



Anthropology

THE HUMAN CHALLENGE



Fifteenth Edition



Haviland • Prins • Walrath • McBride

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Fifteenth Edition

ANTHROPOLOGY

THE HUMAN CHALLENGE

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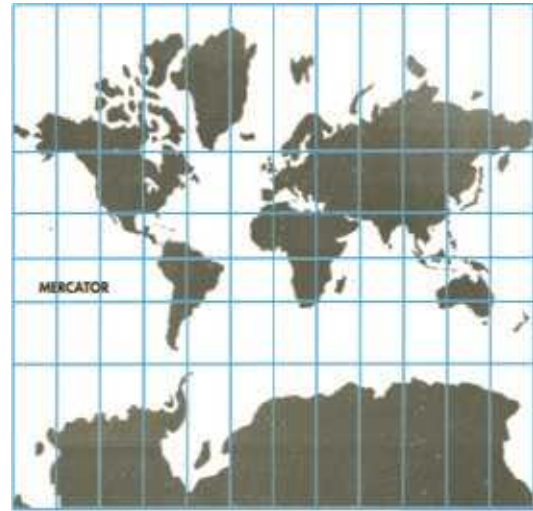
In loving memory of **Joshua Lieberman**,
who brought song, laughter, ease, and precision
to the center of being human.

Putting the World in Perspective

Although all humans we know about are capable of producing accurate sketches of localities and regions with which they are familiar, **cartography** (the craft of mapmaking as we know it today) had its beginnings in 16th-century Europe, and its subsequent development is related to the expansion of Europeans to all parts of the globe. From the beginning, there have been two problems with maps: the technical one of how to depict on a two-dimensional, flat surface a three-dimensional spherical object, and the cultural one of whose worldview they reflect. In fact, the two issues are inseparable, for the particular projection one uses inevitably makes a statement about how one views one's own people and their place in the world. Indeed, maps often shape our perception of reality as much as they reflect it.

In cartography, a **projection** refers to the system of intersecting lines (of longitude and latitude) by which part or all of the globe is represented on a flat surface. There are more than a hundred different projections in use today, ranging from polar perspectives to interrupted "butterflies" to rectangles to heart shapes. Each projection causes distortion in size, shape, or distance in some way or another. A map that correctly shows the shape of a landmass will of necessity misrepresent the size. A map that is accurate along the equator will be deceptive at the poles.

Perhaps no projection has had more influence on the way we see the world than that of Gerhardus Mercator, who devised his map in 1569 as a navigational aid for mariners. So well suited was Mercator's map for this purpose that it continues to be used for navigational charts today. At the same time, the Mercator projection became a standard for depicting landmasses, something for which it was never intended. Although an accurate navigational tool, the Mercator projection greatly exaggerates the size of landmasses in higher latitudes, giving about two-thirds of the map's surface to the northern hemisphere. Thus the lands occupied by Europeans and European descendants appear far larger than those of other people. For example, North America (19 million square kilometers) appears almost twice the size of Africa (30 million



square kilometers), whereas Europe is shown as equal in size to South America, which actually has nearly twice the landmass of Europe.

A map developed in 1805 by Karl B. Mollweide was one of the earlier *equal-area projections* of the world. Equal-area projections portray landmasses in correct relative size, but, as a result, distort the shape of continents more than other projections. They most often compress and warp lands in the higher latitudes and vertically stretch landmasses close to the equator. Other equal-area projections include the Lambert Cylindrical Equal-Area Projection (1772), the Hammer Equal-Area Projection (1892), and the Eckert Equal-Area Projection (1906).

The Van der Grinten Projection (1904) was a compromise aimed at minimizing both the distortions of size in the Mercator and the distortion of shape in equal-area maps such as the Mollweide. Although an improvement, the lands of the northern hemisphere are still emphasized at the expense of the southern. For example, in the Van der Grinten, the Commonwealth of Independent States (the former Soviet Union) and Canada are shown at more than twice their relative size.

The Robinson Projection, which was adopted by the National Geographic Society in 1988 to replace the Van der Grinten, is one of the best compromises to date between the distortions of size and shape. Although an improvement over the Van der Grinten, the Robinson Projection still depicts lands in the northern latitudes as proportionally larger at the same time that it depicts lands in the lower latitudes (representing most Third World nations) as proportionally smaller. Like European maps before it, the Robinson Projection places Europe at the center of the map with the Atlantic Ocean and the Americas to the left, emphasizing the cultural connection between Europe and North America, while neglecting the geographic closeness of northwestern North America to northeastern Asia.

The following pages show four maps that each convey quite different cultural messages. Included among them is the Gall-Peters Projection, an equal-area map that has been adopted as the official map of UNESCO (the United Nations Educational, Scientific, and Cultural Organization), and a map made in Japan, showing us how the world looks from the other side.

The Robinson Projection

The map below is based on the Robinson Projection, which is used today by the National Geographic Society and Rand McNally. Although the Robinson Projection distorts the relative size of landmasses, *it does so much*

less than most other projections. Still, it places Europe at the center of the map. This particular view of the world has been used to identify the location of many of the cultures discussed in this text.





The Gall-Peters Projection

The map below is based on the Gall-Peters Projection, which has been adopted as the official map of UNESCO. Although it distorts the shape of continents (countries near the equator are vertically elongated

by a ratio of 2 to 1), the Gall-Peters Projection does show all continents according to their correct relative size. Though Europe is still at the center, it is not shown as larger and more extensive than the Third World.





Japanese Map

Not all maps place Europe at the center of the world, as this Japanese map illustrates. Besides reflecting the importance the Japanese attach to themselves in the

world, this map has the virtue of showing the geographic proximity of North America to Asia, a fact easily overlooked when maps place Europe at their center.



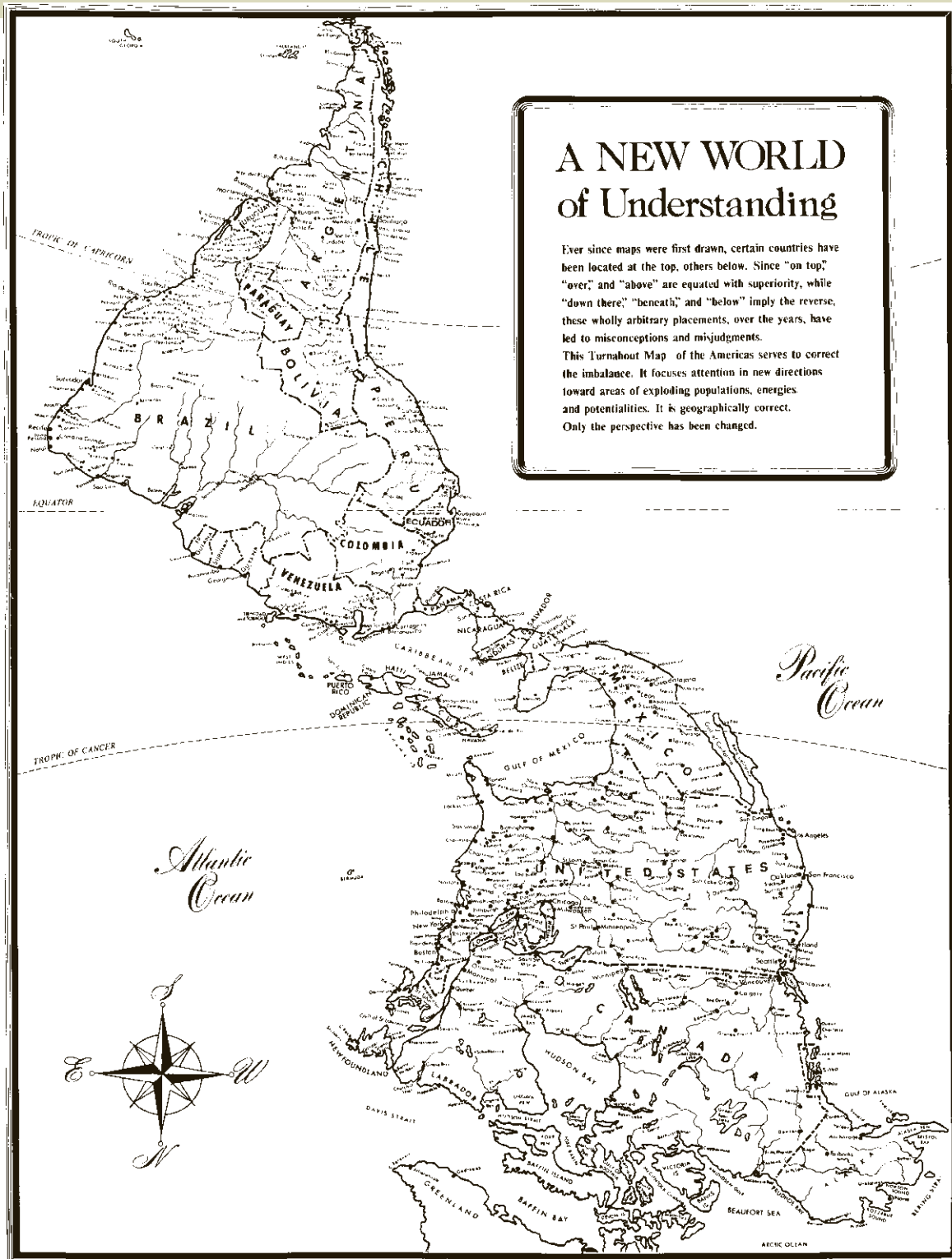


The Turnabout Map

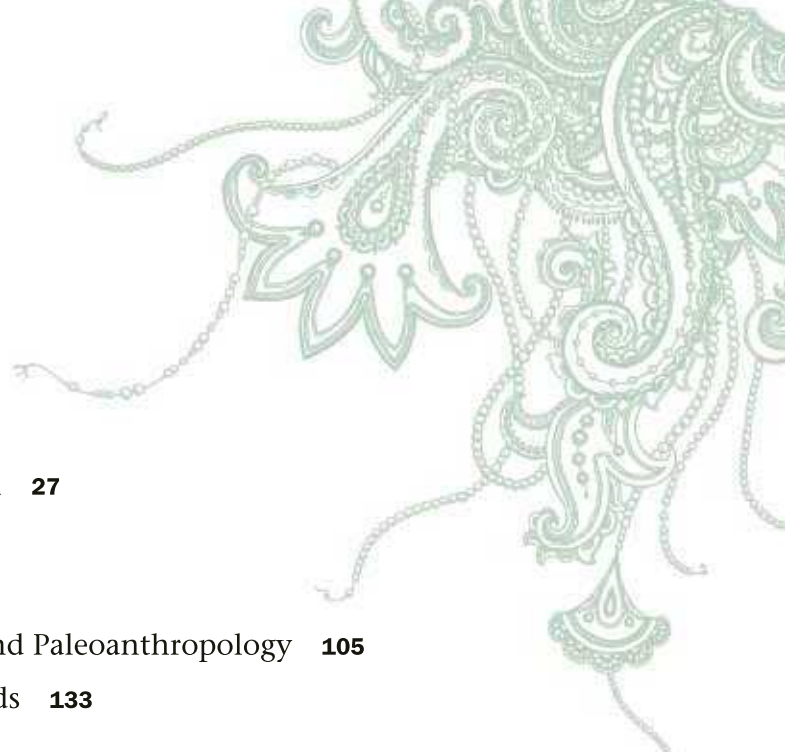
The way maps may reflect (and influence) our thinking is exemplified by the Turnabout Map, which places the South Pole at the top and the North Pole at the bottom. Words and phrases such as “on top,” “over,” and “above” tend to be equated by some people with superiority. Turning

things upside-down may cause us to rethink the way North Americans regard themselves in relation to the people of Central America.

