INTRODUCING MEDICAL ANTHROPOLOGY

A Discipline in Action

MERRILL SINGER AND HANS BAER

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1

WHY HAVE A MEDICAL ANTHROPOLOGY?

> Healing requires a legitimated, credible and culturally appropriate system.
>
> —Mildred Blaxter (2004:43)

People who encounter the term "medical anthropology" for the first time often are puzzled by what it means. Is it the study of how medicine is practiced, what doctors, nurses, or traditional healers from other health care systems actually do? Or is it the study of what it means and feels like to be sick? Perhaps it is the study of folk illnesses in different societies? Might it be the application of cultural knowledge to the actual treatment of diseases? All these questions, in fact, can be answered in the affirmative. Medical anthropology is all of this—and more. A starting premise of medical anthropology is that health-related issues, including disease and treatment, are far more than narrow biological phenomenon. How we get sick, why we get sick, and what sickness means to us are all heavily determined by cultural and social factors as well. The same can be said about what makes us get better and how diseases are understood and handled by health care providers.

To take one example, medical anthropology asks questions such as, Could we really understand the AIDS epidemic and respond to it effectively simply by studying the human immunodeficiency virus, its impact on cells of the body, and ways to stop the virus from destroying the immune system? Would we not also need to know how to reach and effectively engage those who are at greatest risk for infection; to figure out the structural and situational factors that contribute to their involvement in risky behaviors; to know how much they know and what they feel about AIDS and how these factors influence their behaviors; and to determine if the ways we go about

interacting with them in the clinic draws them closer or pushes them away from our treatment programs? In other words, beyond biology it is clear that there are critically important areas of knowledge in the fight against the AIDS epidemic. Now, if we think about the AIDS epidemic as a global problem, with different routes of infection, different populations, different beliefs and behaviors, and different health care systems in different parts of the world or even different parts of a single country, we begin to get a sense of why a social science like anthropology might—as it certainly has—have a significant role to play in addressing the AIDS epidemic. The same is true of many other diseases and health conditions.

This book introduces undergraduate students to the field of medical anthropology and is intended to convey to them what it is that medical anthropologists do and why their work is important. A more precise sense of what medical anthropology is—and why it exists—can be gained by taking a closer look at several actual cases of medical anthropology in action, that is, in its direct use by practitioners in the field. Here we present three cases of the application of medical anthropology. Afterward, in the remainder of this chapter, we 1) review the primary goals of this book, 2) provide a definition of medical anthropology and introduce some of the key concepts in the field, 3) examine the historic development of medical anthropology and its emergence as a distinct area of study and application, 4) explore the relationship of medical anthropology to both the wider field of general anthropology and the arena of anthropological practice known as applied anthropology as well as to other health-related disciplines beyond anthropology, and 5) at the close of the chapter, introduce several of the dominant theoretical frameworks that guide much of the work done in medical anthropology.

THREE CASE STUDIES IN APPLIED MEDICAL ANTHROPOLOGY

Coping with Cystic Fibrosis

The Reynolds family has two children. Carl is five, and Stuart is seven. The younger of the two boys has cystic fibrosis (CF), the most common fatal genetic disease in the United States. Cystic fibrosis causes the body to produce a thickened form of mucus that clogs the lungs, leading to repeated bacterial infections and increasing lung damage. While the median age of survival among CF sufferers has been rising, most people with the disease

do not live very far into adulthood before they succumb. Day-to-day care of a child with CF commonly falls on family members who must learn to cope with both a painful prognosis and the demands of responding to the patient's menacing symptoms, including pounding on the sufferer's chest and back for at least 35 to 40 minutes at a time, two to four times a day, to dislodge mucus. Some burdens fall particularly hard on the siblings of children with CF. Mrs. Reynolds notes one of these burdens that Stuart must endure:

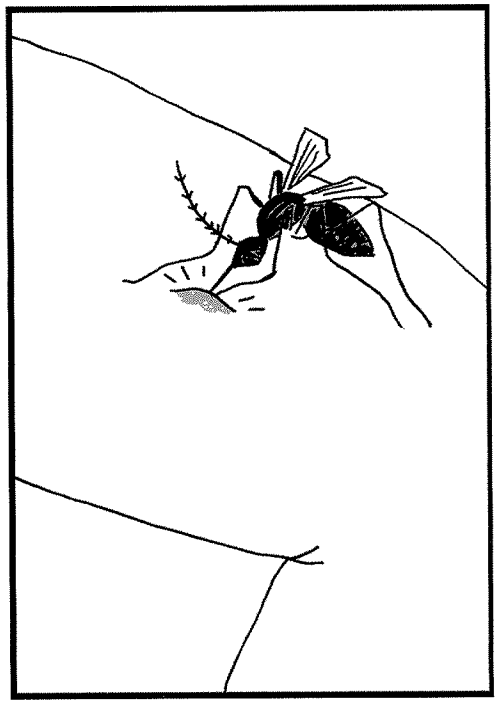
> When Carl's sick, all the phone calls are, "How's Carl?" Everybody who sees Stuart [says], "How's your brother doing?" And all the presents. Carl gets all the presents. It has to have some kind of effect on him [Stuart].

How (and how well) do families with a child with CF cope? What toll does the disease take on family relations and on the emotional well-being of family members? How are siblings affected by growing up with a chronically ill brother or sister? How can health care providers most effectively communicate with families at various stages in the natural history of CF progression? Having previously studied children with cancer, medical anthropologist Myra Bluebond-Langner (1996) set out to answer these critically important questions. For 19 months, in the clinic and in their homes, she repeatedly interviewed and observed families that were recruited from the patient rolls of the Cystic Fibrosis Center of St. Christopher's Hospital for Children in Philadelphia. She also interviewed attending physicians and reviewed patients' medical charts. Like most anthropologists, she immersed herself in the lifeworlds of the people she was studying. Her field notes and taped interviews filled thousands of pages and numerous three-ring binders. In the end, after many months of data collection and careful analysis, she was able to answer the key questions that motivated the study. Additionally—and tellingly—she was able to use her findings to develop a set of useful guidelines for physicians to use in clinical intervention with families with a CF sufferer. As a result, physicians now have a clearer idea of how best to communicate with families and to assist them in coping with the difficult challenges they face and the weighty burdens they must bear. Like many other medical anthropologists, this work by Bluebond-Langner has helped to make a positive impact in the tangled and often confusing world of health and illness. Addressing conflicts, miscommunications, and other problems in doctor–patient relationships as well as patient access to high-quality, culturally appropriate health care are central issues in medical anthropology. But there are many other concerns as well.

The Bone Crusher

Dengue is a mosquito-borne viral disease found in over 100 countries and territories around the world, primarily in tropical and subtropical environments of Latin America, the Caribbean, and Southeast Asia, although a U.S. outbreak occurred in Hawaii in 2001. Current estimates are that each year 50 million to 100 million people are infected with dengue when they are bitten by either the *Aedes aegypti*, the mosquito that also transmits yellow fever, or *Aedes albopictus* mosquitoes. Mosquitoes become infected when they bite people who are infected and, in turn, subsequently transmit the infection to other people that they bite. In Southeast Asia and in most of Latin America and the Caribbean, the disease is pandemic, meaning that it is now firmly entrenched in the population and spreading. Malaysia has been particularly hard hit; thousands of people fall victim each year to this disease colloquially known—because of the fearsome joint pain it causes—as the "bone crusher." Other symptoms include stomach pain, headaches, nausea and vomiting, pain behind the eyes, and body flushes. In a more intense and even more frightening form, known as hemorrhagic fever, the sufferer's gums, nose, and internal organs bleed.

A number of medical anthropologists have worked on preventing the spread of dengue. Karl Kendall (1998), for example, developed a strategy that involves studying and utilizing local health beliefs and practices in the development of community health campaigns about dengue in El Progreso, Honduras. In Kendall's approach, the first step in raising community awareness of effective prevention involved conducting in-depth interviews and surveys with community members to assess what they think and believe about dengue, its routes of infection, and the strategies they use to prevent becoming sick with the dreaded disease. This information was used to frame a locally meaningful education campaign designed to raise community awareness of the insects that transmit dengue, including effective pest control measures. This culturally sensitive project proved to be effective in reducing the populations of dengue-carrying mosquitoes, lowering rates of infection.



