Chapter 1

Anthropology and Its Applications

HUMAN DIVERSITY

ANTHROPOLOGY

APPLYING ANTHROPOLOGY
The Role of the Applied Anthropologist

ACADEMIC AND APPLIED ANTHROPOLOGY
Theory and Practice

ANTHROPOLOGY AND EDUCATION

URBAN ANTHROPOLOGY
Urban versus Rural

MEDICAL ANTHROPOLOGY

ANTHROPOLOGY AND BUSINESS

CAREERS AND ANTHROPOLOGY

Box: Hot Asset in Corporate: Anthropology Degrees

"That's just human nature." "People are pretty much the same all over the world." Such opinions, which we hear in conversations, in the mass media, and in a dozen scenes in daily life, promote the erroneous idea that people in other countries have the same desires, feelings, values, and aspirations that we do. Such statements proclaim that because people are essentially the same, they are eager to receive the ideas, beliefs, values, institutions, practices, and products of an expansive North American culture. Often this assumption turns out to be wrong.

Anthropology offers a broader view—a distinctive comparative, cross-cultural perspective. Most people think that anthropologists study nonindustrial societies, and they do. My research has taken me to remote villages in Brazil and Madagascar, a large island off the southeast coast of Africa. In

Brazil I sailed with fishermen in simple sailboats on Atlantic waters. Among Madagascar's Betsileo people I worked in rice fields and took part in ceremonies in which I entered tombs to rewrap the corpses of decaying ancestors.

However, anthropology is much more than the study of nonindustrial peoples. It is a comparative science that examines all societies, ancient and modern, simple and complex. Most of the other social sciences tend to focus on a single society, usually an industrial nation such as the United States or Canada. Anthropology offers a unique cross-cultural perspective, constantly comparing the customs of one society with those of others.

To become a cultural anthropologist, one normally does *ethnography* (the firsthand, personal study of local settings). Ethnographic fieldwork usually entails spending a year or more in another society, living with the local people and learning about their way of life. No matter how much the ethnographer discovers about the society, he or she remains an alien there. That experience of alienation has a profound impact. Having learned to respect other customs and beliefs, anthropologists can never forget that there is a wider world. There are normal ways of thinking and acting other than our own.

HUMAN DIVERSITY

Humans are the most adaptable animals in the world. In the Andes of South America, people awaken in villages 16,000 feet above sea level and then trek 1,500 feet higher to work in tin mines. Tribes in the Australian desert worship animals and discuss philosophy. People survive malaria in the tropics. Human beings have walked on the moon. The model of the *Starship Enterprise* in Washington's Smithsonian Institution symbolizes the desire to seek out new life and civilizations, to boldly go where no one has gone before. Wishes to know the unknown, control the uncontrollable, and bring order to chaos find expression among all peoples. Flexibility and adaptability are basic human attributes, and human diversity is the subject matter of anthropology.

Students are often surprised by the breadth of anthropology, which is a uniquely **holistic** science. It studies the whole of the human condition: past, present, and future; biology, society, language, and culture. People share **society**—organized life in groups—with other animals. Culture, however, is distinctly human. **Cultures** are traditions and customs, transmitted through learning that play a large role in determining the beliefs and behavior of the people exposed to them. Children *learn* these traditions by growing up in a particular society.

Cultural traditions include customs and opinions, developed over the generations, about proper and improper behavior. Cultural traditions answer such questions as: How should we do things? How do we interpret the world? How do we tell right from wrong? A common culture produces consistencies in behavior and thought in a given society.

The most critical element of cultural traditions is their transmission through learning rather than biological inheritance. Culture is not itself biological, but it rests on capacities that are based in hominid biology. (**Hominids** are members of the zoological family that includes fossil and living humans.) Human **adaptation** (the process by which organisms cope with environmental stresses) involves an interplay between culture and biology. For more than a million years, hominids have had at least some of the biological capacities on which culture depends. These abilities are to learn, to think symbolically, to use language, and to employ tools and other cultural features in organizing their lives and adapting to their environments.

Bound neither by time nor by space, anthropology attempts to answer major questions of human existence. By examining ancient bones and tools, anthropologists solve the mysteries of hominid origins. When did our own ancestors separate from those remote great-aunts and great-uncles whose descendants are the apes? Where and when did *Homo sapiens* originate? How has our species changed? What are we now and where are we going? How have changes in culture and society influenced and been influenced by biological change?

ANTHROPOLOGY

The academic discipline of anthropology, also known as **general anthropology,** includes four main subdisciplines or subfields: sociocultural, archaeological, biological, and linguistic anthropology. (From here on, I will use the shorter term *cultural anthropology* as a synonym for "sociocultural anthropology.")

