CONCEPTS AND A MODEL FOR THE COMPARISON OF MEDICAL SYSTEMS AS CULTURAL SYSTEMS*

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Abstract—A model and related concepts are present for ethnographic and comparative research on medical systems as cultural systems. The major structural and functional aspects of the health care system model are briefly sketched. Clinical realities, explanatory model (EM) transactions in health care relationships, a distinction between disease/illness, cultural healing and cultural naturopathy, and the core adaptive tasks of health care systems are concepts based on this model which have practical clinical and public health, as well as research, implications. A number of hypotheses are outlined which can be used to focus medical ethnographies and to construct comparative cross-cultural studies of health care systems. The model, concepts, and hypotheses attempt to exploit medical anthropology's fundamental tension between medical and anthropological interests; and thereby to contribute to the development of theory that is original to this discipline.

INTRODUCTION

The task assigned to me was to examine theories and concepts that can be used to compare medical systems as cultural systems. Review of the relevant medical anthropology literature, in preparation for writing this paper, revealed, with a few notable exceptions [1], a paucity of well-developed theoretical positions on this subject which could be neatly summarized, compared, and contrasted. Instead, most of the literature is taken up with empirical studies that usually do not specify the theoretical frameworks they employ, that unsystematically import concepts from social science or biomedicine, and that, as a result, are fragmented and difficult to relate. We possess a large array of empirical descriptions, but few cross-cultural comparisons, and hardly any attempts to test specific hypotheses. Here is evidence of the lack of a theoretical base, which is the reason for holding this Conference.

Rather than try to integrate and critique the few theoretical straws in the wind, frail things that they are, I shall, at the risk of appearing egocentric, present a model that I have been working with for the past 5 years. That model is itself an outgrowth of my own field research and my reading of what relevant theory there is, as well as empirical studies [2]. The model is an attempt to understand health, illness, and healing in society as a cultural system, and to compare such systems cross-culturally.

A theoretical model of medicine as a cultural system, if it is to be useful, should specify what that system is and how it functions. It should provide a method for describing individual systems and for making cross-cultural comparisons between different medical systems. It also should produce a more systematic analysis of the impact of culture on sickness and healing than is possible without such a framework.

Furthermore, a model of medicine as a cultural system will be valuable if it can (1) operationalize the concept of culture in the health domain in more precise and potentially quantifiable ways; (2) relate directly to clinical questions; (3) specify hypotheses which could be falsified against existing data or confirmed in prospective field studies; (4) provide systematic interdisciplinary translation between anthropology and the health sciences; and (5) provide a terminology that is not limited to biomedicine, but through which biomedicine can be related to other professional, as well as popular and folk, healing traditions within a broader comparative cross-cultural science of sickness and health care.

My interest here is not to convince you that this is the solution-framework for our field, but rather to place before you one type of problem-framework that we can react to, criticize, and hopefully move beyond. Provisional though it be, this model does suggest at least a few of the advantages to be gained by developing a theory of medicine as a cultural system. It doubtless will also illuminate limitations, but these relate to the specific characteristics of the model, not to models for this field generically. Thus, this presentation is intended to provoke participants at the Conference and readers of the proceedings to take this model apart in order to build others that will perhaps eventually provide us with a unified framework. Even if it simply provides a common set of terms useful for talking about medicine in different societies that would be an advance over the chaotic situation that now prevails. The model has been found helpful in the study of medicine in Chinese cultures and in making comparisons with medicine in the U.S. [3, 4].

A word of caution is indicated. No matter how they are construed, medical systems are both social and cultural systems. That is, they are not simply systems of meaning and behavioral norms, but those meanings and norms are attached to particular social relationships and institutional settings. To divorce the cultural system from the social system aspects of health care in society is clearly untenable. The title of this paper merely reflects an emphasis on the cul-

tural dimension. I am sure that other participants at the Conference will make the alternate emphasis. The model described below, which has been construed in other papers as an ecological model relating “external” (social, political, economic, historical, epidemiological and technological) factors to “internal” (psychophysiological, behavioral and communicative) processes, grounds medical beliefs and activities in socio-political structures and in particular local environmental settings. Again, for reasons of emphasis, I shall not focus on this aspect of the model, only note that it is consistent with the view of medical systems as cultural systems. Our concern will be to understand how culture, here defined as a system of symbolic meanings that shapes both social reality and personal experience, mediates between the “external” and “internal” parameters of medical systems, and thereby is a major determinant of their content, effects, and the changes they undergo.