Artist depiction of mosquito bite. (Bonnie Atwood)

Sara Crabtree and colleagues (2001) built on this approach in the prevention of dengue in two communities in Malaysia. Like Kendall, Crabtree and coworkers began their work with a study of community knowledge, attitudes, and behaviors related to the disease. They also conducted focus groups with four different subgroups: women, youth, men who were heads of families, and village leaders in an area that had not yet been hard hit by dengue. Through this research, it was found that the communities lacked much awareness of mosquito-borne disease transmission; they did not associate getting sick with being bitten by mosquitoes. Consequently, while they were available, people did not make much use of mosquito nets or spray repellents. The team then organized a set of three-day workshops that were designed to train volunteers to conduct a needs assessment on how to prevent dengue in their local communities. Under the guidance of the researchers, these individuals then carried out a door-to-door survey in their local communities. Researchers then worked with the needs assessment staff in translating findings into a strategic set of recommendations for practical, achievable activities to reduce mosquito populations. With the support of local leaders, actions based on these recommendations, such as burning accumulated rubbish, cleaning water containers, and identifying and eliminating breeding sites, were implemented to lower mosquito populations, a goal that was achieved in both participating communities. The medical anthropologists involved in this project believed that this success was due in large part to the initial assessment to ascertain community concerns, mobilize locally generated prevention ideas, and involve community members in all phases of the prevention initiative.

Despite the efforts described here, dengue continues to spread in the world, as do a range of old, new, and renewed diseases that were once controlled but are again spreading out of control (see chapter 6). From the fight against AIDS to the reduction of venereal diseases, medical anthropologists, with their unique approach to understanding health and disease in terms of the interaction of human biology with social and cultural factors, are often on the front lines of infectious and other disease prevention as well as of the development of culturally appropriate and hence often more effective approaches to care. While not all medical anthropology projects are effective and success might be achieved at a much lower level of effect than would

be desired, medical anthropologists can point to a strong track record of making useful contributions to improving health, usually at the local level but sometimes even more broadly.

Pesticide Poisoning

The World Health Organization, a technical agency of the United Nations, estimates that there are over a billion agricultural workers in the world, most in developing countries. Various studies have shown that one of the health problems commonly faced by agricultural workers is poisoning due to exposure to dangerous pesticides; indeed, they are the sector of society most likely to suffer health consequences from the powerful commercial poisons sprayed on food and ornamental crops to limit plant pests. Not only are those who work in agriculture at risk, but so are their spouses and children. Poisoning occurs because pesticide sprays are caught in the wind and drift into adjacent fields where people are working or into areas where they and their families live, workers are sent to work in fields in which pesticide has recently been applied, and workers pick up pesticides on their clothing and other possessions, including their food containers, and bring them home unaware of potential risk. Even if exposures are limited, pesticides accumulate in the body, so that repeated contact increases risk for health-threatening outcomes. One of the most commonly used groups of pesticides, organophosphates (OPs), can be taken into the body through breathing, through ingestion, and through skin exposure. Organophosphates are known to damage nerves by reducing the availability of acetylcholinesterase, a necessary enzyme found at nerve endings. Organophosphate poisoning can produce rashes, nausea and vomiting, body fatigue, loss of consciousness, shock, and even death.

Existing protections for farmworker health are limited. In 2002, for example, the Pesticide Action Network North America and a group of collaborating organizations issued a report called *Fields of Poison* based on data on pesticide poisoning collected by the California Department of Pesticide Regulation. The report found that farmworkers face a two-sided threat from pesticides: first, the existing set of regulations designed to protect them from harmful exposure to toxic chemicals is woefully inadequate to really provide safeguards against acute pesticide exposure, and, second, even the existing laws are weakly enforced. To address this issue, Thomas Arcury, Sara Quandt, and a team of colleagues (2005) recruited a group of nine farmworker households in North Carolina and Virginia for participation in an intervention study called ¡La Familia! Reducing Farmworker Pesticide Exposure, which was funded by the National Institute of Environmental Health Sciences. The research team conducted in-depth interviews with agricultural landowners and agricultural extension workers, interviews on beliefs about pesticide exposure and safety among primarily Latino farmworkers, sample collections in the homes of farmworkers to detect the presence of OP pesticides on household furnishings, and urine tests of farmworker adults and their children to assess body metabolite levels, which reveal whether OPs are present in the bodies of study participants.

These researchers found high levels of OP metabolites, which are the by-products of OP exposure, in the members of all of the households they studied, and all households had at least one member with especially high levels. Moreover, families that had carpeted homes but lacked a vacuum cleaner had higher-than-average OP metabolite levels. Bathing patterns also were linked to OP metabolite levels. As a result of their findings, this research team was able to identify specific policy changes that were needed to reduce farmworker exposure to OPs, including ensuring that all rented farmworker dwellings have shower facilities and working vacuum cleaners, that all farmworker dwellings are built at a safe distance from agricultural fields, and that all farmworkers receive training in pesticide risks and handling. Reflecting on the ultimate goals of their study, they conclude (Arcury et al. 2005:50),

> Providing farmworker families (as well as all Americans) with safe and affordable housing will reduce their exposure to pesticides. This is not an instance of "blaming the victim" for exposure to pesticides, and attempting to address a systematic health disparity by educating those exposed to pesticides. Rather, it is an effort to build the capacity of farmworkers to defend themselves and to demand safe housing for their children.

Notably, most farmworkers live in countries with far few resources and weaker laws to protect workers than is the case in the United States. Pesticides produced in the United States, however, are shipped around the world, and anthropologists have observed them being applied by hand by workers who had received little or no information about how deadly they can be if not handled properly. For medical anthropologists who work with agricultural populations, there is much work to do to help them protect themselves from occupational threats to their lives and well-being. In this instance, part of the problem is social inequality and the prevailing structure

of power relations in society, such as in the making and enforcing of laws that favor one social class, ethnic group, or gender over another. Indeed, medical anthropologists have found that social relationships, such as those between ethnic groups, and social structures that determine access to resources and other things of value are a fundamental factor in health generally.

PRACTICAL AND THEORETICAL CONTRIBUTIONS OF MEDICAL ANTHROPOLOGY

The three cases described here suggest an answer to the question, Why have a medical anthropology? The answer is this: because medical anthropologists, employing anthropology's traditional immersion methods for studying human life up close and in context, as well as the discipline's holistic picture of the human situation, a traditional disciplinary concern with understanding things from the insider's point of view and flow of experience, and an applied orientation to human problems, *can make an important difference in the world*. Revealing the nature of this difference is, as noted in this chapter, one of the main goals of this book.

While a primary emphasis of this book is on the practical contributions of medical anthropology, the theoretical contributions of the discipline are equally important and guide the application of medical anthropology in addressing particular health-related issues. Theory in medical anthropology addresses questions such as the following: What determines health and illness? How and why do societies vary in their health care systems, illness beliefs, and illness experiences? What role does culture play in treatment outcome? These questions are also addressed in this book.

THE GOALS OF THIS BOOK

Teaching and Doing

There is an old saw, repeated often by disparaging students, that maintains that "those that can, do; those that can't, teach." By extension, students sometimes assume that their professors are isolated from the "real world"; that the information they have to share is theoretical, not practical; that it is "book knowledge," not "real knowledge"; and that their life experiences are limited to the cloistered environs of college and university campuses far from the madding crowd and its jolting problems, piercing crises, and painful conflicts.

In other words, there is a suspicion that there is a very wide gap between the world of education and the world of application. Challenging this view, this book stresses that medical anthropology is not a narrow ivory-tower discipline insulated from the off-campus realities of human illness, suffering, and death. Instead, as we hope to demonstrate on the pages that follow, in addition to increasing the fund of knowledge about health, illness, and treatment, medical anthropology is actively and productively engaged day to day in addressing pressing health problems of diverse types around the globe through research, intervention, and policy-related initiatives.

