NINTH EDITION

CONRAD PHILLIP KOTTAK

WINDOW ON HUMANITY

A Concise Introduction to Anthropology

Mc Graw Hill

Window on Humanity

A Concise Introduction to Anthropology

Ninth Edition

Conrad Phillip Kottak
University of Michigan

Mc Graw Hill

WINDOW ON HUMANITY: A CONCISE INTRODUCTION TO ANTHROPOLOGY, NINTH EDITION

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To my wife,
Isabel Wagley Kottak

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Mirror for Humanity: A Concise Introduction to Cultural Anthropology, 12th ed. (2020)

Anthropology: Appreciating Human Diversity, 18th ed. (2019)

Cultural Anthropology: Appreciating Cultural Diversity, 18th ed. (2019)

CULTURE, 2nd ed. (2014) (Lisa Gezon and Conrad Phillip Kottak)

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

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Preface

Window on Humanity is intended to provide a concise, readable introduction to general (four-field) anthropology. Its shorter length increases the instructor's options for assigning additional reading—case studies, readers, and other supplements—in a semester course. *Window* also can work well in a quarter system, for which traditional texts may be too long.

Just as anthropology is a dynamic discipline that encourages new discoveries and explores the profound changes now affecting people and societies, this edition of *Window on Humanity* 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. **Connect** also includes **SmartBook,** the 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 9th edition has benefited from feedback from more than 2,000 students who worked with these tools and programs while using the 8th edition of *Window* or one of my other recent texts. We were able to 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. In preparing this edition, I benefited tremendously from both students' and professors' reactions to my book.

As I work 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 content changes as well as specific features relevant to our changing world. One of my primary goals is to help students make connections between what they read and their own lives. Accordingly, the "Anthropology Today" boxes placed near the end of each chapter examine recent developments in anthropology as well as contemporary topics and issues that are clearly related to anthropology's subject matter. Each chapter also contains a feature that I call "Think Like an Anthropologist," which attempts to get students to do just that—to apply their critical thinking skills as an anthropologist might.

I realize that 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 understanding and appreciation of human diversity and of anthropology as a field. 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.

McGraw-Hill Connect Anthropology

Connect Anthropology is a premier digital teaching and learning tool that allows instructors to assign and assess course material. Connect Anthropology includes assignable and assessable quizzes, exercises, and interactive activities, organized around course-specific learning objectives. **NewsFlash** activities, which are updated regularly, bring in articles on current events relevant to anthropology with accompanying assessment.

The system is praised by users—faculty and students alike—for helping to make both teaching and learning more efficient, saving time and keeping class time and independent study time focused on what is most important and only those things that still need reinforcing, and shifting the teaching/learning process away from memorization and cramming. The result is better grades, better concept retention, more students staying in class and passing, and less time spent preparing classes or studying for tests.

Provide a Smarter Book and Better Value with SmartBook

SMARTBOOK™ Available within Connect, SmartBook makes study time as productive and efficient as possible by identifying and closing knowledge gaps. SmartBook identifies what an individual student knows and doesn't know based on the student's confidence level, responses to questions and other factors.

SmartBook 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.

Chapter-by-Chapter Changes

The 9th edition of *Window on Humanity* was extensively informed by student data, collected anonymously by McGraw-Hill Education's SmartBook. This data graphically illustrated "hot spots" where students struggle the most—at both the sentence and paragraph level—which yielded a plan for revision and improvement centered on the content that is toughest for students.

In addition to revisions and updates throughout the book, the following are this edition's major or significant changes:

Chapter 1: What Is Anthropology?

- Updated "Anthropology Today" box, "School of Hope."

Chapter 2: Culture

- Expanded discussion of cultural appropriation.
- Revised and expanded section on globalization.
- Updates throughout, especially in the "Anthropology Today" box, "Preserving Cultural Heritage."

Chapter 3: Doing Anthropology

- New information on the use of LiDAR ("Light Detection and Ranging") technology as a tool for understanding the past, specifically in the Maya area.
- New discussion of fluorine dating and its role in uncovering the Piltdown hoax.
- A new "Anthropology Today" box, "A Workshop in Genomics for Indigenous Peoples," has been added.

Chapter 4: Evolution, Genetics, and Human Variation

- The "Evolution" section now discusses A. R. Wallace's role in recognizing natural selection as the prime mechanism of biological evolution.
- The "Human Biological Adaptation" section includes a rewritten subsection, "Genes and Disease."

Chapter 5: The Primates

- Rewritten "Our Place among Primates" section, with two new subheads: "Apes Are Our Closest Relatives" and "Zoological Taxonomy."
- New discussion of *Nyanzapithecus alesi* in the "Miocene Hominoids" section.

Chapter 6: Early Hominins

- The Piltdown hoax is now part of an expanded discussion of bipedalism versus brain size as a key marker of "What Makes Us Human?"
- Expanded discussion of *Au. sediba* as one of "The Varied Australopiths."
- New "Anthropology Today" box, "3-D Bone Scans Suggest Lucy's Climbing Ability and Cause of Death".

Chapter 7: The Genus *Homo*

- This chapter has been extensively revised and updated, reflecting new discoveries, and condensed to fit in the new information.
- New section, "Neandertals, Denisovans, and Anatomically Modern Humans."
- A new section, "Asian Island Anomalies," updates the discussion of *H. floresiensis* (Indonesia) and discusses the more recently reported find of *H. luzonensis* (Philippines).
- 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 on the 2017 Madjedbebe discoveries in Australia.

- New discussion of a monumental 2018 report based on DNA analysis of American fossil finds, and detailing the branching of ancestral Native Americans as they settled the Americas.

Chapter 8: The First Farmers

- A new major subhead titled "American First?" exposes the foreign roots of key features of our daily lives.
- There is a new discussion of recent evidence, from a Jordanian desert, for the world's earliest bread.

Chapter 9: The First Cities and States

- The discussion of Maya civilization has been expanded and updated, based on information from the recent LiDAR survey of northern Guatemala.
- The "Anthropology Today" box on "The Fantastic Claims of Pseudo-Archaeology" has been revised.