HEALTH, ILLNESS, AND CARE AS A CULTURAL SYSTEM

Health, illness, and health care-related aspects of societies are articulated as cultural systems. Much field research supports this thesis, which marks a divide between the older and the newer approaches to medical anthropology [3, 5, 6]. Such cultural systems, which I shall call health care systems [7], are, like other cultural systems, e.g. kinship and religious systems, symbolic systems built out of meanings, values, behavioral norms, and the like. The health care system articulates illness as a cultural idiom, linking beliefs about disease causation, the experience of symptoms, specific patterns of illness behavior, decisions concerning treatment alternatives, actual therapeutic practices, and evaluations of therapeutic outcomes. Thus, it establishes systematic relationships between these components.

Because they are part of a cultural system, health, illness, and health care need to be understood in relation to each other. Health beliefs and behavior, illness beliefs and behavior, and health care activities are governed by the same set of socially sanctioned rules.

To examine one in isolation from the others distorts our knowledge of the nature of each and how they function in the context of specific health care systems; it also leads to errors in cross-cultural comparisons. Semantic network analysis [8] is one method of demonstrating these linkages and their important implications for health care. Symbolic analyses have also disclosed the organization of the health care aspects of society as a cultural system [9–14]. However, it is to be expected that full appreciation of the structure and functions of this cultural system will only follow upon ethnographic studies that test specific hypotheses generated by theoretical models of the system, and that use those models to focus their phenomenological descriptions [15]. We can already see this happening in field studies of medicine in Chinese culture [3], which have become more sophisticated, in part, in response to better medical anthropological and cross-cultural medical models. Cross-cultural comparisons either must wait for the emergence of this new kind of medical ethnography, or incorporate that approach simultaneously in several different field settings. Studies of change in health beliefs and practices must examine changes in health care systems.

THE STRUCTURE OF HEALTH CARE SYSTEMS

Most health care systems contain three social arenas within which sickness is experienced and reacted to (see Fig. 1). These are the popular; professional; and folk arenas. The popular arena comprises principally the family context of sickness and care, but also includes social network and community activities. In both Western and non-Western societies somewhere between 70 and 90% of sickness is managed solely within this domain [4, 16, 17]. Moreover, most decisions regarding when to seek aid in the other arenas, whom to consult, and whether to comply, along with most lay evaluations of the efficacy of treatment, are made in the popular domain. Until very recently, medical anthropology tended to deemphasize studies of this domain, while at the same time it overemphasized studies of the folk arena. The latter consists of non-professional healing specialists.
Medical systems as cultural systems

sometimes classified by ethnographers into sacred and secular groups. The professional arena consists of professional scientific ("Western" or "cosmopolitan") medicine and professionalized indigenous healing traditions (e.g. Chinese, Ayurvedic, Yunani, and chiropractic).

These arenas contain and help construct distinct forms of social reality. That is, they organize particular subsystems of socially legitimated beliefs, expectations, roles, relationships, transaction settings, and the like [18]. These socially legitimated contexts of sickness and care, I shall refer to as separate clinical realities [19]. From the standpoint of our model these clinical realities are culturally constructed. They differ not only for different societies, but also for the different sectors or arenas of the same health care system, and often for different agencies and agents of care in the same sector. Furthermore, they accurately reflect major changes in the underlying socio-political sectors of care and their ideological (cultural) structures.

THE CORE ADAPTIVE TASKS OF HEALTH CARE SYSTEMS

From a functional perspective, health care systems perform certain culturally (and frequently psychosocially) adaptive tasks in the face of sickness [20]. For analytic and comparative purposes six core adaptive tasks can be distinguished:

1. The cultural construction of illness as a socially learned and sanctioned experience (see section on disease/illness below).
2. The cultural construction of strategies and evaluative criteria to guide choices amongst alternative health care practices and practitioners, and to evaluate the process and, most importantly, the outcome (efficacy) of clinical care.
3. The cognitive and communicative processes involved in the management of sickness, including: labeling, classifying, and providing personally and socially meaningful explanations.
4. Healing activities per se, including all types of therapeutic interventions, from diet, drugs, and surgery to psychotherapy, supportive care, and healing rituals.
5. Deliberate and non-deliberate health enhancing (largely preventive) and health lowering (sickness producing) behaviors [21].
6. The management of a range of therapeutic outcomes, including cure, treatment failure, recurrence, chronic illness, impairment, and death.

