

Introduction

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This book is about anthropological contributions to public health at the dawn of the new millennium.¹ At the beginning of the twenty-first century, there is cause for great hope *and* great concern in the world of public health. On the positive side, advances in global health have occurred at a rate that is unprecedented in human history. In both the developed and the developing worlds, longevity has increased markedly, owing largely to basic research and application of discoveries and inventions in biomedicine and public health.² Causative agents of major infectious disease have been discovered, and antibiotics have prevented the deaths of millions. Simple therapies for diarrhea have significantly reduced morbidity and mortality in the developing world, especially among children. Immunization can now prevent infection, morbidity, and death from many diseases that were previously mass killers. Indeed, the global eradication of smallpox by campaigns of vaccination based on public health surveillance may be counted as one of the major global achievements of the twentieth century. In the twenty-first century, new public health philanthropists, such as the Bill and Melinda Gates Foundation, have channeled their resources and energies into the development of new vaccines and other low-cost, appropriate health technologies for the developing world.

Beyond infectious diseases, principal causes of major chronic diseases, such as lung cancer and heart disease, have been identified. The use of screening

technologies can prevent death from cervical, breast, and colorectal cancers. Injuries (both intentional and unintentional) are now seen as matters of public health, and their prominent modifiable risk factors are recognized. Although the demonstrated capacity to control chronic diseases and injuries has been less dramatic, modification of the physical and social environment has been shown to reduce exposure to prominent risk factors for many of these conditions. Overall, biomedicine and public health have made major contributions to human health during the twentieth century (Centers for Disease Control and Prevention [CDC] 1999).

Yet, the challenges to global public health in the twenty-first century are still formidable. Since the year 2000, a number of major natural disasters, including the South and Southeast Asian tsunamis, devastating earthquakes in Pakistan and China, Hurricane Katrina in the southern United States, major famines in parts of East and West Africa, and recent cyclones in Bangladesh and Burma (Myanmar) have tested public health infrastructures, both locally and globally, in terms of their ability to deliver timely relief. Reemerging infectious diseases continue to take millions of lives each year. Africa and Asia have also suffered from virulent viral epidemics of ebola, SARS, and avian flu—generating concern about the resurgence of a deadly global flu pandemic. In particular, the emergence and resurgence of three “global killers”—HIV/AIDS, malaria, and tuberculosis—can perhaps be counted as *the* most pressing challenge to global health in this new millennium. The HIV/AIDS pandemic has taken more than 20 million lives, has left more than 12 million AIDS orphans and many child-headed households, and threatens to take the lives of the more than 30 million people now living with the virus as well as the lives of millions more who will become infected, including in the populous nations of China, India, and Russia.

Chronic “lifestyle” diseases, now epidemic in the United States, are spreading to the rest of the world as a result of changing diet and lifestyle—including the so-called “McDonaldization” effect of globalization and the spread of Western fast food to developing countries. In addition, more than half of the world’s men smoke, leading to epidemics of tobacco-related diseases and death, including in family members who suffer the effects of secondhand smoke and the diversion of family resources into tobacco consumption. Tobacco-related diseases are increasingly a global problem of women, and girls and women have been the targets of commercial tobacco campaigns (World Health Organization 2001).

Although major improvements in child health have been achieved during the twentieth century, children in many parts of the world are still at risk of low birth weight, childhood malnutrition, and death from a variety of infectious diseases, including malaria, a major killer of children. Mothers—who are “counted upon” within public health initiatives to save the lives of their children—may themselves be dying from HIV/AIDS and childbirth-related maternal mortality, the latter of which has been singularly recalcitrant to so-called “Safe Motherhood” initiatives around the world. In fact, so many

women and children who are living in poverty continue to die from preventable conditions that two of the eight Millennium Development Goals (MDGs) developed by the United Nations as a global blueprint for action by the year 2015 focus on reducing child mortality and improving maternal health.

The first priority of the UN MDG initiative is to halve the rate of extreme global poverty by the year 2015—an indication of the extent and severity of poverty in many parts of the world and in almost every continent. That some continents, including Latin America, Africa, and parts of Asia, are more severely affected by poverty than others bespeaks the major global inequalities and health disparities between rich and poor nations. Such disparities have been exacerbated through structural adjustment programs (SAPs) and neoliberal economic policies that reinforce the dependence of needy “recipient” nations on wealthy “donor” nations through donor–recipient models of economic aid, including in health development.

As a result of these various factors, wide gaps separate public health capacities to advance global health and the actual fulfillment of these capacities in countries around the world. Available public health knowledge and resources potentially allow far more control of human suffering than has been achieved at this point in the twenty-first century. An index of this gulf is the difference in longevity between Japan, with the highest life expectancy, and Sierra Leone, with the lowest. The Japanese can expect to live more than twice as long as the Sierra Leoneans do (men 78 and 37 years, respectively; women 85 and 40 years, respectively) (WHO 2000). However, if *healthy* life expectancy at birth is measured, then the Japanese can be expected to live *three times* as long in good health as do Sierra Leoneans. Because of HIV/AIDS-related morbidity, men and women from can be expected to live healthy for only 27 years and 30 years, respectively. Because of HIV/AIDS, the overall life expectancy in sub-Saharan Africa has dropped precipitously in the new millennium, with AIDS now being the leading cause of death and far outstripping other life-threatening diseases, such as malaria, tuberculosis, diarrheal disease, and pneumonia. The 155-fold difference between health care expenditures in the high-income economies of the developed world and the low-income economies (World Bank 2007) undoubtedly contributes in part to the disparities in longevity, by affecting efforts to both prevent and treat disease, including through provision of antiretroviral (ARV) therapies to prolong life expectancy in AIDS patients. In short, when considered on a global scale, health care expenditure may be inversely proportional to need.

Obstacles to Achieving Global Health in the New Millennium

It can be argued that there are four major obstacles to closing the gaps in morbidity and mortality worldwide. First is the ongoing *deliberate production*

of illness, suffering, and death by human acts such as warfare, genocide, homicide, torture, and persecution. In 2000, the World Health Organization estimated that 269,000 people died and 8.44 million disability-adjusted life years (DALYS)³ were lost to death and disabilities in 1999 as the direct and immediate effects of all the wars, both civil and international, being fought in that year (Ghobarah, Huth, and Russett 2004). Since 2000, the United States has launched major war efforts in Afghanistan and Iraq, adding to the list of 30 current conflicts being fought around the world in the year 2008. In 2006, there were approximately 20 million people “of concern” to UNHCR (United Nations High Commission on Refugees), the UN refugee agency worldwide (UNHCR 2008). The exodus of more than 2 million Iraqis, mostly to the neighboring countries of Syria and Jordan, has reversed 5-year declines in the global refugee population, bringing the global total to nearly 10 million people.

A second obstacle to solving public health problems is *inequitable allocation of resources, including misallocation and inefficient allocation*, both within and between nations of the world. Discrimination and unequal access to resources based on gender, race/ethnicity, age, religion, socioeconomic status, and region are well recognized (Doyal 1995). Lack of access to resources based on such discrimination can have substantial detrimental effects on health, leading to so-called “health disparities” between populations living within a given society. In addition, ethnocentrism and nationalism, as well as racism, sexism, ageism, and other forms of prejudice, have been, and continue to be, underlying factors in the unequal distribution of resources among and within nations. The beliefs that one’s own culture and society are the only true and worthy ones and that other societies are fundamentally less deserving of the fruits of prosperity and good health underlie global inequalities in health. Such inequalities are a manifestation of so-called “structural violence,” or the violence of poverty, social and political marginalization, and other forms of structured inequalities that affect people’s lives, health, and overall well-being (Farmer 2003, 2004).

