significance associated with sociocultural factors also may reflect an insensitivity to the subtleties of the impact of culture.

It is likely that a lack of English proficiency *is* a major barrier to medical care for Mexican Americans, but that the influence of language cannot be directly assessed. An inability to speak English fluently is associated with lower class membership in which the barriers to health care are the greatest (Angel 1984). Further, if reference group factors influence one's responses to surveys as well as shape one's illness behavior, and if most of one's reference group has little contact with any of the institutions of the larger society, one may not *perceive* the lack of Spanish-speaking personnel as any more of a barrier to medical care than it is to gaining access to any other bureaucratic agency. It is questionable whether one can simply inquire as to the existence of language barriers and take negative findings as indicating the lack of such barriers. In such a case one is attempting to assess the impact of language through the use of the same medium.

It is relevant to add that in the study by Andersen and his colleagues (1981) only one respondent reported seeing a curandero during the year. Since, as mentioned above, the impact of traditional cultural institutions has clearly decreased in recent years (Weaver 1976), probes which phrase questions in terms of antiquated categories will, not surprisingly, miss relevant differences. Again, as mentioned earlier, it is likely that many individuals would hesitate to admit to strangers the use of practices which are generally recognized as unsophisticated. The lack of significance associated with these and other variables examined by Andersen et al., then, most likely reflects the insensitivity of these measures to the subtlety of the impact of culture. Ethnic culture most likely has indirect influences on the cognitive categories through which bodily states and emotions are interpreted and which influence relevant help-seeking options.

Let us conclude this section with the observation that although cognitive categorizations and vocabularies of distress influence the interpretive and behavioral options available to an individual in response to physical or emotional changes, they do not rigidly dictate a specific set of responses to every such change. Rather, they comprise predispositions which interact with situational factors to determine the outcome of any particular illness episode. There is a large body of evidence to indicate that the response to any episode of illness or to any specific symptom depends upon a number of other factors such as stress and the advice of others (Mechanic 1978). As anthropologists have demonstrated, treatment will be sought and treatment regimes adhered to only if they are consistent with the individual's sociocultural construction of reality (Chrisman and Kleinman 1983).

RELABELLING AND REEVALUATION

Contact with medical or mental health professionals further influences the individual's interpretation and evaluation of his or her health. Medical experts transform patients' presenting symptoms into specific diagnoses and provide relevant information regarding cause, seriousness, chronicity, and prognosis. In some cases, physicians transform a patient's attributions of physical illness into a label of psychological disturbance and refer the patient to mental health specialists (Goldberg and Huxley 1980). If he or she accepts the diagnosis, the patient's perceptions and evaluations are transformed. As Frank (1961) points out, the job of the psychotherapist and, by extension, the physician is persuasion — convincing the patient to see his or her problems from the expert's point of view, so that treatment or curative processes can proceed. Indeed, successful psychotherapy can be seen as a restructuring of patients' cognitions to bring them into conformity with normative (medical) standards (Thoits 1985).

It is important to note that professional labelling and evaluation is "fed back" into the cultural system when the individual communicates the outcome to others. Interpersonal processes may not only bring the individual into treatment, but transmit scientific concepts and information from that treatment out into the social network. These informal educational processes have not been studied systematically. We would suggest that informal transmission of medical information may speed the process of acculturation, augmenting inputs from formal education and the mass media.

In summary then, we hypothesize that culture influences every stage of the illness-labelling and help-seeking proccss, from the perception and interpretation of symptoms, to the options one faces in responding to deviations from health through its impact on the development of health-related cognitive categorizations. Such categorizations represent consensual elements through which one's experience of self is filtered and which constitute the socially determined component of individual health.

A RESEARCH AGENDA

The assessment of the impact of culture on each stage of the information processing sequence we have outlined requires new data collection efforts. Existing cross-sectional surveys largely miss the subtleties of the process as we have outlined it here. Most epidemiological studies ask respondents to report the presence/absence or frequency of a battery of symptoms or to assess their general health level. But, as we have pointed out, self reports of symptoms are remarkably inaccurate as well as potentially biased by sociocultural differences in symptom awareness, reference group prevalence, and social desirability. Ideally, objective measures of physical health would make it possible to assess the criterion validity of self reports. These, however, are particularly difficult and expensive to obtain, and objective measures of some symptoms, such as those constituting psychological disturbances, may, in fact, not exist. In the absence of objective criteria some assessment of sensitization of self-monitoring, social desirability, and reference group prevalence is necessary to first assess the systematic biases in symptom awareness and in self reports, since we expect significant sociocultural differences in bodily awareness, and concomitantly, in emotional awareness and expression.

