ANTHROPOLOGY

APPRECIATING HUMAN DIVERSITY

Conrad Phillip Kottak

Eighteenth Edition

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For Students

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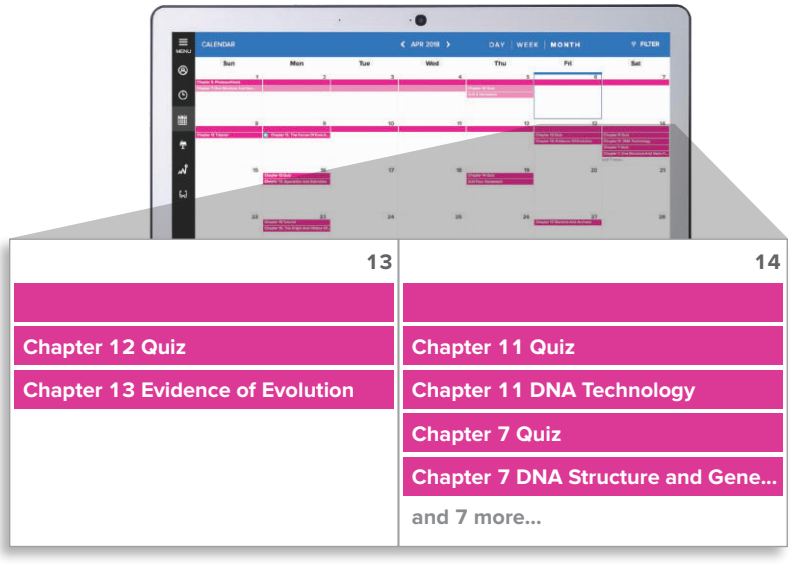

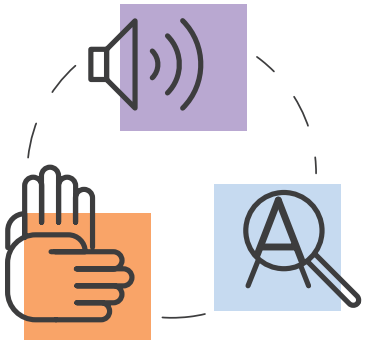

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Mirror for Humanity: A Concise Introduction to Cultural Anthropology,
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8th ed. (2018)

Culture,
2nd ed. (2014,
with Lisa L. Gezon)

On Being Different: Diversity and Multiculturalism in the North American Mainstream,
4th ed. (2012,
with Kathryn A. Kozaitis)

anthropology

APPRECIATING HUMAN DIVERSITY

EIGHTEENTH EDITION

Conrad Phillip Kottak
University of Michigan

Mc Graw Hill Education

To my mother, Mariana Kottak Roberts

ANTHROPOLOGY: APPRECIATING HUMAN DIVERSITY, EIGHTEENTH EDITION

This book is printed on acid-free paper.

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RECAP

about the author

Conrad Phillip Kottak

The author at Bayon temple, Angkor Thom, Cambodia in February 2018.
Courtesy Isabel Wagley Kottak

Conrad Phillip Kottak (A.B. Columbia College, Ph.D. Columbia University) is the Julian H. Steward Collegiate Professor Emeritus of Anthropology at the University of Michigan, where he served as anthropology department chair from 1996 to 2006. He has been honored for his undergraduate teaching by the university and the state of Michigan and by the American Anthropological Association. He is an elected member of the American Academy of Arts and Sciences and the National Academy of Sciences, where he chaired Section 51, Anthropology from 2010 to 2013.

Professor Kottak has done ethnographic fieldwork in Brazil, Madagascar, and the United States. His general interests are in the processes by which local cultures are incorporated—and resist incorporation—into larger systems. This interest links his earlier work on ecology and state formation in Africa and Madagascar to his more recent research on globalization, national and international culture, and the mass media, including new media and social media.

Kottak's popular case study *Assault on Paradise: The Globalization of a Little Community in Brazil* (2006) describes his long-term and continuing fieldwork in Arembepe, Bahia, Brazil. His book *Prime-Time Society: An Anthropological Analysis of Television and Culture* (2009) is a comparative study of the nature and impact of television in Brazil and the United States.

Kottak's other books include *The Past in the Present: History, Ecology and Cultural Variation in Highland Madagascar; Researching American Culture: A Guide for Student Anthropologists;* and *Madagascar: Society and History*. The most recent editions (18th) of his texts *Anthropology: Appreciating Human Diversity* (this book) and *Cultural Anthropology: Appreciating Cultural Diversity* were published by McGraw-Hill in 2019. He also is the author of *Mirror for Humanity: A Concise Introduction to Cultural Anthropology* (11th ed., McGraw-Hill, 2018) and *Window on Humanity: A Concise Introduction to Anthropology* (8th ed., McGraw-Hill, 2018). With Kathryn A. Kozaitis, he wrote *On Being Different: Diversity and Multiculturalism in the North American Mainstream* (4th ed., McGraw-Hill, 2012).

Conrad Kottak's articles have appeared in academic journals, including *American Anthropologist, Journal of Anthropological Research, American Ethnologist, Ethnology, Human Organization,* and *Luso-Brazilian Review.* He also has written for popular journals, including *Transaction/SOCIETY, Natural History, Psychology Today,* and *General Anthropology.*

Kottak and his colleagues have researched television's impact in Brazil, environmental risk perception in Brazil, deforestation and biodiversity conservation in Madagascar, and economic development planning in northeastern Brazil. More recently, Kottak and his colleague Lara Descartes investigated how middle-class American families use various media in planning, managing, and evaluating the competing demands of work and family. That research is the basis of their book *Media and Middle Class Moms: Images and Realities of Work and Family* (Descartes and Kottak 2009). Professor Kottak currently is collaborating with Professor Richard Pace of Middle Tennessee State University and several graduate students on research investigating "The Evolution of Media Impact: A Longitudinal and Multi-Site Study of Television and New Electronic/Digital Media in Brazil."

Conrad Kottak appreciates comments about his books from professors and students. He can be reached by e-mail at the following address: **ckottak@bellsouth.net.**

a letter from the author

Welcome to the 18th Edition of *Anthropology: Appreciating Human Diversity!*

I wrote the first edition of this book during a time of rapid change in my favorite academic discipline—anthropology. My colleagues and I were excited about new discoveries and directions in all four of anthropology's subfields—biological anthropology, anthropological archaeology, sociocultural anthropology, and linguistic anthropology. My goal was to write a book that would capture that excitement, addressing key changes, while also providing a solid foundation of core concepts and the basics.

In preparing this edition, I benefited tremendously from both professors' and students' reactions to my book. Just as anthropology is a dynamic discipline that encourages new discoveries and explores the profound changes now affecting people and societies, this edition of *Anthropology* makes a concerted effort to keep pace with changes in the way students read and learn core content today. Our digital program, **Connect Anthropology,** includes assignable and assessable quizzes, exercises, and interactive activities, organized around course-specific learning objectives. Furthermore, **Connect** includes an interactive eBook; **LearnSmart,** which is an adaptive testing program; and **SmartBook,** the first and only truly adaptive reading experience. The tools and resources provided in **Connect Anthropology** are designed to engage students and enable them to improve their performance in the course. This 18th edition has benefited from feedback from thousands of students who have worked with these tools and programs while using the 16th and 17th editions of *Anthropology*. We were able to flag and respond to specific areas of difficulty that students encountered, chapter by chapter. I used this extensive feedback to revise, rethink, and clarify my writing in almost every chapter. I started work on this 18th edition by once again reviewing how students had done on the probes and quizzes for each chapter in the previous edition. It became apparent that areas of difficulty reflected ambiguities both in the LearnSmart probes and in the textbook. Accordingly, I reviewed and, when necessary, rewrote every question for every chapter in the LearnSmart probes. I also wrote new probes for content new to this edition. I am eager to see, as students work with this new edition, whether my detailed work on both supplements and text enhances understanding and performance.

As I embark on each new edition, it becomes ever more apparent to me that while any competent and useful text must present anthropology's core, that text also must demonstrate anthropology's relevance to the 21st-century world we inhabit. Accordingly, each new edition contains thorough updating and substantial content changes as well as a series of features that examine our changing world. For example, several "Focus on Globalization" essays in this book examine topics as diverse as travel and tourism in the ancient and modern worlds, disease pandemics, world sports events (including the Olympics and the World Cup), and the expansion of international finance and branding. Several chapters contain discussions of new media, including social media. Many of the boxes titled "Appreciating Anthropology" and "Appreciating Diversity" (at least one per chapter) also present new discoveries and topics.

Each chapter begins with a discussion titled "Understanding Ourselves." These introductions, along with examples from popular culture throughout the book, show how anthropology relates to students' everyday lives. My overarching goal is to help students appreciate the field of anthropology and the various kinds of diversity it studies. How do anthropologists think and work? Where do we go, and how do we interpret what we see? How do we step back, compare, and analyze? How does anthropology contribute to our understanding of the world? The "Appreciating Anthropology" boxes focus on the value and usefulness of anthropological research and approaches while the "Appreciating Diversity" boxes focus on various forms and expressions of human biological and cultural diversity.

Most students who read this book will not go on to become anthropologists, or even anthropology majors. For those who do, this book should provide a solid foundation to build on. For those who don't—that is, for most of my readers—my goal is to instill a sense of appreciation: of human diversity, of anthropology as a field, and of how anthropology can build on, and help make sense of, the experience that students bring to the classroom. May this course and this text help students think differently about, and achieve greater understanding of, their own culture and its place within our globalizing world.

Conrad Phillip Kottak

PREFACE

For over 40 years, students have found Conrad Kottak's Introductions to Anthropology and Cultural Anthropology thoughtful guides to the ever-changing discipline. His books are classics in the field offering undergraduates a comprehensive and robust set of materials that support and expand on the instruction they receive in the classroom or online. Students engage with rich content with an effective, efficient, and easy-to-use platform in Connect.

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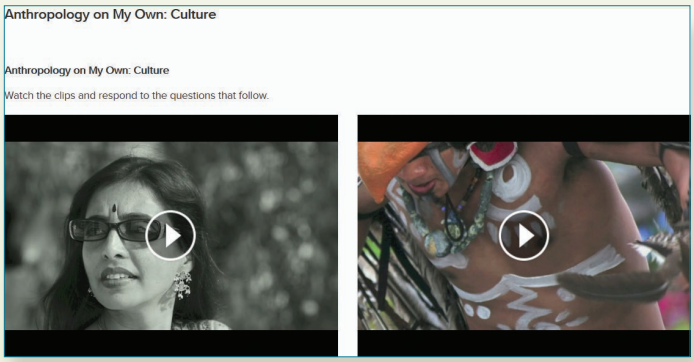
McGraw-Hill Connect® is a digital teaching and learning environment that improves performance over a variety of critical outcomes; it is easy to use; and it is proven effective. Connect® empowers students by continually adapting to deliver precisely what they need, when they need it, and how they need it, so your class time is more engaging and effective. Connect for *Anthropology* offers a wealth of interactive online content, including quizzes, exercises, and critical thinking questions, and "Applying Anthropology," "Anthropology on My Own," and "Anthropology on the Web" activities.