Cultural anthropologists study human society and culture. They describe, interpret, and explain social and cultural similarities and differences. To study and interpret cultural diversity, cultural anthropologists engage in two kinds of activity: ethnography (based on field work) and ethnology (based on cross-cultural comparison). **Ethnography** provides an account of a particular community, society, or culture. During ethnographic field work the ethnographer gathers data, which he or she organizes, describes, analyzes, and interprets to build and present that account, which may be in the form of a book, article, or film. **Ethnology** examines, analyzes, and compares the results of ethnography—the data gathered in different societies. It uses such data to compare and contrast and to make generalizations about society and culture. Ethnologists look beyond the particular to the more general. They strive to explain cultural differences and similarities and to build theory to enhance our understanding of how social and cultural systems work. Ethnology gets its data for comparison not just from ethnography but also from the other subfields. For example, **archaeological anthropology** (more simply, archaeology) reconstructs, describes, and interprets human behavior and cultural patterns through material remains. Archaeologists are best known for studying prehistory (the period before the

Through cross-cultural comparison, we see that many differences between the sexes arise from cultural learning and expectations rather than from biology. This female porter in Calcutta, India, has loaded heavy bricks on her head for transport to a construction site.

invention of writing, around 6,000 years ago), but they also study historical and even living cultures through their material remains.

The subject matter of **biological,** or **physical, anthropology** is human biological diversity in time and space. Biological anthropologists study hominid evolution, human genetics, and human biological plasticity (the body's ability to cope with stresses, such as heat, cold, and altitude). Also part of biological anthropology is primatology—the study of the biology, evolution, behavior, and social life of monkeys, apes, and other nonhuman primates. Biological anthropologists collaborate with archaeologists in reconstructing cultural as well as biological aspects of human evolution. Often found with fossils are tools, which suggest the habits, customs, and lifestyles of the hominids that used them. Human biological and cultural evolution have been interrelated and complementary, and humans continue to adapt both biologically and culturally.

We don't know (and probably never will know) when hominids began to speak. However, well-developed, grammatically complex languages have existed for thousands of years. Like the other subfields, **linguistic anthropology** examines variation in time and space. Linguistic anthropologists study languages of the present and make inferences about those of the past. Linguistic techniques are also useful to ethnographers because they permit the

rapid learning of unwritten languages. Linguistic and cultural anthropologists collaborate in studying links between language and other aspects of culture.

Most American anthropologists, myself included, specialize in cultural anthropology. However, most are also familiar with the basics of the other subfields. Large departments of anthropology usually include members of each subfield.

There are historical reasons for the inclusion of four subdisciplines in a single field. American anthropology arose a century ago out of concern for the history and cultures of the native populations of North America ("American Indians"). Interest in the origins and diversity of Native Americans brought together studies of customs, social life, language, and physical traits. Such a unified anthropology did not develop in Europe, where the subdisciplines tend to exist separately.

The subdisciplines influence each other as anthropologists talk, read professional books and journals, and associate in professional organizations. General anthropology explores the basics of human biology, psychology, society, and culture and considers their interrelations. Anthropologists share certain key assumptions. One is that sound conclusions about "human nature" can't be drawn from a single cultural tradition.

We often hear "nature-nurture" and "genetics-environment" questions. For example, consider gender differences. Do male and female capacities, attitudes, and behavior reflect biological or cultural variation? Are there universal emotional and intellectual contrasts between the sexes? Are females less aggressive than males? Is male dominance a human universal? By examining diverse societies, anthropology shows that many contrasts between men and women arise from cultural learning rather than from biology.

Anthropology is not a science of the exotic carried on by quaint scholars in ivory towers. Rather, it is a holistic, comparative field with a lot to tell the public. Anthropology's foremost professional organization, the American Anthropological Association, has formally acknowledged a public service role by recognizing that anthropology has two dimensions: (1) theoretical/academic anthropology and (2) practicing or **applied anthropology.** The latter refers to the application of anthropological data, perspectives, theory, and methods to identify, assess, and solve contemporary social problems. More and more anthropologists from the four subfields now work in such "applied" areas as public health, family planning, and economic development.

APPLYING ANTHROPOLOGY

Erve Chambers (1987, p. 309) defines *applied anthropology* as the "field of inquiry concerned with the relationships between anthropological knowledge and the uses of that knowledge in the world beyond anthropology."

Applied anthropologists (a.k.a. *practicing anthropologists*) work (regularly or occasionally, full or part time) for nonacademic clients. These clients include governments, development agencies, nongovernmental organizations (NGOs), tribal and ethnic associations, interest groups, social-service and educational agencies, and businesses (see the box at the end of the chapter). Applied anthropologists work for groups that promote, manage, and assess programs aimed at influencing human social conditions. The scope of applied anthropology includes change and development abroad and social problems and policies in North America.

Applied anthropologists come from all four subdisciplines. Biological anthropologists work in the fields of public health, nutrition, genetic counseling, substance abuse, epidemiology, aging, and mental illness. They apply their knowledge of human anatomy and physiology to the improvement of automobile safety standards and to the design of airplanes and spacecraft. In forensic work, biological anthropologists help police identify skeletal remains. Similarly, forensic archaeologists reconstruct crimes by analyzing physical evidence.