A third and related obstacle is *lack of commitment of needed resources*—including health care services, technologies, pharmaceuticals, and personnel—to suffering populations. Public health rests on a moral assumption that response to the perceived suffering of others is a worthy action, deserving commitment of resources and effort. Implementation requires the agreement, if not the active participation, of national governments in efforts to improve public health within a country’s borders. Some public health initiatives fail because of lack of national and/or international commitment to projects designed to address the perspectives and concerns of the populations in need. The concept of “political will” has been invoked to describe the issue of political commitment to public health efforts. Indeed, public health is a very political field of action, involving complex forms of collaboration among governments, international agencies,

ministries, and various nongovernmental organizations, including faith-based organizations, the latter of which are increasingly involved in the delivery of public health services around the world.

A fourth obstacle is the *inadequate translation of public health knowledge into effective action*, largely because of social and cultural boundaries. Such boundaries may separate those who have specific preventive and curative capacities and resources from those who may need them. The failure of some public health programs to study and take into account the culture and society of the community toward which the program is being directed has sometimes led to only partial success or even demise of the program. Indeed, for public health programs to be maximally effective, social and cultural differences must be bridged, and communities receiving public health programs must “buy into” program efforts. The participatory research approaches developed in public health are a promising move toward cross-cultural bridge building (Cargo and Mercer 2008). But the failure of some public health agencies to reflect on their own cultural assumptions or to base programs on misleading concepts and erroneous theories and information remains a serious challenge to global health in the new millennium.

Anthropology and Public Health: Four Approaches

This anthology is devoted primarily to the fourth obstacle—the need for nuanced social and cultural assessment in overcoming public health problems. We argue that the lack of routine and systematic use of anthropological theory and methods has been detrimental to the field of public health. Public health needs anthropology to be maximally effective. Yet, anthropologists have not been consistently collaborative, nor have they made their perspectives understandable for the cultures of others—for example, the public health community.

The authors in this anthology are motivated by their desire to explore interdisciplinary intersections between anthropology and public health and to translate their research in ways that are useful and meaningful for public health audiences. Most of the authors in this book are trained in the subfield of medical anthropology, and many have received additional training in public health. As a result, they are heavily invested in the study and solution of public health problems in both the developed and developing worlds. The chapters in this anthology illustrate the salience of anthropological theory and methods for the public health community through 24 case studies of a diverse range of public health topics in a variety of global sites. The anthology is divided into four sections, based on four different approaches taken by anthropologists to the study of public health issues.

The first section of the anthology, "Anthropological Understandings of Public Health Problems," examines the ways in which anthropologists attempt to understand public health problems within a larger social, cultural, historical, and political-economic context, yet stopping short of developing public health education or promotion programs. Such contextualized studies of public health problems are imperative, not only to understand what local communities think and believe about the causes of their health problems, but also to understand how they grapple with them. In this respect, the importance of indigenous (i.e., local) health culture, including people's own understandings of and solutions to local health problems, is emphasized in the chapters in this section. Anthropologists studying indigenous perspectives on public health problems can provide rich data on knowledge, attitudes, and practices surrounding health; social organization and norms that affect care-giving; and the "local moral worlds," including local religious norms, that surround therapeutic decision making and the acceptance (or rejection) of public health innovations (Kleinman 1996).

The second section of the anthology, "Anthropological Design of Public Health Interventions," introduces the principles, methods, and approaches of so-called "applied" medical anthropology in public health settings. The chapters in this section highlight the work of anthropologists who attempt to develop effective public health education and intervention programs. The expertise offered by anthropologists in public health interventions often focuses on so-called "formative research," or the conceptualization stage of an intervention, in which knowledge of and from the local community is imperative. However, as shown in several of the chapters, anthropologists are now also taking leading roles in multiple facets of public health intervention projects. These roles include design, management, and evaluation of the intervention, including follow-up on intervention outcomes many years after the project. The long-term engagement of anthropologists facilitates local participation and uptake and increases sustainability.

The third section of the anthology, "Anthropological Evaluations of Public Health Initiatives," emphasizes the importance of evaluation—of local, small-scale intervention projects, as well as of major, internationally funded public health initiatives being carried out around the world. The anthropologists in this section of the book critically analyze notions of health "development," often pointing to the difficulties of developing effective, long-term, public health interventions for many of the most serious global health problems. This is especially true when local-level realities are ignored in public health initiatives emanating "top down" from international agencies. The importance of local change initiatives, coming from *within* affected communities, will be apparent in this section of the book.

Finally, the fourth section of the anthology, "Anthropological Critiques of Public Health Policy," challenges many of the major policy initiatives being

invoked in global public health in the twenty-first century. The theory of neoliberalism, which focuses on privatization of public health and biomedical services around the globe, is critically assessed, as are the public health bureaucracies from which such policies emanate. In addition, many public health policies have emerged in reaction to perceived imminent public health threats. In states of emergency, policies of questionable nature are sometimes enacted, with detrimental outcomes for local populations. Examining macrolevel public health policies with a critical eye is therefore an essential endeavor. Such critiques can determine where mistakes have been made and can suggest what lessons might be relevant for future policy makers. Anthropologists are trained in critical theory; thus, as a group, they excel in this critical evaluative role. However, it is important to note that anthropology also excels in auto-critique; anthropologists pride themselves on "reflexivity" (self-reflection) about their research motives, their relationship to those studied, the power differentials between researcher and subject, and what might be described as "best practices" in research methodology, or how different methods are needed for different research problems. The field is also characterized by a strong ethical orientation, with "do no harm" to research subjects as the first principle.

Given the focus of this book on the "value added" by anthropology to public health, the remainder of this introduction briefly

- describes the underlying principles of anthropology, indicating their application to public health;
- gives an overview of anthropological methods; and
- proposes directions for the future of anthropology in public health.

Principles of Anthropology

Anthropology is a discipline that examines diverse aspects of human social life, its processes and causes, the interrelations of its elements, and its relations with phenomena studied by other disciplines, for example, human biology, ecology, economics, politics, and religion. The annual meetings of the American Anthropological Association, undoubtedly the largest regular gatherings of anthropologists in the world, indicate the field's rich variety as its practitioners examine facets of social life taken for granted by most.

Anthropology is commonly divided into four major subfields: *archaeology* examines the physical remains of societies—most often societies of the past—to reconstruct as much of their social and cultural life as possible; *physical*

anthropology focuses on human biology and its relation to society, culture, and history; *linguistic anthropology* examines various facets of human language and its relationship to social and cultural life; and *social and cultural anthropology* examines the organization of societies and their cultural systems, that is, their beliefs, values, norms, and patterns of behavior. Although the division into four subfields reflects differences in interests, theories, and methods, these also may be shared among the subfields.

Medical anthropology, which focuses on the interrelationships of society, culture, and biology on the one hand and sickness and healing on the other, might be considered a component of social and cultural anthropology, incorporating the other fields as well; or it might be regarded as a fifth subfield. With nearly 1,300 members of the Society for Medical Anthropology (SMA) of the American Anthropological Association, medical anthropology is the anthropological field most central to public health. In the remainder of this introduction, medical anthropology is the subfield to which we refer when we use the term *anthropology*.

Like scholars in other disciplines, anthropologists have diverse views and approaches to their discipline. Nevertheless, there are perspectives shared by most anthropologists. The following discussion summarizes four basic anthropological premises and their corollaries, indicating their application in public health. The chapters in this book illustrate these assumptions.