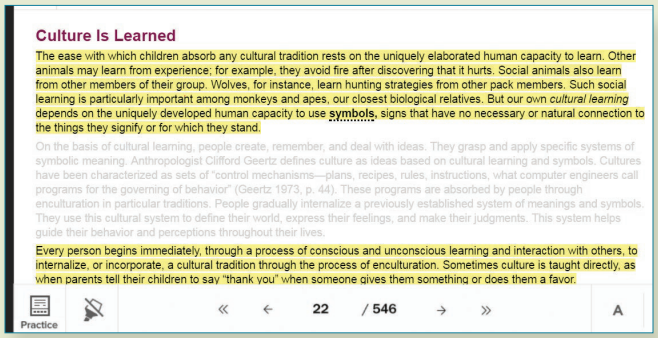


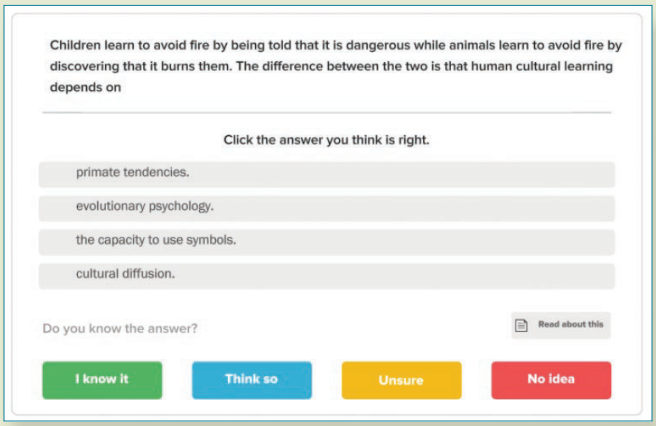
New to this edition, **Newsflash** activities bring in articles on current events relevant to anthropology with accompanying assessment. Topics include "Why Racism is Not Backed by Science" and "What Each of Facebook's 51 New Gender Options Means."

Connect also features these advanced capabilities

SmartBook® makes study time as productive and efficient as possible by identifying and closing knowledge gaps. SmartBook is powered by the proven **LearnSmart®** engine, which identifies what an individual student knows and doesn't know based on the student's confidence level, responses to questions, and other factors. LearnSmart builds an optimal, personalized learning path for each student, so students spend less time on concepts they already understand and more time on those they don't. As a student engages with SmartBook, the reading experience continuously adapts by highlighting the most impactful content a student needs to learn at that moment in time. This ensures that every minute spent with SmartBook is returned to the student as the most value-added minute possible. The result? More confidence, better grades, and greater success.

New to this edition, SmartBook is now optimized for phones and tablets and accessible for students with disabilities using interactive features.





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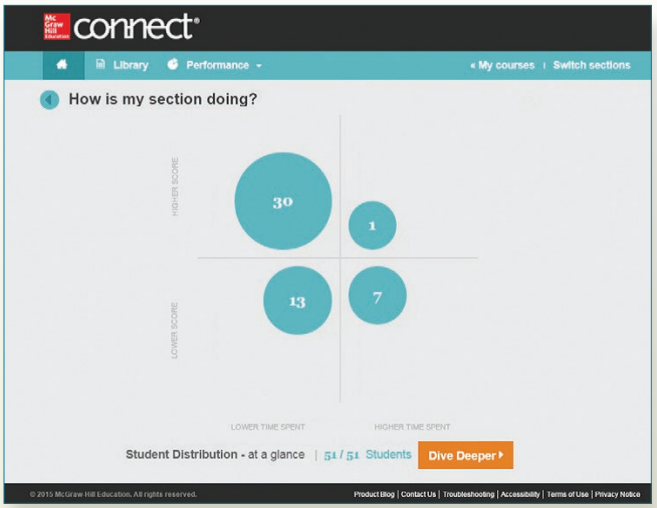

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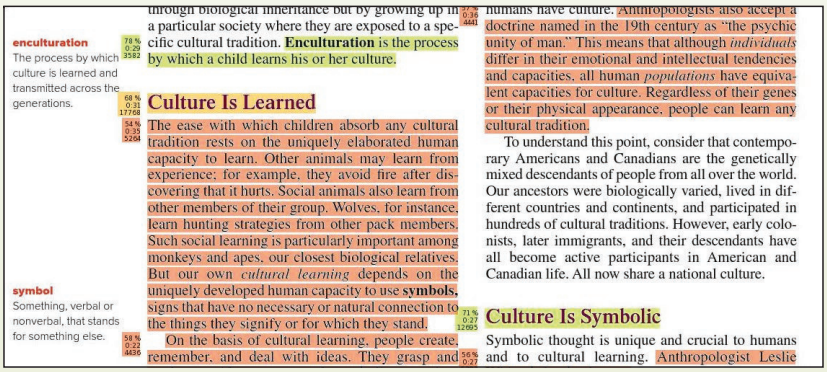
Instructor Resources

Instructor resources available through Connect for *Anthropology* include an Instructor's Manual, Test Bank, Image Bank, and PowerPoint presentation for each chapter.

Updates and Revisions—Informed by Student Data

Revisions to the 18th edition of *Anthropology* were extensively informed by student data, collected anonymously by McGraw-Hill Education's SmartBook. Using this data, we were able to graphically illustrate "hot spots," indicating content area students struggle with (see image below). This data provided feedback at the paragraph and even sentence level. Conrad Kottak relied on this data when making decisions about material to revise, update, and improve. Professor Kottak also reviewed and, when necessary, revised probes to make SmartBook an even more efficient and effective study tool. This revision was also informed by the many excellent reviews provided by faculty at 2- and 4-year schools across the country.



In addition to updated source research and statistical data, new photographs and illustrations, and newly titled "Think Like an Anthropologist" questions (formerly "Critical Thinking" questions) throughout the text, the following chapter-by-chapter changes have been made for the 18th edition:

CHAPTER 1: WHAT IS ANTHROPOLOGY?

- New "Appreciating Anthropology" box, "School of Hope"

CHAPTER 2: CULTURE

- Clarified discussion of Clifford Geertz's definition of culture
- New "Appreciating Diversity" box, "Preserving Cultural Heritage"
- Thoroughly revised, streamlined, and newly titled "Globalization: Its Meaning and Its Nature" section

CHAPTER 3: APPLYING ANTHROPOLOGY

- Completely revised, updated, and expanded "Anthropology and Business" section, with new material on market research, business ethnography, retail anthropology, and focus groups

CHAPTER 4: DOING ARCHAEOLOGY AND BIOLOGICAL ANTHROPOLOGY

- Thoroughly revised and updated discussion of the Kennewick Man controversy in the "Doing Anthropology Right and Wrong: Ethical Issues" section

CHAPTER 5: EVOLUTION AND GENETICS

- New material on DNA testing companies, such as Ancestry.com
- Clarified discussion of protein building in genetics

CHAPTER 6: HUMAN VARIATION AND ADAPTATION

- Updates throughout the "Race: A Discredited Concept in Biology" section
- Revised and expanded discussion of genes and disease

CHAPTER 7: THE PRIMATES

- New material on the placement of eastern lowland gorillas and eastern mountain gorillas on the IUCN's critically endangered list
- New discussion of *Nyanzapithecus alesi* in the "Miocene Hominoids" section

CHAPTER 8: EARLY HOMININS

- Streamlined and clarified discussion of bipedalism; brains, skulls, and childhood dependence; and teeth in the "What Makes Us Human?" section
- Updated and revised Table 8.1, "Dates and Geographic Distribution of Major Hominoid, Hominid, and Hominin Fossil Groups"
- New "Appreciating Anthropology" box, "3-D Bone Scans Suggest Lucy's Climbing Ability and Cause of Death"

CHAPTER 9: THE GENUS *HOMO*

- Updated coverage of recent discoveries in the "Early *Homo*" section
- Updated and revised Recap 9.1, "Summary of Data on *Homo* Fossil Groups"
- Updated coverage of Svante Pääbo's findings in "The Neandertals" section
- New material on the Denisova cave fossils in "The Denisovans" section
- New section, "Neandertals, Denisovans, and Anatomically Modern Humans," with new discussion and a figure illustrating mtDNA, and new material on how Neandertals derived their mtDNA from an ancient AMH woman who lived around 270,000 years ago
- Thoroughly revised and streamlined section on "*H. floresiensis*"

CHAPTER 10: THE ORIGIN AND SPREAD OF MODERN HUMANS

- New discussions of the 2017 discovery of the earliest AMH fossils in Jebel Irhoud, Morocco; AMH migrations out of Africa; and AMH skulls found in Israel in the "Modern Humans" section
- New material an the 2017 Madjedbebe discoveries in Australia
- New discussion of DNA analysis of American fossil finds, including the recently discovered Xach'itee'aanenh T'eede Gaay ("sunrise girl-child")

CHAPTER 11: THE FIRST FARMERS

- New introduction to the newly titled, reorganized, and streamlined "Broad-Spectrum Economics" section (formerly "The Mesolithic")
- Extensively revised and streamlined section on "The First Farmers and Herders in the Middle East," including a new extended discussion of the evolution of private property
- Thorough revisions and updates throughout the section on "The First American Farmers," including new material on Piperno's experiments growing teosinte under prehistoric conditions
- Extensive edits and updates throughout the "Explaining the Neolithic" section

CHAPTER 12: THE FIRST CITIES AND STATES

- Clarified discussion of primary states in the "State Formation" section
- Thorough revisions and updates throughout the "State Formation in the Middle East" section, including new extended discussion of the Göbekli Tepe ritual center in southeastern Turkey
- Updated discussion of the Maya decline in the "Why States Collapse" section

CHAPTER 13: METHOD AND THEORY IN CULTURAL ANTHROPOLOGY

- Reorganized discussion of longitudinal studies, team research, and multisited ethnography (formerly three sections: "Longitudinal Research," "Team Research," and "Expansion in Analytic Scale")
- Revised discussion of online ethnography in the "Ethnographic Perspectives" section
- New Table 13.1, "The 40 Sections of the American Anthropological Association as of 2018" in the "Anthropology Today" section

CHAPTER 14: LANGUAGE AND COMMUNICATION

- Updated "Appreciating Diversity" box, "Words of the Year"
- New discussion of Jane Hill's research into the mixed use of Spanish and English in Mexican-themed restaurants in the "Sociolinguistics" section

CHAPTER 15: ETHNICITY AND RACE

- New introduction to the "Ethnic Groups and Ethnicity" section, as well as updated Table 15.1, "Racial/Ethnic Identification in the United States, 2017" and Recap 15.1, "Measures of Stratification Involving Minority Groups, 2016"
- Updated Figure 15.3, "Ethnic Composition of the United States" in the "Ethnic Tolerance and Accommodation" section, as well as revised discussion of the backlash against multiculturalism in our current (2018) political climate
- Current coverage of the Syrian refugee crisis and the Black Lives Matter movement in the "Ethnic Conflict" section

CHAPTER 16: MAKING A LIVING

- Thoroughly updated "Focus on Globalization" box, "Our Global Economy"
- New "Appreciating Anthropology" box, "When the Mills Shut Down: An Anthropologist Looks at Deindustrialization"
- Streamlined "Potlatching" section

CHAPTER 17: POLITICAL SYSTEMS

- Extensive updates and revisions throughout the "Bands and Tribes" and "Chiefdoms" sections
- New "Appreciating Anthropology" box, "The Illegality Industry: A Failed System of Border Control"
- Thoroughly revised and updated "Focus on Globalization" box, "The Political Role of New Media"

CHAPTER 18: GENDER

- Extensive revision and streamlining of the "Recurrent Gender Patterns" section
- New "Appreciating Diversity" box, "Gender, Ethnicity, and a Gold Medal for Fiji"
- Extensive updating to the "Gender in Industrial Societies" section, with new information and recap box on "Increasing Female Workforce Participation, and Female–Male Employment Ratio, 1950–2024 (projected)"
- Updates throughout the "Beyond Male and Female" section, including the addition of the term *cisgender* and discussion of the increasing visibility of transgender people in the modern world

CHAPTER 19: FAMILIES, KINSHIP, AND DESCENT

- Thorough updating throughout the "Families" section, including a new discussion of the extended families of the Moso people of southwestern China and updated statistics and tables concerning changes in North American kinship
- Clarifications throughout the "Kinship Terminology" section, as well as a new discussion "It's All Relative," concerning the definition of close family relations in light of the current administration's Muslim travel ban