Chapter 10: Language and Communication

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

Chapter 11: Making a Living

- There is a new "Anthropology Today" box: "When the Mills Shut Down: An Anthropologist Looks at Deindustrialization."
- The author paid special attention to clarifying writing and Learn Smart probes for this chapter.

Chapter 12: Political Systems

- The "Anthropology Today" box, "The Illegality Industry: A Failed System of Border Control," has been updated.

Chapter 13: Families, Kinship, and Marriage

- The "Families" section has been thoroughly updated, including a new discussion of the extended families of the Moso people of southwestern China and updated statistics concerning changes in North American kinship.
- A new section,"It's All Relative," examines the definition of close family relations in light of the Trump administration's Muslim travel ban.
- The "Same-Sex Marriage" section has been significantly updated.
- Recent research and a new Figure 13.4, "Why Americans Marry" have been incorporated within the "Arranged Marriages versus Romance Marriages" section.
- The introduction to the "Plural Marriages" section has been rewritten to clarify the difference between polygyny and polyandry.
- The "The Online Marriage Market" section incorporates new research.

- The author paid special attention to clarifying writing and SmartBook probes for this chapter.

Chapter 14: Gender

- The "Gender in Industrialized Societies" section has been heavily revised and updated.
- The "Beyond Male and Female" section has been revised substantially to clarify American gender categories in flux.

Chapter 15: Religion

- The "World Religions" section has been revised to incorporate the latest statistics.
- A new section on "Religious Changes in the United States" has been added.
- Content of the previous "Anthropology Today" box, "Newtime Religion," has been moved into the text.
- The new "Anthropology Today" box, "Great Expectorations," brings back (by popular demand) a discussion of baseball magic.

Chapter 16: Ethnicity and Race

- All sections have been substantially revised, with new photos and statistics.
- Newly available data from the 2016 census now informs the discussion of Canadian ethnic diversity.
- A new discussion of biracial Japanese has been added.
- Results of a new study of cultural/ethnic/linguistic diversity among 180 countries have been added.
- Also added are new demographic projections for the United States through 2060, including significant growth in the dependency ratio.
- Recent election results now inform the "Backlash to Multiculturalism" section.

Chapter 17: Applying Anthropology

- A new section, "Can Change Be Bad," applies this chapter's key point—that innovation succeeds best when it is culturally appropriate—to the international spread of programs aimed at social and economic change as well as of businesses.
- The author paid special attention to clarifying writing and Learn Smart probes for this chapter.

Chapter 18: The World System, Colonialism, and Inequality

- "The Persistence of Inequality" section, including discussion of the water crisis in Flint, Michigan, has been updated, and a new section on exposure to risks that reduce life expectancy has been added.
- The "Development/Neoliberalism" sections include an updated discussion on tariffs and trade agreements, including NAFTA (now USMCA).
- "The World System Today" and the "Anthropology Today" box have been revised and updated.
- The author paid special attention to clarifying writing and SmartBook probes for this chapter.

Chapter 19: Anthropology's Role in a Globalizing World

- Updated statistics on energy consumption and an updated and expanded Table 19.1, Total Energy Consumption, 2017, Top Twelve Countries (in MTOE—Million Tons of Oil Equivalent) + Current Share of World Energy Consumption + Annual Percentage Increase + Per Capita Energy Consumption by Country.
- The "Global Climate Change" section incorporates the latest statistics, has two new subheads: "Emissions and Global Warming" and "Climate Change," and adds a discussion of the implications of the devastating 2017 hurricanes (Harvey, Irma, and Maria).
- The "Interethnic Contact" section adds new information and statistics on media penetration and impact in Brazil and the Middle East.
- The author paid special attention to clarifying writing and SmartBook probes for this chapter.

Content and Organization

No single or monolithic theoretical perspective orients this book. My e-mail, along with reviewers' comments, confirms that instructors with a very wide range of views and approaches have been pleased with *Window* as a teaching tool.

- In Chapter 1, anthropology is introduced as an integrated four-field discipline, with academic and applied dimensions, that examines human biological and cultural diversity in time and space. Anthropology is discussed as a comparative and holistic science, featuring biological, social, cultural, linguistic, humanistic, and historical approaches. Chapter 2 examines the central anthropological concept of culture, including its symbolic and adaptive features. Chapter 3 is about doing anthropology—the methods and ethics of research in anthropology's subfields.
- The chapters focusing on biological anthropology and archaeology (4, 5, 6, 7, 8, and 9) offer up-to-date answers to several key questions: When did humans originate, and how did we become what we are? What role do genes, the environment, society, and culture play in human variation and diversity? What can we tell about our origins and nature from the study of our nearest relatives—nonhuman primates? When and how did the primates originate? What key features of their early adaptations are still basic to our abilities, behavior, and perceptions? How did hominids develop from our primate ancestors? When, where, and how did the first hominins emerge and expand? What about the earliest real humans? How do we explain biological diversity in our own species, *Homo sapiens?* What major transitions have taken place since the emergence of *Homo sapiens?*
- Chapters 8 and 9 discuss the Neolithic, especially the domestication of plants and animals, as a major adaptive change, with profound implications for human lifeways. The spread and intensification of farming and herding are tied to the appearance of the first towns, cities, and states, as well as the emergence of social stratification and major social inequalities.