These functions are what health care or healing is all about. Although each function can be identified in systems of health care in virtually all societies for which we possess adequate ethnographic data [3, 22], the cross-cultural variation in the mechanisms used to fulfill these core clinical tasks is considerable. There also are obvious differences in the way certain of the tasks are performed by the entire health care system, while others are carried out by particular sectors or subsectors. Major discrepancies in the performance of specific tasks also reflect substantial differences in clinical realities.

Healing, in one sense, is the sum of the core clinical tasks of the health care system. That implies it is the cultural system as a whole which heals. This type of healing we shall refer to as cultural healing. Although the healing process usually involves two related activities—the provision of effective control of the disease and of personal and social meaning for the experience of illness—cultural healing principally involves the latter. From this perspective, then, we recognize the paradox that the cultural shaping of illness as a psychosocial experience, under the influence of cultural rules which govern the perception, valuation, and expression of symptoms and which determine the particular characteristics of the sick role, is itself part of the healing process. Similarly, the socially sanctioned criteria for evaluating therapeutic efficacy, another ingredient of cultural healing, can produce the additional paradox that healing is evaluated as successful because the sickness and its treatment have received meaningful explanations, and related social tensions and threatened cultural principles have been dealt with appropriately, in spite of the fate of the sick person and his sickness, as has been suggested by Turner [14], Douglas [23], Kleinman and Sung [24], and Young [25]. From the standpoint of the health care system model, cultural healing occurs so long as the core clinical tasks are adequately performed. When that happens, healing must take place; there is a “fit” between expectations, beliefs, behavior, and evaluations of outcome. Cultural healing clearly raises basic questions about how sickness and therapeutic efficacy are to be construed, and how the core clinical tasks of health care systems are to be evaluated and compared; questions which we shall return to later in the paper. Healing, then, needs to be evaluated on different analytic levels: physiological; psychological; social; and cultural.

Just as the cultural construction of the illness experience and of the criteria for evaluating therapeutic outcome are built into health care systems, so too are institutionalized conflicts between lay and practitioner views of clinical reality and evaluations of therapeutic success. These conflicts, which are heightened by increasing differentiation (specialization of knowledge and social role), and which therefore are greatest in more modern societies and in illness episodes which cross different sectors and subsectors of the health care system, systematically produce problems for clinical care. I shall refer to this process as cultural iatrogenesis [26]. In other words, on the level of the cultural system, certain obstacles to effective health care, such as major discrepancies between the therapeutic goals of practitioners and patients [27, 28], are built into the workings of the health care systems, as the next section will illustrate.

EXPLANATORY MODEL TRANSACTIONS IN HEALTH CARE RELATIONSHIPS

In each sector of the health care system, explanatory models (EMs) can be elicited from practitioners, patients, and family members for particular sickness episodes [29–31]. EMs contain explanations of any or all of five issues: etiology; onset of symptoms; pathophysiology;
course of sickness (severity and type of sick role); and treatment. EMs are tied to specific systems of knowledge and values centered in the different social sectors and subsystems of the health care system. Thus they are historical and socio-political products. Health care relationships (e.g. patient–family or patient–practitioner relationships) can be studied and compared as transactions between different EMs and the cognitive systems and social structural positions to which they are attached. On the cultural level, we can view these transactions as translations between the different idioms into which the separate health care system sectors articulate illness as psychocultural networks of beliefs and experiences. Not infrequently, EMs conflict. When they do, recent evidence suggests these conflicts impede health care [30, 32]. Here communication has been shown to be a major determinant of patient compliance, satisfaction, and appropriate use of health facilities, while cultural influences on clinical communication, when unappreciated and not responded to, have been shown to lead to substantial problems in patient care [11, 33].