Premise One: Cultural Relativism

Undoubtedly, the most basic premise of anthropology is *cultural relativism*, the assumption that "cultures" (the systems of beliefs, values, and norms of behavior found in all societies) are more or less coherent, systematic, and rational within their own context. Beliefs about health and sickness, and their causes and treatment, commonly referred to as *ethnomedicines*, are elements of these cultural systems. Politics, the economy, and religion are also cultural elements; in many technologically less developed societies, there is considerable overlap of ethnomedicines and other cultural elements. Cultural relativism is essentially the opposite of ethnocentrism, cited earlier as a source of failure to address major global health problems. Although there are limits to the anthropological acceptance of cultural relativism (e.g., few if any anthropologists would find slavery or the culture of Nazi Germany in the 1930s and 1940s to be legitimate), most anthropologists subscribe to some version of cultural relativism and value the integrity and worthiness of all human societies.

A question of relativism critical to the role of anthropology when working with public health is whether the predominant medical system of Western civilization, *biomedicine*, is superior entirely, in general, or in specific

aspects—to the *ethnomedicines*, or indigenous health systems of non-Western societies (Hahn 1995). An operating principle of public health is that biomedicine and public health have at least some superior knowledge or technique that justifies addressing the health problems of others.

Several corollaries follow from the premise of cultural relativism. First, *societies and cultures are best understood as whole systems, that is, "holistically."* If the elements of a cultural system do not "make sense" on their own, then the way in which cultural elements fit together is critical for understanding the individual elements. Anthropology traditionally addressed this corollary of relativism by means of holistic studies of communities, referred to as *ethnographies*. These are studies that examine not simply a focal topic, but the interrelationships of physical environment, principal activities, economics, and social organization, including kinship and marriage, politics, science, and religion. In contemporary anthropology, holistic studies are exceptional, perhaps in response to the limitations of funding. Yet even focused, topical studies, which are now the rule, frequently provide contextual information, as shown in the chapters in this anthology.

Second, *Western civilization is also a culture, or rather a combination of many cultures.* Similarly, the discipline of anthropology, largely an intellectual product of the Western world, is itself a culture with many subcultures. A consequence of this corollary is that anthropologists have their own distinct worldviews; they have theories about the way the world is, along with their own, possibly distinctive, values and behavioral norms.

For public health, an implication of the culture of anthropology is that, to communicate with practitioners of other disciplines or even within their own society, anthropologists need to translate their concepts and methodologies into the concepts and languages of other disciplines and practices, for example, public health and policymaking. Although this corollary—the need to translate across cultural boundaries—seems basic to the discipline of anthropology, many anthropologists appear to ignore it in dealing with the nonanthropological world. Many anthropologists direct their discourse only to fellow anthropologists. Some anthropologists may resist translation because they regard the application of anthropology to the solution of real world problems as tainting the discipline with politics and values (as if their own studies were apolitical and value free). Anthropologists who do not acknowledge their own culture or who disdain application of their knowledge may fail to communicate their perspective, its methods, and usefulness across disciplinary boundaries adequately.

Third, *local populations, not the outsiders, are the experts on their own sociocultural environment.* If appropriately enlisted, community members can become the teachers of local perspectives, values, and social life. Anthropologists are schooled to be the students of others. They often acknowledge that, in many

instances, they do not even know what knowledge is relevant in new cultural settings. When they do develop questionnaires, they do so on the basis of their understanding of the local culture and society, often based on months, if not years, of immersive fieldwork. The humble assumption that expertise resides in others—and particularly local community members—is common in anthropology, but rare in other academic disciplines. It is integral also to participatory research approaches now recommended by the Institute of Medicine, among others (Cargo and Mercer 2008).

Fourth, a corollary especially important to programs of public health is that those who seriously interact with foreign cultures have a moral obligation to take those cultures seriously, including their social organizations and values. Anthropologists have noted that public health programs in the past were often based on the assumption that the communities for which programs were planned were “empty vessels,” lacking the relevant knowledge of how to improve some facet of their lives; it was assumed that the problem would be solved by introducing the Western “expert’s” knowledge and techniques. Anthropologists reject this assumption.

Taking the culture and society of others seriously involves two related steps. First is coming to know the social organization and values of the other culture. The methods outlined below and exemplified in the chapters of this book indicate how such knowledge is achieved. This knowledge may make public health and other interventions more effective and efficient by being responsive to the local settings and enhancing local participation. But there is a second step, which some regard as essential, in taking the local social setting seriously and in using knowledge of this setting to develop local interventions. This is a *moral* step of respecting, attending to, and addressing local perceptions, interests, and ways of life. At the least, it requires listening and sympathetic understanding; at the most, it requires helping to serve local interests.

The challenge of taking others seriously may be couched as a question: “Are we providing a benefit that the recipient does not recognize or value as a ‘benefit’?” Members of the recipient society may reject our offering because they do not understand it—at least in the same way that we do—or because they understand it but give this potential benefit a relatively low priority. We might then be motivated to act paternalistically—a morally hazardous course, particularly when dealing with communities that include adults. In the design or implementation of public health programs, local concerns are often not a critical consideration, but should be. The anthropological approach provides moral grounds for routinely making local concerns a primary criterion in public health decision making.

The 1998 Code of Ethics of the American Anthropological Association recognizes the many individuals and communities involved in research, including

the anthropologist, his or her students and institution, the broader society, those who participate in an anthropologist’s study, and the institutions and agencies that fund anthropological research (American Anthropological Association 1998).⁴ First and foremost, the code emphasizes obligations to the populations studied:

A. Responsibility to people and animals with whom anthropological researchers work and whose lives and cultures they study.

1. Anthropological researchers have primary ethical obligations to the people, species, and materials they study and to the people with whom they work. These obligations can supersede the goal of seeking new knowledge, and can lead to decisions not to undertake or to discontinue a research project when the primary obligation conflicts with other responsibilities, such as those owed to sponsors or clients. These ethical obligations include:

- To avoid harm or wrong; understanding that the development of knowledge can lead to change which may be positive or negative for the people or animals worked with or studied
- To respect the well-being of humans and nonhumans
- To consult actively with the affected individuals with the goal of establishing a working relationship that can be beneficial to all parties involved (American Anthropological Association 1998)

Premise Two: Theoretical Foundations of Knowledge and Practice

A second anthropological premise is that anthropological *knowledge and practice are founded in theory*, that is, one’s beliefs and actions are based on underlying beliefs about how the world works. The anthropological approach to knowledge, however, is more inductive than many disciplines in that anthropologists are especially open to having their theories shaped by their experience in the field. Thus, theoretical formulations in anthropology are often fully formulated after field-based research has been undertaken. The “grounded” nature of anthropological theory allows for a process of theoretical revision over time on the basis of new knowledge and observations gained “on the ground” within a research setting.

Because anthropological knowledge production emerges through a process of inductive theory building, many anthropologists eschew deductive approaches based on the testing of predetermined hypotheses. Hypothesis-testing approaches to research are less common in anthropology than in other social sciences and in public health. Although public health funding agencies may require hypothesis-testing approaches, major anthropological funders—including the Wenner-Gren Foundation for Anthropological Research, the National Science Foundation’s Cultural Anthropology program, the Social

Science Research Council, and the Fulbright and Fulbright-Hays programs—generally do not. Rather, research objectives and goals in anthropological research are enumerated in relation to theory and methodology, but without the requirement of a hypothesis-testing research design. In addition, conceptual models, which often “stand in” for theory in public health research, are rarely part of the ethnographic approach favored within anthropology.