- The chapters on linguistic and sociocultural anthropology (10, 11, 12, 13, 14, 15, 16, 17, 18, and 19) are organized to place related content close together—although they are sufficiently independent to be assigned in any order the instructor might select. Thus, "Political Systems" (Chapter 12) logically follows "Making a Living" (Chapter 11). Chapters 13 and 14 ("Families, Kinship, and Marriage" and "Gender," respectively) also form a coherent unit. The chapter on religion (15) covers not just traditional religious practices but also contemporary world religions and religious movements. It is followed by four chapters (16, 17, 18, and 19) that form a natural unit exploring sociocultural transformations and expressions in today's world.
- Those last four chapters address several important questions: How are race and ethnicity socially constructed and handled in different societies, and how do they generate prejudice, discrimination, and conflict? How and why did the modern world system emerge and expand? How has world capitalism affected patterns of stratification and inequality within and among nations? What were colonialism, imperialism, and Communism, and what are their legacies? How do people today actively interpret and confront the world system and the products of globalization? What factors threaten continued human diversity? How can anthropologists work to ensure the preservation of that diversity?
- Let me also single out two chapters present in *Window on Humanity* but not found consistently in other anthropology texts: "Ethnicity and Race" (Chapter 16) and "Gender" (Chapter 14). I believe that systematic consideration of race, ethnicity, and gender is vital in an introductory anthropology text. Anthropology's distinctive four-field approach can shed special light on these topics. We see this not only in Chapter 16 ("Ethnicity and Race") but also in Chapter 4 ("Evolution, Genetics, and Human Variation"), in which race is discussed as a problematic concept in biology. Race and gender studies are fields in which anthropology always has taken the lead. I'm convinced that anthropology's special contributions to understanding the biological, social, cultural, and linguistic dimensions of race, ethnicity, and gender should be highlighted in any introductory text.

Teaching Resources

The following instructor resources can be accessed through the Library tab in **Connect Anthropology:**

- Instructor's manual
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As usual, my family provides me with understanding, support, and inspiration in my writing projects. Dr. Nicholas Kottak and Dr. Juliet Kottak Mavromatis regularly share their insights with me, as does Isabel Wagley Kottak, my long-term companion in the field and in life, to whom this book is dedicated.

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Feedback from students and from my fellow anthropologists, along with teaching forums and workshops, keeps me up-to-date on the interests, needs, and views of the people for whom *Window* is written. I also benefit from my long-term and ongoing participation in the General Anthropology Division (GAD) of the American Anthropological Association and my co-editorship (with Chris Furlow and Kathryn Kozaitis) of the GAD Bulletin *General Anthropology*. I continue to believe that effective anthropology textbooks are based in the enjoyment of teaching, respect for students, and appreciation of anthropology as a holistic and humanistic science. I hope this product of my experience will continue to be helpful to others.

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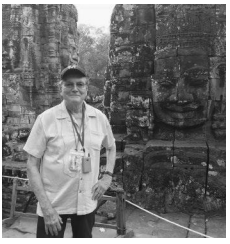
About the Author



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

Conrad Phillip Kottak,

who received his AB and PhD degrees from 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 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. He co-edits *General Anthropology,* the biannual bulletin of the General Anthropology Division of the American Anthropological Association.

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 media, including new media and social media.

Kottak's popular case study *Assault on Paradise: The Globalization of a Little Community in Brazil* (2006, reissued and updated by Waveland Press in 2018) 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* (1980), *Researching American Culture: A Guide for Student Anthropologists* (1982), *Madagascar: Society and History* (1986), and *Media and Middle Class Moms: Images and Realities of Work and Family* (with Lara Descartes, 2009). The most recent editions (18th) of his texts *Anthropology: Appreciating Human Diversity* 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* (12th ed., McGraw-Hill, 2020) and of this book—*Window on Humanity: A Concise Introduction to Anthropology* (9th ed., McGraw-Hill, 2020).

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 more popular journals, including *Transaction/SOCIETY, Natural History, Psychology Today,* and *General Anthropology.*

In other research projects, Professor Kottak and his colleagues have investigated ecological awareness in Brazil, biodiversity conservation in Madagascar, and media use by modern American families. Most recently, he has collaborated with Professor Richard Pace 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," a project supported by the National Science Foundation.

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

Chapter 1

What Is Anthropology?

The Cross-Cultural Perspective

Human Adaptability

Adaptation, Variation, and Change

Cultural Forces Shape Human Biology

General Anthropology

The Subdisciplines of Anthropology

Cultural Anthropology

Anthropological Archaeology

Biological Anthropology

Linguistic Anthropology

Applied Anthropology

Anthropology and Other Academic Fields

A Humanistic Science

Cultural Anthropology and Sociology

Anthropology Today: School of Hope

The Cross-Cultural Perspective

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

Anthropology offers a broader view—a distinctive comparative, cross-cultural perspective. Most people think that anthropologists study nonindustrial societies, and they do. My research has taken me to remote villages in Brazil and Madagascar, a large island off the southeast coast of Africa. In Brazil I sailed with fishers in simple sailboats on Atlantic waters. Among Madagascar's Betsileo people, I worked in rice fields and took part in ceremonies in which I entered tombs to rewrap the corpses of decaying ancestors.

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

Today's anthropologists work in varied roles and settings. Nory Condor Alarcon (top photo) is an anthropologist who works for the Forensic Laboratory of the Public Ministry of Ayacucho, Peru. Here she comforts a young woman as she confirms that the lab's forensic team has identified the remains of several of her close relatives. In the bottom photo, a group of experts including anthropologist Mac Chapin (left), hold a press conference at UN Headquarters in New York introducing a new high-tech map of Indigenous Peoples of Central America. (top): Robin Hammond/ IDRC/Panos Pictures/Redux Pictures; (bottom): Eduardo Munoz Alvarez/AFP/Getty Images

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 American college students? That question 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.

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

Human Adaptability

Anthropologists study human beings wherever and whenever they find them—in a Turkish café, a Mesopotamian tomb, or a North American shopping mall. Anthropology is the exploration of human diversity in time and space. Anthropology studies the whole of the human condition: past, present, and future; biology, society, language, and culture. 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 *Star Trek* starship *Enterprise* in Washington's Smithsonian Institution is a symbol of the *Star Trek* mission "to seek out new life and new 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.

People share **society**—organized life in groups—with other animals, including baboons, 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: How should we do things? How do we make sense of the world? How do we tell right from 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 had at least some of the biological capacities on which culture depends. These abilities are to learn, to think symbolically, to use language, and to employ tools and other products in organizing their lives and adapting to their environments.

Anthropology confronts and ponders major questions of human existence as it explores human biological and cultural diversity in time and space. By examining ancient bones and tools, we unravel the mysteries of human origins. When did our ancestors separate from those remote great-aunts and great-uncles whose descendants are the apes? Where and when did *Homo sapiens* originate? How has our species changed? What are we now, and where are we going? How have changes in culture and society influenced biological change? Our genus, *Homo,* has been changing for more than 2 million years. Humans continue to adapt and change both biologically and culturally.