CHAPTER 20: MARRIAGE

- New discussion of the growing number of young Americans aged 18 to 34 living with their parents in the "Understanding Ourselves" section
- Extensive updates to the "Same Sex Marriage" section, including an updated Figure 20.5, "Countries Allowing Same-Sex Marriage (as of 2018)"
- The latest research and a new Figure 20.6, "Percentage of Americans Citing Each of the Following as a Very Important Reason to Get Married," in the "Romantic Love and Marriage" section
- Extensive updates to the "Divorce" section
- A rewritten introduction to the "Plural Marriages" section clarifying the difference between polygyny and and polyandry
- Updated "The Online Marriage Market" section

CHAPTER 21: RELIGION

- Expanded discussion of accusations of witchcraft in the "Social Control" section
- The latest Pew Research Center statistics and analysis of those statistics throughout the "World Religions" section
- Updated discussion of the spread of Islam, as well as new discussion of religious radicalization today in the "Religion and Cultural Globalization" section

CHAPTER 22: ARTS, MEDIA, AND SPORTS

- Updated introduction (and new title) for the "What Are the Arts?" section (formerly "What Is Art?")
- Thoroughly updated "Appreciating Diversity" box, "Asian American Musicians: Internet Stars, Mainstream Wannabes"
- Extensively revised introduction to the "Art, Society, and Culture" section, as well as a revised and streamlined discussion of continuity and change
- Heavily revised and updated discussion of networking and sociability on- and offline in the "Media and Culture" section
- Thoroughly updated discussion of celebrity scandal, also in the "Media and Culture" section, including a discussion of the #metoo online movement and the recent spate of sexual harassment accusations against prominent celebrities and politicians

CHAPTER 23: THE WORLD SYSTEM, COLONIALISM, AND INEQUALITY

- Updated discussion of wealth distribution in the United States and an updated Table 23.1, "U.S. National Income by Quintile, 2016" in "The Persistence of Inequality" section, along with recent information on the Michigan water crisis
- Revised and updated discussion of neoliberalism and NAFTA in the "Development" section
- Expanded discussion of postsocialist transitions (and a new definition of *socialism*) in the "The Second World" section
- Updated discussion of the worldwide jobs situation in "The World System Today" section

CHAPTER 24: ANTHROPOLOGY'S ROLE IN A GLOBALIZING WORLD

- Updated statistics on energy consumption and an updated Table 24.1, "Total Energy Consumption, 2016, by Country, Top Ten Countries" in the "Energy Consumption and Industrial Degradation" section, as well as new discussion of energy consumption in China
- Updated data, clarified explanation of climate change, and new discussion of the implications of the 2017 hurricanes (Harvey, Irma, Maria) in the "Global Climate Change" section
- Thoroughly revised discussion of global images and global consumption in the "Interethnic Contact" section

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I'm grateful to many colleagues at McGraw-Hill Education. I offer particular thanks to product developer Bruce Cantley, who helped me plan and implement this revision, and worked with me to complete and submit the manuscript on schedule.

Bruce responded rapidly, efficiently, and encouragingly to my revisions, making helpful suggestions, and keeping track of all the changes I made chapter-by-chapter. Thanks, too, to Claire Brantley, portfolio manager; Dawn Groundwater, lead product developer; Elisa Odoardi, editorial coordinator; and to McGraw-Hill's entire team of sales reps and regional managers for the work they do in helping professors and students gain access to my books. I also acknowledge Michael Ryan, vice president for Portfolio and Learning Content.

As usual, Rick Hecker has done a great job as content project manager, guiding the manuscript through production and keeping everything moving on schedule. Sue Culbertson buyer, worked with the printer to make sure everything came out right. Thanks, too, to Charlotte Goldman, freelance photo researcher. I also thank Amy Marks for copyediting, Marlena Pechan for proofreading, and Egzon Shaqiri for executing the design.

Carrie Burger also deserves thanks as content licensing specialist.

I'm also indebted to the reviewers who have evaluated this book and, through their comments, helped guide its development.

Their names are as follows:

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Jennifer Elliott, *Estrella Mountain Community College*
Pam Frese, *College of Wooster*
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Over my many years of teaching anthropology, feedback from students has kept me up to date on the interests and needs of my readers, as does my ongoing participation in workshops on the teaching of anthropology. I hope this product of my experience will be helpful to others.

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CHAPTER 1

What Is Anthropology?

- What distinguishes anthropology from other fields that study human beings?
- How do anthropologists study human diversity in time and space?
- Why is anthropology both scientific and humanistic?

A produce market in Ubud, Bali, Indonesia.

chapter outline

understanding OURSELVES

When you grew up, which sport did you appreciate the most—soccer, swimming, football, baseball, tennis, golf, or some other sport (or perhaps none at all)? Is this because of "who you are" or because of the opportunities you had as a child to practice and participate in this particular activity? Think about the phrases and sentences you would use to describe yourself in a personal ad or on a networking site—your likes and dislikes, hobbies, and habits. How many of these descriptors would be the same if you had been born in a different place or time?

When you were young, your parents might have told you that drinking milk and eating vegetables would help you grow up "big and strong." They probably didn't recognize as readily the role that culture plays in shaping bodies, personalities, and personal health. If nutrition matters in growth, so, too, do cultural guidelines. What is proper behavior for boys and girls? What kinds of work should men and women do? Where should people live? What are proper uses of their leisure time? What role should religion play? How should people relate to their family, friends, and neighbors? Although our genetic attributes provide a foundation for our growth and development, human biology is fairly plastic—that is, it is malleable. Culture is an environmental force that affects our development as much as do nutrition, heat, cold, and altitude. Culture also guides our emotional and cognitive growth and helps determine the kinds of personalities we have as adults.

Among scholarly disciplines, anthropology stands out as the field that provides the cross-cultural test. How much would we know about human behavior, thought, and feeling if we studied only our own kind? What if our entire understanding of human behavior were based on analysis of questionnaires filled out by college students in Oregon? That is a radical question, but one that should make you think about the basis for statements about what humans are like, individually or as a group. A primary reason anthropology can uncover so much about what it means to be human is that the discipline is based on the cross-cultural perspective. A single culture simply cannot tell us everything we need to know about what it means to be human. We need to compare and contrast. Often culture is "invisible" (assumed to be normal, or just the way things are) until it is placed in comparison to another culture. For example, to appreciate how watching television affects us, as human beings, we need to study not just North America today but some other place—and perhaps some other time (such as Brazil in the 1980s; see Kottak 1990*b*, 2009). The cross-cultural test is fundamental to the anthropological approach, which orients this textbook.

HUMAN DIVERSITY

Anthropologists study human beings and their products wherever and whenever they find them—in rural Kenya, a Turkish café, a Mesopotamian tomb, or a North American shopping mall. Anthropology explores human diversity across time and space, seeking to understand as much as possible about the human condition. Of particular interest is the diversity that comes through human adaptability.

Humans are among the world's most adaptable animals. In the Andes of South America, people wake up 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. Men have walked on the moon. The model of the USS *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 create order out of chaos find expression among all peoples. Creativity, adaptability, and flexibility are basic human attributes, and human diversity is the subject matter of anthropology.

Students often are surprised by the breadth of **anthropology,** which is the study of humans around the world and through time. Anthropology is a uniquely comparative and **holistic** science. *Holism* refers to the study of the whole of the human condition: past, present, and future; biology, society, language, and culture. Most people think that anthropologists study fossils and nonindustrial, non-Western cultures, and many of them do. But anthropology is much more than the study of nonindustrial peoples: It is a comparative field that examines all societies, ancient and modern, simple and complex, local and global. The other social sciences tend to focus on a single society, usually an industrial nation like the United States or Canada. Anthropology, however, offers a unique cross-cultural perspective by constantly comparing the customs of one society with those of others.

People share **society**—organized life in groups—with other animals, including monkeys, apes, wolves, mole rats, and even ants. **Culture,** however, is more distinctly human. Cultures are traditions and customs, transmitted through learning, that form and guide the beliefs and behavior of the people exposed to them. Children learn such a tradition by growing up in a particular society, through a process called enculturation. Cultural traditions include customs and opinions, developed over the generations, about proper and improper behavior. These traditions answer such questions as these: How should we do things? How do we make sense of the world? How do we distinguish between what is right, and what is wrong? A culture produces a degree of consistency in behavior and thought among the people who live in a particular society.

The most critical element of cultural traditions is their transmission through learning rather than through biological inheritance. Culture is not itself biological, but it rests on certain features of human biology. For more than a million years, humans have possessed at least some of the biological capacities on which culture depends. These abilities are to learn, to think symbolically, to use language, and to make and use tools.

Anthropology confronts and ponders major questions about past and present human existence. By examining ancient bones and tools, we unravel the mysteries of human origins. When did our ancestors separate from those of 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 social and cultural changes influenced biological change? Our genus, *Homo,* has been changing for more than one million years. Humans continue to adapt and change both biologically and culturally.

anthropology
The study of the humans around the world and through time.

holistic
Encompassing past, present, and future; biology, society, language, and culture.

Adaptation, Variation, and Change

Adaptation refers to the processes by which organisms cope with environmental forces and stresses. How do organisms change to fit their environments, such as dry climates or high mountain altitudes? Like other animals, humans have biological means of adaptation. But humans also habitually rely on cultural means of adaptation. Recap 1.1 summarizes the cultural and biological means that humans use to adapt to high altitudes.

Mountainous terrains pose particular challenges, those associated with altitude and oxygen deprivation. Consider four ways (one cultural and three biological) in which humans may cope with

society
Organized life in groups; shared with humans by monkeys, apes, wolves, mole rats, and ants, among other animals.

culture
Traditions and customs transmitted through learning.

RECAP 1.1 Forms of Cultural and Biological Adaptation (to High Altitude)

FORM OF ADAPTATION	TYPE OF ADAPTATION	EXAMPLE
Technology	Cultural	Pressurized airplane cabin with oxygen masks
Genetic adaptation (occurs over generations)	Biological	Larger "barrel chests" of native highlanders
Long-term physiological adaptation (occurs during growth and development of the individual organism)	Biological	More efficient respiratory system, to extract oxygen from "thin air"
Short-term physiological adaptation (occurs spontaneously when the individual organism enters a new environment)	Biological	Increased heart rate, hyperventilation

low oxygen pressure at high altitudes. Illustrating cultural (technological) adaptation would be a pressurized airplane cabin equipped with oxygen masks. There are three ways of adapting biologically to high altitudes: genetic adaptation, long-term physiological adaptation, and short-term physiological adaptation. First, native populations of high-altitude areas, such as the Andes of Peru and the Himalayas of Tibet and Nepal, seem to have acquired certain genetic advantages for life at very high altitudes. The Andean tendency to develop a voluminous chest and lungs probably has a genetic basis. Second, regardless of their genes, people who grow up at a high altitude become physiologically more efficient there than genetically similar people who have grown up at sea level would be. This illustrates long-term physiological adaptation during the body's growth and development. Third, humans also have the capacity for short-term or immediate physiological adaptation. Thus, when lowlanders arrive in the highlands, they immediately increase their breathing and heart rates. Hyperventilation increases the oxygen in their lungs and arteries. As the pulse also increases, blood reaches their tissues more rapidly. These varied adaptive responses—cultural and biological—all fulfill the need to supply an adequate amount of oxygen to the body.

As human history has unfolded, the social and cultural means of adaptation have become increasingly important. In this process, humans have devised diverse ways of coping with the range of environments they have occupied in time and space. The rate of cultural adaptation and change has accelerated, particularly during the last 10,000 years. For millions of years, hunting and gathering of nature's bounty—*foraging*—was the sole basis of human subsistence. However, it took only a few thousand years for **food production** (the cultivation of plants and domestication of animals), which originated some 12,000–10,000 years ago, to replace foraging in most areas. Between 6000 and 5000 B.P. (before the present), the first civilizations arose. These were large, powerful, and complex societies, such as ancient Egypt, that conquered and governed large geographic areas.

