

# CULTURAL ANTHROPOLOGY

An Applied Perspective

TENTH  
EDITION

GARY FERRARO | SUSAN ANDREATTA







1. SLOVENIA
2. CROATIA
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# Cultural Anthropology



TENTH EDITION

# Cultural Anthropology

An Applied Perspective

**Gary Ferraro**

**Susan Andreatta**



Australia • Brazil • Japan • Korea • Mexico • Singapore • Spain • United Kingdom • United States

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To Stefan and Stephanie—aka “The Steffersons”—who embody the values of multiculturalism, cross-cultural understanding, and the insights of cultural anthropology.

GPF

For Tim—Thank you for your love and for understanding the value of anthropological fieldwork.

SLA

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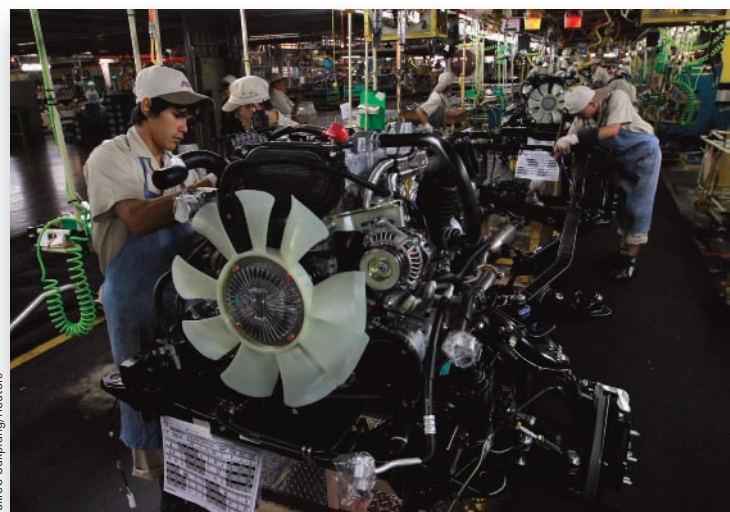
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# Preface

Applied cultural anthropology has become increasingly multifaceted, making it necessary to introduce material from new collaborators with diverse, yet complementary, backgrounds, experiences, and research interests. Both authors share a strong applied focus in their work as well as a similar, compatible vision of the importance of an applied perspective within the discipline and, particularly, the need for an applied focus in introductory-level anthropology courses.

Whereas Gary Ferraro has concentrated for the past several decades on the applied areas of the anthropology of business, education, and organizational structures, Susan Andreatta has focused her professional attention on environmental and medical anthropology. Since 2008 Ferraro and Andreatta have co-conducted five workshops at the annual meetings of the Society for Applied Anthropology and the American Anthropological Association dealing with how anthropology courses can be made more applied in their focus. And in 2013, Andreatta and Ferraro collaborated on a briefer version of this introductory textbook in cultural anthropology titled *Elements of Culture: An Applied Perspective*.

From the beginning, this text has had two major purposes. First, the book is designed to introduce university undergraduates to the field of cultural anthropology by drawing on the rich ethnographic examples found within the discipline. With its comparative approach to the study of cultural diversity, the text provides a comprehensive overview of the discipline. Second, the text goes beyond the basic outline of introductory materials by examining how the theory, insights, and methods of cultural anthropology have been applied to those contemporary situations that students, both majors and non-majors, are likely to encounter in their professional and personal lives.

The popularity of applied anthropology has grown steadily in the past two decades, largely as a result of the discipline's recognition of the need to become more relevant to our everyday lives. Now that we are more than two decades into the age of globalization, few would deny the need for our students to become culturally competent, irrespective of what occupation(s) they might pursue. Enabling today's undergraduates to cope more effectively with cultural diversity is hardly an empty catchphrase. Because cultural anthropology, even in its traditional (nonapplied) form, has always been the academic discipline best positioned to

educate for cultural competency, it only makes sense to make our introductory courses as relevant and applied as possible.

The theme of applied anthropology runs throughout this text. While providing a comprehensive introduction to the field, *Cultural Anthropology: An Applied Perspective*, Tenth Edition, goes beyond the presentation of academic anthropology and thoroughly integrates the application of anthropological theory, methods, and examples to contemporary situations that students are likely to encounter in the world around them. The applied perspective is further highlighted by the chapter opening cases and the features called *Applied Perspectives* and *Cross-Cultural Miscues*. In addition, *Contemporary Issues* boxes draw attention to issues in the field and events, as well as helps students relate to the anthropological perspective in everyday life. The *Applied Perspectives*, which appear in boxed format in all sixteen chapters, demonstrate how cultural anthropology actually has been used to solve specific societal problems in such areas as medicine, the environment, education, government, architecture, business, and economic development. There are a total of thirty new boxed features in the tenth edition, including twelve new *Applied Perspective* boxes. For example, in Chapter 3 students learn about the use of cook stoves in Peru and the local health implications of food preparation, and in Chapter 11 students are introduced to a shelter for abused woman in Kenya. And in Chapter 16 a new *Applied Perspective* box illustrates how research findings from an environmental anthropologist helped in the development of a drought insurance program in Ethiopia.

Over the past decade a number of leading introductory textbooks in the field have, to one degree or another, included some applied case studies in boxed format. We consider this imitation to be the sincerest form of flattery. Nevertheless, the *Applied Perspective* case studies in this text differ in some important respects. For example, each case study is selected to illustrate how *certain understandings from each chapter* have been applied to the solution of significant societal problems; there are more in-depth applied case studies in this text than in the others; and each of the case studies is followed by *Questions for Further Thought*, designed to encourage students to think critically about the broader implications of the applied case.

The second applied feature of this textbook is Cross-Cultural Miscues. These short scenarios, which also appear in all sixteen chapters, illustrate the negative consequences of failing to understand cultural differences. There are fourteen new Cross-Cultural Miscues in the tenth edition. To illustrate, one new miscue box from Chapter 2 shows how even an anthropologist (who should know better) can ask culturally inappropriate questions when operating abroad, and in Chapter 3 a traveler in Indonesia may have benefited from some knowledge of medical anthropology before panicking when seeing people using train-tracks for electric therapy. And in Chapter 16, students see how a failure to understand how what motivates one’s culturally different workforce can cause a US business person to shoot himself in the foot when operating in an overseas context.

A third applied feature of this tenth edition is short, chapter-opening case studies designed to catch the attention of students and remind them that the study of cultural anthropology really is relevant to our lives. These introductory case studies (like the Applied Perspectives and the Cross-Cultural Miscues) are designated with the “SWAP” feature icon. This acronym stands for “share with a parent” (or a friend) and directly illustrates to students the importance and necessity for understanding culture—what it is and how it changes—as an individual living in today’s world. Students should use these SWAP features to counter the inevitable questions from their parents and friends: “You’re taking what? What possible benefit can you get from studying cultural anthropology? How will anthropology get you a job?” Accompanying the Applied Perspectives, the Cross-Cultural Miscues, and the chapter-opening case studies, the SWAP icon appears 45 times throughout the text. Thus, there is more than an adequate number of illustrations to show why tuition money is not being wasted when undergraduates take courses in, or even major in (heaven forbid!), cultural anthropology.