Applied archaeology, usually called *public archaeology,* includes such activities as cultural resource management, contract archaeology, public educational programs, and historic preservation. An important role for public archaeology has been created by legislation requiring evaluation of sites threatened by dams, highways, and other construction activities. To decide what needs saving, and to preserve significant information about the past when sites cannot be saved, is the work of **cultural resource management** (CRM). CRM involves not only preserving sites but allowing their destruction if they are not significant. The "management" part of the term refers to the evaluation and decision-making process. Cultural resource managers typically work for federal, state, or county agencies. Applied cultural anthropologists sometimes work with the public archaeologists, assessing the human problems generated by the proposed change and determining how they can be reduced.

Cultural anthropologists also work with social workers, businesspeople, advertising professionals, factory workers, nurses, physicians, gerontologists, mental-health professionals, and economic development experts. Linguistic anthropology aids education. Knowledge of linguistic differences is important in an increasingly multicultural society whose populace grows up speaking many languages and dialects. Because linguistic differences may affect children's schoolwork and teachers' evaluations, many schools of education now require courses in *sociolinguistics,* which studies the relation between social and linguistic variation.

The Role of the Applied Anthropologist

By instilling an appreciation for human diversity, anthropology combats *ethnocentrism*—the tendency to view one's own culture as superior and to apply one's own cultural values in judging the behavior and beliefs of people

raised in other cultures. This broadening, educational role affects the knowledge, values, and attitudes of people exposed to anthropology. Now we focus on the question: What contributions can anthropology make in identifying and solving problems stirred up by contemporary currents of economic, social, and cultural change?

Anthropologists have held three different positions about applying anthropology—using it to identify and solve social problems. People who hold the *ivory tower view* contend that anthropologists should avoid practical matters and concentrate on research, publication, and teaching. Those who favor what Ralph Piddington (1960) has called the *schizoid view* think that anthropologists should help carry out, but not make or criticize, policy. In this view, personal "value judgments" should be kept strictly separate from scientific investigation. The third view is *advocacy.* Its proponents assert that precisely because anthropologists are experts on human problems and social change and because they study, understand, and respect cultural values, they should make policy affecting people. In this view, proper roles for applied anthropologists include (1) identifying needs for change that local people perceive, (2) working with those people to design culturally appropriate and socially sensitive change, and (3) protecting local people from harmful policies and projects that threaten them.

I join many other anthropologists in favoring advocacy. I share the belief that no one is better qualified to propose and evaluate guidelines for society than are those who study anthropology. To be effective advocates, anthropologists must present their views clearly, thoughtfully, and forcefully to policy makers and the public. Many anthropologists do serve as social commentators and problem solvers, and as policy makers, advisers, and evaluators. We also express our policy views in publications and lectures and through professional associations.

There was a time—the 1940s in particular—when most anthropologists focused on the application of their knowledge. During World War II, American anthropologists studied Japanese and German "culture at a distance" in an attempt to predict the behavior of the enemies of the United States. After the war, Americans did applied anthropology in the Pacific, working to gain local cooperation with American policies in various trust territories.

Modern applied anthropology differs from an earlier version that mainly served the goals of colonial regimes. Application was a central concern of early anthropology in Great Britain (in the context of colonialism) and the United States (in the context of Native American policy). Before turning to the new, we should consider some dangers of the old.

In the context of the British empire, specifically its African colonies, the anthropologist Bronislaw Malinowski (1929) proposed that "practical anthropology" (his term for colonial applied anthropology) should focus on Westernization, the diffusion of European culture into tribal societies. He contended that anthropologists should and could avoid politics by concentrating on facts and processes. However, he was actually expressing his own political views, because he questioned neither the legitimacy of colonialism

nor the anthropologist's role in making it work. For instance, Malinowski saw nothing wrong with aiding colonial regimes by studying land tenure and land use, to decide how much of their land native-born people should keep and how much Europeans should get. Malinowski's views exemplify a historical association between anthropology, particularly in Europe, and colonialism (Maquet 1964).

Colonial anthropologists faced, as do some of their modern counterparts (Escobar 1991, 1994), problems posed by their inability to set or influence policy and the difficulty of criticizing programs in which they have participated. Anthropology's professional organizations have addressed some of these problems by establishing codes of ethics and ethics committees. Also, as Tice (1997) notes, attention to such ethical issues is paramount in the teaching of applied anthropology today (see the next chapter for more on ethics).

ACADEMIC AND APPLIED ANTHROPOLOGY

As has been mentioned, applied anthropology flourished during and immediately after World War II. Applied anthropology did not disappear during the 1950s and 1960s, but academic anthropology did most of the growing after World War II. The baby boom, which began in 1946 and peaked in 1957, fueled expansion of the American educational system and thus of academic jobs. New junior, community, and four-year colleges opened, and anthropology became a standard part of the college curriculum. During the 1950s and 1960s, most American anthropologists were college professors, although some still worked in agencies and museums.

This era of academic anthropology continued through the early 1970s. Especially during the Vietnam War, undergraduates flocked to anthropology classes to learn about other cultures. Students were especially interested in Southeast Asia, whose indigenous societies were being disrupted by war. Many anthropologists protested the superpowers' apparent disregard for non-Western lives, values, customs, and social systems.