This is not to say that anthropology is theoretically underdeveloped. On the contrary, anthropology is a very rich theoretical field, deriving inspiration from such major social theorists as Max Weber, Sigmund Freud, Karl Marx, Pierre Bourdieu, Michel Foucault, Antonio Gramsci, Paolo Freire, Anthony Giddens, Immanuel Kant, Michel de Certeau, and many others. Contemporary theory in anthropology is characterized by rich and productive ferment, with some anthropologists favoring materialist perspectives, whereas others emphasize the symbolic and interpretive (Dirks, Eley, and Ortner 1994). In an insightful review of the late twentieth century development of anthropological theory, anthropologist Sherry Ortner wrote: “We are no longer sure of how the sides are to be drawn up, and of where we would place ourselves if we could identify the sides” (Ortner 1994:372). In recent years—reflecting an intellectual movement in the social sciences and humanities known as *postmodernism* or *poststructuralism*—anthropologists have recognized that cultures and societies are not always single, unified systems. Rather, human social life is often fragmented and fractured along lines of class, race, gender, and so on. Such fragmentation speaks to the social distribution of power within a society, and the crucial importance of understanding a society’s history. Together with historians, anthropologists are attending to these relations of power, as noted by anthropologist Nicholas Dirks:

Culture as emergent from relations of power and domination, culture as a form of power and domination, culture as a medium in which power is both constituted and resisted; it is around this set of issues that certain anthropologists and certain historians ... are beginning to work out an exciting body of thought (Dirks et al. 1994:6).

Relations of power and domination within societies suggest the need to attend to the historical context of health programs, as well as to the political environment in which such programs are embedded. The importance of history and politics cannot be overstated. They are crucial determinants of the success of some public health programs, and the failure of others, as will be shown by several authors in this book. Indeed, many anthropologists employ critical theoretical perspectives to understand how power differentials, including those between donor and recipient in public health programs, may stymie public health efforts. Such anthropological critiques are generally keenly attentive to history and politics on both the micro and macrolevels of analysis.

Anthropologists have proposed a wide range of theories to examine human sickness and health in different social and cultural settings. The range of theoretical positions is suggested by the following rough categorization (Hahn 1995):

- *Ecological/evolutionary theory* claims that the physical environment and human adaptations to it are the principal determinants of sickness and healing. Physical anthropologists employing a so-called *biocultural* approach to public health problems emphasize the interaction between human biology, ecology, and culture.
- *Cultural theory* posits that cultural systems of beliefs, values, and norms are the basic determinants of sickness and healing. So-called *phenomenological* or *interpretivist* approaches to public health problems emphasize local narratives of suffering and an analytical deciphering of cultural symbols and world view.
- *Political-economic theory* proposes that economic organization and relationships of power are the principal forces determining human sickness and health. So-called *critical medical anthropologists* who adopt a political-economic, or *materialist*, perspective tend to emphasize the tensions between *structure and agency*, or how economic factors may constrain health-promoting human action.

These theories have substantially different consequences for public health, in terms of whether biological, cultural, or economic determinants of health are emphasized in any given study. Yet, these theoretical orientations are not exclusive of one another; many anthropologists combine them productively.

It is important that public health practitioners recognize that knowledge and practice are founded in theory and that they need to be aware of their own theories. Awareness of underlying theory and theoretical assumptions allows deliberate assessment of the extent to which a theory’s elements are reasonable and compatible with observations. If observations are incompatible with theory, then a theoretical approach may need further assessment and revision. Whereas there is a rich and ever-expanding literature on theory in anthropology, the theoretical literature in some key public health fields, such as epidemiology, is comparably sparse. (Theory is substantially richer in public health fields such as behavioral sciences, communication, and health education.) Many public health research projects lack explicit theoretical models in favor of methodological rigor. Although methods are important, they are insufficient to answer public health research questions if they are not used to explore, validate, or build theoretical understanding. In this regard, public health could benefit from greater theoretical cross-fertilization with anthropology, including anthropology’s tendency toward critical (self-) reflection.

Anthropological theory may be useful in public health in at least two ways. First, theories may help explain particular circumstances, for example, the history and genesis of health problems within a particular community for which a program is being planned. Second, the varying anthropological theories of health determinants described above may expand upon the models of behavior and behavior change utilized in many public health intervention studies. Anthropologists are keenly attuned to the complexity of human behavior and belief; much health behavior does not fit neatly into conceptual models, suggesting that these models be expanded.

Premise Three: Research as a Sociocultural Process

A third basic premise of anthropology is that *research and intervention are sociocultural processes*. Research about (and by) human beings involves social relationships. In anthropology, and in many other disciplines as well, this relationship is frequently "cross-cultural." Within one's own sociocultural setting, it may be reasonable to assume that people share some of one's values, concepts, and behavioral norms; this assumption cannot reasonably be made when crossing sociocultural boundaries. For example, one cannot assume that information about a different setting will be provided just for the asking or absorbed when given. There are societal rules for interaction, including the proper way to ask questions; rules may differ for political and religious leaders, men and women, and children and elders; and such rules must be recognized to gather information effectively. Moreover, to interpret responses, it is important to know how one is regarded by the community being studied. For example, in communities where investigators are believed to represent "the government," information may be withheld or distorted so as to maximize the benefits (or minimize the losses) of a potential governmental response.

Similarly, *intervention, including public health action, is fundamentally a process of social and cultural exchange*. Again, there are at least two sociocultural systems involved, those of the "donor" and the "recipient." As in cross-cultural research, there are rules for behavior that must be recognized to effectively implement an intervention. Here, too, it is important to know how one is regarded by the community examined to know how to interpret community members' responses to an intervention. To this end, anthropologists commonly engage in a process of *reflexivity*, in which they carefully examine and attempt to articulate how their relationships with community members, including mutual perceptions about each other, may affect the research process and the information generated. Indeed, many anthropologists would argue that one of the key tools in anthropological research is the anthropologist himself/herself. How well he or she is accepted by the community being studied will have major implications for the outcomes of research.

Another corollary given credence by many anthropologists is the *national and global context of local society and culture*. Anthropologists recognize that, although individual cultures are more or less internally coherent systems, they are also part of nations which are, in turn, connected with other nations of the world. Thus, local cultures are not autonomous systems; they are deeply connected to and influenced by international circumstances and events. Recent attention by anthropologists to processes of *globalization* indicates that the global context must be taken into account. Societies may once have lived in relative isolation, little affected by the activities of other societies. However, in the new millennium, such isolation is rare, if it still exists. Anthropologists studying the *glocal*, or the reception of things "global" on the "local" level, suggest that processes of globalization are uneven, with some societies achieving the fruits of globalization more than others. Furthermore, local societies may accommodate, refashion, or resist global forces; the local reception of the global is never guaranteed. The importance of globalization for public health cannot be underestimated: Local acceptance of global health programs—which are often designed in "headquarters" in the West—rests on the ability of public health professionals to "tailor," "hybridize," or "indigenize" top-down, "one-size-fits-all" interventions to the local level. This involves taking into account not only the society for which the intervention is intended, but also its social, economic, and political environment. Local programs may succeed or fail depending on the way in which these global public health initiatives are culturally tailored to the local level.

Premise Four: Human "Nature" is Also Cultural and Social

A fourth premise shared by most anthropologists is that human "nature" is not only natural (i.e., a matter of the "basic" sciences of physics, chemistry, and biology), but also cultural and social. Interdisciplinary connectedness has two basic facets, one substantive and the other methodological.