Adaptation, Variation, and Change

Adaptation refers to the processes by which organisms cope with environmental forces and stresses, such as those posed by climate and *topography* or terrains, also called landforms. How do organisms change to fit their environments, such as dry climates or high mountain altitudes? Like other animals, humans use biological means of adaptation. But humans are unique in also having cultural means of adaptation.

Mountainous terrains pose particular challenges, those associated with high altitude and oxygen deprivation. Consider four ways (one cultural and three biological) in which humans may cope with 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. All these varied adaptive responses—cultural and biological—achieve a single goal: maintaining an adequate supply of oxygen to the body. Table 1.1 summarizes the cultural and biological means that humans use to adapt to high altitudes.

TABLE 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

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 a wide range of environments. The rate of cultural adaptation and change has accelerated, particularly during the past 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 and the forces of globalization have 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. People must cope with forces generated by progressively larger systems—region, nation, and world. The study of such contemporary adaptations generates 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).

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.) 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.

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, including at the Olympics. Brazilian women have been less successful in those competitive individual sports. One reason why Brazilian women may avoid competitive swimming in particular 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 nations that have produced them most consistently are the United States, Canada, Australia, Germany, the Scandinavian nations, the Netherlands, and former Soviet countries, especially Russia. In those countries, this body type isn't as stigmatized as it is in Latin countries. For women, Brazilian culture traditionally has preferred developed hips and buttocks to a muscled upper body. Many young female swimmers in Brazil choose to abandon the sport rather than their culture's "feminine" body ideal.

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. Tim de Waele/Corbis/Getty Images

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? 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 as readily recognize the role that *culture* plays in shaping bodies, personalities, and personal health. If nutrition matters in growth, so, too, do cultural guidelines. What toys and games are appropriate 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 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 nutrition, heat, cold, and altitude do. Culture also guides our emotional and cognitive growth and helps determine the kinds of personalities we have as adults.

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, the shorter term *cultural anthropology* will be used as a synonym for *sociocultural anthropology*.) Of the subfields, cultural anthropology has the largest membership. Most departments of anthropology teach courses in all four subfields.

There are historical reasons for the inclusion of four subfields in a single discipline. The origin of anthropology as a scientific field, and of American anthropology in particular, can be traced 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 Asia? (Note that a unified four-field anthropology did not develop in Europe, where the subfields tend to exist separately.)

Early American anthropology was especially concerned with the history and cultures of Native North Americans. Ely S. Parker, or Ha-sa-no-an-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

There also are logical reasons for the unity of American anthropology. Each subfield considers variation in time and space (that is, in different geographic areas). Cultural anthropologists and anthropological archaeologists study changes in social life and customs (among many other topics). Archaeologists use studies of living societies to imagine what life might have been like in the past. Biological anthropologists examine evolutionary changes in human biology. Linguistic anthropologists may reconstruct the basics of ancient languages by studying modern ones.

The subfields influence each other as anthropologists talk to each other, read books and journals, and meet in professional organizations. 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 sound conclusions about "human nature" cannot be derived from studying a single population, nation, society, or cultural tradition. A comparative, cross-cultural approach is essential.

The Subdisciplines of Anthropology

Cultural Anthropology

Cultural anthropology is the study of human society and culture. This subfield 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 culture, society, or community. During ethnographic fieldwork, the ethnographer gathers data that he or she organizes, analyzes, and interprets to develop that account, which may be in the form of a book, an article, or a film. Traditionally, ethnographers have lived in small communities and studied local behavior, beliefs, customs, social life, economic activities, politics, and religion (see Galman 2018; Okely 2012; Vivanco 2017; Wolcott 2008).

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 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. As noted by Franz Boas (1940/1966) many years ago, contact between neighboring tribes always has existed and has extended over enormous areas. "Human populations construct their cultures in interaction with one another, and not in isolation" (Wolf 1982, p. ix). Villagers increasingly participate in regional, national, and world events. Exposure to external forces comes through education, the mass media, migration, and modern transportation. (The "Anthropology Today" box at the end of this chapter examines the role of a residential school in eastern India in bridging barriers between cultures.) City and nation increasingly

TABLE 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
Is often descriptive	Is usually synthetic
Is specific to a group or community	Is comparative and cross-cultural

invade local communities with the arrival of teachers, tourists, development agents, government and religious officials, and political candidates. Such linkages are prominent components of regional, national, and international 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, compares, analyzes, and interprets the results of ethnography—the data gathered in different societies. Ethnologists use such data to compare, contrast, and generalize about society and culture. Looking beyond the particular to the more general, they 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. Ethnology gets its data for comparison not only from ethnography but also from the other subfields, particularly from anthropological archaeology, which reconstructs social systems of the past. (Table 1.2 summarizes the main contrasts between ethnography and ethnology.)

Anthropological Archaeology

Anthropological archaeology (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 ancient garbage tell stories about consumption and activities. Wild and domesticated grains have different characteristics, which allow archaeologists to distinguish between gathering and cultivation. Examination of animal bones reveals the ages of slaughtered animals and provides other information useful in determining whether species were wild or domesticated.