During the 1970s, and increasingly thereafter, although most anthropologists still worked in academia, others found jobs with international organizations, government, business, hospitals, and schools. This shift toward application, though only partial, has benefited the profession. It has forced anthropologists to consider the wider social value and implications of their research.

Theory and Practice

One of the most valuable tools in applying anthropology is the ethnographic method. Ethnographers study societies firsthand, living with and learning from ordinary people. Ethnographers are participant observers, taking part in the events they study in order to understand local thought and behavior.

During the Vietnam War, many anthropologists protested the superpowers' disregard for the values, customs, social systems, and lives of Third World peoples. Several anthropologists (including the author) attended this all-night Columbia University "teach-in" against the war in 1965.

Applied anthropologists use ethnographic techniques in both foreign and domestic settings. Other "expert" participants in social-change programs may be content to converse with officials, read reports, and copy statistics. However, the applied anthropologist's likely early request is some variant of "take me to the local people." We know that people must play an active role in the changes that affect them and that "the people" have information that "the experts" lack.

Anthropological theory—the body of findings and generalizations of the subdisciplines—also guides applied anthropology. Anthropology's holistic perspective—its interest in biology, society, culture, and language—permits the evaluation of many issues that affect people. Theory aids practice, and application fuels theory. As we compare social-change policy and programs, our understanding of cause and effect increases. We add new generalizations about culture change to those discovered in traditional and ancient cultures.

Anthropology's systemic perspective recognizes that changes don't occur in a vacuum. A program or project always has multiple effects, some of which are unforeseen. For example, dozens of economic development projects intended to increase productivity through irrigation have worsened public health by creating waterways where diseases thrive. In an American example of unintended consequences, a program aimed at enhancing teachers' appreciation of cultural differences led to ethnic stereotyping (Kleinfield

1975). Specifically, Native American students did not welcome teachers' frequent comments about their Indian heritage. The students felt set apart from their classmates and saw this attention to their ethnicity as patronizing and demeaning.

ANTHROPOLOGY AND EDUCATION

Anthropology and education refers to anthropological research in classrooms, homes, and neighborhoods (see Spindler, ed. 2000). Some of the most interesting research has been done in classrooms, where anthropologists observe interactions among teachers, students, parents, and visitors. Jules Henry's classic account of the American elementary school classroom (1955) shows how students learn to conform to and compete with their peers. Anthropologists also follow students from classrooms into their homes and neighborhoods, viewing children as total cultural creatures whose enculturation and attitudes toward education belong to a context that includes family and peers.

Sociolinguists and cultural anthropologists work side by side in education research. For example, in a study of Puerto Rican seventh-graders in the urban Midwest (Hill-Burnett 1978), anthropologists uncovered some misconceptions held by teachers. The teachers had mistakenly assumed that Puerto Rican parents valued education less than did non-Hispanics, but in-depth interviews revealed that the Puerto Rican parents valued it more.

The anthropologists also found that certain practices were preventing Hispanics from being adequately educated. For example, the teachers' union and the board of education had agreed to teach "English as a foreign language." However, they had provided no bilingual teachers to work with Spanish-speaking students. The school was assigning all students (including non-Hispanics) with low reading scores and behavior problems to the English-as-a-foreign-language classroom. This educational disaster brought together in the classroom a teacher who spoke no Spanish, children who barely spoke English, and a group of English-speaking students with reading and behavior problems. The Spanish speakers were falling behind not just in reading but in all subjects. They could at least have kept up in the other subjects if a Spanish speaker had been teaching them science, social studies, and math until they were ready for English-language instruction in those areas.

URBAN ANTHROPOLOGY

By 2025 the developing nations will account for 85 percent of the world's population, compared with 77 percent in 1992 (Stevens 1992). Solutions to future problems will depend increasingly on understanding non-Western cultural backgrounds. The fastest population growth rates are in Third

World cities. The world had only 16 cities with more than a million people in 1900, but there were 276 such cities in 1990. By 2025, 60 percent of the global population will be urban, compared with 37 percent in 1990 (Stevens 1992).

If current trends continue, urban population increase and the concentration of people in slums will be accompanied by rising rates of crime and water, air, and noise pollution. These problems will be most severe in the less-developed countries. Most (97 percent) of the projected world population increase will occur in developing countries, 34 percent in Africa alone (Lewis 1992). Global population growth continues to affect the northern hemisphere, especially through international migration.

As industrialization and urbanization spread globally, anthropologists increasingly study these processes and the social problems they create. Urban anthropology, which has theoretical (basic research) and applied dimensions, is the cross-cultural and ethnographic study of global urbanization and life in cities (see Aoyagi, Nas, and Traphagan, eds. 1998; Gmelch and Zenner, eds. 2002; Stevenson 2003). The United States and Canada have also become popular arenas for urban anthropological research on topics such as ethnicity, poverty, class, and subcultural variations (Mullings, ed. 1987).