© 1982 by Jesse Levine Turnabout Map™—Dist. by Laguna Sales, Inc., 7040 Via Valverde, San Jose, CA 95135



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Preface

For the last edition of this textbook, we did some serious housecleaning—sorting through the contents “clear down to the bottom to determine what should be kept and what should be tossed to make room for new material that warrants a place in a limited space.” Our efforts resulted in a book more thoroughly revised than any new edition since Bill Haviland took on coauthors at the turn of the century. For the current edition of *Anthropology: The Human Challenge*—the fifteenth—we continued our paring down efforts, reducing the overall narrative by 10 percent in order to give more space to stimulating visuals and other pedagogical enhancements. Once again, our own ongoing research fueled our efforts, as did vital feedback from students and anthropology professors who have used and reviewed previous editions. Once again, we scrutinized the archetypal examples of our discipline and weighed them against the latest innovative research methodologies, archaeological discoveries, genetic and other biological findings, linguistic insights, ethnographic descriptions, theoretical revelations, and significant examples of applied anthropology.

Our Mission

Most students enter an introductory anthropology class intrigued by the general subject but with little more than a vague sense of what it is all about. Thus, the first and most obvious task of our text is to provide a thorough introduction to the discipline—its foundations as a domain of knowledge and its major insights into the rich diversity of humans as a culture-making species. Recognizing the wide spectrum of students enrolled in entry-level anthropology courses, we cover the fundamentals of the discipline in an engaging, illustrative fashion—providing a broad platform on which teachers can expand the exploration of concepts and topics in ways that are meaningful to them and to their particular group of students.

In doing this, we draw from the research and ideas of a number of traditions of anthropological thought, exposing students to a mix of theoretical perspectives and methodologies. Such inclusiveness reflects our conviction that different approaches offer distinctly

important insights about human biology, behavior, and beliefs.

If most students start out with only a vague sense of what anthropology is, they often have even less clearly defined (and potentially problematic) views concerning the position of their own species and cultures within the larger world. A second task for this text, then, is to encourage students to appreciate the richness and complexity of human diversity. Along with this goal is the aim of helping them to understand why there are so many differences and similarities in the human condition, past and present.

Debates regarding globalization and notions of progress; the “naturalness” of the mother, father, child(ren) nuclear family; new genetic technologies; and how gender roles relate to biological variation all benefit greatly from the distinct insights gained through anthropology’s wide-ranging, holistic perspective. This aspect of the discipline is one of the most valuable gifts we can pass on to those who take our classes. If we as teachers (and textbook authors) do our jobs well, students will gain a wider and more open-minded outlook on the world and a critical but constructive perspective on human origins and on their own biology and culture today. To borrow a favorite line from the famous poet T. S. Eliot, “The end of all our exploring will be to arrive where we started and know the place for the first time” (“Little Gidding,” *Four Quartets*).

We have written this text, in large part, to help students make sense of our increasingly complex world and to navigate through its interrelated biological and cultural networks with knowledge, empathy, and skill, whatever professional path they take. We see the book as a guide for people entering the often-bewildering maze of global crossroads in the 21st century.

A Distinctive Approach

Two key factors distinguish *Anthropology: The Human Challenge* from other introductory texts: our integrative presentation of the discipline’s four fields and a trio of unifying themes that tie the book together.

Integration of the Four Fields

Unlike traditional texts that present anthropology's four fields—biological (physical) anthropology, archaeology, linguistics, and cultural or social anthropology—as if they were separate or independent, our book takes an integrative approach. This reflects the holistic character of the discipline, a domain of knowledge where members of our species are studied in their totality—as social creatures biologically evolved with the inherent capacity for learning and sharing culture by means of symbolic communication. This approach also reflects our collective experience as practicing anthropologists who recognize that we cannot fully understand humanity in all its fascinating complexity unless we see the systemic interplay among environmental, physiological, material, social, ideological, psychological, and symbolic factors, both past and present.

For analytical purposes, however, we discuss biological anthropology as distinct from archaeology, linguistics, and sociocultural anthropology. Accordingly, there are separate chapters that focus primarily on each field, but the links among them are shown repeatedly. Among many examples of this integrative approach, “Modern Human Diversity—Race and Racism” (Chapter 11) discusses the social context of race and recent cultural practices that have impacted the human genome. In addition, every chapter includes a Biocultural Connection feature to further illustrate the interplay of biological and cultural processes in shaping the human experience.

Unifying Themes

In our own teaching, we recognize the value of marking out unifying themes that help students see the big picture as they grapple with the vast array of material involved with the study of human beings. In *Anthropology: The Human Challenge* we employ three such themes:

1. **Systemic adaptation.** We emphasize that every culture, past and present, like the human species itself, is an integrated and dynamic system of adaptation that responds to a combination of internal and external factors, including influences of the environment.
2. **Biocultural connection.** We highlight the integration of human culture and biology in the steps humans take to meet the challenges of survival. The biocultural connection theme is interwoven throughout the text—as a thread in the main narrative and in boxed features that highlight this connection with a topical example for every chapter.

3. **Globalization.** We track the emergence of globalization and its disparate impact on various peoples and cultures around the world. European colonization was a global force for centuries, leaving a significant and often devastating footprint on the affected peoples in Asia, Africa, and the Americas. Decolonization began about 200 years ago and became a worldwide wave in the mid-1900s. However, since the 1960s, political and economic hegemony has taken a new and fast-paced form: globalization (in many ways a process that expands or builds on imperialism). Attention to both forms of global domination—colonialism and globalization—runs through *Anthropology: The Human Challenge*, culminating in the final chapter where we apply the concept of structural power to globalization, discussing it in terms of hard and soft power and linking it to structural violence.

Pedagogy

Anthropology: The Human Challenge features a range of learning aids, in addition to the three unifying themes described previously. Each pedagogical piece plays an important role in the learning process—from clarifying and enlivening the material to revealing relevancy and aiding recall.

Accessible Language and a Cross-Cultural Voice

In the writing of this text, we consciously cut through unnecessary jargon to speak directly to students. Manuscript reviewers have recognized this, noting that even the most difficult concepts are presented in straightforward and understandable prose for today's first- and second-year college students. Where technical terms are necessary, they appear in bold type with a clear definition in the narrative. The definition appears again in the running glossary at the bottom of our pages, as well as in a summary glossary at the end of the book.

To make the narrative more accessible to students, we deliver it in chewable bites—short paragraphs. Numerous subheads provide visual cues to help students track what has been read and what is coming next.

Accessibility involves not only clear writing enhanced by visual cues, but also an engaging voice or style. The voice of *Anthropology: The Human Challenge* is distinct among introductory texts in the discipline because it has been written from a cross-cultural perspective. We avoid the typical Western “we/they” voice in favor of a more inclusive one to make sure the narrative resonates with both Western and non-Western

students and professors. Also, we highlight the theories and work of anthropologists from all over the world. Finally, we have drawn the text's cultural examples from industrial and postindustrial societies as well as nonindustrial ones.

Compelling Visuals

The Haviland et al. texts garner praise from students and faculty for having a rich array of visuals, including maps, photographs, and figures. This is important because humans—like all primates—are visually oriented, and a well-chosen image may serve to “fix” key information in a student's mind. Unlike some competing texts, nearly all of our visuals are in color, enhancing their appeal and impact.

Photographs

Our pages feature a hard-sought collection of arresting, content-rich photographs. Large in size, many of them come with substantial captions composed to help students do a “deep read” of the image. Each chapter features more than a dozen pictures, including our popular Visual Counterpoints—side-by-side photos that effectively compare and contrast biological or cultural features.

Maps

Map features include our “Putting the World in Perspective” map series, locator maps, and distribution maps that provide overviews of key issues such as pollution and energy consumption. Of special note are the Globalscape maps and stories, described in the boxed features section a bit further on.

Challenge Issues

Each chapter opens with a Challenge Issue and accompanying photograph, which together carry forward the book's theme of humankind's responses through time to the fundamental challenges of survival within the context of the particular chapter.

Student Learning Objectives, Knowledge Skills, and Chapter Checklists

Each chapter begins with a set of learning objectives presented just after the Challenge Issue and photograph. These objectives focus students on the main goals, identifying the knowledge skills they are expected to have mastered after studying each chapter. The main goals are incorporated in a closing Chapter

Checklist, which summarizes the chapter's content in an easy-to-follow format.

Thought-Provoking Questions

Each chapter closes with four Questions for Reflection, including one that relates back to the Challenge Issue introduced in the chapter's opening. Presented right after the Chapter Checklist, these questions ask students to apply the concepts they have learned by analyzing and evaluating situations. They are designed to stimulate and deepen thought, trigger class discussion, and link the material to the students' own lives.

In addition, every Biocultural Connection essay ends with a probing question designed to help students grapple with and firmly grasp that connection. Also, the Globalscape features conclude with a Global Twister question, which asks students to think more deeply about the issue presented in the essay.

Integrated Methods: Digging into Anthropology

New to this edition is our **Digging into Anthropology** feature, presented at the end of every chapter, just after the Questions for Reflection. These hands-on assignments present opportunities to delve into every chapter's content through mini fieldwork projects designed to integrate methodology throughout the book and encourage students to explore topics in their own culture.

Integrated Theory: Barrel Model of Culture

Past and present, every culture is an integrated and dynamic system of adaptation that responds to a combination of internal and external factors. A pedagogical device we refer to as the “barrel model” of culture illustrates this. Depicted in a simple but telling drawing (Figure 13.7), the barrel model shows the interrelatedness of social, ideological, and economic factors within a cultural system along with outside influences of environment, climate, and other societies. Throughout the book, we link examples to this point and this image.