Please note that Chapters 1 and 16 start with letters (rather than opening scenarios) written to the students by us. The opening letter to students in Chapter 1 tells students essentially what we are telling you in this preface—namely, the nature of the book’s applied perspective, what it is designed to accomplish, and how to get the most from the book. Because most professors do not require their students to read the preface, we decided to put this information in the beginning of the first chapter so that they would understand from day one what we are trying to do with the applied focus. And, we open Chapter 16 with a closing letter to the students designed to introduce them to the capstone chapter, remind them of the importance of the applied features of the text, and show them how anthropological understandings and sensitivities are absolutely essential for the resolution of those really

big human challenges of the twenty-first century facing all people—namely, climate change, overurbanization in developing countries, environmental degradation, the spread of world health pandemics, the rise of militant religious fundamentalism, and the widening gap between the rich and the poor throughout the world.

There are also five new Contemporary Issue boxes in the book, dealing with such topics as “Water, Culture, and Power: When Is It Too Late to Act?” (Chapter 4), the competition for high levels of academic achievement between rich and poor students in the United States (Chapter 12), and the conflict between secular values in the United States and religious values in the Islamic World (Chapter 14).

In addition to the smooth integration of applied illustrations into the overall text, an applied perspective (using both positive and negative case studies) is tied to a wide range of professional areas, including, but not limited to, the following:

- |                                   |                         |
|-----------------------------------|-------------------------|
| International businesspeople      | Product designers       |
| International development workers | Public health officials |
| Market researchers                | Public school educators |
| Medical caregivers                | Social workers          |
| Postwar nation builders           | University professors   |

Because our case studies are tied to a variety of occupational areas, students will be more likely to relate the concepts, findings, methods, and theories of cultural anthropology to their own future work lives in the twenty-first century. Tying anthropological insights to specific jobs is particularly important in the increasingly tight job market in the twenty-first century. And, in fact, hiring criteria in most free market economies have changed. By and large employers no longer hire on the basis of what a job candidate knows or whether one’s degree is from a first-rate institution. Instead, they want to know: *Can you add value to the organization?* Do you have the skills and competencies needed to be creative and to solve future problems which do not even exist yet? Although it is true that many of the skills needed by today’s employers are not being taught explicitly at institutions of higher learning, many are being taught.

So, if young people are to be successful in the school-to-work transition, they need to learn as much as possible about our rapidly changing workplace in addition to (not instead of) their chosen fields of study. Applying anthropology in the work place, such as using their acquired cultural sensitivity to multiethnic differences, immigration, and globalization are needed in today’s workforce. Yet, some students may be interested in getting involved in nongovernmental organizations and working on applied projects that facilitate making a difference in local communities here and abroad, this text provides numerous examples inspiring such thinking and action. Students must “know themselves”



well enough to identify what future professions or jobs would be most satisfying to them.

Given the present-day realities of transitioning from school to work, we feel that the applied focus of this textbook is particularly germane for today's students. Each of our applied case studies deals with using anthropological insights for the solution of problems and challenges faced by people from a variety of professions and occupying a wide range of jobs. All features, including the Applied Perspectives, Cross-Cultural Miscues, Contemporary Issues, and chapter-opening scenarios encourage students to appreciate the types of skills and competencies needed by people who work in jobs that require interacting with culturally different people. In today's global marketplace it is difficult to imagine any job that would not require cross-cultural skills and sensitivities when dealing with customers, clients, patients, or students, either at home or abroad.

Over the past decade an increasing number of cultural anthropologists have agreed with our basic premise: that an introductory text with an applied focus was long overdue. Anthropology instructors at many different types of institutions—public and private, large and small, two-year and four-year—have adopted the first nine editions of this book. As well received as the previous editions have been, however, there is always room for improvement. Responding to many helpful suggestions of reviewers, we have made the following changes in the tenth edition.

## General Changes

As previously discussed, the tenth edition of *Cultural Anthropology: An Applied Perspective*, speaks more directly to students with more contemporary examples that deal with nonacademic career opportunities and the application of anthropological concepts in the workplace and in one's personal life. The revision further strengthens the themes of economics and environment as well as community and social responsibility that run throughout the text. In addition, global changes include:

1. Full integration of applied anthropology and applying anthropology examples into every chapter;
2. New Critical Thinking Questions at the end of chapters and the Suggested Readings have been eliminated;
3. A 10-percent reduction in overall length, with most chapters trimmed;
4. Reframing Chapter 3, Applied Anthropology, to eliminate redundancies with Chapters 4 and 5 on theory and methods, and to refocus the chapter on practical applications, emphasizing the role of anthropology and applying anthropology, including nonacademic careers and ethics;

5. The updating and improvement of the art program with new photos, tables, graphs, and maps.

## Changes by Chapter

### Chapter 1: What Is Anthropology?

1. Added a new section explaining the difference between *applied* anthropology and *applying* anthropology.
2. The chapter includes a new Applied Perspective box dealing with an applied archaeologist working in post-Katrina New Orleans.
3. A new section has been introduced on how archaeologists are now studying contemporary urban garbage dumps in the United States to determine consumption patterns and to provide data used by urban policy makers.
4. A new example of ethnocentrism has been added.
5. The discussion of cultural relativism has been reorganized to make it more understandable.
6. The section on anthropology's role in enhancing understanding has been streamlined.
7. New data have been added on the percentage of those accepted to college who choose to defer admission to college to take a gap year in some other culture.
8. The final section of the chapter titled "The Bottom Line" was rewritten with an eye toward succinctness and clarity.

### Chapter 2: The Concept of Culture

1. The section dealing with the definition of "culture" now includes an additional early-twentieth-century definition offered by independent scholar FitzRoy Richard Somerset (1885–1964).
2. The section on cultural universals has been reorganized to make it both more comprehensive and user friendly.
3. A new cross-cultural scenario focusing on different world views between Italians and North Americans on how to conduct a vacation has been added to this chapter.
4. The entire section dealing with altering one's physical appearance for aesthetic reasons has been updated.
5. A new final section has been added dealing with the development of twenty-first-century information technology that will revolutionize how we study the concept of culture, culture change, and the flow of ideas.
6. Sixty four percent of the photos in Chapter 2 are new images.

## Chapter 3: Applied Anthropology

1. Ethics is introduced in this chapter.
2. Introduced the Human Terrain System and its conflict with the professional code of ethics.
3. Included Mark Schuller's research in the Haitian camps postdisaster and the \$5.3 billion dollars pledged for rebuilding Haiti. Internally displaced people remain in campus without proper sanitation, drinkable water, access to health clinics, and regular employment.
4. Added a new Applied Perspective that focuses on the use of more efficient cookstoves to reduce mortality rates in impoverished regions of the world that rely on biomass and coal for fuel and which contributes to environment, climatic and health benefits as well.
5. Added a new Cross-Cultural Miscue in Medical Anthropology on how the Indonesia poor turn to train-track electric therapy.
6. Added a second new Cross-Cultural Miscue on research and ethics in Mali.