Much more recently, the spread of industrial production has profoundly affected human life. Throughout human history, major innovations have spread at the expense of earlier ones. Each economic revolution has had social and cultural repercussions. Today's global economy and communications link all contemporary people, directly or indirectly, in the modern world system. Nowadays, even remote villagers experience world forces and events (see "Focus on Globalization"). The study of how local people adapt to global forces poses new challenges for anthropology: "The cultures of world peoples need to be constantly rediscovered as these people reinvent them in changing historical circumstances" (Marcus and Fischer 1986, p. 24).

focus on GLOBALIZATION

World Events

People everywhere—even remote villagers—now participate in world events, especially through the mass media. The study of global–local linkages is a prominent part of modern anthropology. What kinds of events generate global interest? Disasters provide one example. Think of missing airplanes, nuclear plant meltdowns, and the earthquakes and tsunamis that have ravaged Thailand, Indonesia, and Japan. Think, too, of space—the final frontier: As many as 600 million people may have watched the first (Apollo 11) moon landing in 1969—a huge audience in the early days of global television. Also consider the British royal family, especially the photogenic ones. The wedding of Prince William and Catherine Middleton attracted 161 million viewers—twice the population of the United Kingdom. The birth, public presentation, and naming of their firstborn son, George, an eventual heir to the British throne, in 2013 generated international interest. A generation earlier, millions of people had watched Lady Diana Spencer marry England's Prince Charles. Princess Diana's funeral also attracted a global audience.

And, of course, think of sports: Billions of people watched at least some of the 2016 Summer Olympics held in Rio de Janeiro, Brazil. Consider the FIFA World Cup (soccer), also held every four years. In 2006, an estimated 320 million people tuned in to the tournament's final game. This figure almost tripled to 909 million in 2010, and more than one billion viewers saw Germany defeat Argentina in the 2014 final. The World Cup generates huge global interest because it truly is a "world series," with 32 countries and five continents competing. Similarly, the Cricket World Cup, held every four years (most recently in 2015), is the world's third most watched event: Only the Summer Olympics and the FIFA World Cup exceed it. The 2015 Cricket World Cup was televised in over 200 countries, to over 2.2 billion potential viewers.

It's rather arrogant to call American baseball's ultimate championship "The World Series" when only one non-U.S. team, the Toronto Blue Jays, can play in it. (The title dates back to 1903, a time of less globalization and more American provincialism.) Baseball is popular in the United States (including Puerto Rico), Canada, Japan, Cuba, Mexico, Venezuela, and the Dominican Republic. South Korea, Taiwan, and China have professional leagues. Elsewhere the sport has little mass appeal (see Gmelch and Nathan 2017).

Even so, when we focus on the players in American baseball we see a multiethnic world in miniature. With its prominent Latino and Japanese players, American baseball appears to be more ethnically diverse than American football or basketball. Consider the list of finalists for the 2017 American League MVP (most valuable player) award, won by second baseman José Altuve of the Houston Astros, a Venezuelan. Second place went to New York Yankees outfielder Aaron Judge, an African American from California (who also was named Rookie of the Year). Coming in third was Cleveland second baseman José Ramirez, from the Dominican Republic. In fourth place was last year's winner, New Jersey–born and non-Hispanic White Mike Trout (Los Angeles Angels center fielder). Fifth place went to another Cleveland player, shortstop Francisco Lindor from Puerto Rico. Can you think of a sport as ethnically diverse as baseball? What's the last world event that drew your attention?

Athletes primed for the start of the 10 kilometer women's marathon swim at the 2016 Summer Olympics in Rio de Janeiro. Years of swimming sculpt a distinctive physique—an enlarged upper torso and neck, and powerful shoulders and back.

Cultural Forces Shape Human Biology

Anthropology's comparative, biocultural perspective recognizes that cultural forces constantly mold human biology. (**Biocultural** refers to using and combining both biological and cultural perspectives and approaches to analyze and understand a particular issue or problem.) As we saw in "Understanding Ourselves," culture is a key environmental force in determining how human bodies grow and develop. Cultural traditions promote certain activities and abilities, discourage others, and set standards of physical well-being and attractiveness. Consider how this works in sports. North American girls are encouraged to pursue, and therefore do well in, competition involving figure skating, gymnastics, track and field, swimming, diving, and many other sports. Brazilian girls, although excelling in the team sports of basketball and volleyball, haven't fared nearly as well in individual sports as have their American and Canadian counterparts. Why are people encouraged to excel as athletes in some nations but not others? Why do people in some countries invest so much time and effort in competitive sports that their bodies change significantly as a result?

Cultural standards of attractiveness and propriety influence participation and achievement in sports. Americans run or swim not just to compete but also to keep trim and fit. Brazil's beauty standards traditionally have accepted more fat, especially in female buttocks and hips. Brazilian men have had significant international success in swimming and running, but it is less common to see Brazilian women excelling in those sports. One reason why Brazilian women have tended to avoid competitive swimming may be that sport's effects on the body. Years of swimming sculpt a distinctive physique: an enlarged upper torso, a massive neck, and powerful shoulders and back. Successful female swimmers tend to be big, strong, and bulky. The countries that have produced them most consistently are the United States, Canada, Australia, Germany, the Scandinavian nations, the Netherlands, the former Soviet Union, and (more recently) China, where this body type isn't as stigmatized as it is in Latin countries. For women, Brazilian culture prefers more ample hips and buttocks to a more muscled upper body. Many young female swimmers in Brazil choose to abandon the sport rather than their culture's "feminine" body ideal.

food production
An economy based on plant cultivation and/or animal domestication.

biocultural
Combining biological and cultural approaches to a given problem.

GENERAL ANTHROPOLOGY

The academic discipline of anthropology, also known as **general anthropology** or "four-field" anthropology, includes four main subdisciplines or subfields. They are sociocultural anthropology, anthropological archaeology, biological anthropology, and linguistic anthropology. (From here on, I'll use the shorter term *cultural anthropology* as a synonym for "sociocultural anthropology.") Cultural anthropology focuses on societies of the

general anthropology
Anthropology as a whole: cultural, archaeological, biological, and linguistic anthropology.

present and recent past. Anthropological archaeology reconstructs lifeways of ancient and more recent societies through analysis of material remains. Biological anthropology studies human biological variation through time and across geographic space. Linguistic anthropology examines language in its social and cultural contexts. Of the four subfields, cultural anthropology has the largest membership. Most departments of anthropology teach courses in all four subfields. (Note that general anthropology did not develop as a comparable field of study in most European countries, where the subdisciplines tend to exist separately.)

cultural anthropology
The comparative, cross-cultural study of human society and culture.

There are historical reasons for the inclusion of the four subfields in a single discipline in North America. The origin of anthropology as a scientific field, and of American anthropology in particular, can be traced back to the 19th century. Early American anthropologists were concerned especially with the history and cultures of the native peoples of North America. Interest in the origins and diversity of Native Americans brought together studies of customs, social life, language, and physical traits. Anthropologists still are pondering such questions as these: Where did Native Americans come from? How many waves of migration brought them to the New World? What are the linguistic, cultural, and biological links among Native Americans and between them and Asians?

ethnography
Fieldwork in a particular cultural setting.

There also are logical reasons for including anthropology's four subfields in the same academic discipline. Answers to key questions in anthropology often require an understanding of both human biology and culture and of both the past and the present. Each subfield considers variation in time and space (that is, in different geographic areas). Cultural anthropologists and anthropological archaeologists study (among many other topics) changes in social life and customs. Archaeologists have used studies of living societies and behavior patterns to imagine what life might have been like in the past. Biological anthropologists examine evolutionary changes in physical form, for example, anatomical changes that might have been associated with the origin of tool use or language. Linguistic anthropologists may reconstruct the basics of ancient languages by studying modern ones.

The subdisciplines influence each other as members of the different subfields talk to each other, share books and journals, and associate in departments and at professional meetings. General anthropology explores the basics of human biology, society, and culture and considers their interrelations. Anthropologists share certain key assumptions. Perhaps the most fundamental is the idea that we cannot reach sound conclusions about "human nature" by studying a single nation, society, or cultural tradition. A comparative, cross-cultural approach is essential.

Early American anthropology was especially concerned with the history and cultures of Native North Americans. Ely S. Parker, or Ha-sa-noan-da, was a Seneca Indian who made important contributions to early anthropology. Parker also served as commissioner of Indian affairs for the United States.

Source: National Archives and Records Administration

THE SUBDISCIPLINES OF ANTHROPOLOGY

Cultural Anthropology

Cultural anthropology, the study of human society and culture, is the subfield that describes, analyzes, interprets, and explains social and cultural similarities and differences. To study and interpret cultural diversity, cultural anthropologists engage in two kinds of activity: ethnography (based on fieldwork) and ethnology (based on cross-cultural comparison). **Ethnography** provides an account of a particular group, community, society, or culture. During ethnographic fieldwork, the ethnographer gathers data that he or she organizes, describes, analyzes, and interprets to build and present that account, which may be in the form of a book, an article, or a film. Traditionally, ethnographers lived in small communities, where they studied local behavior, beliefs, customs, social life, economic activities, politics, and religion. Today, any ethnographer will recognize that external forces and events have an increasing influence on such settings.

An anthropological perspective derived from ethnographic fieldwork often differs radically from that of economics or political science. Those fields focus on national and official organizations and policies and often on elites. However, the groups that anthropologists traditionally have studied usually have been relatively poor and powerless. Ethnographers often observe discriminatory practices directed toward such people, who experience food and water shortages, dietary deficiencies, and other aspects of poverty. Political scientists tend to study programs that national planners develop, whereas anthropologists discover how these programs work on the local level.

Communities and cultures are less isolated today than ever before. In fact, as the anthropologist Franz Boas (1940/1966) noted many years ago, contact between neighboring tribes has always existed and has extended over enormous areas. "Human populations construct their cultures in interaction with one another, and not in isolation"

RECAP 1.2 Ethnography and Ethnology—Two Dimensions of Cultural Anthropology

ETHNOGRAPHY	ETHNOLOGY
Requires fieldwork to collect data	Uses data collected by a series of researchers
Often descriptive	Usually synthetic
Group/community specific	Comparative/cross-cultural

(Wolf 1982, p. ix). Villagers increasingly participate in regional, national, and world events. Exposure to external forces comes through the mass media, migration, and modern transportation. (This chapter's "Appreciating Anthropology" box examines the role of a residential school in eastern India in bridging barriers between cultures.) City, nation, and world increasingly invade local communities with the arrival of tourists, development agents, government and religious officials, and political candidates. Such linkages are prominent components of regional, national, and global systems of politics, economics, and information. These larger systems increasingly affect the people and places anthropology traditionally has studied. The study of such linkages and systems is part of the subject matter of modern anthropology.