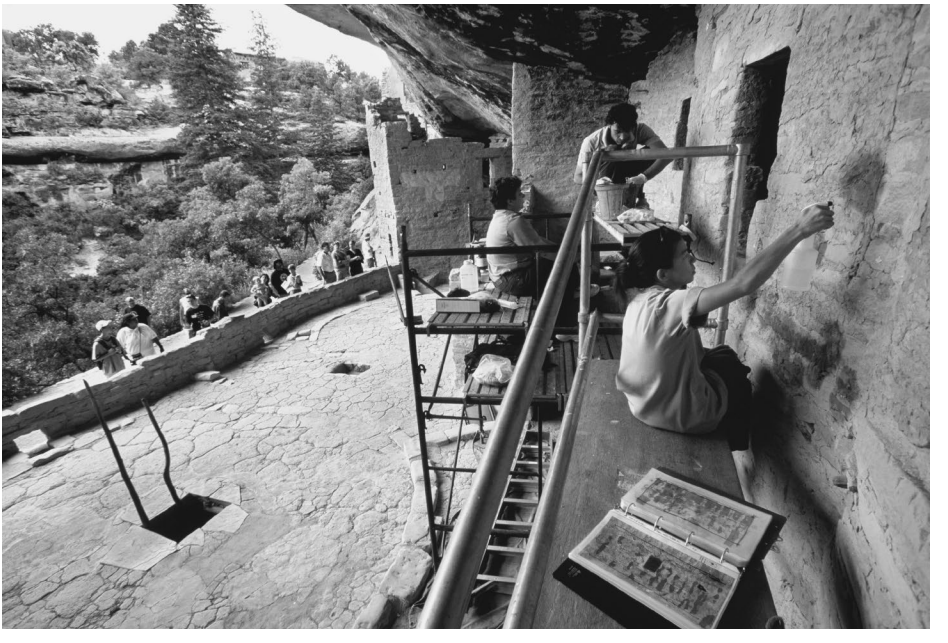
Analyzing such data, archaeologists answer several questions about ancient economies: Did the group get its meat from hunting, or did it domesticate and breed animals, killing only those of a certain age and sex? Did plant food come from wild plants or from sowing, tending, and harvesting crops? Did 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 considerable 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 that were not available 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.

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 went to attend ceremonies. Others were burial sites; still others were farming communities.



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. George H.H. Huey/Alamy Stock Photo

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 (see Sabloff 2008). 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 well-known research project in Tucson, Arizona, archaeologist William Rathje learned a great deal about contemporary life by studying modern garbage (Zimring 2012). 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 three Tucson neighborhoods that reported the lowest beer consumption actually had the highest number of discarded beer cans per household (Rathje and Murphy 2001; Zimring 2012)!

Biological Anthropology

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 modern-day 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

We don't know (and probably never will) when our ancestors acquired the ability to speak, although biological anthropologists have looked to the anatomy of the face, skull, and vocal tract to speculate about the origin of language. Primatologists have described the communication systems of monkeys and apes. We do know that 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 make inferences about universal features of language, linked perhaps to uniformities in the human brain. Others reconstruct ancient languages by comparing their contemporary descendants. Still others study linguistic differences to discover varied perceptions and patterns of thought in different cultures (see Bonvillain 2012, 2016).

Historical linguistics considers variation in time, such as the changes in sounds, grammar, and vocabulary between Middle English (spoken from approximately C.E. [formerly A.D.] 1050 to 1550) and modern English. **Sociolinguistics** investigates relationships between social and linguistic variation: How do different speakers use a given language? How do linguistic features correlate with social factors, including class and gender differences (Coates 2016; Eckert and McConnell-Ginet 2013)? 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) has stated, applied anthropology is "concerned with the relationships between anthropological knowledge and the uses of that knowledge in the world beyond anthropology" (p. 309). 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.

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 resource management, public educational programs, and historic preservation. Legislation requiring evaluation of sites threatened by dams, highways, and other construction

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. Richard Drew/AP Images

TABLE 1.3 The Four Subfields and Two Dimensions of Anthropology

Anthropology's Subfields (General Anthropology)	Examples of Application (Applied Anthropology)
Cultural anthropology	Development anthropology
Anthropological archaeology	Cultural resource management (CRM)
Biological anthropology	Forensic anthropology
Linguistic anthropology	Study of linguistic diversity in classrooms

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 proposed changes and determining how they can be reduced. Table 1.3 relates anthropology's four subfields to its two dimensions.

Anthropology and Other Academic Fields

As mentioned previously, one of the main differences between anthropology and the other fields that study people is anthropology's unique blend of biological, social, linguistic, cultural, historical, and contemporary perspectives. Paradoxically, while distinguishing anthropology, this breadth is what also links it to many other disciplines. For instance, 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.

A Humanistic Science

As a discipline that is both scientific and humanistic, anthropology has links with many other academic fields. 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 references to the material and physical world" (*Webster's New World Encyclopedia* 1993. College Edition. Englewood Cliffs, NJ: Prentice Hall. p.937). The chapters that follow present anthropology as a humanistic science devoted to discovering, describing, understanding, 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, is especially closely related to anthropology. Also linked is folklore, the systematic study of tales, myths, and legends from a variety of cultures. One might well argue that anthropology is among 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 and cultures. 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

Students often ask about how anthropology differs from sociology, which is probably the discipline closest to anthropology, specifically to sociocultural anthropology. Like anthropologists, particularly 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, traditionally focused on nonindustrial and non-Western societies. Sociologists and anthropologists developed different methods to study these different kinds of society. To study contemporary Western societies, which tend to be large-scale, complex nations, sociologists have relied on surveys and other means of gathering quantifiable data. Sociologists must 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.

Traditionally, ethnographers 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.

Anthropology Today *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 another 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.

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 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).

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 of Christine Finnan

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 more fully evaluate KISS's success in meeting its goals, Finnan has retained her connection with the school. She recently (2018) received data indicating that KISS's 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, whereas over 80 percent of tribal students drop out of district schools before completing 10th 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.

This chapter examined the difference between applied and academic anthropology. Think about whether Finnan's research was 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?

In today's interconnected world, however, the interests and methods of anthropology and sociology have converged—come together—as they study many 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 cultural anthropologists are rural-urban migration and transnational (from one country to another) migration, inner-city life, religious/ethnic conflict, crime, and warfare. Contemporary anthropologists are as likely as sociologists to study race, ethnicity, gender, inequality, power, and globalization.