In terms of our model, EMs construct different clinical realities for the same sickness episode, which in turn are reflected in discrepant expectations and miscommunication, and ultimately in poor clinical care. These conflicts reveal the underlying discrepancies in status and power between the key participants in health care relationships.

Since much of clinical communication takes place in the context of the family and lay referral system, and since, even when it occurs with practitioners, it often involves the family as well as the patient, the traditional dyadic model we employ to understand this process is inadequate and almost certainly a serious distortion of the more complex, multi-person transactions that actually occur in most of health care. For example, though the EMs of biomedicine may structure a view of clinical reality in which the sickness is located within the body of the sick person, and care is viewed as treatment of the diseased organ by the doctor, those of the popular culture may locate the problem in the family and may label the entire family as sick. The target of treatment, then, will be seen as involving considerably more than the patient’s body. The doctor will be viewed as only one, and perhaps not the most important, agent of treatment. And the family–patient relationship or family–doctor relationship will be regarded as the “real” therapeutic relationship. Similarly, patient and family EMs will lead to treatment interventions and evaluations of therapeutic outcome that most of the time have nothing to do with biomedicine, and that therefore require other than biomedical concepts for their explanation.

The explanatory model concept illuminates how problems in clinical communication frequently represent conflicts in the way clinical reality is conceived in the popular, folk, and professional arenas of the health care system; and therefore it points to the systematic entailment of these problems within that cultural system. An illustration of this process is the usually tacit but often significant conflicts between professional medical (especially biomedical) EMs that construe sickness as disease and lay (popular culture) EMs that construe sickness as illness [31].

**DISEASE AND ILLNESS EMs OF CLINICAL REALITY**

A valuable, if still incompletely worked out, theoretical distinction in medical anthropological writings [34] is that between disease and illness aspects of sickness. In the language of our model, disease denotes a malfunctioning in or maladaptation of biological and/or psychological processes. Illness, on the other hand, signifies the experience of disease (or perceived disease) and the societal reaction to disease. Illness is the way the sick person, his family, and his social network perceive, label, explain, evaluate, and respond to disease.

Neither disease nor illness is a thing, an entity, instead they are different ways of explaining sickness, different social constructions of reality. Disease is most commonly associated with the EMs of professional practitioners (modern or indigenous), where it relates to special theories of disease causation and nosology that are stated in an abstract, highly technical, usually impersonal idiom (e.g. the disease models of biomedicine, or Chinese and Ayurvedic medicine). Although these EMs are frequently segregated from the general public and have traditionally involved limited access for an elite group, more and more in modern societies this knowledge has been made available to and is used by the laity. Illness is principally associated with the EMs of the popular culture arena of health care, where sickness is most frequently articulated in a highly personal, non-technical, concrete idiom concerned with the life problems that result from sickness. Besides the family, illness EMs are sometimes used by practitioners who employ a psychosomatic or family therapy framework, and especially by folk practitioners, who, even if they employ a technical theoretical EM, tend to couch it in the popular cultural idiom [30, 35, 36]. Support for the last category comes from the frequently documented finding that folk healers who work with cosmological explanations often proffer them in association with strikingly sensitive sociological and psychological explanations [14, 19, 23].

Viewed from the perspective of the cultural system, health care relationships frequently are transactions between disease and illness models of sickness. Here we find the culturally construed conflict, previously mentioned, in which professional practitioners see sickness only as disease and proffer explanations that transmit technical information and treatments that are technical "fixes", whereas patients seek not only symptom relief, but also personally and socially meaningful explanations and psychosocial treatments for illness [31]. Put somewhat differently, professional practitioners talk about sickness in a sector-specific language of biological functions and behavior, whereas patients and families, even when they incorporate terms from the former, talk about sickness in a culture-wide language of experience [37]. One reason why indigenous folk healers do not disappear when modernization creates modern professional medical systems is that they often are skilled at treating illness [24]. Indeed, we can look upon the legitimated role of social workers, psychiatrists, pastoral counselors, and patient advocates, as well as folk healers, in fully modern societies such as the U.S. as.
using a language of experience and treatment for illness, which would otherwise go untalked about and untreated when sickness extends beyond the context of the family into the professional biomedical domain.