Integrated Gender Coverage

In contrast to many introductory texts, *Anthropology: The Human Challenge* integrates coverage of gender throughout the book. Thus, material on gender-related issues is included in every chapter. As a result of this approach, gender-related material in this textbook far exceeds the single chapter that most books devote to the subject.

We have chosen to integrate this material because concepts and issues surrounding gender are almost always too complicated to remove from their context. Spreading this material through all of the chapters has a pedagogical purpose because it emphasizes how considerations of gender enter into virtually everything people do. Gender-related material ranges from discussions of gender roles in evolutionary discourse and studies of nonhuman primates to intersexuality, homosexual identity, same-sex marriage, and female genital mutilation. Through a steady drumbeat of such coverage, this edition avoids ghettoizing gender to a single chapter that is preceded and followed by resounding silence.

Glossary as You Go

The running glossary is designed to catch the student's eye, reinforcing the meaning of each newly introduced term. It is also useful for chapter review, enabling students to readily isolate the new terms from those introduced in earlier chapters. A complete glossary is also included at the back of the book. In the glossaries, each term is defined in clear, understandable language. As a result, less class time is required for going over terms, leaving instructors free to pursue other matters of interest.

Special Boxed Features

Our text includes five types of special boxed features. Every chapter contains a Biocultural Connection, along with two of the following three features: an Original Study, Anthropology Applied, or Anthropologist of Note. In addition, about half of the chapters include a Globalscape. These features are carefully placed and introduced within the main narrative to alert students to their importance and relevance. A complete listing of features is presented on page xiv.

Biocultural Connections

Appearing in every chapter, this signature feature of the Haviland et al. textbooks illustrates how cultural and biological processes interact to shape human biology, beliefs, and behavior. It reflects the integrated biocultural approach central to the field of anthropology today. All of the Biocultural Connections include a critical thinking question. For a quick peek at titles, see the listing of features on page xiv.

Original Studies

Written expressly for this text, or adapted from ethnographies and other original works by anthropologists, these studies present concrete examples that bring specific concepts to life and convey the passion

of the authors. Each study sheds additional light on an important anthropological concept or subject area for the chapter in which it appears. Notably, each Original Study is carefully integrated within the flow of the chapter narrative, signaling students that its content is not extraneous or supplemental. Appearing in nineteen chapters, Original Studies cover a wide range of topics, evident from their titles (see page xv).

Anthropology Applied

Featured in sixteen chapters, these succinct and fascinating profiles illustrate anthropology's wide-ranging relevance in today's world and give students a glimpse into a variety of the careers anthropologists enjoy (see page xiv for a listing).

Anthropologists of Note

Profiling pioneering and contemporary anthropologists from many corners of the world, this feature puts the work of noted anthropologists in historical perspective and draws attention to the international nature of the discipline in terms of both subject matter and practitioners. This edition highlights more than eighteen distinct anthropologists from all four fields of the discipline (see page xiv for a list of the profiles).

Globalscapes

Appearing in fourteen chapters, this unique feature charts the global flow of people, goods, and services, as well as pollutants and pathogens. With a map, a story, and one or two photos highlighting a topic geared toward student interests, every Globalscape shows how the world is interconnected through human activity. Each one ends with a Global Twister—a question that encourages students to think critically about globalization. Check out the titles of Globalscapes on page xiv.

Highlights in the Fifteenth Edition

Anthropology: The Human Challenge has undergone a thorough updating. Definitions of key terms have been honed. Many new visuals and ethnographic examples have been added and others dropped. Nearly every chapter features a new opening photograph and related Challenge Issue. The much-used Questions for Reflection include at least one new question per chapter, and on the heels of those questions we have added a brand-new Digging into Anthropology feature with hands-on assignments that prompt deeper investigation through mini projects related to each chapter's contents.

As with earlier editions, we further chiseled the writing to make it all the more clear, lively, engaging,

and streamlined. *On average, chapter narratives have been trimmed by about 10 percent.* Statistics and examples have been updated throughout—in the narrative, captions, and figures. In addition to numerous revisions of boxed features, some of these are completely new.

Finally, we have replaced footnotes with in-text parenthetical citations, making sources and dates more visible and freeing up space for larger visuals. The complete listing of citations appears in the bibliography at the end of the book.

Beyond these across-the-board changes, particular changes have been made within each chapter.

Chapter 1: The Essence of Anthropology

This opening chapter emphasizes the contemporary relevance of anthropology as it introduces students to the holistic perspective, philosophical underpinnings and defining methodological approaches that run across its distinct four fields. Students will come to understand anthropology in relation to other disciplines and as a living laboratory that allows for the testing of hypotheses without the influence of culture-bound notions. A new Challenge Issue, centered on the repurposing of free antimalarial mosquito nets as fishing nets, shows the interconnectedness of our world today as individuals must choose between disease prevention and the health benefits of increased fishing yields.

Our discussion of anthropology and globalization brings students to the current global refugee crisis through new material on the distinction between nation and state and a new Globalscape “Safe Harbor?” on the plight of Rohingya boat people. Similarly, the global flow of food and pesticides is highlighted with the new placement of the Biocultural Connection “Picturing Pesticides.”

The diversity of anthropologists and the subjects and forms of work they undertake will draw students in as they see: the collaborative nature of contemporary anthropological research through archaeologist Anne Jensen’s work in the Arctic; innovative ethnographic forms in the work of cultural anthropologist Gina Athena Ulysse; novel field sites as with cultural anthropologist Philippe Bourgois’s fieldwork among homeless substance abusers; cutting-edge technology in the genetics work of forensic anthropologist Mercedes Doretti in the updated Anthropology Applied feature (“Forensic Anthropology: Voices for the Dead”); and even the collaboration between archaeologists and microbreweries with the work of biomolecular archaeologist Pat McGovern.

The new Digging into Anthropology feature, “Talking Trash: Hidden in the Middens,” on archaeology and trash provides the opportunity for students to learn archaeological concepts through hands-on experience. This feature is enhanced by the chapter updates

on William Rathje’s Garbage Project that focus on trash production and disposal in large urban areas.

Chapter 2: Biology, Genetics, and Evolution

This chapter on biology, genetics, and evolution opens with a new Challenge Issue demonstrating the link between culture and science and the ways in which biotechnology has become vital to identity and security in the 21st century. To help students stay abreast of technological developments in genetics and their applications in the world (without overwhelming them), the details on DNA replication to protein synthesis have been significantly refined and streamlined.

Compelling photographs with content-rich captions illustrate basic concepts such as toxic mutagenic agents and complement the historical aspects of this chapter’s content. Figure changes include updated cell division art, a new homeobox gene photo, a locator map of the Dadaab refugee camp, and an 18th-century illustration of a chimpanzee. The discussions of heredity and population genetics have been significantly condensed and clarified. A new Digging into Anthropology feature, “Making Meaning of Memes,” asks students to apply the principles of genetics, heredity, and evolution to social media as they trace the appearance, dissemination, and mutation of memes.

Chapter 3: Living Primates

This photo-rich chapter introduces students to our closest relatives in the animal world—the other primates—and the impact we humans have on our cousins. It opens with a discussion of the influence of globalization on populations of living primates in the world today through a new Challenge Issue describing the capture and global trade of slow lorises, one of many primates prized as pets in some societies. The updated endangered primate map further drives home the urgency of primate conservation. Exploring the basic biology of all the living primates, this chapter emphasizes the place of humans *within* the group of primates and basic mammalian primate adaptation compared to that of reptiles. It engages with biological concepts such as homeotherms versus isotherms, k-selection versus r-selection, ancestral and derived characteristics, convergent evolution, preadaptation, adaptive radiation, and ecological niche. New figures on vertical clinging and leaping and brachiation help to illustrate these concepts; the figure on the relationships among the primates has been updated to take into account the new data regarding the gorilla genome.

A new Biocultural Connection, “Gibbons and Sopranos Both Need to Be Heard,” demonstrates the close relationship of humans to our primate relatives by examining the similarities between gibbon vocalizations and soprano singing. The Anthropology Applied feature, “Saving Our Ape Cousins: Primatologists,

Community Action, and the African Wildlife Foundation,” has been extensively updated, telling the stories of primate conservation efforts under way across the African continent with the African Wildlife Foundation. The brave and creative methods of primatologists are explored in the Digging into Anthropology feature, “Finding or Losing Your Inner Ape.” Here, students are challenged to experience their daily lives with some primate quality either enhanced or restricted as a way to tease apart human and nonhuman behavior and biology.

Chapter 4: Primate Behavior

Filled with cutting-edge discoveries and theories about primate behavior, this chapter opens with a new Challenge Issue that considers eminent primatologist Frans de Waal’s work on morality—previously regarded as a uniquely human attribute—among our primate cousins. We introduce students to the research and activism of primatologists such as Jane Goodall and explore the notion of primate culture as evidenced in their communicative abilities, their distinct group traditions, and their ability to grasp complex tasks such as toolmaking.

A new Biocultural Connection on the language capacities of Kanzi the bonobo explores primatologist Sue Savage-Rumbaugh’s intriguing notion that his life has made him in effect bicultural. The new Digging into Anthropology feature asks students to engage with Kanzi’s pictorial language through observation on their own use of emoji in daily communication. Jane Goodall and her work are the focus of both the Anthropologists of Note (along with primatologist Kinji Imanishi) and the updated and expanded Anthropology Applied features—including her activism to protect the rights of apes and to eliminate the use of chimps in biomedical research, reflecting the U.S. National Institutes of Health decision to end this practice entirely. The Globalscape spotlights gorilla hand ashtrays and Dian Fossey’s efforts to protect gorillas and to conserve their habitats in Rwanda, Uganda, and the Democratic Republic of Congo.

Chapter 5: Field Methods in Archaeology and Paleoanthropology

This chapter, detailing the investigative methods utilized by paleoanthropologists and archaeologists in the field, also situates these methods in contemporary sociopolitical contexts. It opens with a tragic example that challenges all of us to find ways to preserve our shared cultural heritage. How can we protect archaeological sites from destructive actions—such as the devastation at the ancient city of Palmyra and the killing of the Syrian archaeologist who tried to protect these remains from ISIS—a group that considers the relics to be sacrilegious? We also explore other threats to archaeological sites—looters motivated by profit, disruption of

sites from normal activities, and the distinctive worldviews at work when scientists and indigenous peoples differ in their approaches to ancient remains.