## Chapter 4: The Growth of Anthropological Theory

1. Noted that not all theoretical perspectives are offered in this chapter because most departments offer a course or two in anthropological theory.
2. Tightened up some of the theoretical sections. Introduced the terms *human ecology* and *political ecology*, which will be further defined and used in Chapters 7 and 8.
3. Reduced time spent on Levi-Strauss French Structuralism.
4. Added material on political economy.
5. Added material on political ecology.
6. Added material on Praxis, which is appropriate for applied research and applying anthropology to the real world.
7. New Contemporary Issue box on "Water, Culture and Power: When Is It Too Late to Act?"

## Chapter 5: Applied Anthropology: Methods in Cultural Anthropology

1. Removed ethics from this chapter to introduce it in Chapter 3.
2. Tightened up the Case Study from Andreatta's research in Jamaica in the section on fieldwork.
3. Introduced community-based participatory research.
4. Introduced recommendations from Shirley Fiske on how to obtain government employment with an interest in applied anthropology.

5. Introduced a final section on accountability.
6. Added a new Applied Perspective box on climate change.

## Chapter 6: Language and Communication

1. Added a new Cross-Cultural Miscue on the use of Facebook in the office as an appropriate means of group communication.
2. Added a new Applied Perspective on language preservation as a way to draw attention to saving endangered languages using digital technology and software apps from smartphones.
3. Introduced an applied linguistics example with the work of Pam Innes and language preservation examples among the Apache.
4. Added cell phone text-messaging examples to illustrate culture change and new means of communicating.

## Chapter 7: Subsistence Patterns

1. Added a new chapter-opening case study on pastoralism and climate change, drawing on the work of Terry McCabe in East Africa.
2. Added a discussion of food deserts in the United States.
3. Added examples of changing environments and the impact on subsistence strategies for groups such as the Sami, Inuit, and Ju/'hoansi, as well as fishing communities and small island states.
4. Introduced the concepts of locavores and freegans as alternative means of sourcing food.
5. Added a discussion of using small-livestock such as goats to manage grassland regions around the airport in the United States.
6. Added a discussion of resistance to industrial agriculture using small-scale food production with examples from Slow Food, use of farmers markets, community-supported agriculture, the back of the land movement, World Wide Opportunities on Organic Farms (WWOOF), and a number of other programs.
7. Added an Applied Perspective box on eating insects to evade hunger.

## Chapter 8: Economics

1. Introduced a new Cross-Cultural Miscue on learning how to change money in a foreign country.
2. Introduced a new Contemporary Issue box on alpacas in the Andes.

3. Added examples from Afghanistan in the section on division of labor that addresses women gaining employment.
4. Updated statistics for international labor and the use of children.
5. Introduced a new Applied Perspective box on what happens to used hotel soap and how nongovernmental organizations are using the business of recycling soap to help people around the world.
6. Introduced another Applied Perspective box on cruise ships in Alaska and increased pollution.

## Chapter 9: Marriage and the Family

1. Introduced a new chapter-opening case study on same-sex families adopting children.
2. Introduced a new Applied Perspective box on preparing for resettlement because of climate change.
3. Introduced an example of Sumburu women in Kenya and the development of a village for abused women only, changing the traditional division of labor; here women do men's work as well.
4. Updated statistics of children with HIV and AIDS and the impact AIDS has on the children and added examples from orphaned children with AIDS.
5. Added an example of dowry deaths in India.
6. Added examples of the modern family in the United States changing composition with college-age students moving back home.

## Chapter 10: Kinship and Descent

1. A new Cross-Cultural Miscue box about an incident of intercultural misunderstanding that occurred in Saudi Arabia between a North American woman and her local Saudi landlord, has been added to the chapter.
2. A new Contemporary Issues box now introduces the idea that the gender of the cultural anthropologist can influence the extent to which patrilineal descent groups are male oriented.
3. Added a new discussion of how kinship roles and obligations in western countries are being "outsourced" on a "fee-for-service" basis.
4. There is a new expanded section on twenty-first-century information technology useful for tracking kinship relations.
5. An expanded discussion has been added on reproductive technologies (e.g., in vitro fertilization, surrogate motherhood), which are making our traditional notions of parenthood more difficult to define.

6. A new case study has been added describing how a recent college senior learned (through new kinship-specific information technology) that she was the great-great-great-granddaughter of the college's first graduate in 1814.

## Chapter 11: Sex and Gender

1. Added discussion on same-sex relationships.
2. Added examples of stay at home fathers and fatherville.
3. Added examples of women in the developing world risking everything for an education, (e.g., example from Pakistan of girl who was shot by the Taliban for speaking out for girls getting an education).
4. Added examples of women in the developing world and their poor reproductive health.
5. Introduced a Cross-Cultural Miscue that focuses on humor in the work place at an international women's crisis shelter.
6. Introduced an Applied Perspective box on Umoja, Kenya a women's village (shelter) that emerged for abused women.
7. Introduced an Applied Perspective box on "Son Preference: New Reproductive Technologies and Family Building Strategies in India."

## Chapter 12: Social Stratification

1. A new Cross-Cultural Miscue box has been added dealing with a culture clash between an American and his Japanese joint venture partners which ended badly.
2. A new Contemporary Issues box discussing how there is never a level playing field when rich and poor students in the United States compete for high levels of achievement in education.
3. The data on the relationship between educational attainment and annual income has been updated using the most recent census data.
4. The latest (2013) *Fortune* data on the world's wealthiest billionaires (and their nationalities) has been incorporated into this chapter.
5. The latest data on income inequities in the United States (since the "great recession of 2008") have been included.
6. A new discussion has been added on the changing nature of traditional ethnic neighborhoods in New York City.
7. The discussion on occupational prestige in the United States has been updated to show how people rank certain occupations after the financial meltdown of 2008.

8. The latest data from the World Bank (2011) has been used to update the ten wealthiest and the ten poorest nations in the world (according to gross national income).

## Chapter 13: Political Organization and Social Control

1. The applied Perspective box on the Poarch Creek Tribe from Alabama has been updated to show the significant changes in the community's economic development that have occurred in the twenty-first century.
2. The section on "Gender and the Modern State" has been updated to show the modest advances in women's participation in government worldwide during the twenty-first century.
3. The section on "Changing State Systems of Government" has included the most recent data on the relationship between democracies and autocracies in world governments.
4. This same section now includes a major addition on the findings and methodologies of the 2012 Failed States Index published annually since 2005 by the Fund for Peace.
5. The multipage section dealing with social control has been reorganized by dividing the various mechanisms of social control into those found in (a) all types of societies, (b) small-scale societies, and (c) state societies.
6. New to Chapter 13 is an Applied Perspective case study showing an applied anthropologist's role as an expert witness in two court cases involving American Indians.
7. Chapter 13 now contains a new Cross-Cultural Miscue illustrating how a United States diplomat failed to understand the symbolism of touching his Kuwaiti counterpart with his left hand.