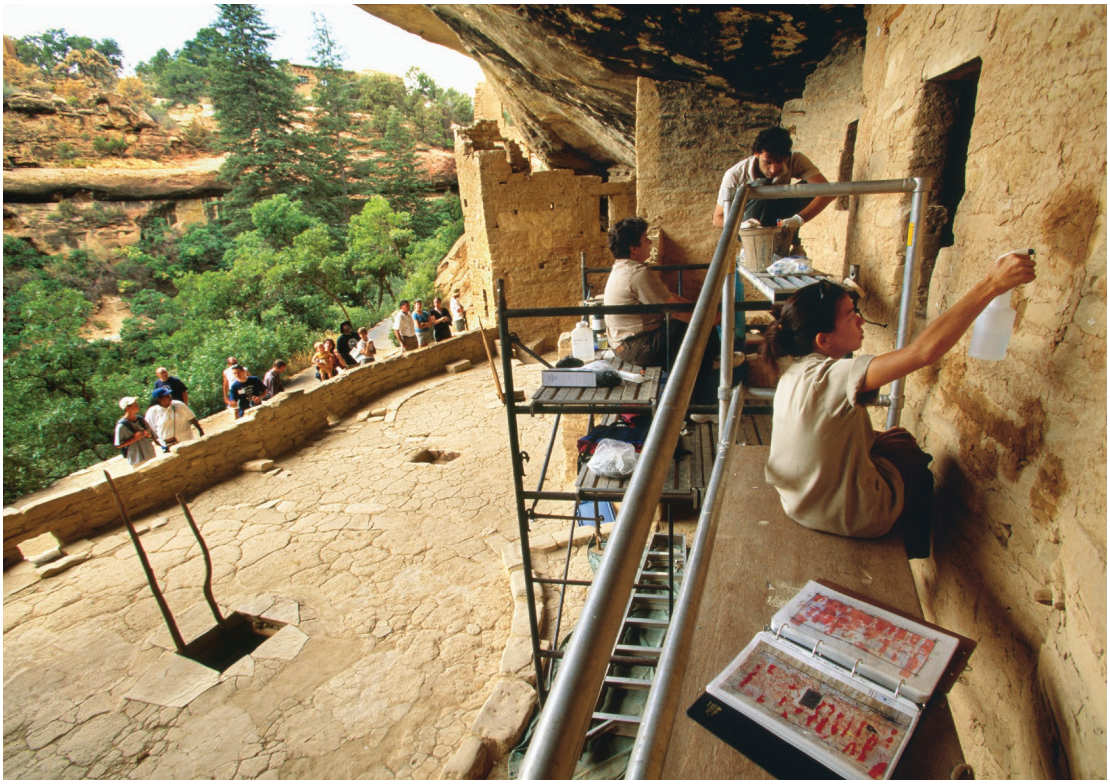
Ethnology examines, interprets, and analyzes the results of ethnography—the data gathered in different societies. It uses such data to compare and contrast and to generalize about society and culture. Looking beyond the particular to the more general, ethnologists attempt to identify and explain cultural differences and similarities, to test hypotheses, and to build theory to enhance our understanding of how social and cultural systems work. (See the section "The Scientific Method" later in this chapter.) Ethnology gets its data for comparison not just from ethnography but also from the other subfields, particularly from archaeology, which reconstructs social systems of the past. (Recap 1.2 summarizes the main contrasts between ethnography and ethnology.)

Anthropological Archaeology

Anthropological archaeology (or, more simply, archaeology) reconstructs, describes, and interprets human behavior and cultural patterns through material remains. At sites where people live or have lived, archaeologists find artifacts, material items that humans have made, used, or modified, such as tools, weapons, campsites, buildings, and garbage. Plant and animal remains and garbage tell stories about consumption and activities. Wild and domesticated grains have different characteristics,

anthropological archaeology
The study of human behavior through material remains.

ethnology
The study of sociocultural differences and similarities.



Anthropological archaeologists from the University of Pennsylvania work to stabilize the original plaster at an Anasazi (Native American) site in Colorado's Mesa Verde National Park.

School of Hope

A school is one kind of community in which culture is transmitted—a process known as enculturation. A boarding school where students reside for several years is fully comparable as a enculturative setting to a village or other local community. You've all heard of Hogwarts. Although fictional, is it not a setting in which enculturation takes place?

Often, schools serve as intermediaries between one cultural tradition and another. As students are exposed to outsiders, they inevitably change. In today's world, opportunities to become bilingual and bicultural—that is, to learn more than one language and to participate in more than one cultural tradition—are greater than ever before.

The Kalinga Institute of Social Sciences (KISS) is a boarding school in Bhubaneswar, India, whose mission is to instill in indigenous students a "capacity to aspire" to a better life (Finnan 2016). KISS is the world's largest residential school for tribal children. Located in Odisha, one of India's poorest states, KISS supports 25,000 students from first grade through graduate training. Its students represent 62 of India's tribal groups. Children as young as age 6 travel to KISS by bus or train, sometimes from hundreds of miles away. They leave their families for up to 10 months at a time, returning to their villages only during the summer.

KISS students at an assembly for visiting foreign dignitaries. KISS officials use such events not only to showcase the school to visitors but also to help build solidarity among students.
Courtesy Christine Finnan

During six months of research at KISS in 2014–2015, anthropologist Christine Finnan gathered stories and personal accounts about the school and its effects. Working with three Indian research partners, she interviewed 160 people: students, former students, parents, staff, teachers, administrators, and visitors. Her team observed classes, meals, celebrations, and athletic competitions. They also visited several tribal villages to find out why parents send

which allow archaeologists to distinguish between the gathering and the cultivation of plants. Animal bones reveal the age and sex of slaughtered animals, providing other information useful in determining whether species were wild or domesticated.

Analyzing such data, archaeologists answer several questions about ancient economies. Did the group get its meat from hunting, or did it domesticate and breed animals, killing only those of a certain age and sex? Did plant food come from wild plants or from sowing, tending, and harvesting crops? Did the residents make, trade for, or buy particular items? Were raw materials available locally? If not, where did they come from? From such information, archaeologists reconstruct patterns of production, trade, and consumption.

Archaeologists have spent much time studying *potsherds,* fragments of earthenware. Potsherds are more durable than many other artifacts, such as textiles and wood. The quantity of pottery fragments allows estimates of population size and density. The discovery that potters used materials unavailable locally suggests systems of trade. Similarities in manufacture and decoration at different sites may be proof of cultural connections. Groups with similar pots may share a common history. They might have common cultural ancestors. Perhaps they traded with each other or belonged to the same political system.

their children so far away to school. Finnan wanted to determine what children gained and lost from growing up at KISS. (For a fuller account of the research described here, see Finnan [2016] at www.sapiens.org.)

Acceptance to KISS is based on need, so that the poorest of the poor are chosen to attend. The school offers cost-free room and board, classes, medical care, and vocational and athletic training to all its students. The value system at KISS encourages responsibility, orderliness, and respect. Children learn those behaviors not only from KISS employees but also from each other—especially from older students. Students are repeatedly reminded that they are special, that they can rise out of poverty and become change agents for their communities. Many students hope to return to their villages as teachers, doctors, or nurses.

KISS receives no government support. Most of its funding comes from its profitable sister institution, the Kalinga Institute of Industrial Technology (KIIT), a respected private university. By targeting indigenous children, KISS meets an educational need that is unmet by the government. In India's tribal villages, the presence of teachers is unreliable, even when there are village schools. At KISS, in sharp contrast, teachers don't just instruct; they also serve in loco parentis, living in the dormitories or in nearby housing, and viewing many of their students as family members.

During her fieldwork, Finnan found attitudes about KISS among all parties to be overwhelmingly positive. Students contrasted their KISS education with the poor quality of their village schools. Teachers mentioned their shared commitment to poverty reduction. Parents were eager for their children to be admitted. Although KISS encourages students to take pride in their native language and culture, both students and parents understand that change is inevitable. Students will adopt new beliefs, values, and behaviors, and they will learn Odia, the state language used at KISS. They will become bilingual and bicultural.

When Finnan began her research, she was aware of the now-notorious boarding schools for indigenous students that were established during the 19th and 20th centuries in the United States and Australia. Native American and Aboriginal children were forcibly removed from their families, required to speak English and accept Christianity, and taught that their native cultures were inferior. The educational style was authoritarian, and its goal was forced assimilation. Finnan found KISS's positive educational philosophy and respect for indigenous cultures to be very different from those archaic institutions.

To fully evaluate KISS's success in meeting its goals, Finnan has retained her connection with KISS. She recently (2018) received data indicating that their promise of improved employment opportunities is being realized. A survey of 10,023 former students indicates that approximately 85 percent have jobs that are likely a result of their KISS education. In addition, while over 80 percent of tribal students drop out of district schools before completing 10th tenth grade, only about 20 percent of KISS students do so. Those who stay at KISS score higher than the state average on state-mandated tests, and considerably higher than averages for tribal children. KISS also can point to a series of successful scholars, ambassadors, and athletes among its graduates. Each year, 5 percent of its graduating class is admitted tuition-free to KIIT. At that highly selective university, students can study engineering, medicine, and law, among other subjects.

Later in this chapter, we examine applied anthropology—how anthropological data, perspectives, theory, and methods can be used to identify, assess, and solve contemporary social problems. Think about whether Finnan's research is academic or applied, and whether there is a sharp distinction between these two dimensions of anthropology. Even if Finnan did not intend her work to be applied anthropology, her findings certainly suggest educational lessons that can be applied beyond this case. What are some of those lessons?

Many archaeologists examine paleoecology. *Ecology* is the study of interrelations among living things in an environment. The organisms and environment together constitute an ecosystem, a patterned arrangement of energy flows and exchanges. Human ecology studies ecosystems that include people, focusing on the ways in which human use "of nature influences and is influenced by social organization and cultural values" (Bennett 1969, pp. 10–11). *Paleoecology* looks at the ecosystems of the past.

In addition to reconstructing ecological patterns, archaeologists may infer cultural transformations, for example, by observing changes in the size and type of sites and the distance between them. A city develops in a region where only towns, villages, and hamlets existed a few centuries earlier. The number of settlement levels (city, town, village, hamlet) in a society is a measure of social complexity. Buildings offer clues about political and religious features. Temples and pyramids suggest that an ancient society had an authority structure capable of marshaling the labor needed to build such monuments. The presence or absence of certain structures, like the pyramids of ancient Egypt and Mexico, reveals differences in function between settlements. For example, some towns were places where people came to attend ceremonies. Others were burial sites; still others were farming communities.

Archaeologists also reconstruct behavior patterns and lifestyles of the past by excavating. This involves digging through a succession of levels at a particular site. In a given area, through time, settlements may change in form and purpose, as may the connections between settlements. Excavation can document changes in economic, social, and political activities.

Although archaeologists are best known for studying prehistory, that is, the period before the invention of writing, they also study the cultures of historical and even living peoples. Studying sunken ships off the Florida coast, underwater archaeologists have been able to verify the living conditions on the vessels that brought ancestral African Americans to the New World as enslaved people. In a research project begun in 1973 in Tucson, Arizona, archaeologist William Rathje launched a long-term study of modern garbage disposal practices. The value of "garbology," as Rathje called it, is that it provides "evidence of what people did, not what they think they did, what they think they should have done, or what the interviewer thinks they should have done" (Harrison, Rathje, and Hughes 1994, p. 108). What people report may contrast strongly with their real behavior as revealed by garbology. For example, the garbologists discovered that the three Tucson neighborhoods that reported the lowest beer consumption actually had the highest number of discarded beer cans per household (Podolefsky and Brown 1992, p. 100)! Findings from garbology also have challenged common misconceptions about the kinds and quantities of trash found in landfills: Although most people thought that styrofoam containers and disposable diapers were major waste problems, they were actually relatively insignificant compared with plastic, and especially paper (Rathje and Murphy 2001; Zimring 2012).

Biological Anthropology

biological anthropology
The study of human biological variation through time and as it exists today.

Biological anthropology is the study of human biological diversity through time and as it exists in the world today. There are five specialties within biological anthropology:

1. Human biological evolution as revealed by the fossil record (paleoanthropology)
2. Human genetics
3. Human growth and development
4. Human biological plasticity (the living body's ability to change as it copes with environmental conditions, such as heat, cold, and altitude)
5. Primatology (the study of monkeys, apes, and other nonhuman primates)

A common thread that runs across all five specialties is an interest in biological variation among humans, including their ancestors and their closest animal relatives (monkeys and apes).