The chapter explores the importance of work conducted in the lab after excavation. The updated Biocultural Connection on Kennewick Man incorporates recent results from genetic investigation and a new photo. A new Anthropology Applied feature, “The Atari Burial Grounds,” shows how field methods at dig sites are useful even for recently buried artifacts. The Original Study on excavations at El Pilar in Belize has been repositioned and significantly updated by Anabel Ford. Enhanced with new images and content-rich captions, including an archaeological comic by John Swogger, the chapter has also been significantly condensed to provide a more direct overview of field methods. The hands-on Digging into Anthropology feature challenges students to feel the earth in their hands as they carry out the field methods detailed in the chapter.

Chapter 6: From First Primates to First Bipedes

With this first of several human evolution chapters, we start by introducing paleoanthropology as a science of discovery: a discipline that reshapes its understanding of the past with each new finding. The Challenge Issue features the stunning announcement in October 2015 of the new species, *Homo naledi*, to illustrate the place of paleoanthropology in the news and our collective imaginations today. But the chapter opener also explains the challenges involved in viewing new discoveries and placing them in the progression from the first primates to the first bipeds to humans. We consider the debates among paleoanthropologists about how specimens might be identified as unique species, the role of dating in paleoanthropological interpretations, and the question of when the genus *Homo* appeared.

This chapter has been extensively revised for clarity, succinctness, and accuracy. We have reorganized headings to reflect these revisions while retaining comparisons between the earliest bipeds of the fossil record to humans and to chimps. New photographs of some of the early fossils—including Little Foot, Ida, and *Ardipithecus ramidus*—as well as updated figures indicating the new Plio-Pleistocene split and the evolutionary branching of gorillas further enrich the chapter. The chapter’s Biocultural Connection on human birth demonstrates the relevance of paleoanthropological theories to contemporary medical practice. A new Anthropologists of Note feature examines the legacy of paleoanthropologists Louis and Mary Leakey through several generations of family members who continue to make significant contributions to paleoanthropology. The new Digging into Anthropology feature “Fool with Your Ancestors” asks students to engage with the infamous Piltdown hoax by imagining a false find

that might gain credibility because it reifies prevailing beliefs.

Chapter 7: Origins of the Genus *Homo*

This exploration of the origins of the genus *Homo* opens with the challenge to consider just what it is that makes us human. Through the example of the use of fire, we introduce the theme that runs through this chapter: What is the relationship between the biological changes preserved in the fossil record and the evidence of culture preserved in the archaeological record? Significantly reorganized to avoid redundancies, flow naturally, and drive home the central points, this chapter gives careful attention to the primary theories in the field today. Chapter 7 prepares students to engage with theories of modern human origins that follow.

The chapter retains its presentation of the contributions of female paleoanthropologists, a discussion of gendered interpretations of the fossil record, and the work of paleoartists to flesh out the bones of our ancestors. It also includes major recent discoveries such as the *Homo naledi* fossils mentioned in the previous chapter; the 2015 discovery of the Lomekwi stone tools that predate Oldowan assemblages by 700,000 years; and new research on a Neandertal hyoid bone that impacts interpretation of their capacity for spoken language. A new Digging into Anthropology feature on language and communication closes the chapter.

Chapter 8: The Global Expansion of *Homo sapiens* and Their Technology

This chapter provides a comprehensive streamlined discussion of theories for modern human origins and the spread of *Homo sapiens* throughout the globe. It asks students to engage with the nature of the relationship between biological change and cultural change as we get closer to the present. When in our evolutionary history does associating behavior with physical appearance become untenable, as it would be today when examining living peoples? The chapter opens by exploring the Eurocentrism embedded in the focus on the art and artifact of Europe by shifting our focus to the Paleolithic art from Indonesia. It also challenges students to think about whether the creation of art was tied to a speciation event involving the spread of a new and improved sort of human across the globe. The chapter hones students' critical thinking skills by showing the distinction between genetic, cultural, and morphological data and the challenges inherent in reconciling these kinds of data with one another.

The chapter discusses in detail the place of genetic studies in mapping the spread of *Homo sapiens*, incorporates new material on the Denisovan and Neandertal genomes, and provides a look at recent genetic studies on the peopling of the Americas. A new Anthropologist

of Note feature introduces students to the work of paleogeneticist Svante Pääbo, and this chapter's Globalscape on UNESCO World Heritage Sites has been updated to reflect the current list of endangered sites. A new Digging into Anthropology feature engages with the chapter's updated Biocultural Connection by asking students to examine the Paleolithic diet that has gained popularity in some contemporary societies.

Chapter 9: The Neolithic Revolution: The Domestication of Plants and Animals

This comprehensive chapter on the Neolithic revolution contains a suite of features demonstrating the relevance of the ancient domestication of plants and animals to contemporary life. It opens with a new Challenge Issue exploring the recent global enthusiasm for the crop quinoa, an ancient food of Andean peoples in South America. But worldwide demand for quinoa has destabilized the lifeways of the region in which this crop was originally domesticated. The Neolithic set into motion a pattern of competition for resources that now takes place on a global scale.

An updated section on the Irish potato famine illustrates the impact of British policy on the Irish, revealing the interplay of political, economic, and farming factors that resulted in tragic consequences. The chapter offers new content-rich captions—for a photo of bottle gourds used by Datooga women to carry and store liquids and for an ancient winery with pottery vessels at Areni-1 in Armenia—providing a view of the role of genetics in archaeology. We have repositioned the Anthropology Applied feature on pre-Columbian fish farming to add more naturally to the theme of resource competition.

The biological consequences of the Neolithic have been incorporated into the text with a fresh writing style including new art illustrating bone growth and Harris line formation. Further, the 2015 avian flu outbreak and subsequent mass slaughter of poultry have been incorporated into this chapter's Globalscape and into the table on diseases acquired from domesticated animals. A new Digging into Anthropology feature "Domestication Today" asks students to study their own pets for a view into what drives domestication of animals.

Chapter 10: The Emergence of Cities and States

With most of this world's 7 billion-plus inhabitants living in urban environments, this chapter on the emergence of cities and states demonstrates the vital role of archaeology to solving problems brought about by this dominant form of social organization. The chapter's opening Challenge Issue explores the relationship between centralized authority and war, using the destruction of archaeological treasures during the current

civil war in Syria as an example. The chapter's new Globalscape "Illicit Antiquities" on the looting that has accompanied this war contains some surprising profiteers and archaeological heroes.

The chapter has been reorganized, particularly in "The Making of States" section, for better clarity and simplicity. The section on the interdependence of cities is updated to include the 2011 tsunami in Japan, a more detailed discussion of the Syrian civil war, the Ebola virus, as well as the role of social media and global interconnections through cyberspace and airspace. The chapter's case study of Tikal demonstrates the range of archeological methods used in the exploration of a complex site. A new visually rich Original Study, "Ani: Identities and Conflicts in and Around a Silk Road City" by Gregory Areshian, connects global politics past and present to the discipline of archaeology.

This chapter also engages deeply with social stratification—an outcome of cities and states that has a profound impact on human populations today. Through visuals and hands-on activities, students see elaborate cemeteries transformed into housing as the population of Cairo, Egypt, expands. "Mapping Class," the new Digging into Anthropology feature, asks students to bring an awareness of social stratification to their local communities as they create maps that note differences in characteristics—such as building density and materials, transportation, and access to services—according to class.

Chapter 11: Modern Human Diversity—Race and Racism

With the violence that has accompanied the rise of racism and interethnic violence globally, the anthropological perspective on human diversity is increasingly important. We have substantially revised this chapter to reflect the structural and physical violence against minorities globally and specific responses to this violence. Race and racism are presented in this chapter through present-day examples that engage students with familiar, modern iterations of these thought-provoking concepts. A new Challenge Issue describes the June 2015 Emanuel African Methodist Episcopal Church murders in Charleston, South Carolina, as a horrific example of racism's continued impact in our world. We explore the social and political realities of race and reinforce the absence of biologically distinct races throughout this chapter.

We have completely revamped and streamlined discussions on race and intelligence for improved pedagogy, and then we ask students to look for bias in the standardized tests and college entrance exams they have taken in the new Digging into Anthropology feature. We provide other contemporary examples of discussions of race and racism, including the 2015 Baltimore police brutality protests; racial identity as

evidenced through the story of Rachel Dolezal; and the Black Lives Matter movement that has grown in response to the violence. In the chapter's new Original Study, "Reflections on the AAA Die-In as a Symbolic Space of Social Death," Faye Harrison reflects on bringing the Black Lives Matter movement into the national anthropology meetings. The new Globalscape "Finding Home?" explores the movement of Korean-born adoptees who have returned to Korea in response to the racism and dissociation they have felt in the United States. The chapter's Biocultural Connection, "Beauty, Bigotry, and the Epicanthic Fold of the Beholder," has been updated to include global statistics on double eyelid plastic surgery.

We have expanded the chapter's examination of genocide, and its inherent connection with racism, with the inclusion of Gregory Stanton's eight phases of genocide and prevention, as well as the Rohingya Muslims' current risk of genocide. The term *genocide* has been added as a glossary term. The chapter provides appropriate approaches to the study of human diversity that avoid the false categories of race. It explores human variation through characteristics such as skin color, lactose digestion, blood type, and so on while debunking the notion of race-specific medicines.

Chapter 12: Human Adaptation to a Changing World

This chapter focuses on the biology of human adaptation and the profound influence of culture on all aspects of human biology. Updates for this edition integrate recent global developments and their impacts on human adaptation. A new Challenge Issue on the Great Pacific garbage patch illustrates how human action is altering the earth's habitability as pollution at a massive scale interferes with global food webs. By using evolutionary, ecological, critical, and biocultural medical anthropological approaches, the chapter grounds human adaptation in the realm of sickness and health. We have updated the case study of the prion disease kuru to show newly discovered biological responses to prion disease that may have a deep history in human endocannibalism.

We have added new glossary terms *epigenetics* and *resistant strain* as part of the discussion on human adaptation. Epigenetics is further explored in an updated section on new research on the intergenerational effects of traumatic experiences. A new Biocultural Connection explores the controversial topic of vaccination, while considering the effects of vaccination on human adaptation. Building on the discussion from the Challenge Issue, the new Digging into Anthropology feature closes the chapter by asking students to explore the operation of waste management systems in their own communities.

Chapter 13: Characteristics of Culture

This chapter addresses anthropology's core concept of *culture*, exploring the term and its significance for individuals and societies. It opens with a vibrant new Challenge Issue photo highlighting Kuchi nomads in Afghanistan, recognizable by their distinctive dress and pack camels. Five other new photos are part of this chapter's revision, including a satellite image illustrating the transformation of vast stretches of the Arabian Desert into rich agricultural land with water from non-renewable sources deep under ground.