It is rare for epidemiological studies to assess the perceived seriousness of symptoms that are acknowledged by respondents. If we are correct in believing that the perceived seriousness of symptoms varies by their prevalence in an individual's reference group, and if perceived seriousness influences the probability of help-seeking, then, ideally, seriousness measures are necessary in order to better predict help-seeking. Measures to tap other cognitive dimensions, such as prognosis, causation, and personal responsibility would provide a better picture of how culture affects symptom reporting and help seeking.

SOME PROPOSITIONS AND HYPOTHESES

We have now arrived at the point of offering a number of general propositions concerning health-related cognitions and the impact of culture on their content and development. These will be followed by more specific hypotheses concerning the illness experience and behavior of Mexican Americans.

1. Culture influences the probability that individuals notice specific deviations from physical or emotional well-being and the probability that these deviations will be labelled "abnormal."

2. Illness is multidimensional and culture affects the salience and evaluation of each dimension.

a. At the broadest level, health consists of a physical and an emotional component which are only partially differentiated. The more traditional the culture, the less differentiation there will be between physical illness and psychological disturbance.

b. Within the categories of physical and psychological illness, members of more technically developed societies typically will have more differentiated cognitive categories concerning etiology, responsibility, prognosis, etc. than members of traditional societies.[6]

3. Culture interacts with social class to determine the content of cognitive categorizations and vocabularies of distress. Social class can be viewed as a sub-culture or as an aspect of culture which influences such cognitive categories. Social class is associated with differential prevalence of various symptoms and influences the extent to which symptoms are viewed as atypical and noteworthy or as normal and part of everyday life.

4. During the process of cultural change, either as the result of economic development or as the result of migration and assimilation into a host society, health-related cognitive categorizations and vocabularies are altered such that, within any particular cultural group, there exists a gradient from more traditional orientations to more scientific orientations characteristic of the medical knowledge of developed industrialized societies. This gradient will be revealed as subtle differences in cognitions concerning health, and lead to different health perceptions and illness behaviors within the same cultural group.

From these general propositions and using existing data, we propose the following hypotheses concerning the impact of Mexican ethnic culture on perceptions and symptom reporting.

1. Given the lower socioeconomic status of Mexican Americans in general, the fewer symptoms often reported by this group represent culturally influenced underreporting since, in the population at large, lower socioeconomic status is associated with a *greater* likelihood of reporting physiological symptoms. Correction for systematic underreporting of physical and psychophysiological symptoms among Mexican Americans will reveal (a) greater ill health among this group compared to non-Hispanics, (b) greater psychophysiological distress among Mexicans than non-Hispanics, and (c) that these findings will vary by degree of assimilation such that less assimilated Mexican Americans will exhibit higher illness and psychophysiological distress scores than the more assimilated.

2. Controls for the differential prevalence of physical symptoms among Mexican Americans and non-Hispanics will strengthen the relationship between an individual's assessment of his or her health and his or her likelihood of treatment-seeking.

DISCUSSION

We began this discussion with the observation that the fundamental objective of cross cultural research is to establish cognitive or phenomenological equivalence, so that comparable personal realities can be examined across culturally-distinct groups. It is our opinion, however, that the possibility of doing so is far from proven and, in fact, we must ask whether a phenomenologically equivalent reality exists in any objective sense. The central question is whether or not the actual linguistic expression of subjective states constitutes the reality. If we treat linguistic expressions as indicators of latent physical or psychological states, we run the risk of introducing cultural biases into assessments of prevalence, since the imputation of latent status from linguistic indicators represents the culturally-based inference of the researcher.

What implications does such a possibility have for cross-cultural epidemiology? Does it make sense to compare culturally-distinct groups in terms of specific scores on an illness or distress scale? Psychometric scales are constructed with the assumption that individuals can be arrayed along a common metric in terms of health or distress and that individuals with similar scores are similarly health or distressed in some objective sense. Indeed, the entire methodology of scale construction is based on the assumption that there is a phenomenological equivalence which can be identified and compared with the appropriate instruments. We have cited examples of studies which assume that lower Langner scores reflect less actual distress among Mexican Americans than among comparable non-Hispanics. Yet, similar lower self-reported illness scores by less assimilated and economically disadvantaged Mexican Americans make such assumptions suspect.