Urban versus Rural

Recognizing that a city is a social context that is very different from a tribal or peasant village, an early student of Third World urbanization, the anthropologist Robert Redfield, focused on contrasts between rural and urban life. He contrasted rural communities, whose social relations are on a face-to-face basis, with cities, where impersonality characterizes many aspects of life. Redfield (1941) proposed that urbanization be studied along a rural-urban continuum. He described differences in values and social relations in four sites that spanned such a continuum. In Mexico's Yucatán peninsula, Redfield compared an isolated Maya-speaking Indian community, a rural peasant village, a small provincial city, and a large capital. Several studies in Africa (Little 1971) and Asia were influenced by Redfield's view that cities are centers through which cultural innovations spread to rural and tribal areas.

In any nation, urban and rural represent different social systems. However, cultural diffusion or borrowing occurs as people, products, and messages move from one to the other. Migrants bring rural practices and beliefs to town and take urban patterns back home. The experiences and social forms of the rural area affect adaptation to city life. City folk also develop new institutions to meet specific urban needs (Mitchell 1966).

An applied anthropology approach to urban planning would start by identifying key social groups in the urban context. After identifying those groups, the anthropologist would elicit their wishes for change and convey those needs to funding agencies. The next role would be to work with the agencies and the people to ensure that the change is implemented correctly

and that it corresponds to what the people said they wanted at the outset. The most humane and productive strategy for change is to base the social design for innovation on existing social forms in each target area, whether rural or urban.

Relevant African urban groups include ethnic associations, occupational groups, social clubs, religious groups, and burial societies. Through membership in these groups, urban Africans have wide networks of personal contacts and support. Ethnic or "tribal" associations are common both in West and East Africa (Little 1965; Banton 1957). These groups also maintain links with, and provide cash support and urban lodging for, their rural relatives.

The ideology of such associations is that of a gigantic kin group. The members call one another "brother" and "sister." As in an extended family, rich members help their poor relatives. When members fight among themselves, the group acts as judge. A member's improper behavior can lead to expulsion—an unhappy fate for a migrant in a large ethnically heterogeneous city.

Modern North American cities also have kin-based ethnic associations. One example comes from Los Angeles, which has the largest Samoan immigrant community (over 12,000 people) in the United States. Samoans in Los Angeles draw on their traditional system of *matai* (matai means chief; the matai system now refers to respect for elders) to deal with modern urban problems. One example: In 1992, a white policeman shot and killed two unarmed Samoan brothers. When a judge dismissed charges against the officer, local leaders used the matai system to calm angry youths (who have formed gangs, like other ethnic groups in the Los Angeles area). Clan leaders and elders organized a well-attended community meeting, in which they urged young members to be patient.

The Samoans used the American judicial system. They brought a civil case against the officer in question and pressed the U.S. Justice Department to initiate a civil-rights case in the matter (Mydans 1992*b*). One role for the urban applied anthropologist is to help relevant social groups deal with larger urban institutions, such as legal and social service agencies with which recent migrants, in particular, may be unfamiliar.

MEDICAL ANTHROPOLOGY

Medical anthropology is both academic/theoretical and applied/practical. It is a field that includes both biological and sociocultural anthropologists (see Anderson 1996; Brown 1998; Joralemon 1999). Medical anthropologists examine such questions as which diseases affect different populations, how illness is socially constructed, and how one treats illness in effective and culturally appropriate ways.

This growing field considers the sociocultural context and implications of disease and illness. **Disease** refers to a scientifically identified health

threat caused by a bacterium, virus, fungus, parasite, or other pathogen. **Illness** is a condition of poor health perceived or felt by an individual (Inhorn and Brown 1990). Cross-cultural research shows that perceptions of good and bad health, along with health threats and problems, are culturally constructed. Various ethnic groups and cultures recognize different illnesses, symptoms, and causes and have developed different health care systems and treatment strategies.

Disease also varies among societies. Traditional and ancient hunter-gatherers, because of their small numbers, mobility, and relative isolation from other groups, lacked most of the epidemic infectious diseases that affect agrarian and urban societies (Inhorn and Brown 1990; Cohen and Armelagos, eds. 1984). Epidemic diseases such as cholera, typhoid, and bubonic plague thrive in dense populations, and thus among farmers and city dwellers. The spread of malaria has been linked to population growth and deforestation associated with food production.

Certain diseases have spread with economic development. *Schistosomiasis* or bilharzia (liver flukes) is probably the fastest-spreading and most dangerous parasitic infection now known (Heyneman 1984). It is propagated by snails that live in ponds, lakes, and waterways, usually ones created by irrigation projects. A study done in a Nile Delta village in Egypt (Farooq 1966) illustrated the role of culture (religion) in the spread of schistosomiasis. The disease was more common among Muslims than among Christians because of an Islamic practice called *wudu,* ritual ablution (bathing) before prayer. The applied anthropology approach to reducing such diseases is to see if natives perceive a connection between the vector (e.g., snails in the water) and the disease. If not, such information may be provided by enlisting active local groups, schools, and the media.

In eastern Africa, AIDS and other sexually transmitted diseases (STDs) have spread along highways, via encounters between male truckers and female prostitutes. STDs are also spread through prostitution as young men from rural areas seek wage work in cities, labor camps, and mines. When the men return to their natal villages, they infect their wives (Larson 1989; Miller and Rockwell, eds. 1988). Cities are also prime sites of STD transmission in Europe, Asia, and North and South America.