The main narrative begins with a section on culture and adaptation, setting the foundation for a discussion of culture and its characteristics. Our re-colored "barrel model" illustration shows the integrative and dynamic nature of culture and introduces the key concepts of cultural infrastructure, social structure, and superstructure. We present the Kapauku Papua of Western New Guinea as an example of culture as an integrated system and explore pluralistic societies and subcultures through an updated look at the Amish in North America.

The chapter includes discussions on culture, society, and the individual; ethnocentrism and cultural relativism; and cultural change in the age of globalization. Special features include the Biocultural Connection, "Modifying the Human Body," with an updated illustration, an Anthropologist of Note on Bronislaw Malinowski, and the Anthropology Applied feature, "New Houses for Apache Indians" by George Esber, who describes his role in designing culturally appropriate homes for a Native American community. The new Digging into Anthropology task, "Hometown Map," invites students to map aspects of their community utilizing the barrel model.

Chapter 14: Ethnographic Research—Its History, Methods, and Theories

Opening with a new Challenge Issue on fieldwork accompanied by a lively visual of a young anthropologist returning from a tortoise hunt with Ayoreo Indians in Paraguay, this chapter takes a distinct approach to discussing ethnographic research. It begins with a historical overview on the subject—from the colonial era and salvage ethnography to acculturation studies, advocacy anthropology, cyberethnography, and multi-sited ethnography in the era of globalization. Relaying this story, we touch on the work of numerous anthropologists, past and present.

The chapter continues with a detailed discussion on ethnographic research methods—from selecting a research question and site to doing preparatory research to engaging in participant observation. It chronicles the ethnographer's approach to gathering qualitative and quantitative data, delineates the challenges of fieldwork, and touches on the creation of

an ethnography in written, film, or digital formats. Readers will also find an overview of anthropology's theoretical perspectives, along with discussions of the comparative method and the Human Relations Area Files. Moral dilemmas and ethical responsibilities encountered in anthropological research are also explored.

Boxed features include an Original Study on fieldwork in the Trobriand Islands, a Biocultural Connection feature on the environmental and economic conditions that impact attitudes about pigs, and an Anthropologists of Note feature highlighting Margaret Mead and Gregory Bateson's collaborative research in Papua New Guinea. The new Digging into Anthropology assignment calls on students to carry out a bit of multi-sited research with six individuals in their social network: two with whom they live, two with whom they interact at work or school, and two with whom they communicate via social media channels but rarely see.

Chapter 15: Language and Communication

This chapter begins with a dynamic new photograph of a busy Chinatown street in Thailand's capital city of Bangkok, where signs appear in multiple languages. It goes on to investigate the nature of language and the three branches of linguistic anthropology—descriptive linguistics, historical linguistics, and the study of language in its social and cultural settings (ethnolinguistics and sociolinguistics). Also found here are sections on paralanguage and tonal languages and a unique introductory exploration of talking drums and whistled speech. The sections on sociolinguistics and ethnolinguistics cover gendered speech, social dialects, code switching, and linguistic relativity, drawing on a range of examples from Lakota Indians in South Dakota to Aymara Indians in Bolivia and Hopi Indians in Arizona.

Our discussion on language loss and revival includes a look at modern technology used by linguistic anthropologists collaborating on field research with speakers of endangered Khoisan "click" languages in southern Africa. It also features the latest data on the digital divide and its impact on ethnic minority languages—plus an updated chart showing Internet language populations. A historical sketch about writing takes readers from traditional speech performatives and memory devices to Egyptian hieroglyphics to the conception and spread of the alphabet. A concluding section on literacy and modern telecommunication looks at issues of language in our globalized world.

New photos include Visual Counterpoint images contrasting social space across cultures. Boxed features include S. Neyooxet Greymorning's Anthropology Applied essay on language revitalization, Lyn White Mile's Original Study on her research with Chantek the orangutan, and a Biocultural Connection on the

biology of human speech. “Body Talk,” a new Digging into Anthropology task, asks students to investigate the relationship between language and culture by documenting the body language of six people from different cultures and experimenting with altering their own body language.

Chapter 16: Social Identity, Personality, and Gender

Looking at individual identity within a sociocultural context, this chapter surveys the concept of self, enculturation and the behavioral environment, social identity through personal naming, the development of personality, the concepts of group and modal personality, and the idea of national character. The new opening Challenge Issue features Khanty mothers and their furdad children on a reindeer sled at their winter camp in Siberia—one of several new photos in this chapter.

The section on culture and personality includes Margaret Mead’s classic research on gender and personality, followed by an Anthropologist of Note essay on Ruth Benedict. Also featured in this section is a case study on childrearing and gender among traditional and nontraditional Ju/’hoansi and a revised overview of three childrearing patterns, including interdependence training among the Beng of West Africa. A section on group personality describes the Yānomami masculine ideal of *waiteri*, followed by discussions on the questions of national character and core values.

Our exploration of alternative gender models includes a highly personal Original Study about intersexuality. Ethnographic examples concerning transgender include the Bugis of Indonesia, who recognize five genders. “The Social Context of Sexual and Gender Identity” section provides new global statistics on state-sponsored homophobia. On its heels is the broad-ranging section, “Normal and Abnormal Personality in Social Context,” which presents the extreme *sadhu* tradition in India and then discusses mental disorders and concepts of “normality” across time and cultures. The Biocultural Connection offers a cross-cultural view on psychosomatic symptoms and mental health, while a concluding section, “Personal Identity and Mental Health in Globalizing Society,” drives home the need for medical pluralism with a variety of modalities fit for humanity in the worldwide dynamics of the 21st century. This chapter’s Digging into Anthropology assignment, “Gender Across Generations,” charges students to do intergenerational interviewing on the concepts of femininity and masculinity to gain insight on gender differentiation.

Chapter 17: Patterns of Subsistence

Here we investigate the various ways humans meet their basic needs and how societies adapt through culture to the environment, opening with a dramatic

new photo of a peasant farmer practicing wet-rice cultivation on the steep slopes of China’s Guangxi Province—one of half a dozen new visuals enlivening this chapter. The chapter narrative, significantly revised and reconfigured with several new headings, begins with a general discussion of adaptation, followed by a new section titled “Adaptation, Environment, and Ecosystem,” which includes a case study on the Tsembaga who raise pigs in Papua New Guinea. On the heels of that comes a brief section on adaptation and culture areas, featuring a new map. Next come modes of subsistence and their characteristics. It begins with food foraging—including a section chronicling the impact of technology on foragers, with Mbuti Pygmies providing an ethnographic example. Moving on to food-producing societies, we discuss pastoralism, crop cultivation, and industrial food production, including a case study of Bakhtiari herders in Iran, a discussion on peasantry, and the \$55 billion U.S. poultry business.

A section on adaptation and cultural evolution touches on the notion of progress, explores convergent and parallel evolution through ethnographic examples, and features the latest ethnohistorical research on ecosystemic collapse on Rapa Nui, commonly known as Easter Island. A new conclusion looks at population growth and the limits of progress.

The chapter’s boxed features include an Original Study on slash-and-burn cultivation in the Amazon basin in Brazil, an Anthropology Applied piece about reviving ancient farming practices in Peru, and a Globalscape on the international poultry industry. “Global Dining,” the topic of this chapter’s Digging into Anthropology task, gives students an opportunity to see how they “embody” globalization by having them locate the sources of their groceries on a map.

Chapter 18: Economic Systems

Opening with a new Challenge Issue and photo highlighting an open city market in the highlands of Guatemala, this reworked chapter offers eight new photographs and captions, including a new Visual Counterpoint on harvesting and exporting tea. After a brief description of economic anthropology, illustrated by a case study on the yam complex in Trobriand culture, we discuss production and resources (natural, technological, labor). Considering labor resources and patterns, we look at gender, age, cooperative labor, and task specialization, drawing on ethnographic examples that include salt mining in Ethiopia.

A section on distribution and exchange explains various forms of reciprocity (including an illustrated description of the Kula ring), trade and barter, redistribution (with brief accounts of the Inca empire and the northwestern American Indian potlatch), and market exchange. The discussion on leveling mechanisms features an ethnographically rich photo of a

contemporary Tlingit potlatch in Sitka, Alaska. After providing an overview on the history of money as a means of exchange, we conclude with a section on local economies and global capitalism, featuring discussions on the informal economy and the development and marketing of genetically modified seeds.

Boxed features include an Anthropology Applied piece on global ecotourism in Bolivia, a newly illustrated Biocultural Connection on chocolate, and an Anthropologist of Note about Tlingit anthropologist Rosita Worl's work with Sealaska, an indigenous collective that markets wood products and other goods. The new Digging into Anthropology task, "Luxury Foods and Hunger Wages," asks students to track down the source of a luxury food or drink, the ethnicities and wages of those who harvested it, and the profit margin of the company that markets it.

Chapter 19: Sex, Marriage, and Family

Exploring the connections between sexual reproductive practices, marriage, family, and household, this chapter opens with a gorgeous photo of a Muslim bride and her female relatives and friends displaying hands decorated with traditional henna design. Particulars addressed in the chapter include the incest taboo, endogamy and exogamy, dowry and bridewealth, cousin marriage, same-sex marriage, divorce, residence patterns, and nonfamily households. Up-to-date definitions of *marriage*, *family*, *nuclear family*, and *extended family* encompass current real-life situations around the world. Of the dozen visuals in this chapter, six are new.

The diverse ethnographic examples in this chapter come from many corners of the world. Opening paragraphs on the traditional sexual freedom of young people in the Trobriand Islands lead into a discussion on the regulation of sexual relations across cultures. A section on marriage and the regulation of sexual relations includes a recent example of Shariah law as it relates to women and adultery—along with a nuanced commentary about the relationship between such restrictive rules and the incidence of sexually transmitted diseases. Also featured is a short case study on sexual and marriage practices among the Nayar in India, which describes consanguineal and affinal kin.

A discussion on endogamy and exogamy includes a fresh look at cousin marriages among Pakistani immigrants in England. Immigration is also touched upon in the "Forms of Marriage" section, which notes the impact immigration is having on polygamy statistics in Europe and the United States, even as the practice declines in sub-Saharan Africa. Other ethnographic examples concern woman–woman marriage among the Nandi of Kenya, dowries in the Kyrgyz Republic, all-male households among the Mundurucu in Brazil's Amazon rainforest, and matrilineal residence among traditional Hopi Indians.