## Chapter 14: Belief Systems

1. A new Cross-Cultural Miscue dealing with the Chinese belief system of *feng shui* has been added to this edition.
2. Updated information on the growing popularity of the Wiccan movement has been included in this edition.
3. A new section has been added on the relative religious knowledge of practitioners of various religious denominations in the United States based on the Pew Forum on Religion and Public Life (2010).
4. The tenth edition now includes an interesting example of a French city's (Bussy Saint Georges) response to new immigrant religions by building

an "esplanade (campus) of religions" housing several Buddhist temples, a Jewish synagogue, and an Islamic mosque.

5. In the section on "globalization of world religions," a new discussion appears on the demographic shift in the Roman Catholic Church from Europe to the "Global South" (comprised of Latin America, Africa, and South Asia).
6. There is now a brief update on the relationship between religion and politics in the United States since the 2004 presidential election.
7. A new Contemporary Issues box has been added that illustrates the conflict between secular values in the United States and religious values in the Islamic world.

## Chapter 15: Art

1. The case of the Denver Museum taking the lead in researching and posting the names of artists from small-scale societies has been added to this chapter, illustrating how some museums are ending the practice of putting more importance on who owns a piece of nonwestern art than on the artist who made it.
2. To illustrate how relatively segregated (by class) some forms of art are in the United States, we have included an example of a "random act of culture," whereby the Philadelphia Opera Company held an impromptu performance of the "Toreador Song" from "Carmen" at the crowded Reading Terminal Market.
3. To illustrate how music can play a role in disrupting the status quo, the music of one courageous rapper from Tunisia was shown to be the major impetus for the series of revolutions occurring in the Middle East known as the Arab Spring.
4. The contemporary issue box dealing with the return of a tattooed Maori head by the Museum of Rouen, France, was updated to include information about the actual repatriation of the body part.
5. A new Cross-Cultural Miscue has been added to Chapter 15 showing how humor often does not translate smoothly from one culture to another.

## Chapter 16: Global Challenges and the Role of Applied Anthropology

1. Two new Cross-Cultural Miscues have been added. The first involves a US businessman working in Singapore who fails to realize the meaning of a hand gesture he uses when conversing with his Singaporean employees. The second new miscue involves the president of a US timber company working in Latin America who fails to understand the proper incentives for recruiting local workers.

2. The chapter also contains two new Applied Perspective boxes. One involves how environmental anthropologist Nicole Peterson applied her research findings to the design of a drought insurance program for small-scale farmers in Ethiopia. The second examines how a major US company, which develops and administers economic development programs in developing countries, recruits its expatriate program officers with an eye toward cross-cultural experience, sensitivities, and coping skills rather than technical expertise alone.
3. The economic data on former African colonies has been updated.
4. A number of new examples of globalization have been added to this edition.
5. The human rights efforts on behalf of the Ngobe of Panama by Cultural Survival have been brought up to date.

## Chapter Features

As discussed, this edition contains a number of pedagogical features designed to enhance student learning. These include What We Will Learn introductory questions alerting the student to the key concepts of the chapter, chapter-opening scenarios that illustrate just how important culture is for understanding the world around us, concise chapter summaries, a list of key terms, a running glossary as well as a cumulative glossary, Applied Perspective boxes, Contemporary Issues boxes, and Cross-Cultural Miscues, all designed to illustrate the relevance of cultural anthropology to our everyday lives. Questions for Further Thought also appear at the end of the Applied Perspective boxes and are designed to stimulate critical thinking about the applied cases.

## Supplements for Instructors

**Online Instructor's Manual with Test Bank for Ferraro/Andreatta's *Cultural Anthropology: An Applied Perspective*, Tenth Edition** An online Instructor's Manual accompanies this book. It contains information to assist the instructor in designing the course, including learning objectives, chapter outlines, key terms, critical thinking questions, class activities, Internet exercises, and suggested films. For assessment support, the updated test bank includes true/false, multiple-choice, short-answer, and essay questions for each chapter.

**Cengage Learning Testing Powered by Cognero for *Cultural Anthropology: An Applied Perspective*, by**

**Ferraro/Andreatta, Tenth Edition** This assessment tool is a flexible, online system that allows you to author, edit, and manage test bank content from multiple Cengage Learning solutions. You can create multiple test versions in an instant and deliver tests from your LMS, your classroom or wherever you want.

**Wadsworth Anthropology Video Library** Qualified adopters can select full-length videos from an extensive library of offerings drawn from such excellent educational video sources as *Films for the Humanities and Sciences*.

**AIDS in Africa DVD** Expand your students' global perspective of HIV and AIDS with this award-winning documentary series focused on controlling HIV and AIDS in southern Africa. Films focus on caregivers in the faith community; how young people share messages of hope through song and dance; the relationship of HIV and AIDS to gender, poverty, stigma, education, and justice; and the story of two women who are HIV-positive helping others.

## Online Resources for Instructors and Students

**Anthropology CourseMate for *Cultural Anthropology: An Applied Perspective*, by Ferraro/Andreatta, Tenth Edition** Interested in a simple way to complement your text and course content with study and practice materials? Cengage Learning's Anthropology CourseMate brings course concepts to life with interactive learning, study, and exam preparation tools that support the printed textbook. Watch student comprehension soar as your class works with the printed textbook and the textbook-specific web site. Anthropology CourseMate goes beyond the book to deliver what you need and includes an interactive eBook that allows students to take notes, highlight, bookmark, search the text, and use in-context glossary definitions; as well as interactive teaching and learning tools including quizzes, flashcards, videos, and more.

**Anthropology CourseReader.** Anthropology Course Reader allows you to create a fully customized online reader in minutes. Access a rich collection of thousands of primary and secondary sources, readings, and audio and video selections from multiple disciplines. See the Author's Choice for selections of applied anthropology articles edited by Gary Ferraro, editor.

To access these resources and additional course materials and companion resources, please visit [www.cengagebrain.com](http://www.cengagebrain.com). At the CengageBrain.com home page, search for the ISBN of your title (from the back cover of your book) using the search box at the top of the page. This will take you to the product page where free companion resources can be found.

## Supplements for Students

For a complete listing of our case studies and readers go to [www.cengage.com/community/fromthefield](http://www.cengage.com/community/fromthefield)

**Classic Readings in Cultural Anthropology, Third Edition** (ISBN: 978-1-111-29792-3) Practical and insightful, this concise and accessible reader by Gary Ferraro presents a core selection of historical and contemporary works that have been instrumental in shaping anthropological thought and research over the past decades. Readings are organized around eight topics that closely mirror most introductory textbooks and are selected from scholarly works on the basis of their enduring themes and contributions to the discipline.