The kind of and incidence of disease varies among societies, and cultures interpret and treat illness differently. Standards for sick and healthy bodies are cultural constructions that vary in time and space (Martin 1992). Still, all societies have what George Foster and Barbara Anderson call “disease-theory systems” to identify, classify, and explain illness. According to Foster and Anderson (1978), there are three basic theories about the causes of illness: personalistic, naturalistic, and emotionalistic. *Personalistic disease theories* blame illness on agents, such as sorcerers, witches, ghosts, or ancestral spirits. *Naturalistic disease theories* explain illness in impersonal terms. One example is Western medicine or *biomedicine,* which aims to link illness to scientifically demonstrated agents which bear no personal malice toward their victims. Thus Western medicine attributes illness

to organisms (e.g., bacteria, viruses, fungi, or parasites), accidents, or toxic materials. Other naturalistic ethnomedical systems blame poor health on unbalanced body fluids. Many Latin societies classify food, drink, and environmental conditions as "hot" or "cold." People believe their health suffers when they eat or drink hot or cold substances together or under inappropriate conditions. For example, one shouldn't drink something cold after a hot bath or eat a pineapple (a "cold" fruit) when one is menstruating (a "hot" condition).

Emotionalistic disease theories assume that emotional experiences cause illness. For example, Latin Americans may develop *susto,* an illness caused by anxiety or fright (Bolton 1981; Finkler 1985). Its symptoms (lethargy, vagueness, distraction) are similar to those of "soul loss," a diagnosis of similar symptoms made by people in Madagascar. Modern psychoanalysis also focuses on the role of the emotions in physical and psychological well-being.

All societies have **health care systems** consisting of beliefs, customs, specialists, and techniques aimed at ensuring health and at preventing, diagnosing, and curing illness. A society's illness-causation theory is important for treatment. When illness has a personalistic cause, magicoreligious specialists may be good curers. They draw on varied techniques (occult and practical), which comprise their special expertise. A shaman (magicoreligious specialist) may cure soul loss by enticing the spirit back into the body. Shamans may ease difficult childbirths by asking spirits to travel up the birth canal to guide the baby out (Lévi-Strauss 1967). A shaman may cure a cough by counteracting a curse or removing a substance introduced by a sorcerer.

If there is a "world's oldest profession" besides hunter and gatherer, it is **curer,** often a shaman. The curer's role has some universal features (Foster and Anderson 1978). Thus curers emerge through a culturally defined process of selection (parental prodding, inheritance, visions, dream instructions) and training (apprentice shamanship, medical school). Eventually, the curer is certified by older practitioners and acquires a professional image. Patients believe in the skills of the curer, whom they consult and compensate.

We should not lose sight, ethnocentrically, of the difference between **scientific medicine** and Western medicine per se (Lieban 1977). Despite advances in pathology, microbiology, biochemistry, surgery, diagnostic technology, and applications, many Western medical procedures have little justification in logic or fact. Overprescription of drugs, unnecessary surgery, and the impersonality and inequality of the physician-patient relationship are questionable features of Western medical systems. Also, overuse of antibiotics, not just for people, but also in animal feed, seems to be triggering an explosion of resistant microrganisms, which may pose a long-term global public health hazard.

Still, biomedicine surpasses tribal treatment in many ways. Although medicines such as quinine, coca, opium, ephedrine, and rauwolfia were discovered in nonindustrial societies, thousands of effective drugs are available

How do Western medicine and scientific medicine differ? Clinics bring antibiotics, minor surgery, and preventive medicine to rural people in Congo. What kind of medicine is being shown here? How can it coexist with the local healing system?

today to treat myriad diseases. Preventive health care improved during the twentieth century. Today's surgical procedures are safer and more effective than those of traditional societies.

But industrialization has spawned its own health problems. Modern stressors include noise, air, and water pollution, poor nutrition, dangerous machinery, impersonal work, isolation, poverty, homelessness, and substance abuse. Health problems in industrial nations are as much caused by economic, social, political, and cultural factors as by pathogens. In modern North America, for example, poverty contributes to many illnesses, including arthritis, heart conditions, back problems, and hearing and vision impairment (see Bailey 2000). Poverty is also a factor in the differential spread of infectious diseases.

Medical anthropologists have served as cultural interpreters in public health programs, which must pay attention to native theories about the nature, causes, and treatment of illness. Successful health interventions cannot simply be forced on communities. They must fit into local cultures and be accepted by local people. When Western medicine is introduced, people usually retain many of their old methods while also accepting new ones (see Green 1987/1992). Native curers may go on treating certain conditions (spirit possession), whereas M.D.s may deal with others. If both modern and traditional specialists are consulted and the patient is cured, the native curer may get as much or more credit than the physician.