A closing section sketches the impact of global capitalism, electronic communication, and transnationalism on love relations. It includes revised subsections on adoption, new reproductive technologies, and migrant workforces. Boxed features include an Original Study on arranged marriages in India, a Biocultural Connection on marriage prohibitions in the United States, and an Anthropologist of Note on Claude Lévi-Strauss. The new Digging into Anthropology feature is titled "Sex Rules?" It involves making a list of six distinctive sets of sexual relationships, noting which are socially accepted or prohibited by law or faith and what the punishment is for breaking the prohibition. The second half of the exercise is comparison and analysis.

Chapter 20: Kinship and Descent

Beginning with a new photograph of a clan gathering in Scotland, this chapter marks out the various forms of descent groups and the role descent plays as an integrated feature in a cultural system. The narrative includes details and examples of lineages, clans, phratries, and moieties (highlighting Hopi Indian matrilineal and Scottish highland patrilineal, among others), followed by illustrated examples of a representative range of kinship systems and their kinship terminologies.

Along with an array of new and revised visuals, this chapter offers ethnographic examples from the Han Chinese, the Maori of New Zealand, and the Canela Indians of Brazil; it also takes a look at diasporic communities in today's globalized world. A section entitled "Making Relatives" explores fictive kin and ritual adoption, illustrating that in cultures everywhere, people have developed ideas about how someone becomes "one of us." We also present a discussion of kinship and new reproductive technologies, touching on the mind-boggling array of reproductive possibilities and how they are impacting humanity's conceptions of what it means to be biologically related.

Boxed features include an Anthropology Applied piece on resolving Native American tribal membership disputes, a thought-provoking Original Study on honor killings among Turkish immigrants in the Netherlands, and a freshly illustrated Biocultural Connection piece about ancient Maori mythical traditions that are now supported by genetic research. The Digging into Anthropology project, "What's in a Name?," invites students to glean the importance of kin terms by interviewing someone ("EGO") and mapping EGO's kin-group.

Chapter 21: Grouping by Gender, Age, Common Interest, and Social Status

Starting with a vibrant photograph of Afghan horsemen playing *buzkashi*, their country's fiercely competitive national sport, this chapter includes discussions

on grouping by gender, age, common interest, and social status.

The gender grouping discussion features ethnographic material from the Mundurucu of Brazil, among others, while age grouping highlights the Tiriki and Maasai of East Africa. Common-interest grouping examples range from “pink vigilantes” in India to the African diaspora in the United States. A section on associations in the digital age provides new figures on the rapid and widespread changes in social networking platforms across the globe. The revised section on grouping by social status explores social class and caste. We give special attention to the traditional Hindu caste system in India and touch on customarily closed European social classes known as estates, as well as the history of racial segregation in South Africa and the United States. Indicators of social status are discussed, along with social mobility and various means of maintaining stratification.

Boxed features include an updated Globalscape profiling the impact of football on Côte d’Ivoire’s ethnic conflicts, a Biocultural Connection about the African Burial Ground Project in New York City, an Original Study on the Jewish *eruv*, and an Anthropology Applied feature on policy research revealing institutionalized inequality. The new Digging into Anthropology assignment is designed to help students reflect on how their social media self and relationships may differ from their face-to-face self and relationships.

Chapter 22: Politics, Power, War, and Peace

This chapter opens with a new Challenge Issue and photo in which masses of people, besieged by Syria’s civil war, are trying to escape the Yarmouk refugee neighborhood outside of Damascus. The main narrative begins by defining power and politics, followed by descriptions of uncentralized and centralized political systems and their characteristics—from bands and tribes to chiefdoms and states. Ethnographic examples include the Ju/’hoansi Bushmen, the Kapauku Papua, the Pashtun of Afghanistan and Pakistan, and the Kpelle of Liberia. We explain the distinction between state and nation, highlighting the Kurdish fight for independence. After discussing the concepts of authority and legitimacy, the narrative explores the link between politics and religion and gender—touching on the role religion may play in legitimizing the political order and leadership and taking a historical, cross-cultural look at the incidence of female leadership. Among the ethnographic examples we present is the dual-gender government system of the Igbo in Nigeria.

A section titled “Cultural Controls in Maintaining Order” investigates internalized control (such as self-control) and externalized control (such as sanctions), as well as witchcraft. The witchcraft discussion features new material on modern witch hunts, including a

searing photo of a woman who fell victim to one. Under the heading “Holding Trials, Settling Disputes, and Punishing Crimes,” we contrast traditional kin-based approaches to those of politically centralized societies. This includes descriptions of Inuit song duels in Canada and Kpelle trials by ordeal in Liberia, plus a discussion of restorative justice.

A section on violent conflict sketches the evolution of warfare and the impact of technology, including drones. It presents a brief new profile (with photo) of the self-proclaimed Islamic State and its *jihad*. Delving further into ideologies of aggression, it chronicles a Christian holy war in Uganda. Following discussions on genocide and contemporary armed conflicts, the narrative looks at approaches to peacemaking—diplomacy, treaty making, and the politics of nonviolent resistance, including brief profiles of movements led by Mohandas Gandhi in India and Aung San Suu Kyi in Myanmar. An updated Anthropology Applied box on dispute resolution has been relocated to this section. Other special features in this chapter include a Biocultural Connection on gender, sex, and human violence and an updated Globalscape on Somali pirates. “Politics and Purses,” the Digging into Anthropology assignment for this chapter, takes students on a journey to locate links between money and power.

Chapter 23: Spirituality, Religion, and Shamanism

This chapter, rich with nine new visuals, opens with a colorful new photo and Challenge Issue highlighting a sacred Buddhist dance ritual in Bhutan. The main narrative begins with a discussion of superstructure and worldview. Noting the distinction between spirituality and religion, we discuss the anthropological approach to studying them and offer an updated chart and a map showing the numbers of religious adherents and the concentrations of major religions around the world. After introducing myths and their role in mapping cosmology, we discuss supernatural beings and spiritual forces—from gods and goddesses to ancestral spirits and the concepts of animism and animatism. This section features a new image of the dual-gender divinity, Ardhanaraishvara.

Next we mark out religious specialists. Our overview of priests and priestesses includes a Biocultural Connection on the masculinization of Taiwanese nuns and a discussion on spiritual lineages, comparing how authority is obtained and passed on among Tibetan Buddhists and three other religious groups. A comprehensive exploration of shamanism features our “shamanic complex” diagram, a description of shamanic healing among the Ju/’hoansi with a remarkable new photo, and an Anthropologist of Note on modern-day shamanic practitioner-teacher Michael Harner.

In a section on ritual performances, we discuss taboos and cleansing ceremonies, rites of passage (with ethnographic examples noting the phases of separation, transition, and incorporation), rites of intensification, magic (imitative and contagious), and divination (with a new Visual Counterpoint juxtaposing “bone throwing” diviners in South Africa with a *feng shui* master in Hong Kong). A section on witchcraft offers a brief cross-cultural overview, followed by a more detailed description of Navajo skin-walkers. Next come sacred sites—from shrines to mountains—and the pilgrimages (devotions in motion) they inspire. This includes a subsection on female saints (highlighting Marian devotions and Black Madonnas) and a discussion of desecration, past and present.

In a section on cultural dynamics, we explore religious and spiritual change, including revitalization movements and syncretic religions (especially Vodou in Haiti). Turning to religious pluralism and secularization, we give an overview of spirituality and religious practices today (including an Original Study on Shariah banking), driving home the point that the anthropological study of religion is crucial to gaining an understanding of today’s world. This chapter’s Digging into Anthropology, “Going Through a Phase,” calls on students to observe a rite of passage, take note of its phases, and analyze why the event requires a ritual.

Chapter 24: The Arts

This chapter begins with a Challenge Issue about articulating ideas and emotions through various art forms, illustrated by a dramatic new photograph showing a crowd of Kayapo Indians staging a political protest in artful ceremonial paint and dress. The main narrative explores three key categories of art—visual, verbal, and musical. It features eight new photographs, including a new Visual Counterpoint juxtaposing ancient rock art and modern urban graffiti.

Describing the distinctly holistic approach anthropologists bring to the study of art, we note the range of cultural insights art discloses—from kinship structures to social values, religious beliefs, and political ideas. We also explain aesthetic and interpretive approaches to analyzing art, as applied to rock art in southern Africa and cross-cultural depictions of the Last Supper in the Bible. A revised verbal arts section presents several ethnographic examples, including the Abenaki creation myth and the culturally widespread “Father, Son, and Donkey” tale.

The section on music carries readers from flutes made of bones from 42,000 years ago to traditional and new age shamans drumming to evoke trances; from rapping and beatboxing to online music mash-ups; from laborers on the edge of the Sahara working

to the beat of a drum to West African *griots* recounting personal histories through percussion and lyrics. We touch on the elements of music, including tonality, rhythm, and melody, and through music we explore the functions of art. Boxed features include a Biocultural Connection about the role of peyote in Huichol art, a newly illustrated Original Study on tattoos, a Globalscape on artful West African coffins, and a moving Anthropology Applied feature about a Penobscot Indian anthropologist recreating traditional regalia as part of a cultural and economic survival strategy. The new Digging into Anthropology assignment, “A Heart for Art,” invites students to look into a public art performance in their own community and compare that to the Kayapo Indians’ artful political protest featured in the chapter’s opening photo and Challenge Issue.

Chapter 25: Processes of Cultural Change

A new opening photo showing a crowd of people stranded by a delayed train in India suggests the challenge of human dependency on major technological advances made since the invention of the steam engine. Globalization themes and terms are woven through this chapter, which includes definitions distinguishing *progress* from *modernization* and *rebellion* from *revolution*. Discussing mechanisms of change—primary and secondary innovation, diffusion, and cultural loss, as well as repressive change—we highlight the spear-thrower (atlatl) and wheel-and-axle technology, as well as the dynamics that encourage or discourage innovative tendencies. Examples in the discussion on diffusion range from bagpipes in Bhutan to the spread of maize and the metric system.

A streamlined exploration of cultural change and loss covers acculturation and ethnocide—featuring an illustrated passage on Yanomami. After discussing directed change, we chronicle reactions to change—explaining syncretism through the story of Trobrianders transforming the British game of cricket and elaborating on revitalization movements with a description of cargo cults in Melanesia and the revival of sacred precolonial rituals such as sun worship in Bolivia. A discussion on rebellion and revolution highlights the Zapatista Maya Indian insurgency in southern Mexico and the Chinese communist revolution (including a new photo and caption concerning its long-term impact on women). Discussing processes of modernization, we consider self-determination among indigenous peoples with two contrasting examples: the Shuar Indians of Ecuador and a newly illustrated story of Sámi reindeer herders in northwest Russia and Scandinavia.