Future comparative cross-cultural studies of health care systems may be able to test the intriguing hypothesis generated by this discussion that cultural healing should be a regular feature of small-scale, pre-literate societies, a less regular feature of modernizing societies, and significantly weakened in fully modern societies, whereas cultural iatrogenesis should relate inversely to this predicted correlation. A related hypothesis is that the symbolic meanings attributed to the experience of illness are the cultural medium for the placebo effect as well as the basis for clinical management problems, and that the former is lessened and the latter heightened by social change and cultural pluralism. Other interesting hypotheses spun off from our model will be taken up in the final section of the paper.

Another researchable issue is whether in fully modern societies the spread of the biomedical disease model in the popular culture [38] is transforming the health care-related beliefs and expectations of that sector, so that lay people, especially in the educated middle-class, are operating with a more mechanistic and less psychosocial model of clinical reality, and are accordingly more interested in technical information and interventions, and less interested in socially meaningful explanations and psychosocial interventions. To answer this question we will have to learn much more about the structure of popular medical rationality in developing and fully developed societies, not just amongst minority groups but also in the mainstream culture. And we will need to be able to compare and contrast popular medical rationality with both biomedical rationality and its transforms in actual clinical practice. That will obviously require a new research terminology, since biomedical rationality cannot be used to study these other cognitive domains on their own terms. For example, Zola [38] argues that to appreciate the nature of popular medical thought we must begin with the concept of "trouble". This is a broad popular category containing amongst a range of troubles, troubles due to sickness, and linking to a broader set of management options than simply medical treatments. It also will require a new research methodology for analyzing and comparing clinical realities, including biomedical versions of clinical reality. Here an autonomous anthropology of suffering and human services would offer distinct advantages not to be gained from a medical anthropology dominated by biomedical paradigms.

The EM model, unlike the research strategies found in most medical ethnographies, focuses on actual transactions between patients (and their families) and practitioners. It suggests that merely eliciting the ideas of the one or the other, without studying how those ideas interact, is insufficient. It is the process of interaction which discloses the real structures of knowledge, logic, and relevance that operate in different health care sectors and systems, and which reveals how they are used in the healing process. Ethnomedical taxonomies do not provide this data, and therefore are a serious distortion of the nature and function of medical cognition. On the other hand, the EM model, because it is a model of cognitive transactions in health care, promises to grant us a deeper appreciation of the mechanisms through which cultural influences decisions about and evaluations of treatment.

Models of communication and cognitive change, like the EM model, can be used to study pluralism in medical beliefs, choices, and treatments, whose extent and significance were only now beginning to appreciate [39]; indeed the EM model is based on an understanding of health care systems as pluralistic systems. Such models also can be applied in studies of how medical modernization and indigenization affect cognition and behavior as well as institutions [13]. These are the kinds of questions that new conceptual models in medical anthropology need to study. Such models, like the EM framework, must be able to examine both individual as well as social dimensions of health care beliefs and actions. Neither alone gives a satisfactory analysis of sickness and healing.

But the study of explanatory model transactions in health care is only one component of the larger comparative study of clinical realities. That larger study, which almost certainly will extend and change our knowledge of the cultural context of sickness and care, requires methods which are not yet available. Those methods, given the nature of the problem, must be interdisciplinary: they must draw from ethnographic, clinical, epidemiological, and social psychological sources. They must relate sociopolitical and environmental determinants to biological and cognitive processes through the medium of cultural systems of meaning. Clearly, they will require models and concepts which consider health and sickness to be the results of complex multi-factor interactions, on biological, psychological and social levels, not the results of single determinants operating on only one level of analysis. Notwithstanding this early stage of development in research methods, the evolution of a more precise and complex problem-framework is an indication of the advance of theory, and also a sign that our present theories are still inadequate.