The fundamental question is whether or not reasonable criteria exist for comparing culturally distinct groups. As we noted earlier the answer is yes when we are dealing with physical pathology. The answer is uncertain for psychopathology, especially for less severe conditions, such as general distress or depression, which are difficult to label pathological, except in their most extreme manifestations. Responses to scales such as the Langner, MacMillan, CES-D and others may or may not reflect the linguistic options available to individuals to express any number of potentially confounded emotional and physical states. Unfortunately, these sorts of scales are the most readily available for epidemiological studies of differential psychopathology. The consequence is that, while we may be interested in questions concerning psychopathology, we tap it using measures which are, to an unknown degree, biased by the linguistic options, values, beliefs, and knowledge individuals inherit from their culture.

For these reasons, we would argue that there are certain specific limitations to cross-cultural epidemiology. We suggest that one alternative way to study ill health and distress is to work *within* an ethnic or cultural group, shifting focus from comparative prevalence rates to factors within a group that enhance or impair health and well-being *as it is defined by that group*. It should be noted that this recommendation is based upon a particular orientation to the utility of prevalence rates in general. We, like other sociologists, see prevalence rates as clues to the social etiology of disease. That is, we have been interested in gender, age, race, marital status, social class, and ethnic differences in disorder because the unequal distributions of disease across these groups suggest factors that may cause physical or psychological illness. These may include such factors as stress, lack of social support, and ineffective coping responses, as well as diet, health practices, and exposure to pathogens. These etiological factors, however, operate within specific cultural contexts.

For example, rather than assuming that lower rates of self-reported psychological distress among Mexican Americans are valid and perhaps due to the greater protectiveness of the family in Mexican culture than in non-Hispanic cultures (e.g., Madsen 1969; Mirowsky and Ross 1980), it would be more reasonable to identify those factors that vary with rates of distress as defined within that culture. Presumably, if there are etiological factors which influence the occurrence and development of disease or disorder in more general ways, we would identify similar factors operating in similar ways within other cultures, despite the fact that diseases are identified and organized differently cross-culturally. What this procedure foregoes is the attempt to compare groups in terms of some universalistic measure of health or illness since, if our hypotheses are correct, no universal and measureable latent phenomenological reality necessarily exists.

As a second alternative we recommend pursuing the subtleties of cultural influences in order to devise correction factors for estimating relative prevalence rates. First, some estimate of sensitivity to bodily sensations could be obtained by comparing objectively measurable physiological states to subjective reports of such sensations (Pennebaker 1982). The second step would require ratings of various symptoms by panels of judges from each culture in terms of perceived prevalence, perceived seriousness, and social desirability. The third step would be to assess the categories of health used in a particular culture and the dimensions along which health is assesssd, by employing multidimensional scaling techniques or confirmatory factor analysis. Ideally, estimates of comparative prevalence corrected for these factors might be obtained. Moreover, these more specific cognitive variables might better predict help-seeking decisions.

In summary then, we have proposed a model which elaborates the impact of culture on health reports and help-seeking as occurring through its influence on specific cognitive structures. In future research we will be examining in detail the content and importance of such structures for different groups. The strength of the concept of structured cognitive categorizations and illness dimensions lies in the fact that it does not treat the interpretation of a symptom as a random or totally idiosyncratic phenomenon, nor as dictated solely by physiological processes and, therefore, similar for everyone. Rather, it frames the interpretation of symptoms within an ongoing process of information seeking and evaluation and allows for a detailed examination of the impact of culture on health reporting and help-seeking. While it is clear from the ethnographic literature that health beliefs and practices are influenced by culture, the specific cognitive mechanisms through which such an influence is exerted have not been elaborated. The present discussion is a step along the way.

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NOTES

[1] Of course this argument could be applied to intracultural differences, such as those associated with social class, as well as to intercultural ones. In this paper we will focus primarily on the impact of culture since we expect these to be the more pronounced and readily discernable.

[2] We might also note that Mexican Americans are significantly underrepresented in mental health facilities (Jaco 1960).

[3] Of course it may be that self reports of health are equally invalid for groups other than Mexican Americans though we will deal with this possibility only indirectly.