The subject matters of anthropology and other disciplines, including psychology, political science, and history, as well as biology and the physical sciences, are fundamentally connected. Many anthropologists assume, for example, that human culture and social organization are substantially affected by human biology and the physical environment, as shown by the contrast between arctic and desert cultures. Similarly, human biology is affected by human culture and social life, as suggested by studies of migrants whose health status often tends to change when they leave their country of origin to live in a new country. The integrated sociocultural and biological aspect of human nature is critical for public health, insofar as populations for whom programs are designed cannot be assumed to be biologically identical to the populations of the program designers. Population differences can lead to the success of

a program in one setting and failure in another. The understanding of socio-cultural and biological effects on public health problems may be essential in addressing those problems. Thus, in addition to social and cultural anthropology, physical anthropology, with its attention to the biocultural basis of human health and well-being, may also be important in public health.

A second connection is methodological: If the subject matters of different disciplines are interconnected, then *the methodologies of those disciplines are also mutually relevant*. Anthropologists, for example, may need to be aware of the methodologies of fields closely linked with their particular study foci. In addition, different disciplines have developed methodologies that may be useful to the practices of other disciplines, independent of disciplinary subject matter; for example, anthropologists sometimes use techniques derived from biostatistics and epidemiology (Chapter 6; Hahn 1995; Inhorn 1995; Trostle 2005; Trostle and Sommerfeld 1996).

Anthropological Methods in Public Health

Foundations

Given its basic objectives and premises, anthropology's methodological challenge is to develop a theoretical and disciplinary framework through which the differing cultural frameworks and details of other societies can be understood. At least initially, the anthropologist has no choice but to use his or her own framework to know the culture of others. To this end, anthropological methods are designed to be flexible and to allow comprehension of other ways of seeing and organizing reality.

Many aspects of human social life, such as beliefs and values, are subjective and resist quantitative measurement. Such subjective phenomena may, nevertheless, be determinants of behavior and are thus critical to assess. Subjectivity of a research topic does not imply subjectivity of the research method used to assess the topic. Subjective characteristics may be measured by the qualitative approaches developed by anthropologists and others (Bernard 2005); once measured, individuals and communities may be systematically compared.

Within anthropology, there are two distinct views regarding quantification in anthropological research. This "qualitative-quantitative" division is associated with underlying differences in views of the discipline, its methods, and its results. Most anthropologists regard qualitative information, which examines the concepts, values, and meanings of sociocultural life, as the essence and foundation of anthropological knowledge. From this perspective, causation among social and cultural elements may not be an appropriate

goal of anthropological inquiry; other forms of explanation, such as creating a coherent description or "making sense" of information, may be the primary goal. However, a vocal minority of anthropologists view quantitative information and statistical analysis as the basic sources of anthropological knowledge. From this perspective, causal or other quantified analysis is a central task, although "making sense" of information may also be a goal of quantitative analysis.

Increasingly, some anthropologists are taking the middle ground in this qualitative-quantitative division, using both approaches in a complementary manner, each indicating support for the other. Medical anthropologists, including contributors to this book, often adopt a *mixed-methods* approach, in which methodological *triangulation*, or multiple methods to determine the validity of research findings, is employed (Bernard 2005). It has been argued that, although there are differences in practice between quantitatively and qualitatively oriented disciplines—for example, between epidemiology and anthropology—there is no radical difference in underlying principles; indeed, both approaches implicitly use each other and may be enhanced by explicit combination and collaboration (Chapter 6; Hahn 1995; Inhorn 1995).

As in many disciplines, anthropological research usually has several phases. The anthropologist generally begins by posing a research question; reviewing prior approaches, theories, and results; and specifying research design. Next, a study is conducted and the findings analyzed; and finally a book, series of articles, or report is prepared. The anthropological research process gives primary importance to the societies being studied and their cultural perspectives. And, depending on the setting, anthropologists may encourage participation of the study population in the research process, in phases ranging from community participation in the formulation of the initial research question through review of the results and final report. Indeed, the participatory research approaches used in public health have roots in anthropology (Cargo and Mercer 2008).

Formulating a Research Question

Anthropological research commonly has many sources, including the personal interests of the researcher and colleagues; the perceived magnitude of the problem to be studied; the state of theory, method, and findings in the discipline; sources of support; and research opportunities. The anthropologist must select a focus, however general, and develop a coherent proposal balancing these realities. Much of the research being done in medical anthropology emphasizes public health problems of social significance, for which practical solutions may eventually be achieved.

Because the culture an anthropologist studies generally differs greatly from the anthropologist's own culture, it may be difficult to specify in advance the exact information sought in research. Respondents may think of the research topic in a manner entirely different from that of the researcher, a difference critical to the anthropologist's process of understanding. Thus, the phases of research do not always follow the same course. Newly discovered topics may be critical to the researcher's original interests and alternative methods of information collection or analysis may be indicated. Nevertheless, it is incumbent on the researcher to specify clearly at the start what he or she intends to do, why, to what end, and how. It is also an intellectual prerequisite that the researcher demonstrates how the proposed study responds to the theory, methods, and prior findings on the chosen topic.

Anthropology applied to public health problems may also differ in several ways from the approaches of other anthropological subdisciplines. Because it is directed toward solution of a problem, the questions it seeks to answer will generally have practical import, such as why some intervention did not work, or how new knowledge of a public health problem can suggest a way to overcome it. Research of social significance, with potential benefits to the society being studied, is prioritized in the anthropology of public health. Increasingly, anthropological funding agencies, particularly the National Science Foundation, are attentive to the social significance of anthropological research. On the basis of such policy-relevant research, the anthropologist may go on to develop a public health intervention and evaluate its outcome. Anthropologists participating in these initiatives may produce action-oriented reports of findings (and theory and methods) that may include recommendations to policy makers, public health practitioners, or the communities studied.

As suggested above, anthropological research, like all other research, needs to be funded. Traditionally, support was needed for prolonged field research in remote locales. Although such long-term, immersive anthropological research continues today, many anthropological research projects are more focused, are carried out over shorter periods, and may involve research teams, including teams in which local research assistants are trained to carry out anthropological methods of data collection. As noted earlier, a variety of funding agencies, including those that foster research in the non-Western world, support anthropological research projects. It is critical that researchers attend to funding sources, while also being aware of and nurturing institutional connections, particularly with host countries and study communities. The American Anthropological Association's Code of Ethics regards informed consent of the study community and its members as a prerequisite for anthropological research. Ethical issues should always be paramount in research design, and increasingly, funding agencies require ethical disclosure on the part of all grantees.

Fieldwork: Collecting and Analyzing Anthropological Information

In anthropology, the research setting is typically referred to as *the field*. *Doing fieldwork* or *ethnography* is a rite of passage in anthropological training and an ongoing activity in the careers of many anthropologists. Basically, fieldwork means living or working for an extended period (often a year or more) at the site of one's research—an obvious precondition of participant observation, described subsequently. It also means a commitment to serious foreign language training, both before and during fieldwork. Anthropologists try to achieve fluency in one or more field languages, so that they can communicate effectively with those among whom they are living. Anthropologists refer to community members who provide them with information as *informants*. For anthropologists, the term does not carry the connotation of espionage associated with "informer"; moreover, it avoids the connotation of domination associated with anthropology's own history of research in colonial settings and with the term research "subject" used by other behavioral disciplines.

Anthropologists generally carry out their fieldwork alone, without a team of colleagues or research assistants. This "solo" model of research, sometimes called the *lone stranger* model, is valued and supported within the discipline of anthropology, including by anthropological funding agencies (Agar 1980). Increasingly, anthropologists are recognizing the value of taking others with them to the field, including spouses and children, students, and fellow researchers. Although group research is not the norm in anthropology, anthropologists are increasingly working in collaborative, cross-disciplinary teams, as shown in several chapters in this book.