**Globalization and Change in Fifteen Cultures: Born in One World, Living in Another, edited by George Spindler and Janice E. Stockard.** (978-0-534-63648-7) In this volume, fifteen case study authors write about culture change in today's diverse settings around the world. Each original article provides insight into the dynamics and meanings of change, as well as the effects of globalization at the local level.

**Case Studies in Cultural Anthropology, edited by George Spindler and Janice E. Stockard.** Select from more than sixty classic and contemporary ethnographies representing geographic and topical diversity. Newer case studies focus on culture change and culture continuity, reflecting the globalization of the world and include a legacy edition of Napoleon Chagnon's *Yanomamö*, and a fourth edition of Richard Lee's *The Dobe Ju/'hoansi*. Recent publications include *Shadowed Lives*, by Leo Chavez.

**Case Studies on Contemporary Social Issues, edited by John A. Young.** Framed around social issues, these new contemporary case studies are globally comparative and represent the cutting-edge work of anthropologists today. Recent publications include *Slaughterhouse Blues* by Donald Stull and Michael Broadway and *Seeking Food Rights: Nation, Inequality and Repression in Uzbekistan* by Nancy Rosenberger.

## Acknowledgments

To one degree or another, many people have contributed to this textbook. Some have made explicit suggestions for revisions, many of which have been incorporated into various editions over the past eighteen years. Others have contributed less directly, yet their fingerprints are found throughout the text. We are particularly grateful to the many professors with whom we have studied at Syracuse University (Ferraro)

and Michigan State University (Andreatta). We owe a similar debt to the many colleagues over the years who have shared with us their thinking on anthropological research and teaching. Although there are far too many names to fit into a small preface, they have had an important impact on our thinking and our careers as anthropologists and, thus, on the content of this book. They have always responded graciously to our requests for information in their various areas of expertise and have taught us a great deal about teaching introductory anthropology. We are confident that they know who they are and will accept our most sincere gratitude.

Since its first appearance in 1992, this textbook has benefited enormously from excellent editorial guidance and the comments of many reviewers. We want to thank our original editor, Peter Marshall, for his encouragement to write an introductory textbook with an applied focus before it was fashionable. We also want to thank our Senior Content Developer, Lin Marshall Gaylord, for her vision, counsel, and many excellent suggestions for improving the tenth edition. Thanks are also extended to the entire Cengage Learning editorial, marketing, and production team composed of Chelsea Meredith, Product Assistant Editor; Sean Cronin, Content Coordinator; John Chell, Media Developer; Tanya Nigh, Senior Content Production Manager; Integra, Production Services; and Venkat Narayanan, Photo Researcher.

As with the previous editions of this book, many reviewers have made valuable and insightful suggestions for strengthening the text. For this tenth edition we would like to express our gratitude to the many colleagues who wish to remain anonymous.

We also want to thank the many unsolicited reviewers—both professors and students—who have commented on various aspects of the text over the years. We trust that these reviewers will see that many of their helpful suggestions have been incorporated into the tenth edition. We encourage any readers, professors, or students to send us comments, corrections, and suggestions for future improvements via e-mail at the following addresses:

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After nearly a half-century (cumulative) of full-time university teaching, we want to express our deepest gratitude to our many students who have helped us define and refine our anthropological perspectives and, consequently, the concepts and interpretations in this book.

Gary Ferraro  
Susan Andreatta

# About the Author

**Gary Ferraro**, Professor Emeritus of Anthropology at the University of North Carolina–Charlotte, received his BA in history from Hamilton College and his MA and PhD from Syracuse University. He has been a Fulbright Scholar at the University of Swaziland in Southern Africa (1979–1980) and again at Masaryk University in the Czech Republic (2003), and he has served twice (1983, 2003) as a visiting professor of anthropology in the University of Pittsburgh’s Semester at Sea Program, a floating university that travels around the world. He has conducted research for extended periods of time in Kenya and Swaziland and has traveled widely throughout many other parts of the world. He has served as a consultant and trainer for such organizations as USAID, the Peace Corps, the World Bank, IBM, G.E. Plastics, and Georgia Pacific, among others. From 1996 to 2000 he served as the Director of the Intercultural Training Institute at UNC–Charlotte, a consortium of cross-cultural trainers and educators from academia, government, and business, designed to help regional organizations cope with cultural differences at home and abroad. He is the author of

*The Two Worlds of Kamau* (1978),

*The Cultural Dimension of International Business* (1990, 1994, 1998, 2002, 2006, 2010, and 2013 with co-author, Elizabeth K. Briody),

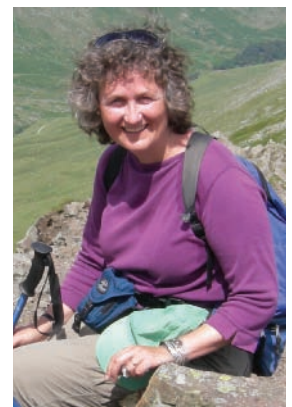
*Anthropology: An Applied Perspective* (1994),

*Applying Cultural Anthropology: Readings* (1998),

*Global Brains: Knowledge and Competencies for the Twenty-First Century* (2002), and

*Classic Readings in Cultural Anthropology* (2004, 2009, 2012).

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A young girl from Guatemala peers from behind a tree to see what is going on in the world around her, an activity in which students of cultural anthropology also engage.



# What Is Anthropology?



## A LETTER TO STUDENTS

Greetings! We would like to welcome you to the 10th edition of *Cultural Anthropology: An Applied Perspective*.

We are proud of this textbook and the difference we bet it will make in your lives after reading and learning from the text. To be certain, all introductory textbooks in cultural anthropology are designed to introduce the reader to the content of cultural anthropology. But this textbook, with its “Applied Perspective,” goes beyond the content of the discipline by showing you how the research findings, theories, methods, and insights of cultural anthropology can be useful in your *everyday* personal and professional lives.

The study of cultural anthropology, in other words, is far more than the study of the similarities and differences among the thousands of distinct and discrete cultures of the world and, in today’s interconnected world, it is far more relevant. The *applied* orientation of this book illustrates (through distinct examples and scenarios) how understanding the ideas and behavior patterns of culturally different people, both at home and abroad, enables us to better meet our personal and professional objectives. Conversely, when we fail to take our cultural environments seriously, we are likely to commit some serious cultural faux pas.

The book’s applied orientation is woven into each chapter through three unique features: chapter-opening real-world scenarios, Applied Perspective features, and Cross-Cultural Miscues. First, an introductory mini-case study that is actual, and not hypothetical, begins each chapter and illustrates why it is important to understand the basic concepts in the chapter. The second feature that highlights applied anthropology is the Applied Perspective boxes. These are longer case studies based on actual anthropological research that demonstrate how cultural anthropology has been used to solve specific societal problems in such work-related areas as medicine, government, architecture, education, economic development, and business. Finally, the Cross-Cultural Miscues, which appear in each chapter, illustrate the negative consequences of failing to appreciate cultural differences in one’s everyday interactions. All three of these features are highlighted with the SWAP (an acronym for “Share with a Parent” or a friend) icon to direct your attention to key examples in the text that illustrate the importance of applied anthropology.