All of which suggests that this area of medical anthropology is undergoing a shift in paradigms. The old research paradigm, built by Rivers, Sigerist, Ackerknecht, Clements, and other "founding fathers" of our discipline to conceptualize medicine in "primitive" societies, is simply no longer sufficient for integrating the more complex and sophisticated findings that are the result of an extension of our interest toward the full range of social contexts and medical systems, and toward a much wider set of concerns than the traditional biomedical issues in "medicine" [3]. The new paradigm, whatever it be, will probably not only help us to rethink aspects of our own discipline, but also to rethink medicine as well, since the medical enterprise is similarly suffering from antiquated conceptual models and the absence of new meta-theoretical exploration, especially with respect to its social involvements. For example, now that family medicine and primary care see social science as one of their basic sciences, it is appropriate to use medical anthropological ideas to help them construct a new paradigm for clinical practice. Another example would be refor-
mulating the "medical model", which, as it presently stands in biomedicine, is notoriously inadequate. A reformulation of the medical model ought to include medical anthropology's understanding of medicine as a cultural system, as well as our appreciation of the mechanisms by which culture systematically influences disease/illness and healing. These are illustrations of the importance of systematic translation of medical anthropological concepts into the medical field; and the reverse is equally important. New models for our field should facilitate this process of translation [40].

THE BIOCULTURAL CONTEXT OF HEALTH CARE SYSTEMS, AND ITS RELATION TO SOCIO-PsyCHO-SOMATIC INTERRELATIONSHIPS IN SICKNESS AND HEALING

Of many other issues about health care systems which could be elaborated, their biocultural context is of special interest. Although this subject is far too large to be reviewed in this space, certain points, relevant to our model, are worth noting. Stated baldly, the cultural construction of illness as a psychosocial experience entails complex psycho- and socio-somatic processes that both feed back to affect disease and play a role in the process of healing disease and illness [41-44]. The fact that these processes are involved in the organization of health, illness, and healing as a cultural system means that the health care system helps to mediate the impact of social environmental and psychological factors on physiological processes. Various models have been advanced to explain how this occurs, including operant conditioning, social learning, information theory, and others [45-48]. However it is accomplished, it is clear these processes are actively involved in the relation of stress to disease [49] and the effects of psychotherapy and other symbolic therapies on physiological pathology [50]. Incomplete as our knowledge still is, it is nonetheless essential that future studies of health care systems focus on this biosocial bridge, and employ appropriate methods for assessing its significance in health, illness, and health care. This argues for a strong biological anthropology component in medical anthropology [51], one which is concerned with the relation of culture and stress; and it also argues for the need to add a biological dimension to the cultural dimension of medical anthropological theories [40, 52, 53]. It adds further support to the view of medical anthropology as an interdisciplinary bridge between biomedical and social sciences, a bridge often acknowledged but rarely studied.

HYPOTHESES FOR ETHNOGRAPHIC AND COMPARATIVE CROSS-CULTURAL STUDIES OF HEALTH CARE SYSTEMS

A comprehensive model such as this is best evaluated with respect to its applications. I have used this model to study cultural patterning of the phenomenology of depression amongst Chinese patients [54], to analyse clinical communication, to compare it for a range of types of practitioner–patient transactions [30], and to study the efficacy (and mechanisms of efficacy) of shamans and other indigenous healers in Taiwan [24]. In each instance I found the biomedical paradigm to be inadequate, and the model I have discussed more useful as a research framework. The *raison d'être* for the model is precisely to provide an alternative social and cultural model to challenge the egregiously distorting biological reductionism of the biomedical model in research and teaching [31]. Unfortunately, it is not feasible in this space to both describe and demonstrate the model. But the hypotheses which follow should enable the reader to assess certain of its uses.

The hypotheses, which fluctuate widely in degree of specificity and feasibility for being tested in the field, flow directly from the model and concepts that I have outlined. Some can be applied in ethnographic and comparative cross-cultural studies, and some are directly relevant to clinical and public health issues. Others are simply open-ended questions, an invitation to readers to ask specific questions about the model and concepts, or to raise more general issues about the study of medicine as a cultural system. Not surprisingly, the hypotheses reflect the interdisciplinary tug between anthropological and medical interests in our field: a source of difficulty, but also of great opportunity. That tension is responsible for much of what is unique about our discipline. Rather than try to reduce or ignore it, we ought to exploit it as a basic dialectic running through our work.

Hypotheses:

1. Except for those relatively few societies which lack professional (indigenous or Western) and/or folk practitioners, the health care systems of contemporary and historical societies can be described by the tripartite typology outlined above. All health care agencies, agents, and functions can fit within the model. Both pluralism and change can be mapped on the model.