Boxed features include a Biocultural Connection on the emergence of new diseases, an Anthropologist of Note on Eric R. Wolf, and an Anthropology Applied

about development anthropology and dams, with a fascinating satellite image of China's Three Gorges Dam. A new Digging into Anthropology, "Life Without Imports," asks students to analyze how their culture would change if they faced a political revolution that prohibited the consumption of foreign goods and information.

Chapter 26: Global Challenges, Local Responses, and the Role of Anthropology

Our final chapter opens with a new photo of an Internet café in China coupled with a revised Challenge Issue about cultural adaptations that have fueled population growth and globalization. The main narrative begins with a new passage describing the stunning globalizing effect of today's digital telecommunication technology—featuring a new illustration of satellites orbiting earth and raising the question of whether our species can successfully adapt to the dynamic ecosystem of the current geological epoch known as the Anthropocene. A section titled "Cultural Revolutions: From *Terra Incognita* to Google Earth" offers a 500-year overview of technological inventions that have transformed humanity's lifeways, expanded interconnections, and changed our perceptions about our place and destiny in the universe. It ends with the first full-view photograph taken of earth and speculations by some that a homogenous global culture is in the making.

A section on global integration processes marks out the emergence of international organizations. We then consider pluralistic societies, multiculturalism, and fragmentation, illustrating the push-and-pull aspects of today's world. A section on global migrations catalogues the number of internal and external migrants, including transnationals working in one country while remaining citizens of another, plus the millions of refugees forced outside their countries. Marking out challenges migrants face, we include a new section titled "Diasporas and Xenophobia," followed by "Migrants, Urbanization, and Slums," reporting on the 1 billion people worldwide now living in slums.

Next comes what may be most important section in this chapter, "Structural Power in the Age of Globalization," with comprehensive subsections on hard power (economic and military) and soft power (media) featuring updated and newly designed graphs. On its heels is a revised overview of the problems of structural violence—from poverty and income disparity; to hunger, obesity, and malnutrition; to pollution and global warming. This section features a new world map showing income inequality. Another world map depicts energy consumption. Discussing reactions to

globalization, we touch on religious fanaticism among Muslims and Christians, along with the human rights struggles of ethnic minorities and indigenous peoples. The chapter concludes with an encouraging look at anthropology's role in meeting the inequities and other challenges of globalization.

Special box features include a Biocultural Connection about the threat to Arctic cultures from outside contamination; an updated Globalscape about dumping toxic waste in poor countries; an Anthropology Applied piece on Ann Dunham (President Obama's mother), who was a pioneer in microfinancing; and an uplifting Anthropologist of Note profile about Paul Farmer and his global Partners In Health foundation. The new Digging into Anthropology feature, "How Are You Wired?," calls on students to analyze their use of telecommunication devices.

Supplements

Anthropology: The Human Challenge comes with a comprehensive supplements program to help instructors create an effective learning environment both inside and outside the classroom and to aid students in mastering the material.

Online Instructor's Manual, PowerPoint Slides, and Test Bank

The instructor's manual offers detailed chapter outlines, lecture suggestions, key terms, and student activities such as video exercises and Internet exercises. In addition, there are over seventy-five chapter test questions including multiple choice, true/false, fill in the blank, short answer, and essay.

Readings and Case Studies

Classic and Contemporary Readings in Physical Anthropology, edited by M. K. Sandford with Eileen M. Jackson

This highly accessible reader emphasizes science—its principles and methods—as well as the historical development of physical anthropology and the applications of new technology to the discipline. The editors provide an introduction to the reader as well as a brief overview of the article so students know what to look for. Each article also includes discussion questions and Internet resources.

Classic Readings in Cultural Anthropology, 4th edition, edited by Gary Ferraro

Now in its fourth edition, this reader includes historical and recent articles that have had a profound effect on the field of anthropology. Organized according to the major topic areas found in most cultural anthropology courses, this reader includes an introduction to the material as well as a brief overview of each article and discussion questions.

Globalization and Change in Fifteen Cultures: Born in One World, Living in Another, edited by George Spindler and Janice E. Stockard

In this volume, fifteen case studies describe cultural change in diverse settings around the world. The fifteen authors of the original case studies provide insight into the dynamics and meanings of change, as well as the effects of globalization at the local level.

Case Studies in Cultural Anthropology, edited by George Spindler and Janice E. Stockard

Select from more than sixty classic and contemporary ethnographies representing geographic and topical diversity. Newer case studies focus on cultural change and cultural continuity, reflecting the globalization of the world.

Case Studies on Contemporary Social Issues, edited by John A. Young

Framed around social issues, these contemporary case studies are globally comparative and represent the cutting-edge work of anthropologists today.

Case Studies in Archaeology, edited by Jeffrey Quilter

These engaging accounts of new archaeological techniques, issues, and solutions—as well as studies discussing the collection of material remains—range from site-specific excavations to types of archaeology practiced.

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About the Authors



Courtesy of the authors

Authors Bunny McBride, Dana Walrath, Harald Prins, and William Haviland.

All four members of this author team share overlapping research interests and a similar vision of what anthropology is (and should be) about. For example, all are true believers in the four-field approach to anthropology, and all have some involvement in applied work.

WILLIAM A. HAVILAND is professor emeritus at the University of Vermont, where he founded the Department of Anthropology and taught for thirty-two years. He holds a PhD in anthropology from the University of Pennsylvania.

He has carried out original research in archaeology in Guatemala and Vermont; ethnography in Maine and Vermont; and physical anthropology in Guatemala. This work has been the basis of numerous publications in various national and international books and journals, as well as in media intended for the general public. His books include *The Original Vermonters*, coauthored with Marjorie Power, and a technical monograph on ancient Maya settlement. He also served as consultant for the award-winning telecourse *Faces of Culture*, and he is coeditor of the series *Tikal Reports*, published by the University of Pennsylvania Museum of Archaeology and Anthropology.

Besides his teaching and writing, Dr. Haviland has given lectures for numerous professional as well as nonprofessional audiences in Canada, Mexico, Lesotho, South Africa, and Spain, as well as in the United

States. A staunch supporter of indigenous rights, he served as expert witness for the Missisquoi Abenaki of Vermont in an important court case over aboriginal fishing rights.

Awards received by Dr. Haviland include being named University Scholar by the Graduate School of the University of Vermont in 1990; a Certificate of Appreciation from the Sovereign Republic of the Abenaki Nation of Missisquoi, St. Francis/Sokoki Band in 1996; and a Lifetime Achievement Award from the Center for Research on Vermont in 2006. Now retired from teaching, he continues his research, writing, and lecturing from the coast of Maine. He serves as a trustee for the Abbe Museum in Bar Harbor, focused on Maine's Native American history, culture, art, and archaeology. His most recent books are *At the Place of the Lobsters and Crabs* (2009) and *Canoe Indians of Down East Maine* (2012), along with the monograph *Excavations in Residential Areas of Tikal* (2015).

HARALD E. L. PRINS is a University Distinguished Professor of cultural anthropology at Kansas State University. Academically trained at half a dozen Dutch and U.S. universities, he previously taught at Radboud University (Netherlands), Bowdoin College and Colby College in Maine, and as a visiting professor at the University of Lund, Sweden. He has received numerous honors for his teaching, including the Conoco Award for Outstanding Undergraduate Teaching in 1993, Presidential Award in 1999, Coffman Chair of Distinguished Teaching Scholars in 2004, Carnegie Foundation Professor of the Year for Kansas in 2006, and the AAA/Oxford University Press Award for Excellence in Undergraduate Teaching of Anthropology in 2010.

His fieldwork focuses on indigenous peoples in the western hemisphere, and he has long served as an advocacy anthropologist on land claims and other native rights. In that capacity, Dr. Prins has been a lead expert witness in both the U.S. Senate and Canadian federal courts. He has refereed for forty academic book publishers and journals. His own numerous academic publications appear in nine languages, with books including *The Mi'kmaq: Resistance, Accommodation, and Cultural Survival* (Margaret Mead Award finalist).

Also trained in filmmaking, he served as president of the Society for Visual Anthropology and has

coproduced award-winning documentaries. He has been the visual anthropology editor of *American Anthropologist*, coprincipal investigator for the U.S. National Park Service, international observer in Paraguay's presidential elections, and a research associate at the National Museum of Natural History, Smithsonian Institution.

DANA WALRATH—an award-winning writer, artist, and anthropologist—is a faculty member at the University of Vermont College of Medicine. After earning her PhD in medical and biological anthropology from the University of Pennsylvania, she taught there and at Temple University. Dr. Walrath broke new ground in paleoanthropology through her work on the evolution of human childbirth. She has also written on a wide range of topics related to gender in paleoanthropology, the social production of sickness and health, sex differences, genetics, and evolutionary medicine. Her work has appeared in edited volumes and in journals such as *Current Anthropology*, *American Anthropologist*, *American Journal of Physical Anthropology*, and *Anthropology Now*. Her books include *Aliceheimer's*, a graphic memoir, and *Like Water on Stone*, a verse novel.

She developed a novel curriculum in medical education at the University of Vermont College of Medicine that brings humanism, anthropological theory and practice, narrative medicine, and professionalism skills to first-year medical students. Dr. Walrath also has an MFA in creative writing from Vermont College of Fine Arts and has exhibited her artwork in North America and Europe. Her recent work in the field of graphic medicine combines anthropology with memoir and visual art. Spanning a variety of disciplines, her work has been supported by diverse sources such as the National Science Foundation, the Templeton Foundation, the Centers for Disease Control, the Health Resources and Services Administration, the Vermont Studio Center, the Vermont Arts Council, and the National Endowment for the Arts. She spent 2012–2013 as a Fulbright Scholar at the American University of Armenia and the Institute of Ethnography and Archaeology of the National Academy of Sciences of Armenia. She is

working on a second graphic memoir that combines her *Aliceheimer's* work with her fieldwork on aging and memory in Armenia and a graphic novel about the genetics of mental illness.

BUNNY MCBRIDE is an award-winning author specializing in cultural anthropology, indigenous peoples, international tourism, and nature conservation issues. Published in dozens of national and international print media, she has reported from Africa, Europe, China, and the Indian Ocean. Holding an MA from Columbia University and highly rated as a teacher, she has taught at the Salt Institute for Documentary Field Studies and at Principia College, where she was a visiting faculty member in the Anthropology Department on and off for many years. Since 1996 she has been an adjunct lecturer of anthropology at Kansas State University.