Strong involvement in diverse health issues and application is seen as well in the careers of the two authors of this book. Merrill Singer, who has taught in several departments of anthropology in the United States, has helped develop, implement, and evaluate a number of projects designed to prevent the spread of HIV/AIDS, projects that have contributed to a measurable drop in local HIV incidence. Hans Baer, who has a joint appointment in the Development Studies Program, School of Social and Environmental Enquiry, and in the Centre of Health and Society, University of Melbourne, has carried out studies of complementary and alternative healing systems in the United States, Britain, and Australia as part of a broader project designed to understand the processes of health care system integration. Elsewhere in this book, we present many additional real-world examples of the ways medical anthropologists are tackling health-related issues and the impact their work is having on health.

In sum, when it comes to the field of medical anthropology, one of the goals of this book is to affirm and demonstrate that those who teach usually are very involved in the process of helping, to varying degrees, to change the world around them through their work in applied projects, policy initiatives, and advocacy. Moreover, it merits mentioning both that not all medical anthropologists teach—many are involved full time in applied work—and that not all of medical anthropology involves application. As a social science, medical anthropology not only addresses specific health issues but also seeks to build a broad, theoretically based understanding of what health is, how culture and health interact, the role of social relations in shaping disease, and a range of other issues. In other words, medical anthropology seeks to understand health-related issues and to use this knowledge in improving human health and well-being.

Clarifying the Culture of Health and Illness

Beyond its initial goal, a second goal of this book is a presentation of the fundamental importance of culture and social relationships in

health and illness. Through a review of the key ideas, concepts, methods, and theoretical frameworks that guide research and application in medical anthropology, the book makes the case that illness and disease involve complex biosocial processes and that resolving them requires attention to a range of factors beyond biology, including systems of belief, structures of (often unequal) social relationship, and environmental conditions.

Health Inequality

Finally, through an examination of the issues of health inequality, such as exposure to pesticides among farmworkers on the one hand and environmental degradation and environment-related illness on the other, the

Crutches left behind at El Santuario de Chimayó Church in New Mexico, where pilgrims come to get "healing soil" from a hole in the church floor. (Pamela Irene Erickson)

book underlines the need for going beyond cultural or even ecological models of health toward a comprehensive medical anthropology. Such an approach integrates biological, cultural, and social factors in building unified theoretical understandings of the origin of ill health while contributing to the building of effective and equitable national health care systems (e.g., Rylko-Bauer and Farmer 2002). In this manner, medical anthropologists seek to be part of a collective process aimed at creating a healthier world for both humanity and the biosphere and thereby prevail over widespread patterns of health and social injustice and environmental destruction.

DEFINING MEDICAL ANTHROPOLOGY

There is no simple definition of medical anthropology because medical anthropologists are involved in so many different issues and kinds of work. Because of this range, any easily crafted definition falters because it leaves out as much as it holds in. In effect, this whole book is designed to define medical anthropology. Generally, however, medical anthropologists are engaged in using and expanding many of anthropology's core concepts in an effort to understand what sickness is; how it is understood and directly experienced and acted on by sufferers, their social networks, and healers; and how health-related beliefs and practices fit within and are shaped by encompassing social and cultural systems and contexts. In this multifaceted task, medical anthropologists take a page out of Shakespeare's comedy *The Merry Wives of Windsor* in defining their domain of research:

> Why, then the world's mine oyster,
> Which I with sword will open.

In other words, medical anthropology is concerned not with a single society or with a particular health care system but rather with health issues throughout the whole world and even through time. Their sword, so to speak, is research, especially the types of fieldwork-based experience-near strategies of research that have given the wider discipline of anthropology its distinctive flavor as an immersed social science.

While recognizing the fundamental importance of biology in health and illness, medical anthropologists generally go beyond seeing health as primarily a biological condition by seeking to understand the social origins of disease, the cultural construction of symptoms and treatments, and the nature of interactions between biology, society, and culture. Similarly, they

tend not to accept any particular health care system, including Western biomedicine, as holding a monopoly on useful health knowledge or effective treatment; rather, they see all health care systems—from advanced nuclear medicine or laser surgery to trance-based shamanic healing or acupuncture—as cultural products, whatever their level of healing efficacy and however efficacy is defined within particular healing traditions.

Culture and Biology

Medical anthropologists seek to understand and to help others see that health is rooted in 1) cultural conceptions, such as culturally constituted ways of experiencing pain or exhibiting disease symptoms; 2) social connections, such the type of relations that exist within the family or within society and the encompassing world political and economic system generally; and 3) human biology, such as the threat of microscopic pathogens to bodily systems and the body's immune responses to such threats. In pursuing these lines of inquiry, medical anthropologists are especially concerned with linking patterns of disease, configurations of health-related beliefs and behaviors, and healing systems with cultural systems, social hierarchies, and biosocial relationships. Consequently, medical anthropologists have tended to look at health as a "biocultural and biosocial phenomenon," based on an understanding that both physical and sociocultural environments in interaction determine the health of individuals and of whole populations.

Some medical anthropologists, those who call themselves critical medical anthropologists (including both authors of this book), stress what they call a *critical biocultural model*, one that is especially concerned with investigating the role of social inequality in shaping health, health-related experience and behavior, and healing, issues we will explore throughout this book. Whatever their theoretical perspective, however (and several alternative perspectives exist within the discipline), medical anthropologists tend to have an applied orientation; they are concerned with putting their work to good use in addressing real and pressing health-related problems in diverse human communities and contexts (e.g., Rylko-Bauer et al. 2006).

Bioculturalism

This term refers to the significant interactions that take place between biology and culture in health and illness. Consider the issue of pain. In childbirth, a baby with a comparatively large head pushes its way through a small birth channel, a process that produces often "intense labor pains" among women giving birth in the United States. While these pains are expected, they are not accepted as tolerable, and the medical administration of painkillers is commonly demanded, sometimes vehemently so. In Poland, by contrast, labor pains are not only expected but also accepted, and painkillers are not normally requested. What accounts for these differences? While pain on one level is biological, part of a bodily communication system composed of nerves that ensures urgency in limiting bodily damage (e.g., pulling one's stray finger from the fire), medical anthropologists have argued that pain expression and experience can be understood only in a cultural context. Culture teaches us how to think about, experience, and respond to the sensation of pain. At the same time, in assessing a disease, it is important to consider how biology and culture interact. For example, it is likely that a devout Jew or Muslim could be made violently ill by being forced to eat pork, while consuming this meat is considered very satisfying among most people in New Guinea. The same could be said of monkey brains, worms, or hamburger, depending on the cultural traditions of the people involved. Cultural beliefs and practices are very involved as well in the spread and reaction to many infectious diseases, such as sexually transmitted diseases. Disease rarely acts as an independent biological force whose health impact is everywhere the same. Rather, disease expression is shaped by cultural values, beliefs, and expectations. Cultural practices may inhibit or promote disease spread, and, conversely, disease can significantly mold culture.

WHERE DID MEDICAL ANTHROPOLOGY COME FROM?