2. By specifying the differences in clinical realities and explanatory models for the sectors and subsectors of a given health care system, we can predict conflicts which result from their interaction. Recognition of such differences, and attempts to negotiate between the discrepant EMs of patients, families, and practitioners, should prevent major conflicts in health care transactions. Prevention of major conflicts between EMs, and the clinical realities they represent, should exert a positive influence upon patient adherence to the medical regimen, satisfaction, and appropriate use of health facilities, and potentially might speed ejection from the sick role and return to normal social role and function.

3. Inter-system comparisons of clinical realities should disclose the chief mechanisms by which culture influences health care systems. Both inter- and intra-system comparisons of clinical realities should also reveal the nature and extent of historical, political, economic, technological, and epidemiological influences on health care. That is, the health care system can be looked upon as a micro-record of these effects.

4. Such comparisons will demonstrate particular patterns of conflicts and dominance between sector and subsector clinical realities which are characteristic of each system, but which also show a clear pattern of influence resulting from modernization and Westernization. Recognition of such typical patterns
may help predict (and thereby prevent) problems for health care produced by the processes of modernization and Westernization.

(5) All clinical realities and the EMs they entail can be shown to be culture-specific, including those of biomedicine. Conversely, biomedicine does not contain culture-free clinical realities and EMs. Furthermore, clinical realities and EMs also are specific for their social structural position within the health care system. Thus, in our own health care system, for example, the conflict between medical and social deviance models with regard to mental illness, in part, must be viewed as due to their social structural specificity as biomedical and sociological models, and the underlying professional and political struggles for power that conflict implies. Resolution of this conflict cannot occur within either subsector, but requires incorporation of these models into an overarching scientific framework for studying sickness and treatment across cultural system and social structural boundaries. That resolution will require major social and political change. Any candidate for that overarching framework must view medicine as a cultural system, and biomedicine (or medical sociology) as only part of that system.

(6) Most, and perhaps all, of the so-called culture-bound disorders can be construed as extreme examples of the general function of health care systems to culturally pattern universal diseases into culturally-specific illnesses.

(7) When the EMs of patients, families, and practitioners are alike there will be improved clinical communication, fewer problems in clinical management, and better patient adherence and satisfaction. Conversely, when their EMs are substantially dissimilar, clinical communication and patient adherence and satisfaction will be worse, and there will be an increase of significant problems in clinical management. Cultural healing will be more likely to occur in the former case than in the latter. Indigenous folk healers should do better than professional practitioners in clinical communication and the treatment of illness, while professional practitioners do better at the treatment of disease. Where the latter are trained to systematically negotiate with patient and family EMs, and to recognize and treat illness, clinical communication and patient adherence and satisfaction should improve, and problems in clinical management should be reduced.

(8) The six core clinical tasks of health care systems can be shown to produce culturally, psychosocially, and biologically adaptive effects. Health care systems can be evaluated by analyzing how successful they are in producing these adaptive effects. Along with this measure of their efficacy, health care systems can be compared with respect to the nature and extent of the problems for health care that they create. Their efficacy in the treatment of specific disease/illness can also be determined.

(9) Evaluations of the efficacy of health care must take into account the two-fold nature of healing: provision of control for the disease and of meaning for the illness. The healing of disease and the healing of illness must be evaluated separately, if cross-cultural comparisons of the efficacy of health care are to hold any significance.

(10) For ethnographic description and cross-cultural comparison, health care systems need to be treated as local systems. Specific types of local health care resources and the patterns of utilization dependent on them, for example, may account for significant variation between localities. Political, economic, and social determinants can produce similar local variation. Local settings are useful for field studies because they allow investigators to relate health care systems to particular environmental influences, and thereby to reconstruct the ecology of those systems. Because they are local systems, health care systems cannot be equated with an entire society. Each society possesses distinct local systems of health care. In Chinese cultural settings, for example, we find many health care systems in the same society (e.g. Taiwan or Hong Kong), and these differ from each other as well as from health care systems in other Chinese societies and in non-Chinese societies with substantial Chinese populations [33]. Thus, one can make intra-societal, inter-societal but still intra-cultural, and inter-cultural comparisons of those health care systems.