Because fieldwork often fully and sometimes abruptly engages the anthropologist in a setting very different from his or her own home setting, it is commonly an intense and personal experience. It is often wonderful, but it sometimes results in *culture shock*, that is, a personal disturbance fostered by abrupt immersion in a new cultural setting where one may not understand the language, expectations, and one's standing, and where one's own sense of cultural and social order is not shared. Although many anthropologists experience such strains, most gradually transform their uncertainty into understanding.

Anthropologists recognize the need to establish *rapport* with the community in which they conduct their study, and particularly with the community informants. Rapport is a relationship of mutual trust. Building rapport is a critical step in research, because information given by informants may be substantially affected by their relationship with the researcher and by their understanding of what the researcher is doing. From an anthropological perspective, it involves the interaction of two social and cultural systems. Once rapport is established, the likelihood that informants will behave abnormally—out of

character—in front of the newcomer diminishes. But rapport is not simply of methodological interest, as a tool for gathering information; it is of ethical importance as well in affirming the observer's obligations to the people studied.

A renowned principle of anthropological research is *participant observation*. Participant observation is not so much a specific method as an approach to the collection of information by means of the presence and participation of the researcher in the social life of the study setting. The participant observer makes anthropological observations while participating; participation is a means of observation. Anthropologists rarely attempt to *go native*, fully adopting local customs and beliefs: most retain some distance while participating. The observer's participation may diminish the effects his or her presence might otherwise have on "normal" events.

Anthropologists traditionally assess basic background information about the research setting. They make maps of the community, collect information on its physical environment, including the "man-made" environment, and approximate population size and demographic characteristics, sometimes through community censuses. Much of this information can be collected by use of unobtrusive measures, which do not involve the observer's presence in, and thus potential alteration of, the local setting (Scrimshaw and Hurtado 1987). Such information not only gives a sense of what the place is like but is also often critical to the substance of the project.

Beyond background information, basic anthropological information collected in the field may be roughly categorized into two types: *cognitive*, that is, mental or ideational (including local concepts, beliefs, attitudes, and values); and *behavioral*, that is, describing what people actually do and how they interact. Anthropologists have developed substantial expertise for eliciting local concepts of how things (e.g., types of diseases) are classified and defined (Bernard, 2005). They regard the understanding of concepts as a guide to local views of the world. Anthropologists have also developed techniques for assessing how concepts are woven into belief systems (e.g., about the etiology and treatment of diseases). And they have methods for the assessment of attitudes and values, that is, ideas about what is good and bad, right and wrong, beautiful and ugly. Values are important because they are associated with local priorities—for example, whether treatment of one person or one condition is regarded as more or less important than the treatment of another person or another condition.

Interviews are the principal sources of cognitive information collected by anthropologists in the field; anthropologists value the importance of *discourse*, or "talk," whether it is in naturally occurring conversations or through interviews guided by the anthropologist. Anthropological interviews, like interviews in other disciplines, are commonly described in terms of their

degree of *structure*, that is, the extent to which they are intended to control interviewer–informant dialogue (Agar 1980; Bernard 2005; Fetterman 1998; Spradley 1979). Informal interviews are barely interviews at all; the researcher participates in normal conversation and records comments of interest to the research topic. Informal interviews are a side benefit of participant observation.

In formal interviews—classified as unstructured, semi-structured, or structured—interviewee and interviewer both know there is a specific goal: the interviewer's collection of certain information. Degrees of structure are the extent to which the interviewer is supposed to follow a fixed sequence of questions and the interviewee is supposed to choose from a fixed set of response options. In *unstructured interviews*, although the interviewer may have a chosen topic, he or she learns both by attempting to move the discussion to flesh out the topic and by allowing informants to explain their points of view on topics of interest and to lead in directions yet unknown to the anthropologist. Except for specific purposes, anthropologists carefully avoid *leading questions*, because rather than eliciting a response that reflects the respondents' own beliefs about the question, these might yield an answer that is thought to be expected by the questioner. Unstructured interviews are characterized by many *open-ended questions*, some of which may be included in a simple *interview guide* developed beforehand by the anthropologist, but others of which may arise during the course of the interview itself.

Bernard (2005) provides a list of *probes* useful in unstructured interviews to elicit different kinds of responses by informants. For example, the *echo probe* responds to an informant's statement with a brief summary of the statement; the *silent probe* waits silently for the informant to continue speaking; and the *leading, or baiting probe* (Agar 1980) suggests to the informant knowledge on the part of the interviewer, to encourage the informant to reveal information that might otherwise be secret. Since the rules of talk vary with the setting, the usefulness of probes depends on the cultural circumstances. For example, cultures differ in the time allowed between turns of speech, so that what the interviewer regards as a silent probe may be a normal wait in some settings, and thus not a probe at all.

A particularly useful probe for anthropology in public health is the question, "What happens when someone has such-and-such a disease?" The question may be about a current episode of the disease or a past one. When directed toward a specific informant's experience with a disease, it may lead to a rich and complex *illness narrative*, in which the informant reveals his or her *explanatory model* (EM) of the disease, and how he or she went about seeking treatment (Kleinman 1989). Illness narratives allow assessment of local theories of disease origin, perceived importance and implications, consultation and diagnosis, home and healer treatment, and follow-up; they may be complemented by

observation of disease-related actions, such as when an anthropologist accompanies an informant on a trip to a healer. Illness narratives is an important part of the anthropological toolkit in public health. Many of the chapters in this book will provide case studies in which portions of illness narratives are presented.

Along with unstructured illness narratives, *semi-structured interviews* are among the most common forms of interviews used in the anthropology of public health problems. The anthropologist generally prepares an interview schedule containing a list of questions he or she wants addressed. The semi-structured interview schedule contains both close-ended and open-ended questions, which will be asked of multiple informants. Semi-structured interviews are particularly useful when there are time constraints on the interview, when there may not be subsequent opportunities for interviews, and when teams of interviewers must collect comparable information (Bernard 2005). Semi-structured interviews are particularly useful for determining *patterns* of knowledge and belief because the same questions are asked of multiple informants.

Finally, in *structured interviews*, the interviewer has a fixed set of questions or a questionnaire. Several structured interview techniques have been developed by anthropologists working within the subfield of *cognitive anthropology* to assess local concepts, beliefs, and values (Bernard 2005). These techniques include *free listing*, in which the informant is asked to list all items in a given category, such as skin diseases; *ranking*, in which the informant is asked to rank items by specified criteria, such as most severe or most common; *triad tests*, in which the informant is asked to indicate which two of three items are most similar and which are most different; and *pile sorts*, in which the informant is asked to put like items together in piles. These techniques allow analysis of how informants divide up their universe and what dimensions connect and distinguish the elements.

Anthropologists also use *questionnaires*, which are generally developed only after months of prior fieldwork and built on established knowledge of local concepts and beliefs. Although widely used in other behavioral disciplines, questionnaires raise special issues in anthropology, largely because of differences in culture and society between questioner and respondent. Not only literacy, but also, for example, rules of speech, privacy, and secrecy may affect the design, administration, and usefulness of questionnaires. Questionnaires presume that the researcher knows what to ask and how; thus, anthropologists tend to use them only in later stages of a study.