These varied interests link biological anthropology to other fields: biology, zoology, geology, anatomy, physiology, medicine, and public health. Knowledge of osteology—the study of bones—is essential for anthropologists who examine and interpret skulls, teeth, and bones, whether of living humans or of our fossilized ancestors. *Paleontologists* are scientists who study fossils. *Paleoanthropologists* study the fossil record of human evolution. Paleoanthropologists often collaborate with archaeologists, who study artifacts, in reconstructing biological and cultural aspects of human evolution. Fossils and tools often are found together. Different types of tools provide information about the habits, customs, and lifestyles of the ancestral humans who used them.

More than a century ago, Charles Darwin noticed that the variety that exists within any population permits some individuals (those with the favored characteristics) to do better than others at surviving and reproducing. Genetics, which developed after Darwin, enlightens us about the causes and transmission of the variety on which evolution depends. However, it isn't just genes that cause variety. During any individual's lifetime, the environment works along with heredity to determine biological features. For example, people with a genetic tendency to be tall will be shorter if they have poor nutrition during childhood. Thus, biological anthropology also investigates the influence of environment on the body as it grows and matures. Among the environmental factors that influence the body as it develops are nutrition, altitude, temperature, and disease, as well as cultural factors, such as the standards of attractiveness that were discussed previously.

Biological anthropology (along with zoology) also includes *primatology.* The primates include our closest relatives—apes and monkeys. *Primatologists* study their biology, evolution, behavior, and social life, often in their natural environments. Primatology assists paleoanthropology, because primate behavior and social organization may shed light on early human behavior and human nature.

Linguistic Anthropology

linguistic anthropology
The study of language and linguistic diversity in time, space, and society.

We don't know (and probably never will know) when our ancestors started speaking, although biological anthropologists have looked to the anatomy of the face and the skull to speculate about the origin of language. As well, primatologists have described the communication systems of monkeys and apes. We do know that well-developed, grammatically complex languages have existed for thousands of years. Linguistic anthropology offers further illustration of anthropology's interest in comparison, variation, and change. **Linguistic anthropology** studies language in its social and cultural context, throughout the world and over time.

Some linguistic anthropologists also make inferences about universal features of language, linked perhaps to uniformities in the human brain. Others reconstruct ancient languages by comparing their contemporary descendants and in so doing make discoveries about history. Still others study linguistic differences to discover varied perceptions and patterns of thought in different cultures.

Historical linguistics considers variation over time, such as the changes in sounds, grammar, and vocabulary between Middle English (spoken from approximately 1050 to 1550 C.E.) and modern English. **Sociolinguistics** investigates relationships between social and linguistic variation. No language is a homogeneous system in which everyone speaks just like everyone else. How do different speakers use a given language? How do linguistic features correlate with social factors, including class and gender differences? One reason for variation is geography, as in regional dialects and accents. Linguistic variation also is expressed in the bilingualism of ethnic groups. Linguistic and cultural anthropologists collaborate in studying links between language and many other aspects of culture, such as how people reckon kinship and how they perceive and classify colors.

APPLIED ANTHROPOLOGY

What sort of man or woman do you envision when you hear the word *anthropologist*? Although anthropologists have been portrayed as quirky and eccentric, bearded and bespectacled, anthropology is not a science of the exotic carried on by quaint scholars in ivory towers. Rather, anthropology has a lot to tell the public. Anthropology's foremost professional organization, the American Anthropological Association (AAA), has formally acknowledged a public service role by recognizing that anthropology has two dimensions: (1) 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. As American anthropologist Erve Chambers (1987, p. 309) has stated, applied anthropology is "concerned with the relationships between anthropological knowledge and the uses of that knowledge in the world beyond anthropology." More and more anthropologists from the four subfields now work in "applied" areas such as public health, family planning, business, market research, economic development, and cultural resource management.

applied anthropology
The use of anthropology to solve contemporary problems.

sociolinguistics
The study of language in society.

Because of anthropology's breadth, applied anthropology has many applications. For example, applied medical anthropologists consider both the sociocultural and the biological contexts and implications of disease and illness. Perceptions of good and bad health, along with actual health threats and problems, differ among societies. Various ethnic groups recognize different illnesses, symptoms, and causes and have developed different health care systems and treatment strategies.

Applied archaeology, usually called *public archaeology,* includes such activities as cultural

Applied anthropology in action. Professor Robin Nagle of New York University is also an anthropologist-in-residence at New York City's Department of Sanitation. Nagle studies curbside garbage as a mirror into the lives of New Yorkers. Here she accompanies sanitation worker Joe Damiano during his morning rounds in August 2015.

resource management, public educational programs, and historic preservation. Legislation requiring evaluation of sites threatened by dams, highways, and other construction activities has created an important role for public archaeology. 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 also 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 work for federal, state, and county agencies and other clients. Applied cultural anthropologists sometimes work with public archaeologists, assessing the human problems generated by the proposed change and determining how they can be reduced.

cultural resource management
Deciding what needs saving when entire archaeological sites cannot be saved.

ANTHROPOLOGY AND OTHER ACADEMIC FIELDS

As mentioned previously, one of the main differences between anthropology and the other fields that study people is holism, anthropology's unique blend of biological, social, cultural, linguistic, historical, and contemporary perspectives. Paradoxically, while distinguishing anthropology, this breadth also is what links it to many other disciplines. Techniques used to date fossils and artifacts have come to anthropology from physics, chemistry, and geology. Because plant and animal remains often are found with human bones and artifacts, anthropologists collaborate with botanists, zoologists, and paleontologists.

science
A field of study that seeks reliable explanations, with reference to the material and physical world.

Anthropology is a **science**—a "systematic field of study or body of knowledge that aims, through experiment, observation, and deduction, to produce reliable explanations of phenomena, with reference to the material and physical world" (*Webster's New World Encyclopedia*. College Edition. Englewood Cliffs, NJ: Prentice Hall, 1993, p. 937.) This book presents anthropology as a *humanistic science* devoted to discovering, describing, understanding, appreciating, and explaining similarities and differences in time and space among humans and our ancestors. Clyde Kluckhohn (1944) described anthropology as "the science of human similarities and differences" (p. 9). His statement of the need for such a field still stands: "Anthropology provides a scientific basis for dealing with the crucial dilemma of the world today: how can peoples of different appearance, mutually unintelligible languages, and dissimilar ways of life get along peaceably together?" (p. 9). Anthropology has compiled an impressive body of knowledge, which this textbook attempts to encapsulate.

Besides its links to the natural sciences (e.g., geology, zoology) and social sciences (e.g., sociology, psychology), anthropology also has strong links to the humanities. The humanities include English, comparative literature, classics, folklore, philosophy, and the arts. These fields study languages, texts, philosophies, arts, music, performances, and other forms of creative expression. Ethnomusicology, which studies forms of musical expression on a worldwide basis, has close links to anthropology. Also linked is folklore, the systematic study of tales, myths, and legends from a variety of cultures. One can make a strong case that anthropology is one of the most humanistic of all academic fields because of its fundamental respect for human diversity. Anthropologists listen to, record, and represent voices from a multitude of nations, cultures, times, and places. Anthropology values local knowledge, diverse worldviews, and alternative philosophies. Cultural anthropology and linguistic anthropology in particular bring a comparative and non-elitist perspective to forms of creative expression, including language, art, narratives, music, and dance, viewed in their social and cultural context.

Cultural Anthropology and Sociology

Sociology is probably the discipline that is closest to anthropology, specifically to cultural anthropology. Like cultural anthropologists, sociologists study society—consisting of human social behavior, social relations, and social organization. Key differences between sociology and anthropology reflect the kinds of societies traditionally studied by each discipline. Sociologists typically have studied contemporary, Western, industrial societies. Anthropologists, by contrast, have focused on nonindustrial and non-Western societies. Sociologists and anthropologists developed different methods to study these different kinds of society. To study large-scale, complex nations, sociologists have relied on surveys and other means of gathering quantifiable data. Sociologists use sampling and statistical techniques to collect and analyze such data, and statistical training has been fundamental in sociology. Working in much smaller societies, such as a village, anthropologists can get to know almost everyone and have less need for sampling and statistics. However, because anthropologists today are working increasingly in modern nations, use of sampling and statistics is becoming more common in cultural anthropology.

Traditionally, ethnographers (field workers in cultural anthropology) studied small and nonliterate (without writing) populations and developed methods appropriate to that context. An ethnographer participates directly in the daily life of another culture and must be an attentive, detailed observer of what people do and say. The focus is on a real, living population, not just a sample of a

population. During ethnographic fieldwork, the anthropologist takes part in the events she or he is *observing*, describing, and analyzing. Anthropology, we might say, is more personal and less formal than sociology.

In today's interconnected world, however, the interests and methods of cultural anthropology and sociology are converging (becoming more similar), because they are studying some of the same topics and areas. For example, many sociologists now work in non-Western countries, smaller communities, and other settings that used to be mainly within the anthropological orbit. As industrialization and urbanization have spread across the globe, anthropologists now work increasingly in industrial nations and cities, rather than villages. Among the many topics studied by contemporary sociocultural anthropologists are rural–urban and transnational (from one country to another) migration, urban adaptation, inner-city life, ethnic diversity and conflict, crime, and warfare. Cultural anthropologists today may be as likely as sociologists are to study issues of globalization and inequality.

Anthropology and Psychology

Psychologists, like sociologists, typically do their research in only one—their own—society. Anthropologists know, however, that statements about "human" psychology cannot rely solely on observations made in a single society. Cross-cultural comparison suggests that certain psychological patterns may indeed be universal. Others occur in some but not all societies, while still others are confined to one or very few cultures. *Psychological anthropology* studies cross-cultural similarities and differences in psychological traits and conditions (see Church 2017; LeVine 2010; Matsumoto and Juang 2017). During the 1920s, 1930s, and 1940s, several prominent anthropologists, including Bronislaw Malinowski (1927) and Margaret Mead (1935/1950; 1928/1961), described how particular cultures create distinctive adult personality types by inculcating in their children specific values, beliefs, and behavior patterns. Anthropologists have provided needed cross-cultural perspectives on aspects of developmental and cognitive psychology (Brekhus 2015; Kronenfeld et al. 2011; Shore 1996), psychoanalytic interpretations (Paul 1989), and psychiatric conditions (Bures 2016; Khan 2017; Kleinman 1991).

Anthropologists are familiar, for example, with an array of *culturally specific syndromes*. These are patterns of unusual, aberrant, or abnormal behavior confined to a single culture or a group of related cultures (see Bures 2016; Khan 2017). One example is *koro*, the East Asian term for intense anxiety arising from the fear that one's sexual organs will recede into one's body and cause death. A distinctive Latin American syndrome is *susto*, or soul loss, whose symptoms are extreme sadness, lethargy, and listlessness. The victim typically falls prey to susto after experiencing a personal tragedy, such as the death of a loved one. A milder malady is *mal de ojo* ("evil eye"), most typically found in Mediterranean countries. Symptoms of evil eye, which mainly affects children, include fitful sleep, crying, sickness, and fever. Western cultures, too, have distinctive psychiatric syndromes (e.g., anorexia nervosa), some of which appear now to be spreading internationally through globalization (see Watters 2010).

THE SCIENTIFIC METHOD

Anthropology, remember, is a science, although a very humanistic one. Any science aims for reliable explanations that *predict* future occurrences. Accurate predictions stand up to tests designed to disprove (falsify) them. Scientific explanations rely on data, which can come from experiments, observation, and other systematic procedures. Scientific causes are material, physical, or natural (e.g., viruses) rather than supernatural (e.g., ghosts).