[4] Certain evidence suggests that atypical symptoms may be denied rather than attended to (Jemmott, Croyle, and Ditto 1984). Indeed, a major problem in medical care arises when individuals with serious symptoms deny that they are ill and delay seeking medical attention until well along in the pathological process. We cannot, therefore, be certain how atypicality affects symptom reporting, though we expect it to result in attending more often than in denial. Such an hypothesis requires empirical verification.

[5] Social desirability may also affect the individual's private assessments of seriousness. One may not only deny to others, but to *oneself* the existence or importance of a symptom.

[6] Conceptualizations of illness in traditional societies can certainly be complex and convoluted. Frake (1961) reports on disease concepts among the Subunun of Mindanao

and details the complexity of their diagnostic processes and categories for skin diseases. Nonetheless, while this diagnostic lexicon is complex, the Subanun are not very concerned with such things as differentiating between types of pathogens, which include plant floss, microscopic mites, intrusive objects, symbolic acts, stress, and soul loss (Frake 1961, p. 125). These include both physical and non-physical objects or acts. In addition, in contrast to Western medicine, knowledge of the exact pathogen is not crucial for diagnosis of a specific illness. Our point is that even in traditional societies with a detailed and complex set of illness categories and a complex pharmacopoeia, there is a greater conflation of the mental, physical, and the supernatural than in scientifically-informed Western cultures. We might characterize the Western medical model as based on a radical Cartesian separation of mind and body which is less typical of traditonal non-Western cultures, and which leads to prageasin differentiation of physiological and psychological states.

REFERENCES

Aday, L. A., R. Andersen, and G. V. Fleming
1980 Health Care in the U.S.: Equitable for Whom? Beverly Hills: Sage.
Aday, L. A., G. Y. Chiu, and R. Andersen
1980 Methodological Issues in Health Care Surveys of the Spanish Heritage Population. American Journal of Public Health 70: 367—374.
Andersen, R., J. Kravits, and O. W. Anderson
1975 Equity in Health Services: Empirical Analyses in Social Policy. Cambridge, Mass: Ballinger.
Andersen, R., S. Z. Lewis, A. L. Giachello, L. A. Aday, and G. Chiu
1981 Access to Medical Care among the Hispanic Population of the Southwestern United States. Journal of Health and Social Behavior 22: 78—89.
Angel, R.
1984 The Costs of Disability for Hispanic Males. Social Science Quarterly 65: 426—443.
Angel, R. and P. D. Cleary
1984 The Effects of Social Structure and Culture on Reported Health. Social Science Quarterly 65: 814—828.
Antunes, G., C. Gordon, C. M. Gaitz, and J. Scott
1974 Ethnicity, Socioeconomic Status, and the Etiology of Psychological Distress. Sociology and Social Research 58: 361—369.
Basso, Keith H. and Henry A. Selby (eds.).
1976 Meaning in Anthropology. Albuquerque: University of New Mexico Press.
Becker, Marshall H. and Lois A. Maiman
1983 Models of Health-Related Behavior. In David Mechanic (ed.) Handbook of Health, Health Care, and the Health Professions. Pp. 539—568. New York: The Free Press.
Berkanovic, B.
1980 The Effect of Inadequate Language Translation on Hispanics' Responses to Health Surveys. American Journal of Public Health 70: 1273—1276.
Burnam, M. Audrey, Dianne M. Timbers, and Richard L. Hough
1984 Two Measures of Psychological Distress Among Mexican Americans, Mexicans and Anglos. Journal of Health and Social Behavior 25: 24—33.
Byrne, Don., M. A. Steinberg, and M. S. Schwartz
1968 Relationship Between Repression-Sensitization and Physical Illness. Journal of Abnormal Psychology 73: 154—155.

Chesney, A. P., J. A. Chavira, R. P. Hall, and H. E. Gary
1982 Barriers to Medical Care of Mexican-Americans: The Role of Social Class, Acculturation, and Social Isolation. Medical Care 20: 883—891.

Chrisman, Noel J. and Arthur Kleinman
1983 Popular Health Care, Social Networks, and Cultural Meanings: The Orientation of Medical Anthropology. In David Mechanic (ed.) Handbook of Health, Health Care, and The Health Professions. Pp. 569—590. New York: The Free Press.

Clark M.
1970 Health in the Mexican-American Culture. Berkeley, Calif: Univ. of California Press.

Cotton, John L.
1981 A Review of Research on Schacter's Theory of Emotion and the Misattribution of Arousal. European Journal of Social Psychology 11: 365—397.