Each form of interviewing has its particular use: unstructured interviews are an excellent means of exploring new topics, exploring topics in greater depth, and in designing more structured interviews. Anthropologists use unstructured interviews in a variety of ways, for example, to develop genealogies, to elicit life

histories from elders in a community, and to collect myths, fables, and other stories that a community deems important. Semi-structured interviews allow more directed exploration and facilitate systematic coverage of a topic and are thus particularly useful in more focused research on particular public health problems. Structured interviews are best suited for examining the range and distribution of specific beliefs in populations (Bernard 2005).

In recent years, anthropologists have also used *focus groups* as an interview technique (Krueger 1994). In focus groups, individuals from a community are selected by chosen criteria and interviewed together by a trained interviewer. The interviewer guides the discussion with a semi-structured list of questions and analyzes the results to assess group attitudes and practices on a given topic. Although focus group methodology suffers the anthropological handicap of occurring out of normal social context, it is useful for rapidly assessing a community's ideas about a topic, and for generating discussion about issues of potential concern to the community. Focus group questions must lend themselves to the group setting; interpretation of responses must reflect the group process involved in their creation.

Because language is a principal instrument of their research, particularly in interviews, anthropologists give great importance to the *local language* in conducting field research. Ideally, the researcher uses the local language. In practice, though, even if language instruction is available, it is often difficult, if not impossible, to learn the local language in advance, and it may require years to learn a language in the field. Anthropologists, therefore, sometimes use *interpreters*, when available. The use of interpreters, however, hinders a basic anthropological task—the recognition and comprehension of conceptual differences in culture, commonly represented in language. For this reason, anthropologists make every effort to learn the local language and to be careful about *translation*; for example, when they translate questionnaires or educational materials into a local language, they may *back translate*, that is, check the accuracy of the translation by translating the material back to the researcher's language.

Furthermore, many anthropologists attempt to *tape-record* interviews as much as possible, for the purposes of detailed transcription, translation, and analysis later. Although tape-recording allows for greater accuracy and precision, it may also arouse fear and suspicion among informants, especially if the information being collected is of a sensitive nature. For this reason, anthropologists typically ask informants whether they can tape-record interviews; tape-recording should never be done covertly, and the tape-recorder should never be used without an informant's explicit permission. When tape-recorders are not being used, the anthropologist generally takes handwritten notes during the interview or, increasingly, enters these notes directly into a laptop computer.

In addition to asking questions about the cognitive world of the local population, anthropologists also gather information through systematic *observation* of local behaviors and social interactions. The behaviors observed are not simply physical movements, but also actions that are intentional and meaningful to the actor, including "verbal behaviors" (speech). *Behavioral observations* form part of the background description of an anthropological report, allowing characterization of the basic activities of the population, such as work, rituals, and recreation. Systematic observation of behavior requires selection of settings and persons to be observed, as well as definition and classification of behaviors of interest. For purposes of public health, background information may indicate sources of exposure to various pathogenic agents, substances, or events.

Beyond background characteristics, anthropologists may also observe health-related behavior, such as how people recognize and respond to health conditions, consult and make decisions with family members and others regarding home treatment, and resort to healers of different sorts. By assessing behaviors in households and other social units, anthropologists can estimate the distribution of these behaviors in the population. On the basis of information collected in this systematic way, the researcher should be able to describe community response to health conditions of interest. The application of anthropological methods in settings such as clinics, hospitals, and health bureaucracies allows the analysis of treatments, healer-patient interactions, and the control of health resources.

The analysis of *social organization* is a common anthropological practice that involves both cognitive and behavioral information. Social organization is the framework in which the society operates; its components include institutions and other organizational structures as well as behavioral roles. Social organization is a broad notion that interrelates societal groups and membership, societal and community factions, and leadership and decision making, as well as marriage and postmarital residence, kinship, and inheritance. Law and its sanctions, as well as politics and economics, may be regarded as elements of social organization. Cognitive information indicates the rules and rationale of social organization, whereas behavioral information indicates what people actually do (including violation of organizational rules and consequent sanctions). Social organization may be important in public health for many reasons, including societal allocation of work and other activities (some of which may, in turn, be associated with harmful exposures), allocation of treatment resources and control of access, certification of healers and healing institutions, and provision of public education, health-related information, and programs.

The systematic recording of observations in the field is a critical step in anthropological research. This may be especially true with an open-ended research agenda, in which observations that do not make sense to the observer initially may become comprehensible later. Bernard (2005) provides a useful

classification of types of information recorded in the field, including logs of intended and actual daily activities, a personal diary, and methodological and descriptive field notes of observations and analyses. Taking *field notes* is an important part of anthropological field research. Anthropologists typically carry a notebook with them at all times, to make *field jottings* of their observations and conversations. At the end of the day, these field jottings are transformed into more fully descriptive field notes at the computer. Computer software developed for anthropology allows for the analysis of such notes (Bernard 2005).

Traditionally, anthropological research required at least a year and sometimes more than 2 years of field study, followed by a thorough analysis and written account. Anthropology is often criticized by action-oriented professions as too time- and resource-consuming in producing results. Partly in response to such concerns, anthropologists have formulated a variety of quicker and more focused approaches to the collection of information. *Rapid Assessment Procedures (RAPs)* have been developed to survey the research setting and address particular health issues in 1 or 2 months, using a systematic set of questions and methods. First developed to understand issues of nutrition and primary care, RAP is applicable and has been used in the assessment of a broad array of issues (Scrimshaw and Gleason 1992). Scrimshaw and Hurtado (1987) provide guides for the rapid and systematic elicitation of health-related information at the community, household, and biomedical resource (i.e., clinicians and pharmacy) levels. These guides can be tailored to particular studies and particular settings; they are not rigid protocols. Both RAP and a similar approach, the *Focused Ethnographic Study (FES)*, directed toward the understanding of specific disease conditions and programs, have been used by applied medical anthropologists since the 1990s (Pelto and Pelto 1997). Although more time generally allows for the gathering of more and better information, the results of rapid, focused approaches may be more likely to meet the urgent needs of public health programs and personnel.

Computers have offered enormous benefits to qualitative as well as quantitative analysis in anthropology. Computers allow the filing, analysis, and transmission of vast amounts of information (Bernard 2005; Weitzman and Miles 1995). Without the assistance of computers, data analysis would (and formerly did) require enormous amounts of time and resources. But there are also hazards in the use of computers in anthropological (and other) research. Perhaps the greatest hazard is the distance that computers readily allow between the researcher and the information stored and manipulated, easily producing so-called results that do not accord with what the researcher has observed. Researchers may simply enter the information they have collected, decide on a coding strategy to sort the information, and establish an analytic approach to assess relationships in the sorted information. With a few

computer keystrokes, an "analysis" is produced. What is missing is the intense scrutiny, pondering, review, and revision that are traditional in anthropology and that give the anthropologist a familiarity with what he or she has observed. Anthropologists must recognize the need to remain close to their information in the course of computer analysis and to use computers as tools to assist data collection and analysis guided by careful thought and experience.

Ethnographic and Other Reports

The format of anthropological reports often differs from that of other disciplines. Anthropology is a book-oriented field. The books that anthropologists produce are called *ethnographies*, a term that refers to both the process and product of fieldwork. Thousands, if not hundreds of thousands, of ethnographies have been written by anthropologists over the past century. These rich descriptions of cultures provide a veritable wealth of information, including about matters of health, sickness, and healing around the globe. Several of the contributors to this book have published such ethnographies.