We are writing to you in Chapter 1 so that you know from the outset that this book has a twofold purpose: (1) It introduces you to the basic field of

## WHAT WE WILL LEARN

- How does anthropology differ from other social and behavioral sciences?
- What is the four-field approach to the discipline of anthropology?
- What do anthropologists mean by *holism*?
- What is meant by *cultural relativism*, and why is it important?
- What skills will students develop from the study of anthropology?
- How can anthropology help solve social problems?

cultural anthropology, and (2) it demonstrates how cross-cultural awareness is extraordinarily relevant in the highly interconnected world of the twenty-first century. We also want to alert you that there are several important features of each chapter that should be taken seriously because they remind us of the relevance of cultural knowledge to our everyday lives. It is, in fact, these highly relevant scenarios and examples that you should cite to your parents and friends who never fail to ask the question: Why are you taking (or worse yet, majoring in) cultural anthropology? Because we all play out our lives in a cultural context—and, to an increasing degree, in a multicultural or cross-cultural context—an understanding of cultural anthropology is extremely important for maximizing our personal and professional success in the twenty-first century, irrespective of what line of work you might pursue.

We trust that you will find reading about living and working in other cultures (for example, see the Cross-Cultural Miscue in Chapter 1) or about anthropology and new product research in the developing world (see the Applied Perspective about cell phone technology in Chapter 8) interesting and thought provoking as you learn about the real impact culture has on your everyday life. Be sure to pay close attention to the SWAP icons that appear beside all mini-case studies throughout the book. It is these case studies that will help you to answer the questions from parents and friends about what you can possibly learn from cultural anthropology. ■

When most North Americans hear the word *anthropologist*, a number of images come to mind. They picture, for example:

- Dian Fossey devoting years of her life to making systematic observations of mountain gorillas in their natural environment in Rwanda
- A field anthropologist interviewing an exotic tribesman about his kinship system
- The excavation of a jawbone that will be used to demonstrate the evolutionary link between early and modern humans
- A linguist meticulously recording the words and sounds of a native informant speaking a language that has never been written down
- A cultural anthropologist studying the culture of unemployed men in Washington, D.C.
- A team of archaeologists in pith helmets unearthing an ancient temple from a rain forest in Guatemala

Each of these impressions—to one degree or another—accurately represents the concerns of scientists who call themselves anthropologists. Anthropologists do in fact travel to different parts of the world to study little-known cultures (cultural anthropologists) and languages (anthropological linguists),

but they also study culturally distinct groups within their own cultures. Anthropologists also unearth fossil remains (physical anthropologists) and various artifacts (archaeologists) of people who lived thousands and, in some cases, millions of years ago. Even though anthropologists in these subspecialties engage in substantially different types of activities and generate different types of data, they are all directed toward a single purpose: the scientific study of humans, both biologically and culturally, in whatever form, time period, or region of the world they might be found.

Anthropology—derived from the Greek words *anthropos* for human and *logos* for study—is, if we take it literally, the study of humans. In one sense this is an accurate description to the extent that anthropology raises a wide variety of questions about the human condition. And yet this literal definition is not particularly illuminating because a number of other academic disciplines—including sociology, biology, psychology, political science, economics, and history—also study human beings. What is it that distinguishes anthropology from all of these other disciplines?

Anthropology is the study of people—their origins, their development, and contemporary variations wherever and whenever they have been found. Of all the disciplines that study humans, anthropology is

by far the broadest in scope. The subject matter of anthropology includes fossilized skeletal remains of early humans, artifacts and other material remains from prehistoric and historic archaeological sites, and all of the contemporary and historical cultures of the world. The task that anthropology has set for itself is an enormous one. Anthropologists strive for an understanding of the biological and cultural origins and evolutionary development of the species. They are concerned with all humans, both past and present, as well as their behavior patterns, thought systems, and material possessions. In short, anthropology aims to describe, in the broadest sense, what it means to be human (Peacock 1986).

In their search to understand the human condition, anthropologists—drawing on a wide variety of data and methods—have created a diverse field of study. Many specialists in the field of anthropology often engage in research that is directly relevant to other fields. It has been suggested (Wolf 1964) that anthropology spans the gap between the humanities, the social sciences, and the natural sciences. To illustrate, anthropological investigations of native art, folklore, values, and supernatural belief systems are primarily humanistic in nature; studies of social stratification, comparative political systems, and means of distribution are common themes in sociology, political science, and economics, respectively; and studies of comparative anatomy and radiocarbon dating are central to the natural sciences of biology and chemistry.

The global scope of anthropological studies has actually increased over the past century. In the early 1900s, anthropologists concentrated on the non-Western, preliterate, and technologically simple societies of the world and were content to leave the study of industrial societies to other disciplines such as sociology and economics. In recent decades, however, anthropologists have devoted increasing attention to cultural

and subcultural groups in industrialized areas while continuing their studies of more exotic peoples of the world. It is not uncommon today for anthropologists to apply their field methods to the study of the Hutterites of Montana, rural communes in California, or urban street gangs in Chicago. Only when the whole range of human cultural variation is examined will anthropologists be in a position to test the accuracy of theories about human behavior.

Traditionally, the discipline of anthropology is divided into four distinct branches or subfields: *physical anthropology*, which deals with humans as biological organisms; *archaeology*, which attempts to reconstruct the cultures of the past, most of which have left no written records; *anthropological linguistics*, which focuses on the study of language in historical, structural, and social contexts; and *cultural anthropology*, which examines similarities and differences among contemporary cultures of the world (see Table 1.1). All four subfields of the discipline of anthropology engage in both (1) theoretical research (describing and comparing cultural features among and between cultures) and (2) more practical forms of research designed to solve specific societal problems. This more problem-oriented endeavor is itself comprised of two broad streams: first, “applied anthropology” involves conducting applied research projects designed to generate policy recommendations for addressing societal problems; and the second, which is known in the field as “applying anthropology,” involves using already existing anthropological data, methods, theories, and insights to inform government programs and nongovernment organizations (NGOs) that promote, manage, and assess social programs and social policies.

Although cultural anthropology is the central focus of this textbook, a brief discussion of all four branches will provide an adequate description of the discipline as a whole.