Summary

1. Anthropology is the holistic, biocultural, and comparative study of humanity. It is the systematic exploration of human biological and cultural diversity across time and space. Examining the origins of, and changes in, human biology and culture, anthropology provides explanations for similarities and differences among humans and their societies.
2. The four subfields of general anthropology are (socio)cultural 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. Anthropology's biocultural perspective is a particularly effective way of approaching interrelations between biology and culture. Cultural forces mold human biology, including our body types and images.
3. Cultural anthropology explores the cultural diversity of the present and the recent past. Archaeology reconstructs cultural patterns, often of prehistoric populations. Biological anthropology documents diversity involving fossils, genetics, growth and development, bodily responses, and nonhuman primates. Linguistic anthropology considers diversity among languages. 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. Sociologists traditionally study Western, industrial societies, whereas anthropologists have focused on rural, nonindustrial peoples.

Think Like an Anthropologist

1. 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.

2. 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 where an anthropologist could help identify, assess, and solve contemporary social problems.

Key Terms

adaptation, *4*
anthropological archaeology, *9*
anthropology, *3*
applied anthropology, *13*
biocultural, *5*
biological anthropology, *11*
cultural anthropology, *8*
cultural resource management (CRM), *14*
culture, *3*
ethnography, *8*
ethnology, *9*
food production, *5*
general anthropology, *7*
holistic, *3*
linguistic anthropology, *12*
science, *14*
society, *3*
sociolinguistics, *12*

Chapter 2

Culture

What Is Culture?
- *Culture Is Learned*
- *Culture Is Symbolic*
- *Culture Is Shared*
- *Culture and Nature*
- *Culture Is All-Encompassing and Integrated*
- *Culture Is Instrumental, Adaptive, and Maladaptive*

Culture's Evolutionary Basis
- *What We Share with Other Primates*
- *How We Differ from Other Primates*

Universality, Generality, and Particularity
- *Universals and Generalities*
- *Particularity: Patterns of Culture*

Culture and the Individual

Levels of Culture

Ethnocentrism, Cultural Relativism, and Human Rights

Mechanisms of Cultural Change

Globalization
- *Anthropology Today: Preserving Cultural Heritage*

What Is Culture?

In Chapter 1 we saw that humans share *society*, organized life in groups, with social animals, such as apes, monkeys, wolves, and ants. Although other animals, especially apes, have rudimentary cultural abilities, only humans have fully elaborated cultures—distinctive traditions and customs transmitted over the generations through learning and through language.

The concept of culture has long been basic to anthropology. Well over a century ago, in his book *Primitive Culture*, the British anthropologist 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 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 in which they are exposed to a specific cultural tradition. **Enculturation** is the process by which a child *learns* his or her culture.

Culture Is Learned

The ease with which children absorb their cultural tradition rests on the uniquely elaborated human capacity to learn. Other animals may learn from experience, so that, for example, they avoid fire after discovering that it hurts. Social animals also learn from other members of their group. Wolves, for example, 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 stand for, or signify.

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 (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 person 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 just 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 Brazilians or Italians to stand closer together than North Americans do; they learn to do so as part of their cultural tradition.

Culture Is Symbolic

Symbolic thought is unique and crucial to humans and to cultural learning. A symbol is something verbal or nonverbal, within a particular language or culture, that comes to stand for something else. There need be no obvious, natural, or necessary connection between a symbol and the thing that it symbolizes. The familiar pet that barks is no more naturally a *dog* than it is a *chien*, *Hund*, or *mbwa*, the words for "dog" in French, German, and Swahili, respectively. Language is one of the distinctive possessions of *Homo sapiens.* No other animal has developed anything approaching the complexity of language, with its multitude of symbols.

There also is a rich array of nonverbal symbols. Flags, for example, stand for various countries, as arches do for a hamburger chain. Holy water is a potent symbol in Roman

Children acquire culture through instruction, observation, and participation. Here we see diverse American kids participating in a national tradition, as they celebrate Independence Day (July 4).
Ariel Skelley/Getty Images

Catholicism. As is true of all symbols, the association between water and what it stands for (holiness) is arbitrary and conventional. Water probably 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 associated arbitrarily with a particular meaning for Catholics, who share beliefs and experiences that are based on learning and 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.

All humans possess the abilities on which culture rests—the abilities 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. However, no other animal has elaborated cultural abilities 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 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 constantly changes, 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, Twitter, and other apps. 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 colonials 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 eat fish (e.g., kippers—kippered herring) for breakfast, but North Americans prefer hot cakes and cold cereals. Brazilians put hot milk into strong coffee, whereas many North Americans pour cold milk into a weaker brew. Midwesterners dine at 5 or 6, Spaniards at 10.

Cultural habits, perceptions, and inventions mold "human nature" into many forms. 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. Peasant women in the Andean highlands squat in the streets and urinate, getting all the privacy they need from their massive skirts. All these habits are parts of cultural traditions that have converted natural acts into cultural customs.

Culture influences how we perceive nature, human nature, and "the natural," and cultural advances have overcome many "natural" limitations. We can prevent and cure diseases, such as polio and smallpox, that felled our ancestors. We can use pills to enhance or restore sexual potency. Through cloning, scientists have challenged the way we think about biological identity and the meaning of life itself. Culture, of course, does not always protect us. Hurricanes, earthquakes, tsunamis, floods, and other natural forces regularly thwart our efforts to modify the environment through building, development, and expansion.

Culture Is All-Encompassing and Integrated

For anthropologists, culture includes much more than refinement, good 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 those of "popular" culture. To understand contemporary North American culture, we must consider holidays, mass media, the Internet, fast food, sports, and games. As a cultural manifestation, a rock star may be as interesting as a symphony conductor (or vice versa); a comic book may be as significant as a book-award winner.

The term **popular culture** encompasses aspects of culture that have meaning for many or most people within the same national culture. American examples include July 4th, Halloween, Thanksgiving, football, homecoming dances, dinner-and-a-movie dates, and retirement parties. Although popular culture is available to us all, we use it selectively, and its meaning varies from one person to the next. For example, the World Cup, the Super Bowl, Taylor Swift, *Star Wars*, and *The Simpsons* mean something different to each of their fans. All of us creatively consume and interpret print media, music, television, films, theme parks, celebrities, politicians, and other popular culture products.