Theories, Associations, and Explanations

In their 1997 article "Science in Anthropology," Melvin Ember and Carol R. Ember describe how scientists strive to improve our understanding of the world by hypothesis testing. A **hypothesis** is a *proposed* explanation for something. Until it is *tested,* it is merely hypothetical. If the test confirms the hypothesis, then that explanation is a good one. An *explanation* shows how and why one variable causes or is closely associated with another variable that we want to explain. An **association** refers to *covariation* of variables. Covariation means they vary together—when one variable changes, the other one also changes. *Theories provide explanations for associations* (Ember and Ember 1997). What exactly is a theory? A **theory** is a framework of logically connected ideas that helps us explain not just one, but many, associations. In other words, the most useful theories cover multiple cases.

hypothesis
A suggested but as yet unverified explanation.

association
An observed relationship between two or more variables.

theory
A set of ideas formulated to explain something.

We generalize when we say that a change in a particular variable usually follows or is usually associated with a change in another variable. A *law* is a *generalization* that applies to and explains all instances of an association. An example of a law is the statement "water freezes at 32 degrees Fahrenheit." This law states a uniform association between two variables: the state of the water (whether liquid or ice) and the air temperature. We confirm the truth of the statement by repeated observations of freezing and by the fact that water does not solidify at higher temperatures. The

RECAP 1.3 Theories and Associations

Key question: How do you explain associations?

ASSOCIATION	A systematic relationship between variables, so that when one variable changes (varies), the other does, too (covaries). **Example:** When temperatures fall, water solidifies.
HYPOTHESIS	A proposed explanation for an association; must be tested—may be confirmed or not. **Example:** Conflict will increase along with population size.
EXPLANATION	Reasons how and why a particular association exists. **Example:** Giraffes with longer necks have higher rates of survival and more surviving offspring than do shorter-necked giraffes, because they can feed themselves better when food is scarce.
THEORY	An explanatory framework of logically interconnected ideas used to explain multiple phenomena. **Example:** Darwinian evolutionary theory used to explain giraffes' long necks and other adaptive features in multiple species.
GENERALIZATION	A statement that change in one variable tends to follow or be associated with change in another variable. **Example:** When societies have low-protein diets, they tend to have longer postpartum taboos than when the diet is richer in protein.
LAW	A generalization that is universally valid. **Example:** When temperature reaches 32 degrees F, water turns from liquid to solid (ice).

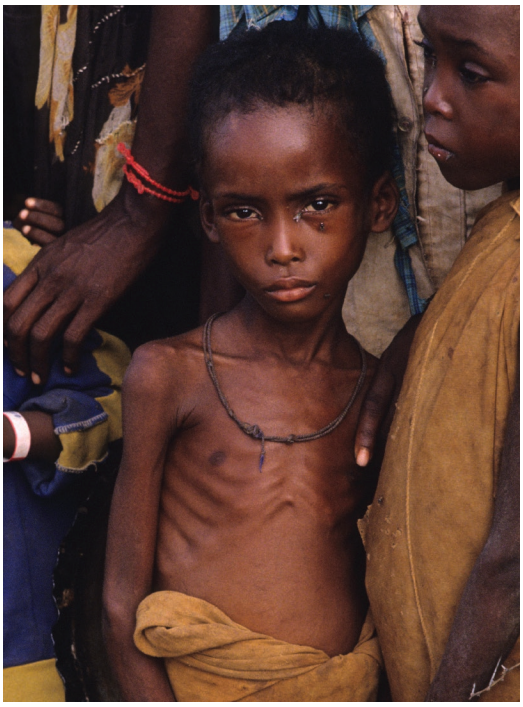
existence of laws makes the world a more predictable place, helping us to understand the past and predict the future. Yesterday ice formed at 32 degrees F, and tomorrow it will still form at 32 degrees F.

The social sciences have few, if any, absolute laws of the water-freezing sort. "Laws" in social science tend to be imperfect generalizations, and explanations in social science tend to be probable rather than certain. They usually have exceptions; that is, sometimes the explanation does not hold. Does that mean such explanations are useless? Not at all. Imagine a law that said that water freezes at 32 degrees 83 percent of the time. Although we cannot make an exact prediction based on such a generalization, it still tells us something useful, even if there are exceptions. Most of the time, we would predict correctly that water was going to freeze. To take a real example from social science, we can generalize that "conflict tends to increase as a group's population size increases." Even if this statement applies only 83 percent of the time, it still is useful. In the social sciences, including anthropology, the variables of interest only *tend* to be associated in a predictable way; there are always exceptions. Recap 1.3 summarizes the key terms used in this section: association, hypothesis, explanation, theory, generalization, and law.

Case Study: Explaining the Postpartum Taboo

One classic cross-cultural study revealed a strong (but not 100 percent) association, or correlation, between a sexual restriction and a type of diet. A long postpartum sex taboo (a ban on sexual intercourse between husband and wife for a year or more after the birth of a child) tended to occur in societies where the diet was low in protein (Whiting 1964).

This association was confirmed by cross-cultural data (ethnographic information from a randomly chosen sample of several societies). How might one explain why the *dependent variable* (the thing to be explained, in this case the postpartum sex taboo) is related to the *predictor variable* (a low-protein diet). A likely explanation is that, when there is too little protein in their diets, babies can develop and die from a protein-deficiency disease called kwashiorkor. If the mother delays her next pregnancy, her current baby gets to breast-feed longer, thereby getting protein from the mother and enhancing its survival chances. Having another baby too soon—forcing early weaning—would jeopardize the survival of the previous one. The postpartum taboo thus enhances infant survival. When the taboo becomes institutionalized as a cultural expectation, people are more likely to comply, and less likely to succumb to momentary temptation.



The name *kwashiorkor,* for a condition caused by severe protein deficiency, comes from a West African word meaning "one-two." Some cultures abruptly wean one infant when a second one is born. In today's world, children in war-ravaged countries, including the Somali girl shown here, are among the most common victims of malnutrition.

Theories suggest patterns and relationships, and they generate additional hypotheses. Based, for example, on the theory that the postpartum taboo exists because it reduces infant mortality when the diet is low in protein, one could hypothesize that changes in the conditions that favor the taboo might cause it to disappear. By adopting birth control, for instance, families could space births without avoiding intercourse. The taboo might also disappear if babies started receiving protein supplements, which would reduce the threat of kwashiorkor.

Recap 1.4 summarizes the main steps in using the scientific method. In hypothesis testing, the relevant variables should be clearly defined (e.g., "height in centimeters" or "weight in kilograms" rather than "body size") and measured reliably. The strength and significance of the results should be evaluated using legitimate statistical methods (Bernard 2011; Bernard, Wutich, and Ryan 2017). Scholars should be careful to avoid a common mistake in generalizing—citing only cases that confirm their hypothesis, while ignoring negative ones. The best procedure is random selection of cases from a wide sample of societies, not all of which are likely to fit the hypothesis.

The Value, and Limitations, of Science

Science is one way—an excellent way—of understanding the world, but it certainly is not the only way. Indeed, the work of many prominent anthropologists has more in common with the humanities than with a strictly scientific approach. Many cultural anthropologists prefer to analyze and interpret aspects of culture, rather than trying to explain them scientifically. Accordingly, anthropological approaches that are interpretive, qualitative, and humanistic are considered in this book, along with those that are quantitative and scientific.

RECAP 1.4 Steps in the Scientific Method

Have a research question.	Why do some societies have long postpartum taboos?
Construct a hypothesis.	Delaying marital sex reduces infant mortality when diets are low in protein.
Posit a mechanism.	Babies get more protein when they nurse longer; nursing is not a reliable method of contraception.
Get data to test your hypothesis.	Use a (random) sample of cross-cultural data (data from several societies; such data sets exist for cross-cultural research).
Devise a way of measuring.	Code societies 1 when they have a postpartum taboo of one year or longer, 0 when they do not; code 1 when diet is low in protein, 0 when it is not.
Analyze your data.	Notice patterns in the data: Long postpartum taboos generally are found in societies with low-protein diets, whereas societies with better diets tend to lack those taboos. Use appropriate statistical methods to evaluate the strength of these associations.
Draw a conclusion.	In most cases, the hypothesis is confirmed.
Derive implications.	Such taboos tend to disappear when diets improve or new reproductive technologies become available.
Contribute to larger theory.	Cultural practices can have adaptive value by enhancing the survival of offspring.

summary

1. Anthropology is the holistic and comparative study of humanity. It is the systematic exploration of human biological and cultural diversity. Examining the origins of, and changes in, human biology and culture, anthropology provides explanations for similarities and differences. The four subfields of general anthropology are sociocultural anthropology, anthropological archaeology, biological anthropology, and linguistic anthropology. All consider variation in time and space. Each also examines adaptation—the process by which organisms cope with environmental stresses.
2. Cultural forces mold human biology, including our body types and images. Societies have particular standards of physical attractiveness. They also have specific ideas about what activities—for example, various sports—are appropriate for males and females.
3. Cultural anthropology explores the cultural diversity of the present and the recent past. Anthropological archaeology reconstructs cultural patterns, often of prehistoric populations. Biological anthropology documents variety, involving fossils, genetics, growth and development, bodily responses, and nonhuman primates. Linguistic anthropology considers diversity among languages. It also studies how speech changes in social situations and over time. Anthropology has two dimensions: academic and applied. Applied anthropology is the use of anthropological data, perspectives, theory, and methods to identify, assess, and solve contemporary social problems.
4. Concerns with biology, society, culture, and language link anthropology to many other fields—sciences and humanities. Anthropologists study art, music, and literature across cultures. But their concern is more with the creative expressions of common people than with arts designed for elites. Anthropologists examine creators and products in their social context. Sociologists traditionally study Western industrial societies, whereas anthropologists have focused on rural, nonindustrial peoples. Psychological anthropology views human psychology in the context of social and cultural variation.
5. Ethnologists attempt to identify and explain cultural differences and similarities and to build theories about how social and cultural systems work. Scientists strive to improve understanding by testing hypotheses—suggested explanations. Explanations rely on associations and theories. An association is an observed relationship between variables. A theory is an explanatory framework capable of explaining many associations. The scientific method characterizes any anthropological endeavor that formulates research questions and gathers or uses systematic data to test hypotheses.

key terms

anthropological archaeology 7
anthropology 3
applied anthropology 11
association 13
biocultural 5
biological anthropology 10
cultural anthropology 6
cultural resource management 12
culture 3
ethnography 6
ethnology 7
food production 4
general anthropology 5
holistic 3
hypothesis 13
linguistic anthropology 10
science 12
society 3
sociolinguistics 11
theory 13

think like an anthropologist

1. How might a *biocultural* approach help us understand the complex ways in which human populations adapt to their environments?
2. What themes and interests unify the subdisciplines of anthropology? In your answer, refer to historical reasons for the unity of anthropology. Are these historical reasons similar in all places where anthropology developed as a discipline?
3. If, as Franz Boas illustrated early on in American anthropology, cultures are not isolated, how can ethnography provide an account of a particular community, society, or culture? *Note:* There is no easy answer to this question! Anthropologists continue to deal with it as they define their research questions and projects.
4. The American Anthropological Association has formally acknowledged a public service role by recognizing that anthropology has two dimensions: (1) academic anthropology and (2) practicing, or applied, anthropology. What is applied anthropology? Based on your reading of this chapter, identify examples from current events in which an anthropologist could help identify, assess, and solve contemporary social problems.
5. In this chapter, we learn that anthropology is a science, although a very humanistic one. What do you think this means? What role does hypothesis testing play in structuring anthropological research? What are the differences between theories, laws, and hypotheses?

CHAPTER 2

Culture

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This Peruvian Quechua woman weaves while offering handwoven textiles for sale in an outdoor market in Peru's Urubamba Valley. People learn and share beliefs and practices as members of cultural groups.