The Straits Expedition

Interest in health-related issues within anthropology dates to the very origins of the discipline as a field-oriented social science. In 1898, three British researchers, W. H. R. Rivers and fellow physician C. G. Seligman, as well as Alfred Haddon, initiated the historic Cambridge University Torres Straits (Australia) expedition, one of the earliest anthropological research projects. Various kinds of data on indigenous Australian peoples were collected during this expedition, including information on traditional healing beliefs and practices. Rivers, who some see as the father of medical anthropology, used data from the expedition to refute the popular notion among Western physicians and other worldly observers of the era that the ethnomedical practices of non-Western societies were "a medley of disconnected and meaningless customs" (Rivers 1927:51). Instead, he argued,

ideas and practices around health and healing found in preliterate societies constitute internally coherent structures of cultural beliefs about the causes of disease. Now over 80 years old, this perspective on healing systems around the world has been abundantly supported by subsequent research in medical anthropology and has guided numerous examinations of the nature of the relationship of health beliefs and practices to the encompassing cultural context in which they are found, including in modern Western society and its dominant healing system, biomedicine. For example, in the book *The Woman in the Body: A Cultural Analysis of Reproduction*, an influential text in medical anthropology discussed in chapter 3, Emily Martin (1989) shows that the dominant metaphors in biomedicine for the delivery of babies come from the arena of industrial production. Thus, in her examination of medical textbooks, Martin found that reproduction is talked about and taught to students using analogies and concepts borrowed from factory production. In this biomedical cultural model of birth, 1) the doctor is portrayed as the manager of the laboring process, much like a factory foreman who oversees and regulates the production process; 2) the uterus is portrayed as the machinery of reproduction; 3) the mother is talked about as a kind of laborer, and hence she is said to be "in labor" during the birthing process; and 4) the baby is the product. This way of viewing reproduction, Martin found, is often in conflict with the views held by women who have or who are about to give birth, creating the potential for misunderstandings and conflicts in childbirth.

W. H. R. Rivers and Beyond

In his book on ethnomedicine mentioned previously, *Medicine, Magic, and Religion*, a volume that has been called the "symbolic totem of medical anthropology" (Landy 1977:4) because it incorporates health-related issues into the agenda of anthropology, Rivers also maintained that non-Western ethnomedical traditions and biomedicine constitute completely separate entities. Indigenous healing, he asserted, is characterized by manipulation, through the use of spells and other ritual, of assumed magical connections among objects and beings in the world as well as by beliefs about the actions of supernatural beings (e.g., spirits) in causing and curing illness. Biomedicine, by contrast, is grounded in natural laws and scientific principles. Ever since, medical anthropologists have grappled with understanding similarities and differences in healing systems cross-culturally. The distinctiveness of biomedicine has been intensely debated within the field. While

some medical anthropologists have accepted it as a standard by which to assess the efficacy of other healing systems, other medical anthropologists have sought to show the following:

- Biomedicine in its understandings and practices reflects its culture of origin no less than any other ethnomedicine.
- Folk healing systems around the world incorporate practices (e.g., bone setting) that are based on observation and practical reason as well conceptions and protective behaviors that are believed to be derived from natural laws, such as the hot and cold properties of foods or other elements in nature, and not just on magical or religious belief.
- Many of the ideas and practices found in biomedicine are not, in fact, based solely on natural laws and scientific principles.

Pearl Katz (1999), in her book *The Scalpel's Edge: The Culture of Surgeons* (which is described in greater detail in chapter 2), portrays modern surgery as an elaborate set of rituals that function to limit ambiguity, uncertainty, and error. The process of "scrubbing," for example, involves very strict behaviors, within precisely designated time periods, such as washing each hand in particular ways for a specified amount of time. While it is possible to significantly reduce the presence of pathogens on one's hands and arms through careful cleaning, the precisely defined rules of scrubbing appear to serve also to reduce anxiety about not being sufficiently germ free to avoid infecting the internal organs of the patient. By closely adhering to the rituals of surgery, the confidence doctors and nurses need to undertake a very delicate and potentially disastrous activity, such as cutting open and in some way changing a patient's internal environment, is heightened.

Rudolf Virchow

Returning to the origin of medical anthropology, Otto von Mering (1970:272) contends that the emergence of the field dates to the late 1800s when Rudolf Virchow, a renowned pathologist who is often regarded as the father of social medicine because of his interest in the ways in which the distribution of health and disease mirror the distribution of wealth and power in society, helped establish the first anthropological professional society in Berlin. Virchow was an important early influence on Franz Boas, the father of American anthropology, while he was affiliated with the Berlin Ethnological Museum during 1883–1886.

Erwin Ackerknecht and William Caudill

During the 1940s and 1950s, Erwin Ackerknecht emerged as an important figure in the evolution of medical anthropology. Using field accounts from anthropologists working in various societies, Ackerknecht sought to develop a systematic understanding of healing beliefs and practices that emphasized that 1) healing behaviors and ideas tend to reflect the wider cultural traditions of the society in which they develop and that 2) whatever their ability to improve the health of patients, healing systems reinforce core cultural values and structures and contribute to maintaining the status quo by controlling social conflict and deviance.

The Postbellum Period

After World War II, a growing number of anthropologists began to turn their attention to health-related issues, especially applied ones. Thus, the very first review of what we now call medical anthropology was produced by William Caudill eight years after the end of the war and was titled "Applied Anthropology in Medicine" (Caudill 1953). Caudill's paper marked two important developments in the evolution of medical anthropology: 1) the entry of a number of anthropologists after the war into international health development work and 2) the hiring of anthropologists to work in medical schools and clinical settings as teachers, researchers, administrators, and, in some cases, clinicians. Involvement in the international health field actually began during the 1930s and 1940s within the context of British colonialism—an era during which the delivery of Western health services was seen as central to a larger effort to administer and control indigenous peoples.

Medical Anthropology and National Development

Cora DuBois became the first anthropologist to hold a formal position with an international health organization when she was hired by the World Health Organization in 1950. Within a few years, Edward Wellin at the Rockefeller Foundation, Benjamin Paul at the Harvard School of Public Health, and George Foster and others at the Institute for Inter-American Affairs had joined the pool of anthropologists involved in seeking to address health-related aspects of technological development around the world, including the negative health consequences of ill-planned development projects. Another set of anthropologists became involved in efforts to facilitate the delivery of biomedical care to people in developed nations and underdeveloped sectors of technologically advanced nations. Alexander and Dorothea Leighton, for example, became involved in the Navajo-Cornell Field Health Project. This applied initiative created the social role of "health visitor," a Navajo paramedic and health educator who acted as a "cultural broker" or community liaison between the white-dominated health care system and the Navajo people.

The Discipline Is Born

Whatever its diverse roots, as a distinct and labeled subdiscipline of anthropology, medical anthropology has a relatively short history that can be traced to the period after World War II. Organizationally, medical anthropology began with the formation of the Group for Medical Anthropology in 1967, with Hazel Weidman, an applied anthropologist, as chair. Ultimately, this fledging organization became the now quite robust Society for Medical Anthropology, a formal section of the American Anthropological Association since 1972, with Dorothea Leighton, a psychiatrist-anthropologist, serving as its first president. Medical anthropology associations formed subsequently in other nations as well as the field continued to grow and diffuse. Today, as described throughout the rest of this book as well as in several others that bring together the range of work done in the field (e.g., Brown 1998; Sargent and Johnson 1996), medical anthropology continues to grow in size and diversity of work and in terms of the impact of the efforts of medical anthropologists on a wide range of health-related issues internationally. As in any field, there have been disagreements and debates as well as frustration about structures that sometimes restrict the influence of medical anthropology on health-related policy decision making and worries about how to have a bigger role in shaping public health discussions to include issues of culture, social organization, and the voice of disparity populations.

THE RELATIONSHIP OF MEDICAL ANTHROPOLOGY TO ANTHROPOLOGY GENERALLY AND TO OTHER HEALTH-RELATED DISCIPLINES

Health Research and the Subfields of Anthropology

Traditionally, anthropology in the United States has been comprised of four subfields—social and cultural anthropology, biological anthropology, archaeology, and linguistics—although in other countries, such as the United

Kingdom and Australia, the discipline has focused more narrowly on social and cultural anthropology. While some have proposed that medical anthropology constitutes the fifth subdiscipline of anthropology, others see it as sitting on the cusp between cultural and biological anthropology and incorporating elements of each in its understandings of health, illness, and healing. An alternative perspective places medical anthropology on the cusp between general or theoretical anthropology and applied anthropology. In this book, as we have stressed, a primary focus is on the applied side of medical anthropology.