Ethnographies are often lengthy, generally around 200 pages or more. Thus, they require time and effort to read and absorb. Furthermore, ethnographies may be written in a way that appeals to other anthropologists (e.g., full of jargon and esoteric language, abstract theoretical or methodological discussions, and factual details not clearly relevant to application). Although these characteristics may be efficient, if not necessary, for communication within the discipline of anthropology, they are inappropriate and ineffective in communication with non-anthropologists. In short, ethnographies may not be read outside of anthropology—an obvious obstacle to their effective use.

Increasingly, anthropologists studying public health issues are writing for broader audiences and publishing in peer-reviewed journals that are widely read within public health circles (e.g., *Social Science and Medicine*). Generally, these anthropological publications include descriptions of research objectives, methods used, results or findings obtained, and their implications. The contents, language, and accessibility of such publications are critical determinants of their use and application. Often, such anthropological publications also include recommendations for action or policy.

Integrating Anthropology and Public Health

The objectives of this anthology are to provide examples for public health of how anthropology is useful—even necessary—in public health. Given this conviction, we propose six courses of action to increase the integration of anthropology and public health.

Translating Anthropology into Public Health

Anthropologists are accustomed to communication within their own discipline. As in many other disciplines, much of what is produced is not readily comprehensible to those in other fields, and it is sometimes not clear to anthropologists in other schools or subfields. A major effort in the preparation of this book was the translation of anthropological studies into a language accessible to public health audiences. What would be useful, particularly for anthropologists who apply their scholarship to the solution of social problems, is the development and use of curricula to teach anthropologists how to communicate beyond the discipline. Such a curriculum should emphasize the following:

- Common language and concepts and the avoidance of jargon
- Clear description of methods
- Theoretical exposition focused on solution of the problem at hand
- Ethnographic detail focused on the problem
- Reports organized to clearly indicate the utility of the information provided, theories and methods used, findings, and implications
- Practical conclusions that address solutions to the problem, or that indicate that the problem should not be addressed or that the proposed project will be ineffective or should be revised or abandoned

Integrating Medical Anthropology into Schools of Public Health

Medical anthropology is a discipline of fundamental importance to public health, and as such should be routinely taught in schools of public health. Many schools of public health across the globe have begun to hire faculty with doctoral degrees in medical anthropology and to add medical anthropology courses to their curricula. Many medical anthropology faculty members around the world, including several contributors to this book, are jointly appointed between departments of anthropology and schools of public health. Indeed, one medical anthropologist has already served as the dean of a school of public health, whereas another is a provost. This trend toward integration of medical anthropology into schools of public health is heartening. The first edition of this book has been used in schools of public health around the world, and we imagine that the revised edition will be similarly well received. We hope that it might serve as an introduction to anthropology for public health students, faculty, practitioners, administrators, and policy makers, who will come to see why ethnographic research is invaluable to the understanding of and response to public health problems.

Training Anthropologists in Public Health

Just as public health has much to learn from anthropology, medical anthropology has much to learn from public health, particularly in the areas of epidemiology and biostatistics. Research design tends to be much more rigorous in public health studies than in anthropological ones; anthropologists could learn to strengthen their own research designs and to move beyond single case studies by receiving public health training. Increasingly, doctoral students of medical anthropology are receiving dual degrees in public health. Masters of public health (MPH) degrees in epidemiology and international health have been most popular to date. Receiving such training has made more and more anthropologists aware of the merits of public health approaches, and how anthropology can learn from public health, as well as vice versa. As noted earlier, several of the contributors to this book have received such dual training. Some anthropologists have even gone on to establish their own public health organizations, such as Partners in Health (PIH) (Chapter 21).

Establishing Links among Anthropological and Public Health Organizations

Establishing connections between anthropological and public health professional organizations would help facilitate interaction and integration of the fields. Closer working relations of, for example, the American Anthropological Association (AAA) and its Society for Medical Anthropology (SMA), with the World Health Organization (WHO), the US Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the many privately funded public health organizations that work around the world (e.g., the Ford Foundation, the Bill and Melinda Gates Foundation), would facilitate the exchange of relevant perspectives, information, and personnel. Increasingly, anthropologists present their work at the meetings of the American Public Health Association (APHA) and the Global Health Council (GHC). The GHC's official journal, *Global Public Health*, is edited by a medical anthropologist and includes several other anthropologists on its editorial board. Such professional linkages are vital in terms of integrating the two fields.

Employing Anthropologists in Public Health Organizations

Many anthropologists are not employed in academia. Rather, they are *practicing* or *applied medical anthropologists*, who bring their anthropological expertise to nonacademic work settings. In this regard, practicing anthropologists have been consulted and employed by public health agencies for decades. At the CDC, for example, there are more than 40 PhD anthropologists at work on

diverse public health matters. Several anthropologists work at the NIH, and many others receive NIH funding for field research projects. Anthropologists also hold program officer positions in many of the major global health organizations, such as WHO, the Ford Foundation, the Population Council, and so on. Self-employed anthropological consultants are paid by agencies to provide expertise on a variety of public health initiatives, especially around HIV/AIDS. Public health agencies need to continue employing practicing medical anthropologists in the new millennium and to see the "value added" by anthropological expertise. Similarly, practicing medical anthropologists need to seek employment in the public health world, demonstrating why they can offer services that are novel and important in the solution of public health problems.

Working in Collaborative, Transdisciplinary Teams

In order for anthropologists to work in the world of public health, they need to embrace the concept of collaboration. As a discipline, anthropology has reveled in the solitary pursuit of knowledge, with lone ethnographers "going solo" into the field. However, public health projects usually rely on teamwork, with multiple investigators bringing their expertise to the solution of a common problem. Anthropologists who hope to work in public health need to value collaboration and the merits of multidisciplinary. Increasingly, the term *transdisciplinarity* is being employed to emphasize the truly transactional and boundary-crossing nature of interdisciplinary collaborations that provide more than just the sum of their parts. Anthropology has much to offer to such transdisciplinary efforts to solve public health problems. Indeed, in the new millennium, medical anthropology may well make its most significant contributions "at the intersections" of other fields, including the field of global public health (Inhorn 2007). But to do so, anthropologists must be willing to move beyond the solo model of research, to turn intellectual curiosities outward beyond the field of anthropology, and to embrace the spirit of interdisciplinary dialogue and collaboration with openness and candor. Through such boundary crossings, anthropology can perhaps make its greatest contributions to the world in which we live.

This book represents one such attempt at boundary crossing. The book highlights four ways in which anthropology can contribute to public health: through anthropological understanding of public health problems, through anthropological design of public health interventions, through anthropological evaluation of public health initiatives, and through anthropological critiques of public health policies. A range of public health problems in a wide variety of geographic settings are highlighted to showcase the breadth and depth of anthropological contributions to the field of public health. HIV/AIDS receives special attention, given its pandemic status. However, many other issues of

vital importance to public health in the twenty-first century are covered in this book. Ethnographic methods are spelled out in detail, and ethnographic findings are richly described. The stories of real lives found throughout most chapters, as well as the fieldwork photos, serve to humanize the accounts and to remind us of the unalleviated suffering caused by public health problems in many parts of the world. Alleviation of such suffering seems a worthy goal for the new millennium. In this respect, anthropology and public health are united by their common compassion.

Notes

1. The conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.
2. Biomedicine is distinguished from public health in its focus on pathology in individual patients and its orientation toward laboratory science and clinical practice (Hahn 1995). Public health focuses on the pathology and health of populations; it builds on biomedicine but examines a broader array of causes.
3. The DALY is a measure of disease burden that takes into account not only death from specific causes, but also the youthfulness of the decedent and the sickness, disability, and suffering associated with these causes.
4. The Code of Ethics is available on the Internet at www.aaanet.org/committees/ethics/ethcode.htm

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