TABLE 1.1

**Branches of Anthropology**

Physical Anthropology	Archaeology	Anthropological Linguistics	Cultural Anthropology
Paleoanthropology	Historical archaeology	Historical linguistics	Development anthropology
Primatology	Prehistoric archaeology	Descriptive linguistics	Psychological anthropology
Human variation	Contract archaeology	Ethnolinguistics	Environmental anthropology
Forensic anthropology	Applied archaeology	Sociolinguistics	Medical anthropology
Applied physical anthropology	Cultural resource management	Applied linguistics	Urban anthropology Political anthropology Applied anthropology

## Physical (Biological) Anthropology

The study of humans from a biological perspective is called *physical anthropology* (*biological anthropology*). Essentially, physical anthropologists are concerned with three broad areas of investigation. First, they are interested in reconstructing the evolutionary record of the human species; that is, they ask questions about the emergence of humans and how humans have evolved up to the present time. This area of physical anthropology is known as *paleoanthropology*. The second area of concern to physical anthropologists, known as primatology, focuses on our nearest living relatives, namely apes, monkeys, and prosimians. And the third area, known as human variation, studies how and why the physical traits of contemporary human populations vary throughout the world. Unlike comparative biologists, physical anthropologists study how culture and environment have influenced these two areas of biological evolution and contemporary variations.

### Evolutionary Record of Humans

In their attempts to reconstruct human evolution, paleoanthropologists have drawn heavily on fossil remains (hardened organic matter such as bones and teeth) of humans, protohumans, and other primates. Once these fossil remains have been unearthed, the difficult job of comparison, analysis, and interpretation begins. To which species do the remains belong? Are the remains human or those of our prehuman ancestors? If not human, what do the remains tell us about our own species? When did these primates live? How did they adapt to their environment? To answer these questions, paleoanthropologists use the techniques of comparative anatomy. They compare such physical features as cranial capacity, teeth, hands, position of the pelvis, and shape of the head of the fossil remains with those of humans or other nonhuman primates. In addition to comparing physical features, paleoanthropologists look for signs of culture (such as tools) to help determine the humanity of the fossil remains. For example, if fossil remains are found in association with tools, and if it can be determined that the tools were made by these creatures, then it is likely that the remains will be considered human.

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**physical anthropology (biological anthropology)** The subfield of anthropology that studies both human biological evolution and contemporary physical variations among peoples of the world.

**paleoanthropology** The study of human evolution through fossil remains.

**primatology** The study of nonhuman primates in their natural environments for the purpose of gaining insights into the human evolutionary process.

The work of paleoanthropologists is often tedious and must be conducted with meticulous attention to detail. Even though the quantity of fossilized materials is growing each year, paleoanthropologists have little data to analyze. Much of the evolutionary record remains underground. Of the fossils that have been found, many are partial or fragmentary, and more often than not, they are not found in association with cultural artifacts. Consequently, to fill in the human evolutionary record, physical anthropologists need to draw on the work of a number of other specialists: paleontologists (who specialize in prehistoric plant and animal life), archaeologists (who study prehistoric material culture), and geologists (who provide data on local physical and climatic conditions).

In addition to reconstructing the human evolutionary record, paleoanthropology has led to various applications of physical anthropology. For example, forensic anthropology for years has used traditional methods and theories from physical anthropology to help identify the remains of crime and disaster victims for legal purposes. Forensic anthropologists can determine from skeletal remains the age, sex, and stature of the deceased as well as other traits such as physical abnormalities, traumas (such as broken bones), and nutritional history. In recent years, forensic anthropologists have been called on to testify in murder trials. On a larger scale, some applied forensic anthropologists have headed international teams to study the physical remains of victims of mass human rights abuses. For example, in 1984 forensic anthropologist Clyde Snow helped identify some of the nine thousand people murdered by the government of Argentina between 1976 and 1983. Snow's forensic research and subsequent testimony in an Argentinean court were crucial in convicting some of the perpetrators of these mass murders. Similarly, forensic anthropologists have been working in Bosnia and Kosovo to identify the victims of Slobodan Milosevic's programs of ethnic cleansing during the 1990s. More recently, the life and work of Kathy Reichs, a forensic anthropologist and best-selling crime novelist, have inspired the prime-time TV series *Bones* (Figure 1.1).

### Primatology

Since the 1950s, physical anthropologists have developed an area of specialization of their own that helps shed light on human evolution and adaptation over time and space. This field of study is known as *primatology*—the study of our nearest living relatives (apes, monkeys, and prosimians) in their natural habitats (Figure 1.2). Primatologists study the anatomy and social behavior of such nonhuman primate species as gorillas, baboons, and chimpanzees in an effort to gain clues about our own evolution as a species. Because physical anthropologists do not have the luxury of



Christopher J. Morris/Corbis

**FIGURE 1.1** Dr. Kathy Reichs, a forensic anthropologist, works with police, the courts, medical examiners, and international organizations to help identify victims of crimes, disasters, and genocide. She also served on the forensic recovery team for victims of the World Trade Center disaster of September 11, 2001.



Alex Pitt/Newscom

**FIGURE 1.2** Primatologist Birute Galdikas holds an orphaned adolescent orangutan at the Oranutan Foundation International Care Center in Borneo, Indonesia. Galdikas has spent more than three decades braving tropical diseases and violent encounters in the forests of Borneo to study and defend some of the world's last remaining orangutans.

observing the behavior of human ancestors several million years ago, they can learn how early humans could have responded to certain environmental conditions and changes in their developmental past by studying contemporary nonhuman primates (such as baboons and chimps) in similar environments. For example, the simple yet real division of labor among baboon troops can shed light on role specialization and social stratification in early human societies, or the rudimentary tool-making skills found among chimpanzees in Tanzania may help explain early human strategies for adapting to the environment.

Sometimes the study of primatology leads to findings that are both startling and eminently practical. While studying chimps in their natural habitat in Tanzania, primatologist Richard Wrangham noticed that young chimps occasionally ate the leaves of plants that were not part of their normal diet. Because the chimps swallowed the leaves whole, Wrangham concluded that they were not ingesting these leaves primarily for nutritional purposes. Chemical analysis of the leaves by pharmacologist Eloy Rodriguez indicated that the plant contains substantial amounts of the chemical compound thiarubrine-A, which has strong antibiotic properties. Wrangham concluded that the chimps were medicating themselves, perhaps to control internal parasites. Seeing the potential for treating human illnesses, Rodriguez and Wrangham applied for a patent. Interestingly, they use part of the proceeds from their new drug to help preserve the chimpanzee habitat in Tanzania. In Wrangham's words, "I like the idea of chimps showing us the medicine and then helping them to pay for their own conservation" (quoted in Howard 1991).

## Physical Variations among Humans

Although all humans are members of the same species and therefore are capable of interbreeding, considerable physical variation exists among human populations. Some of these differences are based on visible physical traits, such as the shape of the nose, body stature, and color of the skin. Other variations are based on less visible biochemical factors, such as blood type or susceptibility to diseases.

For the first half of the twentieth century, physical anthropologists attempted to document human physical variations throughout the world by dividing the world's populations into various racial categories. A *race* was defined as a group of people who share a greater statistical frequency of genes and physical traits with one another than they do with people outside the group. Today, however, no anthropologists subscribe to the notion that races are fixed biological entities whose members all share the same physical features. Despite an enormous amount of effort devoted to classifying people into discrete racial categories during much of the twentieth century, most anthropologists do not consider these categories to be particularly useful. Today we know that the amount of genetic variation is much greater within racial groups than between racial groups. Thus, most anthropologists view these early-twentieth-century racial typologies as largely an oversimplification of our present state of genetic knowledge. (For more on race and racism, see Chapter 12.)