Medical anthropology has become one of the largest topical interest areas beyond the four primary subfields of the discipline. One of the current debates within medical anthropology is the degree to which it has had an impact in shaping the ideas and orientation of the wider field of anthropology, including to what degree medical anthropology has developed its own theories or merely borrowed and applied those found elsewhere in the discipline.

Applied Anthropology

Medical anthropology straddles the line between theoretical and applied anthropology. Applied anthropology is the application of anthropological theories, concepts, and methods to solving problems in the world. Applied anthropologists work in many different areas, from A for aging, such as solving problems in the isolation aging people often feel in Western society, to Z for zoos, as seen in work done to determine how to use zoos to educate visitors about pressing environmental issues. While it is sometimes asserted that applied anthropology grew out of theoretical anthropology, the reverse is in fact the case. Despite this fact, there have been strong tensions at times between applied and theoretical anthropology. Some theoretical anthropologists identify the discipline's mission as understanding diverse pathways in human social life. They assert that to use anthropology to formulate planned social change violates two basic disciplinary principles: *cultural relativism*, which proscribes judging any given society by the values of any other, and avoidance of *research bias*, which includes, among other concerns, the scientific standard of minimizing opportunities for data contamination because of the value commitments of the researcher. Both of these principles suggest that intervention is, by definition, not anthropology. Applied anthropologists counter that science does not exist in a social vacuum and that its fundamental purpose is to apply its findings to solving human problems and improving the quality of human life. Because we live in a world of cultural contact and resulting social change that often leads to pressing problems and extensive human suffering, applied anthropologists feel obliged to apply their skills and understandings solving real-world challenges. In recent years, these divisions have begun to break down, and older animosities about what is the proper role of anthropologists in society have begun to fade into history.

MEDICAL ANTHROPOLOGY AND PALEOPATHOLOGY

Medical anthropology has developed an important interface with archaeology. In that archaeology in the United States is often defined as part of sociocultural anthropology or at least one of the four subfields of anthropology, the bridging nature of medical anthropology is particularly apparent in the endeavor called "paleopathology," that is, the study of diseases in the past and, in particular, in prehistoric times. This research is accomplished through the study of human fossil remains recovered through archaeological excavations. Buikstra and Cook (1980) delineate four stages in the development of paleopathology: 1) the descriptive period during the nineteenth century, focusing on bone abnormalities; 2) the analytical period during the early twentieth century, when an attempt was made to interpret bone abnormalities; 3) the period between 1930 and 1970, when the field became more specialized, drawing on fields such as radiology, histology, and serology; and 4) the current phase beginning around 1970, when the field became considerably more interdisciplinary and incorporated genetic studies, including examination of microbial DNA in bone and soft tissue in order to diagnose disease in past humans.

Roberts and Manchester (1995:9) call attention to one of the important limitations of this endeavor:

> The populations being studied in paleopathology are dead and therefore may not be representative of the living group; biological anthropologists are dealing with a sample of a sample of a sample . . . of the original living population, and total excavation of a cemetery is unusual. Partial excavation of a cemetery is the most common occurrence in archaeology and therefore only a portion of the original buried population will be examined; the differential disposal of males, females and subadults and their subsequent excavation means biases in the produced data is inevitable. . . . Researchers in biological anthropology often deal with small numbers of individuals and therefore cannot say much about disease prevalence at the population level because the group of skeletons being examined can only be a small sample of the original living population.

Despite these limitations, paleopathology has much to teach us about diseases and related health problems of antiquity, including congenital defects, traumatic injuries, infectious diseases, metabolic and nutritional disorders, degenerative diseases, circulatory problems, caries, and even cancer. For example, bone spurs in the knees, toes, and spines of ancient Mesoamerican women strongly suggest that they spent long hours grinding maize in order to make flour.

Medical Anthropology and Epidemiology

THE AIDS CONNECTION

Beyond anthropology, one of the important connections of medical anthropology is with epidemiology, a discipline concerned with the patterns and spread of disease, including containing outbreaks of disease. At the U.S. Centers for Disease Control and Prevention (CDC), a branch of the national Public Health Service, scientists monitor the appearance and spread of disease all over the country and beyond. In the AIDS epidemic, for example, CDC researchers attempted to understand what was causing the disease, how it was spread, and how the AIDS epidemic could be stopped. There has been a long but in some ways not always deep collaboration between epidemiologists and medical anthropologists. Over 200 medical anthropologists, for example, have worked on some aspect of the global AIDS epidemic, often in close partnership with epidemiologists and other researchers and interventionists (Bolton and Orozco 1994). In this work, medical anthropologists have played various roles, including, as but one example, working closely with outreach workers who locate and recruit hard-to-reach at-risk individuals, such as injection drug users, for interviews by the anthropologists on patterns of HIV risk and/or for participation in prevention interventions. Research of this sort has led to discoveries by medical anthropologists and their colleagues of a range of behaviors beyond direct syringe sharing that can spread the AIDS virus as well as sexual risk associated with injected and noninjected drug use. In addition medical anthropologists were involved in identifying social and behavior contexts in which risky behavior is most frequent, assessing the role of social networks in the spread of HIV infection and the importance of exposure to violence in risk behavior, and have played key roles in prevention research on syringe exchange.

Melissa Parker (2003:179), who studied unsafe sex among gay-identified men in the backrooms of pubs, clubs, and saunas in London, has argued anthropologists should "draw upon their ethnographic expertise and help to design interventions which target people and places with the explicit intention of promoting social change and saving lives."

CULTURAL EPIDEMIOLOGY

In his book *Epidemiology and Culture*, James Trostle (2005), an anthropologist long concerned with building collaboration between epidemiology and anthropology, has argued for the creation of a "cultural epidemiology" that would integrate the anthropological concept of culture into the set of explanatory variables used by epidemiologists to explain disease. Cultural beliefs and practices about condom use, for example, have contributed to the spread of HIV infection. Because many people link condom use to casual intercourse with people other than their main partner, it is difficult to convince them to use condoms with their primary partners.

HEALTH TRANSITION

Within epidemiology, the term "health transition" is used to label improvements in life expectancy and changes in the configuration of primary causes of mortality that have occurred worldwide (although not equally so) since the beginning of the twentieth century and especially since the end of World War II. In many (but not all) countries of the world, rates of infectious disease have diminished as a cause of death, although less so in places where HIV is most prominent, while chronic diseases, such as cancer, heart disease, and stroke, and what are termed "behavior problems," such as substance abuse, have become more important. One effect of the health transition is that poorer countries now suffer from what has been called the "triple burden" of acute disease, such as diarrheal disease; chronic disease, such as cancer; and behavioral pathology, such as the global spread of illicit drug injection. At the same time, health care systems have been changing. One force pushing such changes is the imposition of what are called "neoliberal reforms" by international lender institutions (i.e., banks that loan money for development to poorer countries), such as the World Bank. In poorer nations, such as Mongolia, as medical anthropologist Craig Janes (Janes and Chuluundorj 2004) found during his research there, lender-endorsed steep cuts in government investment in the health sector and the transformation of health services from a government-provided benefit to a

purchasable commodity resulted in a significant drop in the quality and quantity of health services available in rural areas while restricting access to services that were still in operation. Janes discovered that women in particularly were vulnerable to these changes, leading to increasing rates of both poor reproductive health and maternal mortality.

Illness Behavior

Within the kinds of sweeping changes noted here, medical anthropologists have focused on how local sociocultural factors have contributed to the creation of considerable variation in the nature and effects of the health transition across local settings. One way in which cultural factors come into play in this regard is "illness behavior," a term that refers to "monitoring the body, recognizing and interpreting symptoms, and taking remedial action . . . to rectify the perceived abnormality" as well as "adherence to therapeutic advice, changes in treatment regimens [e.g., switching healers], and evaluation [and reevaluation over time] of therapeutic efficacy and outcome" (Christakis et al. 1994:277). As a society moves through health transition, illness behaviors change, including patterns of use of health services. The global distribution of pharmaceutical drugs, for example, has contributed to the use of these commercial laboratory remedies in ways that go far beyond their intended purposes and patterns of use, such as crushing antibiotic capsules and applying them to wounds and emergence of folk injectors who administer individual antibiotic injections. Documenting and assessing emergent patterns of illness behavior and their causes is a new role that medical anthropologists have begun to play in the realm of epidemiology.