D'Andrade, R. G., N. R. Quinn, S. B. Nerlove, and A. K. Romney
1972 Categories of Disease In American-English And Mexican-Spanish. In A. K. Romney, R. N. Shepard, and S. B. Nerlove (eds.) Multidimensional Scaling. Pp. 9—54. New York: Seminar Press.

Demers, R., R. Altamore, H. Mustin, A. Kleinman, and D. Leonardi
1980 An Exploration of the Depth and Dimensions of Illness Behavior. Journal of Family Practice 11: 1085—1092.

Dohrenwend, B. P. and B. S. Dohrenwend
1969 Social Status and Psychological Disorder: A Causal Inquiry. New York Wiley-Interscience.

Eisenberg, L.
1977 Disease and Illness: Distinctions Between Professional and Popular Ideas of Sickness. Culture, Medicine, and Psychiatry 1: 9—23.

Febrega, H. Jr.
1974 Disease and Social Behavior: An Interdisciplinary Perspective. Cambridge, Mass: MIT Press.

Fabrega, H., Jr., J. D. Schwartz, and C. A. Wallace
1968 Ethnic Differences in Psychopathology, II: Specific Differences with Emphasis on a Mexican-American Group. Journal of Psychiatric Research 6: 221—235.

Fabrega, H., Jr. and D. B. Silver
1973 Illness and Shamanistic Curing in Zinacantan. Stanford, Calif: Stanford Univ. Press.

Frake, C. O.
1961 The Diagnosis of Disease Among the Subanun of Mindanao. American Anthropologist 63: 113—132.

Frank, J.
1961 Persuasion and Healing. New York: Schocken Books.

Frerichs, R. R., C. S. Aneshensel, and V. A. Clark
1981 Prevalence of Depression in Los Angeles. American Journal of Epidemiology, 113: 691—699.

Gaitz, C. and J. Scott
1974 Mental Health of Mexican Americans: Do Ethnic Factors Make a Difference? Geriatrics 29: 103—110.

Geertz, C.
1973 The Interpretation of Cultures. New York: Basic Books.
1984 Local Knowledge: Further Essays in Interpretive Anthropology. New York: Basic Books.

Goldberg, D. and P. Huxley
1980 Mental Illness in the Community: The Pathway of Psychiatric Care. London: Tavistock.
Good, B. S. and M. D. Good
1981 The Meaning of Symptoms: A Cultural Hermeneutic Model for Clinical Practice. The Relevance of Social Science for Medicine. In L. Eisenberg and A. Kleinman (eds.). Pp. 165—196. Dordrecht, Holland: D. Reidel.
Gove, W. R. and M. R. Geerken
1977 Response Bias in Surveys of Mental Health: An Empirical Investigation. American Journal of Sociology 82: 1289—1317.
Hansell, S. and Mechanic, D.
1984 The Development of Introspectiveness and Symptom Reporting Among Adolescents. Paper presented at the 79th Annual Meetings of the American Sociological Association, San Antonio, Texas, August.
Harwood, A. (ed.).
1981 Ethnicity and Medical Care. Cambridge, Mass.: Harvard Univ. Press.
Hochschild, A. R.
1979 Emotion Work, Feeling Rules, and Social Structure. American Journal of Sociology 85: 551—575.
1983 The Managed Heart: The Commercialization of Human Feeling. Berkeley, Calif.: University of California Press.
Horwitz, A. V.
1977 The Pathways into Psychiatric Treatment: Some Differences Between Men and Women. Journal of Health and Social Behavior 18: 169—178.
Hulka, B. S., L. L. Kupper, and J. C. Cassel
1972 Determinants of Physician Utilization. Medical Care 10: 300—309.
Jaco E. G.
1960 The Social Epidemiology of Mental Disorders: A Psychiatric Survey of Texas. New York: Russell Sage Foundation.
Jemmott, J. B. III, R. T. Croyle, and P. H. Ditto
1984 Subjective Judgments of Illness Prevalence and Seriousness. Unpublished Manuscript, Department of Psychology, Princeton University.
Kadushin, C.
1969 Why People Go to Psychiatrists. New York: Atherton Press.
Keefe, Susan
1980 Personal Communities in the City: Support Networks Among Mexican-Americans and Anglo-Americans. Urban Anthropology 9: 51—74.
Kessler, R. C., R. L. Brown, and C. L. Broman
1981 Sex Differences in Psychiatric Help-Seeking: Evidence from Four Large-Scale Surveys. Journal of Health and Social Behavior 22: 29—64.
Kleinman, A.
1980 Patients and Healers in the Context of Culture Berkeley, Calif.: Univ. of California Press.
1982 Neurasthenia and Depression: A Study of Somatization and Culture in China. Culture, Medicine, and Psychiatry 6: 117—190.
Kleinman, A. and J. Kleinman
1984 Somatization: The Interconnection Between Depressive Experiences, the Meanings of Pain and Culture. Unpublished manuscript, Department of Anthropology, Harvard University.
Koos. E.
1954 The Health of Regionville: What the People Thought and Did About It. New York: Columbia University Press.