A more personal treatment of illness that emulates the non-Western curer-patient-community relationship could probably benefit Western systems. Western medicine tends to draw a rigid line between biological and psychological causation. Non-Western theories usually lack this sharp distinction, recognizing that poor health has intertwined physical, emotional, and social causes. The mind-body opposition is part of Western folk taxonomy, not of science (see also Brown 1998; Helman 2001; Joralemon 1999; Strathern and Stewart 1999).

ANTHROPOLOGY AND BUSINESS

Carol Taylor (1987) discusses the value of an "anthropologist-in-residence" in a large, complex organization, such as a hospital or a business. A free-ranging ethnographer can be a perceptive oddball when information and decisions usually move through a rigid hierarchy. If allowed to observe and converse freely with all types and levels of personnel, the anthropologist may acquire a unique perspective on organizational conditions and problems. Also, high-tech companies, such as Xerox, IBM, and Apple, have employed anthropologists in various roles. Closely observing how people actually use computer products, anthropologists work with engineers to design products that are more user-friendly.

For many years anthropologists have used ethnography to study business settings (Arensberg 1987). For example, ethnographic research in an auto factory may view workers, managers, and executives as different social categories participating in a common social system. Each group has characteristic attitudes, values, and behavior patterns. These are transmitted through *microenculturation,* the process by which people learn particular

Professor Marietta Baba of Michigan State University does applied anthropology at an automotive supply plant in Detroit. What issues might interest her in this setting?

roles in a limited social system. The free-ranging nature of ethnography takes the anthropologist back and forth from worker to executive. Each is an individual with a personal viewpoint and a cultural creature whose perspective is, to some extent, shared with other members of a group. Applied anthropologists have acted as "cultural brokers," translating managers' goals or workers' concerns to the other group (see Ferraro 2002).

For business, key features of anthropology include: (1) ethnography and observation as ways of gathering data, (2) cross-cultural expertise, and (3) focus on cultural diversity. An important application of anthropology has to do with knowledge of how consumers use products. Businesses hire anthropologists because of the importance of observation in natural settings and the focus on cultural diversity. Thus, Hallmark cards has hired anthropologists to observe parties, holidays, and celebrations of ethnic groups to improve its ability to design cards for targeted audiences. Anthropologists go into people's homes to see how they actually use products. (Check out www.ethnographic-solutions.com and see the box at the end of the chapter.)

CAREERS AND ANTHROPOLOGY

Many college students find anthropology interesting and consider majoring in it. However, their parents or friends may discourage them by asking, "What kind of job are you going to get with an anthropology major?" The purpose of this section is to answer that question. The first step in answering "What do you do with an anthropology major?" is to consider the more general question, "What do you do with any college major?" The answer is "Not much, without a good bit of effort, thought, and planning." A survey of graduates of the literary college of the University of Michigan showed that few had jobs that were clearly linked to their majors. Medicine, law, and many other professions require advanced degrees. Although many colleges offer bachelor's degrees in engineering, business, accounting, and social work, master's degrees are often needed to get the best jobs in those fields. Anthropologists, too, need an advanced degree, almost always a Ph.D., to find gainful employment in academic, museum, or applied anthropology.

A broad college education, and even a major in anthropology, can be an excellent foundation for success in many fields. A recent survey of women executives showed that most had not majored in business but in the social sciences or humanities. Only after graduating did they study business, obtaining a master's degree in business administration. These executives felt that the breadth of their college educations had contributed to their business careers. Anthropology majors go on to medical, law, and business schools and find success in many professions that often have little explicit connection to anthropology.

Anthropology's breadth provides knowledge and an outlook on the world that are useful in many kinds of work. For example, an anthropology major combined with a master's degree in business is excellent preparation

for work in international business. Breadth is anthropology's hallmark. Anthropologists study people biologically, culturally, socially, and linguistically, across time and space, in developed and underdeveloped nations, in simple and complex settings. Most colleges have anthropology courses that compare cultures and others that focus on particular world areas, such as Latin America, Asia, and Native North America. The knowledge of foreign areas acquired in such courses can be useful in many jobs. Anthropology's comparative outlook, its longstanding Third World focus, and its appreciation of diverse life styles combine to provide an excellent foundation for overseas employment.

Even for work in North America, the focus on culture is valuable. Every day we hear about cultural differences and about social problems whose solutions require a multicultural viewpoint—an ability to recognize and reconcile ethnic differences. Government, schools, and private firms constantly deal with people from different social classes, ethnic groups, and tribal backgrounds. Physicians, attorneys, social workers, police officers, judges, teachers, and students can all do a better job if they understand social differences in a part of the world such as ours that is one of the most ethnically diverse in history.

Knowledge about the traditions and beliefs of the many social groups within a modern nation is important in planning and carrying out programs that affect those groups. Attention to social background and cultural categories helps ensure the welfare of affected ethnic groups, communities, and neighborhoods. Experience in planned social change—whether community organization in North America or economic development overseas—shows that a proper social study should be done before a project or policy is implemented. When local people want the change and it fits their lifestyle and traditions, it will be more successful, beneficial, and cost-effective. There will be not only a more humane but a more economical solution to a real social problem.