Medical Anthropology and Public Health

Closely related to epidemiology is the discipline of public health, a field that is concerned with assessing and improving the quality of health of the general populations as well as that of especially vulnerable and at-risk subgroups therein. In the past, medical anthropologists have contributed to public health by ethnographically examining disease-promoting behaviors in social context. As Peter Brown and colleagues (1996:198) point out, "As interpreters of human behavior who elucidate how and why people do what they do," medical anthropologists have been able to contribute to disease prevention and control.

There have been a number of methodological and conceptual developments in public health in recent years that have created *new opportunities for medical anthropology* to play a part in public health discussions and interventions. Among these new developments are 1) the growing public health and medical concern with health inequities, 2) the increasingly recognized need to enhance the cultural competence of health care providers, 3) the emergence and growing influence of the community-based participatory research model, 4) the diffusion of and increasing funder emphasis on evidenced-based interventions in public health, 5) the mounting demand for translational research that allows the findings and knowledge produced by health-related studies to shape health intervention efforts, and 6) spiraling interest in what have come to be called complementary and alternative medicines. At the same time, a research method developed within anthropology—rapid ethnographic assessment—has spread into public health, creating additional opportunities for medical anthropology to have an impact on health issues. Each of these increasingly important arenas of public concern in which medical anthropology directly or indirectly has played a role are described in turn.

HEALTH INEQUITY (OR DISPARITY)

These terms refer to the significant differences in the health profiles (i.e., the distribution of diseases) across human populations, social strata such as social classes, or other segments of the population, such as rural areas compared to urban settings. Additionally, health disparities researchers are concerned with why disparities in health exist. In the United States, for example, as Grace Budrys (2003:39), in her book *Unequal Health: How Inequality Contributes to Health and Illness*, observes, from a health standpoint "being at the top of the [social class] heap is a lot better than being on the bottom. . . . There has been an explosion of research indicating that social class is a powerful, and arguably the most powerful, predictor of health." The nature and importance of health inequities will be examined in greater detail in chapter 6. Suffice it to note here that it is an important health arena in which a number of medical anthropologists have become quite active.

COMMUNITY-BASED PARTICIPATORY RESEARCH

There are various approaches to research on health issues in specific populations and communities. In the "unilateral research model," researchers based at universities or research centers design a research project based on

their understanding of the key issues and questions. The research agenda in this approach is almost completely if not completely determined by the researchers in terms of their conceptions and interests. After a project is largely designed, the researchers may contact and subcontract with a community organization to recruit participants from the community who will be interviewed in the planned study. Often strapped for funding, community organizations accept such subcontracts even though they may at the same time resent not having much voice in planning the study, including a say in what are the key health issues in need of research from the community's perspective. Another approach to research is called the "collaborative model." In this approach, while a researcher initially conceptualizes a study, she or he then contacts one or more organizations based in the community of concern and invites them to participate in fleshing out the details of the study. While the community organization(s) participates at some level in the study, the bulk of project direction, decision making, and funding is still centered in the university or research institute. Both unilateral and collaborative research projects are very common and can be found on most university campuses, often funded by federal research grants or private health foundations.

As contrasted with both of these approaches to research, "community-based participatory research" (CBPR) is based on a full partnership between researchers and community representatives and organizations, from project conception to completion, including publication of findings. Community-based participatory research grew out of recognition that traditional population-based biomedical research methods lack authentic community involvement and often result in community alienation from research and researchers. In some cases, researchers have come to be defined as exploiters of communities rather than as their natural allies. Consequently, in CBPR-guided projects, the community plays a key role in setting the research agenda. In this, communities are guided by their pressing need for specific health-related knowledge, which can be put to use in addressing community health problems and in making ongoing decisions about the direction of the research. As the concept of CBPR has developed and its value recognized, various efforts have been made to establish guidelines for successful and mutually satisfying participatory research projects.

The community-based organization known as Community-Campus Partnerships in Health, for example, which has as its mission the creation of healthier communities and overcoming complex societal problems, has identified the following principles and best practices in CBPR (see http://www.ccph.info/):

- Research partners should establish the mission, values, goals, and measurable outcomes for the partnership.
- The relationship between partners is best characterized by mutual trust, respect, genuineness, and commitment.
- The partnership should balance power and share among partner organizations.
- There should be open communication between partners, making it an ongoing priority to listen to others.
- Partners should share the credit for the partnership's accomplishments (e.g., publications).

Medical anthropologists have contributed to the development of this alternative orientation to research. For example, the Institute for Community

Community-Based Organizations

In response to pressing health problems and disparities, communities often respond by creating organizations to improve health and social well-being. In that they are not part of government structures, they are also called nongovernmental organizations (NGOs). Sometimes, such organizations do not emerge from indigenous initiatives but are initiated by outside groups (e.g., churches). Thus, it is possible to differentiate community-based organizations (CBOs) and NGOs into community-based and community-placed organizations. Whatever their title, these entities have been important arenas of work by medical anthropologists in recent years. In particular, they have been places in which medical anthropologists have been able to work collaboratively with community members in partnerships that are designed to develop and evaluate programs that address community-identified needs. At times, this work also involves advocating with communities for policy or programmatic efforts to address their pressing health needs. Alayne Unterberger, for example, has been involved for many years in a CBO called the Florida Institute for Community Studies in the Tampa area that focuses on the health issues of migrant and nonmigrant farmworkers. One of the projects she has worked on through the institute is called Pocos Hijos. This is a family planning education and referral effort that focuses on identifying and meeting the health and service needs of farmworkers and their families. The project is guided by an advisory committee comprised of current and past clients. It seeks to ensure that the project addresses community-identified needs. Originally begun as a needs assessment research project, Pocos Hijos now delivers culturally, linguistically, and gender-appropriate community outreach, radio programming, and youth outreach.

Research in Hartford, Connecticut, a community-based organization that has been led by anthropologists since its founding, has established the Youth Action Research Institute to promote the use of a participatory action research model among youth. Central to the institute's work have been projects that involve minority youth in ethnographic research on issues of concern (e.g., AIDS, substance abuse) to the youth, including the primary health and social problems faced by their communities. Anthropologists train youth in ethnographic methods and help them identify problems for action research. The goals of this project are personal growth among the youth participants, the development of positive peer norms, and the assessment of community health needs.

DIFFUSED EVIDENCE-BASED INTERVENTION

There has been a strong effort in recent years to accelerate the movement of scientifically proven (i.e., evidence-based) intervention models, such as training programs to assist people in avoiding contracting AIDS. Rather than fund organizations to implement intervention models that have not been evaluated, funder institutions, such as the CDC, are increasingly requiring the use of models that have proven to be effective. The CDC's Diffusing Effective Behavioral Interventions project, for example, has helped implement 18 different research-based HIV prevention models through community-based organizations, health departments, and other prevention providers across the United States. These were designed for specific populations, such as injection drug users, sexual and romantic partners of injection drug users, men who have sex with men, heterosexuals at high risk, people living with HIV/AIDS infection, and homeless and runaway adolescents. To prepare community organizations to successfully implement these intervention models in their respective communities, the researchers or those they have trained are called in to provide guidance and technical assistance to the frontline people who would use the models in day-to-day prevention work.