- What is culture and why do we study it?
- What is the relation between culture and the individual?
- How does culture change—especially with globalization?

understanding OURSELVES

How special are you? To what extent are you "your own person" and to what extent are you a product of your particular culture? How much does your cultural background influence your actions and decisions? Americans may not fully appreciate the power of culture because of the value their culture assigns to "the *individual*." Americans like to regard everyone as unique in some way. Yet individualism itself is a distinctive *shared* value, a feature of American culture, transmitted constantly in our daily lives. In the media, count how many stories focus on individuals versus groups. Agents of enculturation, ranging from TV personalities to our parents, grandparents, and teachers, continually insist that we all are "someone special." That we are individuals first and members of groups second is the opposite of this chapter's lesson about culture. To be sure, we have distinctive features because we are individuals, but we have other distinct attributes because we belong to cultural groups.

For example, a comparison of the United States with Brazil, Italy, or virtually any Latin nation reveals striking contrasts between a national culture (American) that tends to discourage physical affection and national cultures in which the opposite is true. Brazilians touch, embrace, and kiss one another much more frequently than North Americans do. Such behavior reflects years of exposure to particular cultural traditions. Middle-class Brazilians teach their kids—both boys and girls—to kiss (on the cheek, two or three times, coming and going) every adult relative they see. Given the size of Brazilian extended families, this can mean hundreds of people. Women continue kissing all those people throughout their lives. Until they are adolescents, boys kiss all adult relatives. Men typically continue to kiss female relatives and friends, as well as their fathers and uncles, throughout their lives.

Do you kiss your father? Your uncle? Your grandfather? How about your mother, aunt, or grandmother? The answers to these questions may differ between men and women, and for male and female relatives. Culture can help us to make sense of these differences. In America, a cultural homophobia (fear of homosexuality) may prevent American men from engaging in displays of affection with other men; similarly, American girls typically are encouraged to show affection, while American boys typically are not. It's important to note that these cultural explanations rely on example and expectation, and that no cultural trait exists because it is natural or right. *Ethnocentrism* is the error of viewing one's own culture as superior and applying one's own cultural values in judging people from other cultures. How easy is it for you to see beyond the ethnocentric blinders of your own experience? Do you have an ethnocentric position regarding displays of affection?

WHAT IS CULTURE?

The concept of culture is fundamental in anthropology. Well over a century ago, in his book *Primitive Culture,* the British anthropologist Sir Edward Tylor proposed that cultures—systems of human behavior and thought—obey natural laws and therefore can be studied scientifically. Tylor's definition of culture still offers an overview of the subject matter of anthropology, and it is widely quoted: "Culture . . . is that complex

chapter outline

whole which includes knowledge, belief, arts, morals, law, custom, and any other capabilities and habits acquired by man as a member of society" (Tylor 1871/1958, p. 1). The crucial phrase here is "acquired . . . as a member of society." Tylor's definition focuses on attributes that people acquire not through biological inheritance but by growing up in a particular society where they are exposed to a specific cultural tradition. **Enculturation** is the process by which a child learns his or her culture.

enculturation
The process by which culture is learned and transmitted across the generations.

Culture Is Learned

The ease with which children absorb any cultural tradition rests on the uniquely elaborated human capacity to learn. Other animals may learn from experience; for example, they avoid fire after discovering that it hurts. Social animals also learn from other members of their group. Wolves, for instance, learn hunting strategies from other pack members. Such social learning is particularly important among monkeys and apes, our closest biological relatives. But our own *cultural learning* depends on the uniquely developed human capacity to use **symbols,** signs that have no necessary or natural connection to the things they signify or for which they stand.

symbol
Something, verbal or nonverbal, that stands for something else.

Through cultural learning, people create, remember, and deal with ideas. They understand and apply specific systems of symbolic meaning. Anthropologist Clifford Geertz (1973) described cultures as sets of "control mechanisms—plans, recipes, rules, instructions" and likens them to computer programs that govern human behavior (Geertz 1973, p. 44). During enculturation, people gradually absorb and internalize their particular culture—a previously established system of meanings and symbols that helps guide their behavior and perceptions throughout their lives.

Every child begins immediately, through a process of conscious and unconscious learning and interaction with others, to internalize, or incorporate, a cultural tradition through the process of enculturation. Sometimes culture is taught directly, as when parents tell their children to say "thank you" when someone gives them something or does them a favor.

We also acquire culture through observation. Children pay attention to the things that go on around them. They modify their behavior not only because other people tell them to do so, but also because of their own observations and growing awareness of what their culture considers right and wrong. Many aspects of culture are absorbed unconsciously. North Americans acquire their culture's notions about how far apart people should stand when they talk not by being told directly to maintain a certain distance but through a gradual process of observation, experience, and conscious and unconscious behavior modification. No one tells Latins to stand closer together than North Americans do, but they learn to do so anyway as part of their cultural tradition.

Anthropologists agree that cultural learning is uniquely elaborated among humans and that all humans have culture. Anthropologists also agree that although *individuals* differ in their emotional and intellectual tendencies and capacities, all human *populations* have equivalent capacities for culture. Regardless of their genes or their physical appearance, people can learn any cultural tradition.

To understand this point, consider that contemporary North Americans are the genetically mixed descendants of people from all over the world. Our ancestors lived in different countries and continents and participated in hundreds of cultural traditions. However, early colonists, later immigrants, and their descendants have all become active participants in American or Canadian life. All now share a national culture.

Culture Is Symbolic

Symbolic thought is unique and crucial to humans and to cultural learning. Anthropologist Leslie White defined culture as

> dependent upon symbolling. . . . Culture consists of tools, implements, utensils, clothing, ornaments, customs, institutions, beliefs, rituals, games, works of art, language, etc. (White 1959, p. 3)

For White, culture originated when our ancestors acquired the ability to use symbols, that is, to originate and bestow meaning on a thing or an event, and, correspondingly, to grasp and appreciate such meanings (White 1959, p. 3).

A symbol is something verbal or nonverbal, within a particular language or culture, that comes to stand for something else. There is no obvious, natural, or necessary connection between the symbol and the thing that it symbolizes. A pet that barks is no more naturally a *dog* than a *chien, Hund,* or *mbwa,* to use the words for the animal we call "dog" in French, German, and Swahili. Language is one of the distinctive possessions of *Homo sapiens.* No other animal has developed anything approaching the complexity of language.

There also is a rich array of nonverbal symbols. Flags, for example, stand for countries, as arches do for a hamburger chain. Holy water is a potent symbol in Roman Catholicism. As is true of all symbols, the association between water and what it stands for (holiness) is arbitrary and conventional. Water is not intrinsically holier than milk, blood, or other natural liquids. Nor is holy water chemically different from ordinary water. Holy water is a symbol within Roman Catholicism, which is part of an international cultural system. A natural thing has been arbitrarily associated with a particular meaning for Catholics, who share common beliefs and experiences that are based on learning

Some symbols are linguistic. Others are nonverbal, such as flags, which stand for countries. Here, colorful flags of several nations wave in front of the United Nations building in New York City.

and that are transmitted across the generations. Our cultures immerse us in a world of symbols that are both linguistic and nonverbal. Particular items and brands of clothing, such as jeans, shirts, or shoes, can acquire symbolic meanings, as can our gestures, posture, and body decoration and ornamentation.

For hundreds of thousands of years, humans have possessed the abilities on which culture rests. These abilities are to learn, to think symbolically, to manipulate language, and to use tools and other cultural products in organizing their lives and coping with their environments. Every contemporary human population has the ability to use symbols and thus to create and maintain culture. Our nearest relatives—chimpanzees and gorillas—have rudimentary cultural abilities. No other animal, however, has elaborated cultural abilities—to learn, to communicate, and to store, process, and use information—to the extent that *Homo* has.

Culture Is Shared

Culture is an attribute not of individuals per se but of individuals as members of *groups*. Culture is transmitted in society. We learn our culture by observing, listening, talking, and interacting with many other people. Shared beliefs, values, memories, and expectations link people who grow up in the same culture. Enculturation unifies people by providing us with common experiences. Today's parents were yesterday's children. If they grew up in North America, they absorbed certain values and beliefs transmitted over the generations. People become agents in the enculturation of their children, just as their parents were for them. Although a culture changes constantly, certain fundamental beliefs, values, worldviews, and child-rearing practices endure. One example of enduring shared enculturation is the American emphasis on self-reliance and independent achievement.

Despite characteristic American notions that people should "make up their own minds" and "have a right to their opinion," little of what we think is original or unique. We share our opinions and beliefs with many other people—nowadays not just in person but also via new media. Think about how often (and with whom) you share information or an opinion via texting, Facebook, Instagram, Snapchat, or Twitter. Illustrating the power of shared cultural background, we are most likely to agree with and feel comfortable with people who are socially, economically, and culturally similar to ourselves. This is one reason Americans abroad tend to socialize with each other, just as French and British colonists did in their overseas empires. Birds of a feather flock together, but for people, the familiar plumage is culture.

Culture and Nature

Culture takes the natural biological urges we share with other animals and teaches us how to express them in particular ways. People have to eat, but culture teaches us what, when, and how. In many cultures, people have their main meal at noon, but most North Americans prefer a large dinner. English people may eat fish for breakfast, while North

Americans may prefer hot cakes and cold cereals. Brazilians put hot milk into strong coffee, whereas North Americans pour cold milk into a weaker brew. Midwesterners dine at 5 or 6 P.M., Spaniards at 10 P.M.

Culture molds "human nature" in many directions. People have to eliminate wastes from their bodies. But some cultures teach people to defecate squatting, while others tell them to do it sitting down. A generation ago, in Paris and other French cities, it was customary for men to urinate almost publicly, and seemingly without embarrassment, in barely shielded *pissoirs* located on city streets. Our "bathroom" habits, including waste elimination, bathing, and dental care, are parts of cultural traditions that have converted natural acts into cultural customs.

Our culture—and cultural changes—affect the ways in which we perceive nature, human nature, and "the natural." Through science, invention, and discovery, cultural advances have overcome many "natural" limitations. We prevent and cure diseases, such as polio and smallpox, that felled our ancestors. We can use pills to restore and enhance sexual potency. Through cloning, scientists have altered the way we think about biological identity and the meaning of life itself. Culture, of course, has not freed us from natural disasters. Hurricanes, earthquakes, tsunamis, and other natural forces regularly challenge our efforts to modify the environment through building, development, and expansion.

Cultures are integrated systems. When one behavior pattern changes, others also change. During the 1950s, most American women expected to have careers as wives, mothers, and domestic managers. As more and more women have entered the workforce, attitudes toward work and family have changed. In the earlier photo, a 1950s mom and kids do the dishes. In the recent photo, a doctor and two nurses examine a patient's record. What do you imagine these three women do when they get home?

(top): ©William Gottlieb/Corbis; (bottom): ©Tom Tracy Photography/Alamy Stock Photo

Culture Is All-Encompassing

For anthropologists, culture includes much more than refinement, taste, sophistication, education, and appreciation of the fine arts. Not only college graduates but all people are "cultured." The most interesting and significant cultural forces are those that affect people every day of their lives, particularly those that influence children during enculturation. *Culture,* as defined anthropologically, encompasses features that sometimes are considered trivial or unworthy of serious study, such as "popular" culture. To understand contemporary North American culture, however, we must consider social media, cell phones, the Internet, television, fast-food restaurants, sports, and games. As a cultural manifestation, a rock star may be as interesting as a symphony conductor, a comic book as significant as a book-award winner.

Culture Is Integrated

Cultures are not haphazard collections of customs and beliefs. Cultures are integrated, patterned systems. If one part of the system (e.g., the economy) changes, other parts also change. For example, during the 1950s, most American women planned domestic careers as homemakers and mothers. Since then, an increasing number of American women, including wives and mothers, have entered the workforce. Only 32 percent of married American women worked outside the home in 1960, compared to about 60 percent today.

Economic changes have social repercussions. Attitudes and behavior about marriage, family, and children have changed. Late marriage, "living together," and divorce have become commonplace. Work competes with marriage and family responsibilities and reduces the time available to invest in child care.

Cultures are integrated not simply by their dominant economic activities and related social patterns but also by sets of values, ideas, symbols,