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**race** A subgroup of the human population whose members share a greater number of genes and physical traits with one another than they do with members of other subgroups.

Although contemporary anthropologists continue to be interested in human physical variation, they have turned their attention to examining how human physical variations help people adapt to their environment. Physical anthropologists have found that populations with the greatest amount of melanin in their skin are found in tropical regions, whereas lighter-skinned populations generally reside in more northern latitudes. This suggests that natural selection has favored dark skin in tropical areas because it protects people from dangerous ultraviolet light. In colder climates people tend to have considerable body mass (less body surface), which is a natural protection from the deadly cold. And sickle cells, found widely in the blood of people living in sub-Saharan Africa, protect people against the ravages of malaria. These three examples illustrate how physical variations can help people adapt to their natural environments. In their investigations of how human biological variations influence adaptation, physical anthropologists draw on the work of three allied disciplines: *genetics* (the study of inherited physical traits), *population biology* (the study of the interrelationships between population characteristics and environments), and *epidemiology* (the study of the occurrence, distribution, and control of disease in populations over time).

## Archaeology

Experts in the field of *archaeology* study the lifeways of people from the past by excavating and analyzing the material culture they have left behind. The purpose of archaeology is not to fill up museums by collecting exotic relics from prehistoric societies. Rather, it is to understand cultural adaptations of ancient peoples by at least partially reconstructing their cultures. Because archaeologists concentrate on societies of the past, they are limited to working with material culture including, in some cases, written records. From these material remains, however, archaeologists are able to infer many nonmaterial cultural aspects

**genetics** The study of inherited physical traits.

**population biology** The study of the interrelationships between population characteristics and environments.

**epidemiology** The study of the occurrence, distribution, and control of disease in populations.

**archaeology** The subfield of anthropology that focuses on the study of prehistoric and historic cultures through the excavation of material remains.

**Artifacts** A type of material remain (found by archaeologists) that has been made or modified by humans, such as tools and arrowheads.

**features** Archaeological remains that have been made or modified by people and cannot easily be carried away, such as house foundations, fireplaces, and postholes.

**Ecofacts** Physical remains—found by archaeologists—that were used by humans but not made or reworked by them (for example, seeds and bones).

(ideas and behavior patterns) held by people thousands, and in some cases millions, of years ago.

Archaeologists work with three types of material remains: artifacts, features, and ecofacts. *Artifacts* are objects that have been made or modified by humans and that can be removed from the site and taken to the laboratory for further analysis. Tools, arrowheads, and fragments of pottery are examples of artifacts. *Features*, like artifacts, are made or modified by people, but they cannot be readily carried away from the dig site. Archaeological features include such things as house foundations, fireplaces, and postholes (Figure 1.3). *Ecofacts* are objects found in the natural environment (such as bones, seeds, and wood) that were not made or altered by humans but were used by them. Ecofacts provide archaeologists with important data concerning the environment and how people used natural resources.

The data that archaeologists have at their disposal are selective. Not only are archaeologists limited to material remains, but also the overwhelming majority of material possessions that may have been part of a culture do not survive thousands of years under the ground. As a result, archaeologists search for fragments of material evidence (such items as projectile points, hearths, beads, and postholes) that will enable them to



**FIGURE 1.3** The archaeological ruins at Sechin Bajo, discovered in 2008, is located several hundred miles north of Lima, Peru. Built 5,500 years ago, this site is considered one of the oldest structures ever unearthed in the Americas.

piece together a culture. A prehistoric garbage dump is particularly revealing because the archaeologist can learn a great deal about how people lived from what they threw away. These material remains are then used to make inferences about the nonmaterial aspects of the culture (that is, values, ideas, and behaviors) being studied.

Once the archaeologist has collected the physical evidence, the difficult work of analysis and interpretation begins. By studying the bits and pieces of material culture left behind (within the context of both environmental data and anatomical remains), the archaeologist seeks to determine how the people supported themselves, whether they had a notion of an afterlife, how roles were allocated between men and women, whether some people were more powerful than others, whether the people engaged in trade with neighboring peoples, and how lifestyles have changed over time.

Present-day archaeologists work with both historic and prehistoric cultures. Historic archaeologists help to reconstruct the cultures of people who used writing and about whom historical documents have been written. For example, historical archaeologists have contributed significantly to our understanding of colonial American cultures by analyzing material remains that can supplement such historical documents as books, letters, graffiti, and government reports.

Prehistoric archaeology, on the other hand, deals with the vast segment of the human record (several million years) that predates the advent of writing about 5,500 years ago. Archaeology remains the one scientific enterprise that systematically focuses on prehistoric cultures. Consequently, it has provided us with a much longer time frame than written history for understanding the record of human development.

The relevance of studying ancient artifacts often goes beyond helping us better understand our prehistoric past. In some cases, the study of stone tools can lead to improvements in our own modern technology. To illustrate, while experimentally replicating the manufacture of stone tools, archaeologist Don Crabtree found that obsidian from the western part of the United States can be chipped to a sharp edge. When examined under an electron microscope, the cutting edge of obsidian was found to be two hundred times sharper than modern surgical scalpels. Some surgeons now use these obsidian scalpels because the healing is faster and the scarring is reduced (Sheets 1993).

Another area of applied archaeology is called *cultural resource management*. During the 1960s and 1970s, a number of preservation and environmental protection laws were passed to identify and protect cultural and historic resources (for example, landmarks, historic buildings, and archaeological sites) from being bulldozed. The laws require environmental impact studies to be conducted before the start of federally funded projects such as dams, highways, airports, or office buildings. If the building project would destroy the cultural resource, then the law requires that archaeological research be

conducted to preserve the information from the site. In response to these laws, archaeologists developed the specialty of cultural resource management (also known as *public archaeology* or *contract archaeology*).

The goal of this form of applied archaeology is to ensure that the laws are properly followed, that high-quality research is conducted, and that the data from archaeological sites are not destroyed by federally funded building projects. Cultural resource management has grown so rapidly in recent years that by the turn of the millennium about half of all professionally trained archaeologists were working in this field.

Although, typically, archaeology focuses on prehistoric and historical peoples, some archaeologists are using their techniques to study contemporary societies. For example, archaeologist William Rathje of the University of Arizona, one of the world's best known "garbologists," seeks to better understand prehistoric, historic, and *contemporary* peoples by studying what they throw away (Figure 1.4). For example, in his study of garbage in Tucson, Arizona, Rathje found some



Jim Sugar/corbis

**FIGURE 1.4** Archaeologist William Rathje, shoveling debris in a landfill in San Francisco, seeks to understand cultures (both prehistoric and contemporary) by studying their waste.

**cultural resource management** A form of applied archaeology that involves identifying, evaluating, and sometimes excavating sites before roads, dams, and buildings are constructed.