TRANSLATIONAL RESEARCH

This is a specialized type of research that is carried out with the intention of improving the flow of knowledge from research into action in public health or some other arena of social intervention. AIDS practitioners and policy advocates, for example, have complained that the findings of behavioral research are slow in finding their way to public prevention efforts. To take one example, anthropologists and others who conduct ethnographic research with injection drug users have observed that they engage in a number of behaviors during the consumption of drugs that might lead to HIV infection. One of these behaviors involves several drug users pooling their money to purchase a packet of an illicit drug, such as heroin or cocaine, and then mixing it with water, using one of the participant's syringes and the unit gauge on its barrel to measure the right amount of water to allow an equal distribution of the dissolved drug. If the syringe that is used for this purpose contains HIV, the virus that causes AIDS, then the virus may be flushed into the container (such as a bottle cap) that is being used for drug mixing and drawn up by all the individuals who are sharing the drugs from that container. In this way, all these individuals may be exposed to HIV infection. An examination of the messages given by prevention programs to drug injectors to protect themselves, however, often urges them only not to "share needles." Because individuals who share drugs may never share a needle, they may falsely believe that they are protected from HIV infection when in fact *other* behaviors in the drug preparation and use process are causing disease transmission.

As a result of examples like this, those involved in translation research have urged social scientists not only to publish their findings in professional journals, most of which are not widely read outside of academic and research settings, but also to take specific steps to ensure that their research is readily accessible to, relevant for, and understood by those who work in HIV/AIDS prevention programs or who make health policy decisions. As Sloboda (1998:203) has written, a "key issue that faces the field of intervention in general is how to translate the research findings for more widespread practice." The need for readily accessible and usable knowledge is particularly great in intervention efforts targeted to populations that are harder to reach and harder to retain, such as injection drug users and commercial sex workers, a task that has been taken on by a number of medical anthropologists. At the same time, if proven effective at the local level, interventions models, if they are to have a significant impact on the epidemic, must be scaled up beyond the pilot level. For example, with regard to AIDS prevention programs in Africa, Binswanger (2000:2173) argues, "In most of Africa, there are examples of excellent HIV/AIDS prevention, mitigation, and care projects. These projects reach only a small fraction of the population however. Like expensive boutiques, they are only available to a lucky few." This too is a type of work that is well suited to the skills and interests of medical anthropologists.

COMPLEMENTARY AND ALTERNATIVE MEDICINE

There has been a fairly dramatic shift in recent years in the way policymakers, health care providers, and the general public view healing systems beyond the dominant biomedical approach. One indication of this change is the remaking of the American pharmacy. Today the shelves of the average major chain pharmacy are filled with over-the-counter alternative medicines, such as Saint-John's-wort, echinacea, and black cohosh, that in the past could have been found only in specialty health food stores or alternative markets. Moreover, in 1992 the U.S. Congress established the Office of Alternative Medicine, which in 1999 became the National Center for Complementary and Alternative Medicine, one of the 27 research institutes and centers that make up the National Institutes of Health. The mission of the center is to promote scientific exploration of promising nonbiomedical healing practices and disseminate research-based information on these practices to the public and health professionals. While some have argued that the new interest in complementary and alternative healing systems is driven, at least in part, by a desire to subordinate them to the dominant biomedical system (Baer 2004), there clearly has been a significant change in the way they are viewed and their place in Western societies if not globally. We will return to the issue of complementary and alternative medicine later in the book as we explore alternative health approaches. Here, suffice it to say that the rise in interest in complementary and alternative medicine rests on and grew out of a long history of anthropological study of nonbiomedical healers and their approaches to the treatment of illness.

RAPID ETHNOGRAPHIC ASSESSMENT

This approach to research, which has now been adopted by health promotion institutions around the globe, was first fully described in the late 1980s and early 1990s by anthropologists Susan Scrimshaw and Elena Hurtado. Rapid ethnographic assessment is designed to bridge the gap between science and public health practice and policy by allowing the swift movement from community-based research on health or other pressing social issues to interventions that are based on research findings. While ethnographic research traditionally was both a labor- and a time-intensive approach, Scrimshaw sought a methodology that would take advantage of close-up ethnographic insight in a community of concern without requiring the customary year or more of social immersion and extensive documentation

of behaviors and events characteristic of traditional anthropological fieldwork. Rapid approaches allow researchers to build on existing knowledge of a target community and several strategies for the rapid development of rapport, such as the use of local staff to collect information in their own communities and collaboration with local community organizations, in the assembly of highly focused data on narrow issues and problems. For example, in Project RARE (Rapid Assessment, Response, and Evaluation), anthropologists and other researchers used focus groups, quick-intercept interviewing, concentrated field observation, and social mapping to identify and describe gaps in the existing array of AIDS prevention programs and services in several dozen cities across the United States. In the Hartford RARE project, for example, the research team, which consisted of people from the local community who were led by several community-based medical anthropologists, found that late night (midnight to 4:00 A.M.) sexual and drug use behavior was not being addressed by AIDS prevention efforts, resulting in a continued spread of HIV in the local population. As a result, the city health department began to require late night prevention efforts by some of the organizations that it funded to prevent the spread of AIDS in the city. The value of rapid research methods has been recognized in other fields as well, leading to the emergence of other types of accelerated assessment and evaluation models, such as rural rapid appraisal, rapid epidemiology, rapid disaster assessment, and rapid assessment of biomedical conditions. All these present emergent arenas of employment for medical anthropologists.

Medical Anthropology and Bioethics

Bioethics emerged as a new academic field during the 1970s and has quickly become an important force in science and medicine and, through the setting of health-related social policies and the rise of institutional review boards (IRBs), in medical anthropology as well. The term "bioethics" can be defined as a branch of the field of ethics that is concerned with the establishment and application of standards and principles by which human actions within the arenas of health care, health-related decision making, and health research can be judged morally right or wrong. Many hospitals, for example, employ experts on bioethics to provide consultation on the treatment of terminally ill patients and to inform decision making regarding issues such as organ transplant, abortion, euthanasia, in vitro fertilization, and the allocation of scarce clinical resources. As Everett (2006:46–47) points out, while it is likely that, because of the

kinds of research they do, medical anthropologists would have something important to offer, "they have found it especially difficult to find a place within bioethics debates" that tend to be dominated by the fields of philosophy, law, and biomedicine. Medical anthropologist, in fact, have sometimes been critical of bioethics because of a lack of sensitivity to cultural differences. Rayna Rapp (2000:44), a medical anthropologist who does ethnographic research on genetic counseling, for example, argues that bioethics is "self-confidently unaware of its own sociocultural context" and fails to consider whether the standards it develops reflect the values of non-Western populations. Thus, bioethics has emphasized the importance of respecting individual autonomy, free will, and self-determination and thus has opposed forcing patients or research participants to do things against their will or without their full consent. The problem, medical anthropologists point out, is that the values emphasized in bioethics reflect the Western celebration of individualism, a moral stance that is not shared by cultural systems that emphasize collectivist models or rigid social hierarchies. The narrow application of Western ethical standards without sensitivity to alternative norms may be construed as ethical imperialism.

Moreover, bioethics has been used in the effort to set standards for ethical research in light of a past history of gross violations of the rights of human subjects in research. All universities and research centers now have established IRBs that apply standards established for medical research to all forms of research involving human subjects. According to these standards, all research that has potential risks for human participants must be reviewed and approved by an IRB, including research by medical anthropologists. A number of anthropologists have questioned the appropriateness of IRB review of ethnographic research on the grounds that it commonly involves the misapplication of standards that were established for biomedical and experimental research where life and death risks are not uncommon (Marshall and Koenig 1996). Further, there has been some concern that IRBs may require anthropological researchers to engage in behaviors that create rather than avoid ethical dilemmas, such as mandating that research participants sign informed consent forms that result in participants' names being part of a project's records. In the study of illegal behaviors, such as illicit drug use or prostitution, this may contradict the researcher's commitment to protect the confidentiality of study participants. Medical anthropologists recognize that the kind of research they conduct commonly encounters perplexing ethical dilemmas and recognize the need for ethical principles to guide their research activities. Whether bioethics is the appropriate source for such

principles is an issue of debate. Whatever the challenges, there is little doubt that medical anthropology will continue to engage and develop in relationship with the field of bioethics.