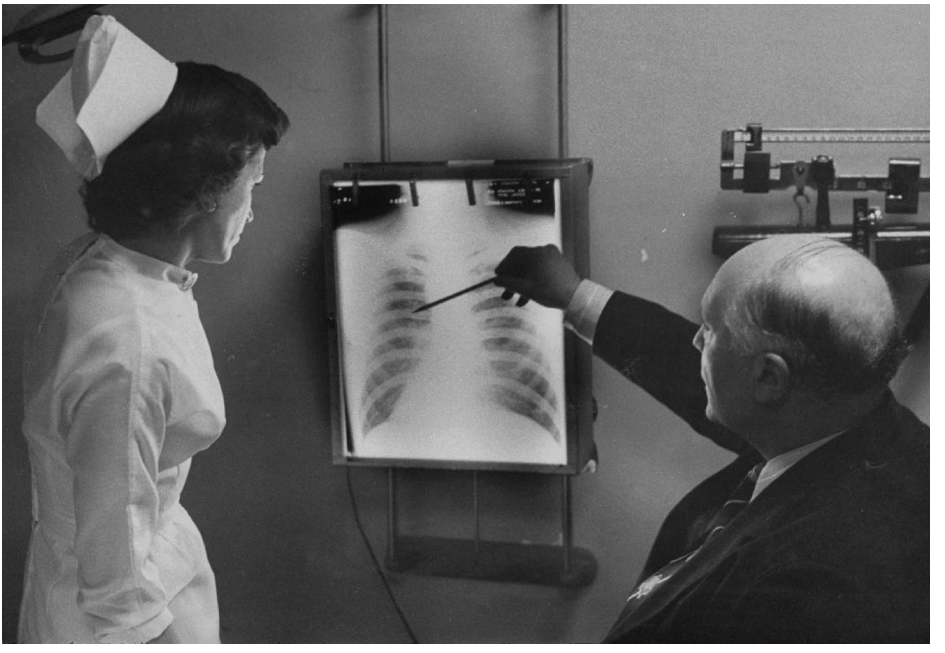
Cultures are not haphazard collections of customs and beliefs. Cultures are integrated, patterned systems. If one part of the system (e.g., the economy) changes, other parts also change. For example, during the 1950s, most American women planned domestic careers as homemakers and mothers. Since then, 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.

What are some of the social repercussions of this particular economic change? Attitudes and behavior regarding marriage, family, and children have changed. Late marriage, "living together," and divorce have become more common. 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, and judgments. Cultures train their individual members to share certain personality traits. A set of characteristic **core values** (key, basic, central values) integrates each culture and helps distinguish it from others. For instance, the work ethic and individualism are core values that have integrated American culture for generations. Different sets of dominant values influence the patterns of other cultures.

Culture Is Instrumental, Adaptive, and Maladaptive

Culture is the main reason for human adaptability and success. Other animals rely on biological means of adaptation (such as fur or blubber, which are adaptations to cold). Humans also adapt biologically—for example, by shivering when we get cold or sweating when we get hot. But in addition to biological responses, people also have cultural ways of adapting. To cope with environmental stresses, we habitually use technology, or tools. We hunt cold-adapted animals and use their fur coats as our own. We turn the thermostat up in the winter and down in the summer. In summer, we have a cold drink, jump in a pool, or travel to someplace cooler. In winter, we drink hot chocolate, seek out a sauna, or vacation in warmer climates. People use culture *instrumentally*, that is, to fulfill their basic biological needs for food, drink, shelter, comfort, and reproduction.



In the top photo (circa 1950), a male doctor points out features of an X-ray to a female nurse. In the bottom photo, a contemporary doctor holds up and studies MRI scans. Nowadays, female college graduates aged 30 to 34 are just as likely to be doctors, dentists, lawyers, professors, managers, and scientists as they are to be working in traditionally female professions, as teachers, nurses, librarians, secretaries, or social workers. (top): Walter Sanders/The LIFE Picture Collection/Getty Images; (bottom): Ron Levine/Getty Images

People also use culture to fulfill psychological and emotional needs, such as friendship, companionship, approval, and sexual desirability. People seek *informal support*—help from people who care about them—as well as *formal support* from associations and institutions. To these ends, individuals cultivate ties with others on the basis of common experiences, political interests, aesthetic sensibilities, or personal attraction.

On one level, cultural traits (e.g., air conditioning) may be called *adaptive* if they help individuals cope with environmental stresses. But on a different level, such traits can also be *maladaptive.* That is, they may threaten a group's continued existence. Thus, chlorofluorocarbons (e.g., as found in old air conditioners) have been banned in the United States because they deplete the ozone layer and, by doing so, can harm humans and other life. Many modern cultural patterns may be maladaptive in the long run. Some examples of maladaptive aspects of culture are policies that encourage overpopulation, poor food-distribution systems, overconsumption, and environmental degradation.

Culture's Evolutionary Basis

The human capacity for culture has an evolutionary basis that extends back perhaps 3 million years, the date of the earliest evidence of tool manufacture in the archaeological record. Tool making by our distant ancestors may extend even farther back, based on observations of tool manufacture by chimpanzees in their natural habitats (e.g., Mercader, Panger, and Boesch 2002).

Similarities between humans and apes, our closest relatives, are evident in anatomy, brain structure, genetics, and biochemistry. Most closely related to us are the African great apes: chimpanzees and gorillas. *Hominidae* is the zoological family that includes fossil and living humans, as well as chimps and gorillas. We refer to members of this family as **hominids**. The term **hominins** is used for the group that leads to humans but not to chimps and gorillas and that encompasses all the human species that ever have existed.

Many human traits are part of an ancestral arboreal heritage that we share with monkeys and apes. These traits developed as our ancestors adapted to life in the trees millions of years ago. They include (1) grasping ability and manual dexterity (especially opposable thumbs), (2) depth and color vision, (3) learning ability based on a large, visually oriented brain, and (4) substantial parental investment in a limited number of offspring (see the section "Primate Adaptations" in Chapter 5). All these traits continue to be key features of human adaptation. Manual dexterity, for example, is essential to a major human adaptive capacity: tool making.