People with anthropology backgrounds are doing well in many fields. Even if one's job has little or nothing to do with anthropology in a formal or obvious sense, a background in anthropology provides a useful orientation when we work with our fellow human beings. For most of us, this means every day of our lives.

Hot Asset in Corporate: Anthropology Degrees

An important business application of anthropology has to do with knowledge of how consumers use products. Businesses hire anthropologists because of the importance of observation in natural settings and the focus on cultural diversity. Thus, as we see in the following article, Hallmark cards has hired

anthropologists to observe parties, holidays, and celebrations of ethnic groups to improve its ability to design cards for targeted audiences. Anthropologists go into people's homes to see how they actually use products. This permits better product design and more effective advertising.

Don't throw away the MBA degree yet.

But as companies go global and crave leaders for a diverse workforce, a new hot degree is emerging for aspiring executives: anthropology.

The study of man is no longer a degree for museum directors. Citicorp created a vice presidency for anthropologist Steve Barnett, who discovered early warning signs to identify people who don't pay credit card bills.

Not satisfied with consumer surveys, Hallmark is sending anthropologists into the homes of immigrants, attending holidays and birthday parties to design cards they'll want.

No survey can tell engineers what women really want in a razor, so marketing consultant Hauser Design sends anthropologists into bathrooms to watch them shave their legs.

Unlike MBAs, anthropology degrees are rare: one undergraduate degree for every 26 in business and one anthropology Ph.D. for every 235 MBAs.

Textbooks now have chapters on business applications. The University of South Florida has created a course of study for anthropologists headed for commerce.

Motorola corporate Lawyer Robert Faulkner got his anthropology degree before going to law school. He says it becomes increasingly valuable as he is promoted into management.

"When you go into business, the only problems you'll have are people problems," was the advise given to teenager Michael Koss by his father in the early 1970s.

Koss, now 44, heeded the advice, earned an anthropology degree from Beloit College in 1976, and is today CEO of the Koss headphone manufacturer.

Katherine Burr, CEO of The Hanseatic Group, has masters in both anthropology and business from the University of New Mexico. Hanseatic was among the first money management programs to predict the Asian crisis and last year produced a total return of 315 percent for investors.

"My competitive edge came completely out of anthropology," she says. "The world is so unknown, changes so rapidly. Preconceptions can kill you."

Companies are starving to know how people use the Internet or why some pickups, even though they are more powerful, are perceived by consumers as less powerful, says Ken Erickson, of the Center for Ethnographic Research.

It takes trained observation, Erickson says. Observation is what anthropologists are trained to do.

Source: Del Jones, "Hot Asset in Corporate: Anthropology Degrees," *USA Today,* February 18, 1999, p. B1.

Summary

1. Anthropology is the holistic and comparative study of humanity. It is the systematic exploration of human biological and cultural diversity across time and space. The four subfields of general anthropology are sociocultural, archaeological, biological, and linguistic. All consider

variation in time and space. Each also examines adaptation—the process by which organisms cope with environmental stresses.

2. Cultural anthropology explores the cultural diversity of the present and the recent past. Ethnography is field work in a particular society. Ethnology involves cross-cultural comparison—the comparative study of ethnographic data, of society, and of culture.
3. Archaeology uses material remains to reconstruct cultural patterns, often of prehistoric populations. Biological anthropology documents diversity involving fossils, genetics, growth and development, bodily responses, and nonhuman primates. Linguistic anthropology considers diversity among languages. Anthropology has two dimensions: academic and applied. The latter uses anthropological knowledge and methods to identify and solve social problems.
4. Applied anthropology uses anthropological perspectives, theory, methods, and data to identify, assess, and solve problems. Applied anthropologists have a range of employers. Examples: development and government agencies, NGOs, tribal, ethnic, and interest groups, businesses, social service and educational agencies. Applied anthropologists come from all four subfields. Ethnography is one of applied anthropology's most valuable research tools. Another is the comparative, cross-cultural perspective.
5. Anthropology and education researchers work in classrooms, homes, and other settings relevant to education. Their studies may lead to policy recommendations. Both academic and applied anthropologists study migration from rural areas to cities and across national boundaries. Rural social forms affect adjustment to the city.
6. Medical anthropology is the cross-cultural study of health problems and conditions, disease, illness, disease theories, and health care systems. Medical anthropology includes biological and cultural anthropologists and has theoretical (academic) and applied dimensions. In a given setting, the characteristic diseases reflect diet, population density, economy, and social complexity. Native theories of illness may be personalistic, naturalistic, or emotionalistic.
7. In applying anthropology to business, the key features are: (1) ethnography and observation as ways of gathering data, (2) cross-cultural expertise, and (3) focus on cultural diversity. A broad college education, including anthropology and foreign-area courses, offers an excellent background for many fields.

Key Terms

adaptation
anthropology and education
applied anthropology
archaeological anthropology
biological, or **physical, anthropology**
cultural resource management
cultural anthropologists
cultures
curer
disease
ethnography
ethnology
general anthropology
health care systems
holistic
hominids
illness
linguistic anthropology
medical anthropology
scientific medicine
society