MAJOR THEORETICAL FRAMEWORKS IN MEDICAL ANTHROPOLOGY

As is typical in science generally, medical anthropologists understand the world in particular ways. One of the influences on how a medical anthropologist approaches issues of health or illness is through a particular theoretical framework or school of understanding. There are several such frameworks in medical anthropology, although many individuals do not see themselves as adherents of any single perspective but rather take a more eclectic approach and allow the problem they are working on to shape the perspectives that they use. Other medical anthropologists consider themselves adherents or even advocates of particular points of view. Indisputably, however, the perspective one brings to his or her research will strongly influence the way a problem is approached, the questions that are asked, and the answers that are deemed sufficient and adequate. Among the primary perspectives found in medical anthropology are medical ecology, meaning-centered medical anthropology, and critical medical anthropology.

Medical Ecology

Rooted in both cultural ecology and evolutionary theory, this approach began with an emphasis on adaptation, defined as behavioral or biological changes at either the individual or the group level that support survival in a given environment, as the core concept in the field. From this perspective, health was seen as a measure of environmental adaptation. In other words, a central premise of medical ecology initially was that a social group's level of health reflects the nature and quality of the relationships "within the group, with neighboring groups, and with the plants and animals [as well as nonbiotic features] of the habitat" (McElroy and Townsend 1996:12). Beliefs and behaviors that improve health or protect societal members from disease or injury are adaptive. For example, in a volume that has had a significant impact on the field, McElroy and Townsend (1996) point to the indigenous development of snow goggles that shield the eyes of Arctic dwellers from the damaging glare caused by the sun reflecting off of ice and snow as an important health-related cultural adaptation of the

Inuit people. Similarly, from the medical ecological perspective, behavioral complexes, such as medical systems, including everything from shamanistic healing of soul loss to biomedicine treatment of heart disease, can be viewed as "sociocultural adaptive strategies" (G. Foster and Anderson 1978:33). In recent years, as a result of dialogue with other perspectives, there has been movement toward "merging medical ecology and the political economy of health into a 'political ecology of health'" (McElroy 2003:33).

Meaning-Centered Medical Anthropology

The approach taken in medical ecology to the understanding of human biology and behavior, as an interactive set of adaptations to ecological and social challenges, makes a lot of sense to many medical anthropologists. Yet others have questioned aspects of this approach. Byron Good (1994:45), for example, argues that in ecological studies, "disease is often taken to be a natural object, more or less accurately represented in folk and scientific thought. Disease is thus an object separate from human consciousness." In turn, medical systems come to be seen in medical ecology as utilitarian social responses to intrusive natural conditions. Good questions both halves of this ecological equation, asserting that in medical ecology "culture is . . . absorbed into nature, and cultural analysis consists of demonstrating its adaptive efficacy" (Good 1994:46). Lost in such understanding, he maintains, is a full appreciation of the human cultural/symbolic construction of the world we inhabit. Humans can experience the external material world only through their cultural frames, Good emphasizes, and thus diseases, *as they are known*, through body sensations or observations and measurements, by sufferers and healers alike, are containers packed with cultural content. Even medical science and biomedicine do not offer culture-free accounts of the physical world, as these too are cultural constructions. This is because both of these historically intertwined pragmatic ways of knowing the world are cultural products; they emerged within particular cultural systems at particular points in the development of those systems, and they accept without thought or questioning many deep-seated cultural ideas and values derived from their encompassing cultural assemblage. For example, deeply embedded within and strongly supported by the day-to-day activities, theories, and organizational structures of biomedicine and medical science are Western cultural notions of 1) individualism, namely, that each individual is distinct and is responsible for his or her success or failure as well as self-improvement; 2) progress and the belief that history is a process of steady social improvement; and 3) the responsibility of action or a belief in the appropriateness of changing the world to meet human needs. Consequently, from the meaning-centered perspective, a goal of medical anthropology is to "unpack" and analyze everything that makes up the health arena, from the experience of pain to the training and functioning of healers, as a set of systems for creating, experiencing, and communicating meaning in human life.

Critical Medical Anthropology

During the early years of medical anthropology's formation, explanations within the discipline tended to be narrowly focused on explaining health-related beliefs and behaviors at the local level in terms of specific ecological conditions, cultural configurations, or psychological factors. While providing insight about the nature and function of folk medical models, the initial perspectives in the field tended to ignore the wider causes and determinants of human decision making and behavior. Explanations that are limited to accounting for health-related issues in terms of the influence of human personalities, culturally constituted motivations and understandings, or even local ecological relationships, some medical anthropologists began to argue, are inadequate because they tend not to include examination of the structures of social relationship that unite (in some, often unequal fashion) and influence far-flung individuals, communities, and even nations. A critical understanding, by contrast, involves paying close attention to what has been called the "vertical links" that connect the social group of interest to the larger regional, national, and global human society and to the configuration of social relationships that contribute to the patterning of human behavior, belief, attitude, and emotion (Singer and Baer 1995). Consequently, what came to be called critical medical anthropology (CMA) focused attention on understanding the origins of dominant cultural constructions in health, including which social class, gender, or ethnic group's interests particular health concepts express and under what set of historic conditions they arise. Further, CMA emphasizes structures of power and inequality in health care systems and the contributions of health ideas and practices in reinforcing inequalities in the wider society. Moreover, CMA focuses on the social origins of illness, such as the way in which poverty, discrimination, violence, and fear of violence contribute to poor health. Both of the authors of this book have been active throughout their careers in the development of the CMA perspective.

Contrary to what some have asserted, CMA does not take a "top-down approach . . . in which political and economic forces press down

upon people represented as having relatively little autonomy or power" over their health and illness (Harper 2002:178). Rather, critical medical anthropologists argue that experience and "agency," that is, individual and group decision making and action, are "constructed and reconstructed in the action arena between socially constituted categories of meaning and the political-economic forces that shape the context [and texture] of daily life" (Baer et al. 2003:44). In other words, people develop their own individual and collective understandings and responses to illness and to other threats to their well-being, but they do so in a world that is not of their own making, a world in which inequality of access to health care, the media, productive resources (e.g., land, water), and valued social statuses play a significant role in their daily options. Conversely—and in interesting contradiction of Harper's reading of CMA theory—Brodwin (1996:197) is not quite correct in asserting that "critical medical anthropologists tend to see all experiences of body/self disorder as a potential register for social critique and resistance." Often, in fact, illness experience and the way it is handled socially serves only to reinforce rather than throw open to question existing structures of power.

Additionally, while recognizing the fundamental importance of physical (including biological) reality in health, such as the nature of particular pathogens, CMA emphasizes the fact that it is not merely the idea of "nature"—the way external reality is conceived and related to by humans—but also the very physical shape of nature, including human biology, that has been deeply influenced by an evolutionary history of social inequality, overt and covert social conflict, and the operation of both physical power and the power to shape dominant ideas and conceptions in society and internationally through processes of globalization (Whiteford and Manderson 2000).

In the following chapters, we return to many of these ideas while emphasizing the ways in which medical anthropology—guided by any of the perspectives described here—actively seeks to understand health, health beliefs and behaviors, and healing systems and practices across time and place and to use this information in addressing health problems, conflicts, and suffering in the world. We begin this process in the next chapter by examining what medical anthropologists do, including the ways they approach problems, the kinds of problems they address, their collaboration with other health-interested disciplines, and their impact on the health arena.

2

WHAT MEDICAL ANTHROPOLOGISTS DO

> [T]he distinctive approach of anthropology to research is to go out and see what is actually occurring, and to talk to the people themselves.
>
> —John Janzen (2001:18)

In the previous chapter, one of the points that was stressed is that medical anthropologists are involved in a wide variety of issues, places, and kinds of work. This chapter is concerned with providing a closer examination of just what it is that medical anthropologists actually "do" in these various settings. We begin this process by providing four additional cases of medical anthropologists at work, including exploring the kinds of problems they address and how they go about applying medical anthropology. Based on these cases, we then 1) discuss the range of issues medical anthropologists study and the special focus they bring to their work because they are anthropologists; 2) set the distinctive medical anthropological approach to research within the broad, holistic vision of the field of anthropology; 3) examine the specific methods used in medical anthropology research; and 4) examine applied activities in medical anthropology beyond research.