(11) Comparison between health care systems in different cultures will reveal significant differences in the relative size and salience of particular systems and their sectors. For example, there are differences in the kinds of problems legitimated as belonging to systems of health care or their sectors; and these differences may increase or decrease the social space they occupy. There also are differences in the extent to which health care systems perform important non-medical functions, such as social control. Comparison of health care systems in traditional, developing, and fully developed societies should enable us to test the medical sociological thesis that there is a progressive medicalization of modern societies, such that problems previously labeled moral or political are increasingly legitimated as part of the health care system, especially its professional sector [39]. This thesis runs counter to the anthropological argument that in small-scale, preliterate societies medical systems tend to serve more general (non-medical) functions than in more developed and differentiated societies [55]. These hypotheses are of special comparative interest because they can be examined in historical as well as in cross-cultural studies.

(12) Kunstadter [40] has hypothesized that pluralism of medical beliefs, choices, and therapeutic strategies offers adaptive advantages to health care systems. Instead of producing negative effects, as some proponents of the symbolic unity of cultural systems have led us to believe, cognitive dissonance (multiple and competing health care strategies), at least in the health care system, may well have distinct advantages for biological survival, the resolution of psychosocial tensions, and the evolution of adaptive cultural strategies. The EM framework can be used to articulate this hypothesis in a more precise and quantifiable form that then can be either confirmed or disconfirmed in field studies.

(13) Finally, the very fact that it has been recognized and studied as a cultural system has placed a particular bias on the anthropological study of medicine in society. This happened because most earlier interest in this subject grew out of an anthropological
study of religious systems. As a result, the non-sacred aspects of sickness and treatment received little attention until fairly recently [56]. Ethnographers looking for a strategic focus for studying medicine as an ethnographic category tended to center on ritual activities. That has produced considerable distortion in many ethnographies, since sickness must be centered on in order to grasp the scope and activities of health care systems. This bias, I predict, will not be found in most future medical ethnographies (see [6] for an example of what is to be gained from correcting this bias). Those ethnographies, and comparative studies along with them, should rewrite the story of medicine in society: in part, because they are biomedically sophisticated; but in larger part, because they represent an advance in conceptualizing and investigating medicine as a cultural system, and in so doing challenge the traditional biomedical paradigms with anthropological concepts and methods which achieve a broader and more inclusive understanding of sickness and healing in society.

REFERENCES

1. An outstanding exception is the work of Horatio Fabrega, which has been unrelentingly theoretical (see [35]). But since most of his work is concerned with the relation of culture and illness, and only passingly with medicine as a cultural system, I have decided not to review Fabrega's ideas, though the model I describe builds upon certain of these. Similarly, I do not deal explicitly with the approaches of Alland, Dunn, and Leslie, which focus on other aspects of medical systems: their adaptive functions (Alland, Dunn, and Kunstadter), their social structural arrangements (Freidson), and their changing (e.g. modernizing) institutional structure (Leslie). But the theory I advance draws from these sources as well.


7. I use the term health care system simply to underscore the health care activities at the center of these systems. I recognize that health system may be a better term for general use, since it is more inclusive, indicating the preventive as well as the healing functions these systems perform, while it is not medico-centric like the term medical system.


15. Alan Young [25], for example, presents some researchable concepts about traditional medical systems, such as the notion that the efficacy of their healing approaches has an important "ontological consequence", in which episodes of sickness "communicate and confirm ideas about the real world". This must be appreciated, he argues, if the efficacy of traditional healing is to be properly studied. This concept can be used by the medical ethnographer either to inform his phenomenological descriptions or to generate specific hypotheses about the efficacy of traditional healing which he can then set out to test. The same holds for Young's statement that withdrawal is characteristic of all sickness episodes, which is refuted by evidence from a number of societies, including our own.


21. I follow Fred Dunn on this important function, which
admittedly I have neglected in previous elaborations of the model (see [52]).
26. I am indebted to Charles Leslie for this term. Of course, literally cultural iatrogenesis means that culture produces sickness. Although there is considerable evidence to support this notion, I use the term here in a broader sense to refer to problems in general in health care that are systematically derived from cultural factors.
37. I owe the distinction between languages of behavior and languages of experience to my colleague, Professor David Raskin, Department of Psychiatry, University of Washington School of Medicine.