What We Share with Other Primates

There is a substantial gap between primate *society* (organized life in groups) and fully developed human *culture*, which is based on symbolic thought. Nevertheless, studies of nonhuman primates reveal many similarities with humans, such as the ability to learn from experience and change behavior as a result. Monkeys, and especially apes, learn throughout their lives. In one group of Japanese macaques (land-dwelling monkeys), for

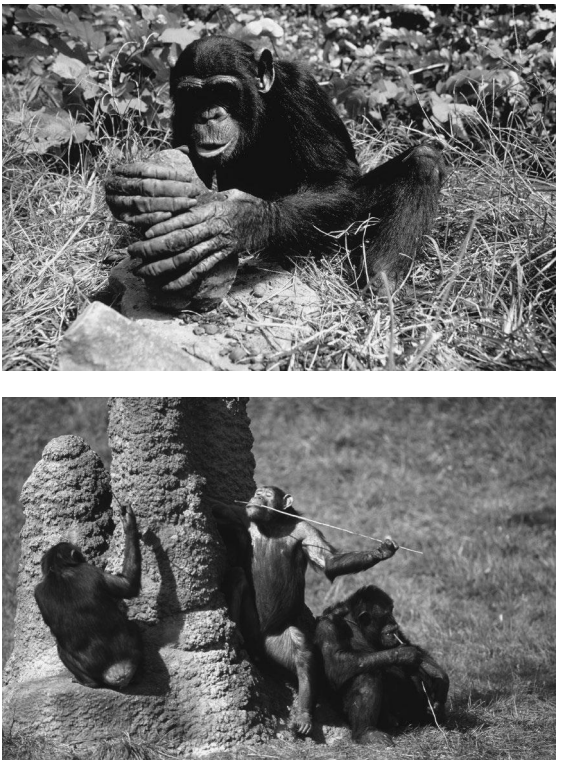
example, a 3-year-old female started washing sweet potatoes before she ate them. First her mother, then her age peers, and finally the entire troop began washing sweet potatoes as well. The ability to benefit from experience confers a tremendous adaptive advantage, permitting the avoidance of fatal mistakes. Faced with environmental change, humans and other primates don't have to wait for a genetic or physiological response. They can modify learned behavior and social patterns instead.

Although humans employ tools much more than any other animal does, tool use also turns up among several nonhuman species, including birds, beavers, sea otters, and especially apes (see Campbell 2011). Humans are not the only animals that make tools with a specific purpose in mind. Chimpanzees living in the Taï forest of Ivory Coast make and use stone tools to break open hard, golf-ball-sized nuts (Mercader et al. 2002; Wilford 2007b). Nut cracking is a learned skill, with mothers showing their young how to do it. In 1960, Jane Goodall began observing wild chimps—including their tool use and hunting behavior—at Gombe Stream National Park in Tanzania, East Africa (see Goodall 2010). The most studied form of ape tool making involves "termiting," in which chimps make tools to probe termite hills. They choose twigs, which they modify by removing leaves and peeling off bark to expose the sticky surface beneath. They carry the twigs to termite hills, dig holes with their fingers, and insert the twigs. Finally, they pull out the twigs and dine on termites that were attracted to the sticky surface. Given what is known about ape tool use and manufacture, it is unsurprising that early hominins shared this ability; currently, the earliest evidence for hominin stone tool making dates back 3 million years. Bipedalism (moving around upright on two legs) would have allowed early hominins to carry and wield tools and weapons against predators and competitors in an open grassland habitat.

The apes have other abilities on which culture depends. Wild chimpanzees and orangutans aim and throw objects. Gorillas build nests, and they throw branches, grass, vines, and other objects. Hominins have elaborated the capacity to aim and throw, without which we never would have developed projectile technology and weaponry—or baseball.

As with tool making, anthropologists once considered hunting to be a distinctive human activity not shared with the apes. Again, however, primate research shows that other primates, especially chimpanzees, are habitual hunters. For example, in Uganda's Kibale National Park, chimps form large hunting parties, including an average of 26 individuals (almost always adult and adolescent males). Most hunts (78 percent) result in at least one prey item being caught—a much higher success rate than that among lions (26 percent), hyenas (34 percent), or cheetahs (30 percent). Chimps' favored prey there is the red colobus monkey (Mitani and Watts 1999).

It is likely that human ancestors were doing some hunting by at least 3 million years ago, based on the existence of early stone tools designed to cut meat. Given our current understanding of chimp tool making and hunting, we can infer that hominids may have been hunting much earlier than the first archaeological evidence attests. Because chimps typically devour the monkeys they kill, leaving few remains, we may never find archaeological evidence for the first hominid or hominin hunt, especially if it proceeded without stone tools.



Different forms of tool use by chimps. Top photo shows a Liberian chimp using a hammer stone to crack palm nuts. The bottom photo shows chimps using prepared twigs to "fish" for termites from a termite hill. (top): Clive Bromhall/Oxford Scientific/Getty Images; (bottom): Stan Osolinski/Oxford Scientific/Getty Images

How We Differ from Other Primates

Although chimps often share meat from a hunt, apes and monkeys (except for nursing infants) tend to feed themselves individually. Cooperation and sharing are much more characteristic of humans. Until fairly recently (12,000 to 10,000 years ago), all humans were hunter-gatherers who lived in small social groups called bands. In some world areas, the hunter-gatherer way of life persisted into recent times, permitting study by ethnographers. In such societies, men and women take resources back to the camp to share. Everyone shares the meat from a large animal. Nourished and protected by younger band members, elders live past reproductive age and are respected for their knowledge and experience. Humans are among the most cooperative of the primates—in the food quest and other social activities. As well, the amount of information stored in a human band is far greater than that in any other primate group.

Another difference between humans and other primates involves mating. Among baboons and chimps, most mating occurs when females enter **estrus**, during which they ovulate. In estrus, the vaginal area swells and reddens, and receptive females form temporary bonds with, and mate with, males. Human females, by contrast, lack a visible estrus cycle, and their ovulation is concealed. Not knowing when ovulation is occurring, humans maximize their reproductive success by mating throughout the year. Human pair bonds for mating are more exclusive and more durable than are those of chimps. Related