Leventhal, H., D. Meyer, and D. Nerenz
1980 The Common Sense Representation of Illness Danger. In S. Rachman (ed.), Contributions to Medical Psychology (Vol. 2). Pp. 7—30.
Linz, D., S. Penrod, S. Siverhus, and H. Leventhal
1982 The Cognitive Organization of Disease and Illness Among Lay Persons. Unpublished manuscript. Department of Psychology, Wisconsin.
Madsen, W.
1969 Mexican-Americans and Anglo-Americans: A Comparative Study of Mental Health in Texas. In S. C. Plog and R. B. Edgerton (eds.) Changing Perspectives in Mental Illness. Pp. 217—241. New York: Holt, Rinehart, & Winston.
Marcus, H.
1977 Self-Schemata and Processing Information About the Self. Journal of Personality and Social Psychology 35: 63—78.
Mechanic, D.
1980 The Experience and Reporting of Common Physical Complaints. Journal of Health and Social Behavior 21: 146—155.
1979 Correlates of Physician Utilization: Why do Major Multivariate Studies of Physician Utilization Find Trivial Psychosocial and Organizational Effects? Journal of Health and Social Behavior 20: 387—396.
1978 Medical Sociology (Second edition). New York: The Free Press.
Mirowsky, J. and C. E. Ross
1980 Minority Status, Ethnic Culture, and Distress: A Comparison of Blacks, Whites, Mexicans, and Mexican Americans. American Journal of Sociology 86: 497—495.
1984 Mexican Culture and its Emotional Contradictions. Journal of Health and Social Behavior 25: 2—13.
Newton, F., E. L. Olmedo, and A. M. Padilla
1982 Hispanic Mental Health Research: A Reference Guide. Berkeley: Univ. of California Press.
Nichter, Mark
1981 Idioms of Distress: Alternatives in the Expression of Psychological Distress: A Case Study from South India. Culture, Medicine, and Psychiatry 5: 397—408.
Obeyesekere, G.
1978 Illness, Culture, and Meaning. In A. Kleinman (ed.) Culture and Healing in Asian Societies. Pp. 253—263. Cambridge, Mass: Schenkman.
Pennebaker, J. W.
1982 The Psychology of Physical Symptoms. New York: Springer-Verlag.
Quesada, T., W. Spears and P. Ramos
1978 Interracial Depressive Epidemiology in the Southwest. Journal of Health and Social Behavior 19: 77—85.
Reisenzein, R.
1983 The Schachter Theory of Emotion: Two Decades Later. Psychological Bulletin 94: 239—264.
Roberts, R. E.
1980 Reliability of the CES-D Scale in Different Ethnic Contexts. Psychiatry Research 2: 125—134.
Rosenstock, I. M.
1966 Why People Use Health Services (Part 2). Milbank Memorial Fund Quarterly 44: 94—127.
Ross, C. E. and J. Mirowsky
1984 The Worst Place and the Best Face. Social Forces 62: 529—536.

Salber, E. J. and A. G. Beza
1980 The Health Interview Survey and Minority Health. Medical Care 18: 319—326.

Saunders, L.
1954 Cultural Differences and Medical Care: The Case of the Spanish-Speaking People in the Southwest. New York: Russell Sage Foundation.

Schachter, S. and J. E. Singer
1962 Cognitive, Social and Physiological Determinants of Emotional State. Psychological Review 69: 379—399.

Schreiber, J. M. and J. P. Homiak
1981 Mexican Americans In Ethnicity and Medical Care. A. Harwood (ed.). Pp. 264—336. Cambridge: Harvard Univ. Press.

Suchman, Edward A.
1965a Social Patterns of Illness and Medical Care. Journal of Health and Human Behavior 6: 2—16.
1965b Stages of Illness and Medical Care. Journal of Health and Human Behavior 6: 114—128.

Tessler, R. and D. Mechanic
1978 Psychological Distress and Perceived Health Status. Journal of Health and Social Behavior 19: 254—262.

Thoits, P. A.
1984 Coping, Social Support, and Psychological Outcomes: The Central Role of Emotion. Shaver (ed.) Reivew of Personality and Social Psychology, Vol 5. Pp. 213—232. Beverly Hills, Calif.: Sage.
1985 Self-Labelling Processes in Mental Illness: The Role of Emotional Deviance. American Journal of Sociology 91: 221—249.

Thoits, P. A. and M. T. Hannan
1979 Income and Psychological Distress: The Impact of an Income Maintenance Experiment. Journal of Health and Social Behavior 20: 120—138.

Ulim, R. C.
1984 Understanding Cultures: Perspectives in Anthropology and Social Theory. Austin: University of Texas.

Vega. W., G. Warheit, J. Buhl-Auth, and K. Meinhardt
1984 The Prevalence of Depressive Symptoms Among Mexican Americans and Anglos. American Journal of Epidemiology 120: 592—607.

Vega, W., G. Warheit, and R. Palacio
1985 Psychiatric Symptomatology Among Mexican American Farmworkers. Social Science and Medicine 20: 39—45.

Velimirovic, B. (ed).
1978 Modern Medicine and Medical Anthropology in the United States-Mexico Border Population. Washington, D.C.: World Health Organization, Pan American Health Organization Scientific Publication No. 359.

Vernon, S. W. and R. E. Roberts
1981 Measuring Nonspecific Psychological Distress and Other Dimensions of Psychopathology. Archives of General Psychiatry 38: 1239—1247.

Vernon, S. W., R. E. Roberts, and E. S. Lee
1982 Response Tendencies, Ethnicity, and Depression Scores. American Journal of Epidemiology, 116: 482—495.

Veroff, J., R. A. Hulka, and E. Douvan
1981 Mental Health in Amercia: Patterns of Help-Seeking from 1957—1976. New York: Basic Books.

Weaver, J. L.
1976 National Health Policy and the Underserved: Ethnic Minorities, Women, and the Elderly. St. Louis: C. V. Mosby.
Wheaton, Blair
1982 Uses and Abuses of the Langner Index: A Reexamination of Findings on Physical and Psychological Distress. In David Mechanic (ed.) Symptoms, Illness Behavior, and Help-Seeking. Pp. 25—53. New York: Prodist.
Whitt, H. and R. L. Meile
1985 Alignment, Magnification, and Snowballing: Processes in the Definition of 'Symptoms of Mental Illness.' Social Forces 63: 682—697.
Winch, P.
1958 The Idea of a Social Science and its Relation to Philosophy. London: Routledge and Kegan Paul.
1964 Understanding A Primitive Society. American Philosophical Quarterly 1: 307—324.
Wolinsky, F. D.
1978 Assessing the Effects of Predisposing, Enabling, and Illness-Morbidity Characteristics on Health Service Utilization. Journal of Health and Social Behavior 19: 384—396.
Yokopenic, P. A., V. A. Clark, and C. S. Aneshensel
1983 Depression, Problem Recognition, and Professional Consultation. Journal of Nervous and Mental Disease 171: 15—23.
Young, J.
1980 Medical Choice in a Cultural Context: Treatment Decision Making in a Mexican Town. New Brunswick, N. J.: Rutgers Univ. Press.
Zborowski, M.
1952 Cultural Components in Responses to Pain. Journal of Social Issues 8: 16—30.
Zillman, D.
1978 Attribution and Misattribution of Excitatory Reactions. In John H. Harvey, Willian Ickes, and Robert F. Kidd (eds.) New Directions in Attribution, Vol. 2. Pp. 335—361.
Zola, I. K.
1964 Illness Behavior of the Working Class: Implications and Recommendations. In Arthur B. Shostak and William Gomberg (eds.), Blue-Collar World: Studies of the American Worker. Pp. 350—361. Englewood Cliffs, N.J.: Prentice-Hall.
1966 Culture and Symptoms: An Analysis of Patient's Presenting Complaints. American Sociological Review 31: 615—630.