Among McBride's many publication credits are the books *Women of the Dawn*; *Molly Spotted Elk: A Penobscot in Paris*; and *Our Lives in Our Hands: Micmac Indian Basketmakers*. She has also contributed chapters in a dozen books and coauthored several books, including *Indians in Eden* and *The Audubon Field Guide to African Wildlife*. Working on a range of issues and projects with Maine Indian tribes since 1981, McBride received a commendation from the Maine state legislature for her research and writing on the history of Native American women. *Boston Globe Sunday Magazine* featured a long profile about her, and Maine Public Television made a documentary about her research and writing on Molly Spotted Elk.

In recent years, McBride has served as coprincipal investigator for a National Park Service ethnography project and curated several museum exhibits, including "Journeys West: The David & Peggy Rockefeller American Indian Art Collection" for the Abbe Museum in Bar Harbor, Maine. Her exhibit, "Indians & Rusticators," received a Leadership in History Award from the American Association for State and Local History (2012). As of 2016, she serves on the advisory panel for the Women's World Summit Foundation (based in Geneva, Switzerland) after ten years on the organization's board and three as its president.



Uriel Sinai/The New York Times/Redux

CHALLENGE ISSUE

How do we make sense of the world? Who are we, and how are we connected to the person pictured here? Why might we look different from this person or speak a different language? Anthropologists approach such questions holistically, framing them in a broad, integrated context that considers human culture and biology, in all times and places, as inextricably intertwined. Consider David Abongo Owich pictured here catching baby catfish in Kenya's Lake Victoria with repurposed mosquito nets, provided by health organizations to regions with a high incidence of malaria, which is spread by mosquitoes. However, the free malarial nets are useful for trapping fish, so some choose to improve their diet rather than protect themselves from malaria. This has led to problems not only with the continued spread of the disease but with overfishing and water contamination from the insecticides in the nets. Historically, disease-specific interventions have often overlooked the needs and values of each particular human society. The anthropological perspective equips us to negotiate today's interconnected, globalized world, enabling us to contribute to practical solutions for the problems of contemporary life.

The Essence of Anthropology

1

The Anthropological Perspective

Anthropology is the study of humankind in all times and places. Of course, many disciplines focus on humans in some way. For example, anatomy and physiology concentrate on our species as biological organisms. Anthropology focuses on the interconnections and interdependence of all aspects of the human experience in all places, in the present and deep into the past, well before written history. This unique, broad **holistic perspective** equips anthropologists to address that elusive thing we call *human nature*.

Anthropologists welcome the contributions of researchers from other disciplines and, in return, offer their findings to these disciplines. Anthropologists may not know as much about the structure of the human eye as anatomists or as much about the perception of color as psychologists. As synthesizers, however, anthropologists seek to understand how anatomy and psychology relate to color-naming practices in different societies. Because they look for the broad basis of ideas and practices without limiting themselves to any single social or biological aspect, anthropologists acquire an expansive and inclusive overview of our species.

Embracing a holistic perspective allows anthropologists to guard against possible personal or cultural biases. As the old saying goes, people often see what they believe rather than what appears before their eyes. By maintaining a critical awareness of their own assumptions about human nature—checking and rechecking the ways their beliefs and actions might be shaping their research—anthropologists strive to gain objective knowledge about humans. With this in mind, anthropologists avoid the pitfalls of **ethnocentrism**, a belief that the ways of one's own culture are the best or only proper ones. Thus anthropologists have expanded our understanding of diversity in human thought, biology, and behavior, as well as our understanding of the many things humans have in common.

anthropology The study of humankind in all times and places.

holistic perspective A fundamental principle of anthropology: The various parts of human culture and biology must be viewed in the broadest possible context in order to understand their interconnections and interdependence.

ethnocentrism The belief that the ways of one's own culture are the only proper ones.

In this chapter you will learn to

- Describe the discipline of anthropology and make connections between each of its four fields.
- Compare anthropology to the sciences and the humanities.
- Identify the characteristics of anthropological field methods and the ethics of anthropological research.
- Explain the usefulness of anthropology in light of globalization.



Gina Ulysse

Figure 1.1 Anthropologist Gina Athena Ulysse

Anthropologists come from many corners of the world and contribute to the field in myriad ways. Dr. Gina Athena Ulysse, pictured here, was born in Pétion-Ville, Haiti, and immigrated to the United States with her family when she was a teenager. Now an associate professor of anthropology at Wesleyan University, she is a writer and spoken word scholar-artist. Her work explores Haitian history, identity, spirituality, and the lingering, dehumanizing effects of colonialism. Her performances incorporate spoken word and Vodou chant, blurring the lines between anthropology and art. She recently brought her performance back to Haiti while wearing the International Peace Belt, first created from coins that went out of circulation when the euro replaced most former European currencies. Today 115 of the world's 196 countries are represented on the belt. As a "living link between cultures and a symbol of peace and unity of all nations" (Artists for World Peace, 2015), the belt has traveled to over twenty-five countries on five continents.

Anthropologists come from many different backgrounds, and individuals practicing the discipline vary in their personal, national, ethnic, political, and religious beliefs (Figure 1.1). At the same time, they apply a rigorous methodology for researching from the perspective of the culture being studied, which requires them to check for the influences of their own biases. This is as true for an anthropologist analyzing the global banking industry

culture-bound A perspective that produces theories about the world and reality that are based on the assumptions and values from the researcher's own culture.

as for one investigating tropical food gardens or traditional healing ceremonies. We might say anthropology is a discipline concerned with unbiased evaluation of diverse human systems, including one's own.

Although other social sciences have predominantly concentrated on contemporary peoples living in North American and European (Western) societies, anthropologists have historically focused on non-Western peoples and cultures. Anthropologists work with the understanding that to fully access the complexities of human ideas, behavior, and biology, *all humans*, wherever and whenever, must be studied. A cross-cultural and long-term evolutionary perspective distinguishes anthropology from other social sciences. This approach guards against theories that are **culture-bound**—based on assumptions about the world and reality that come from the researcher's own culture.

As a case in point, consider the fact that

infants in the United States typically sleep apart from their parents. To people accustomed to multibedroom houses, cribs, and car seats, this may seem normal, but cross-cultural research shows that *co-sleeping*, of mother and baby in particular, is more common globally (Figure 1.2). Further, the practice of sleeping apart favored in the United States dates back only about 200 years (McKenna & McDade, 2005). Cultural norms are neither universal nor eternal.

Consider also the medical practice of organ transplantation, which has become widespread since the first kidney transplant between twin brothers in Boston in 1954.

VISUAL COUNTERPOINT



Figure 1.2 Sleeping Habits Across Cultures

A newborn baby in United States lies alone in a hospital cradle. A newborn Ho baby in Chakradharpur, India, sleeps nestled beside her mother. The patterns set in the first hours of life repeat in the coming weeks, months, and years. The U.S. pattern promotes the cultural norm of 8 isolated, uninterrupted hours of sleep at night throughout all phases of the life span. Cross-cultural research shows that co-sleeping and periods of wakefulness during the night are far more common. For U.S. infants sleeping alone in cribs, the consequences can be dire. They do not benefit from breastfeeding cues provided by someone sleeping nearby. Consequently, they are more susceptible to sudden infant death syndrome (SIDS), a phenomenon in which a baby, usually between 4 and 6 months old, stops breathing and dies while asleep. The highest rates of SIDS are found among infants in the United States (McKenna, Ball, & Gettler, 2007). That 50 to 70 million adults in the United States suffer from sleep disorders may also be a product of this cultural pattern (Institute of Medicine, 2006).

Today, transplants between unrelated individuals are common, so much so that organs are illegally trafficked, often across continents from the poor to the wealthy. A practice like organ transplantation can only exist if it fits with cultural beliefs about death and the human body. The dominant North American and European view—that the body is a machine that can be repaired much like a car—makes organ transplantation acceptable. However, in Japan the concept of brain death (that a person is “dead” when the individual’s brain no longer functions, despite a still-beating heart) is hotly contested. Their idea of personhood does not incorporate a mind-body split, so Japanese people do not accept that a warm body is a corpse from which organs can be harvested. In addition, the idea of organs as anonymous “gifts” does not fit with the Japanese social pattern of reciprocal exchange. Consequently, organ transplants are rarely performed in Japan (Lock, 2001).

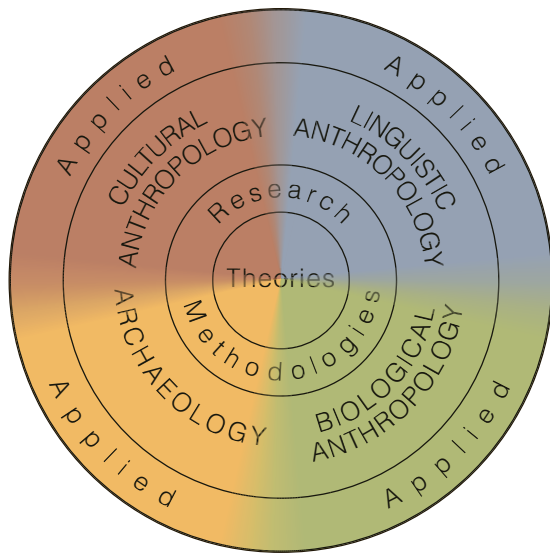
The findings of anthropologists have often challenged the conclusions of sociologists, psychologists, and economists. At the same time, anthropology is indispensable to those in other disciplines because it provides the only consistent check against culture-bound assertions. In a sense, anthropology is to these disciplines what the laboratory is to physics and chemistry: an essential testing ground for their theories.

Anthropology and Its Fields

Individual anthropologists tend to specialize in one of four fields or subdisciplines: cultural anthropology, linguistic anthropology, archaeology, and biological (physical) anthropology (Figure 1.3). Some anthropologists consider archaeology and linguistics to be part of a broader study of human cultures, but both subdisciplines have close ties to biological anthropology. For example, although linguistic anthropology focuses on the cultural aspects of language, it has deep connections to the evolution of human language and to the biological basis of speech and language studied within biological anthropology.

Researchers in each of anthropology’s fields gather and analyze data to explore similarities and differences among humans, across time and space. Moreover, individuals within each of the four fields practice **applied anthropology**, using anthropological knowledge and methods to prevent or solve practical problems. Most applied anthropologists actively collaborate with the communities

applied anthropology The use of anthropological knowledge and methods to solve practical problems, often for a specific client.



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Figure 1.3 The Four Fields of Anthropology

Note that the divisions among the fields are not sharp, indicating that their boundaries overlap. Also, all four fields include the practice of applied anthropology.

in which they work—setting goals, solving problems, and conducting research together. In this book, the Anthropology Applied features spotlight how anthropology contributes to solving a wide range of challenges.

An early example of the application of anthropological knowledge to a practical problem is the international public health movement that began in the 1920s. This marked the beginning of **medical anthropology**—a specialization that brings theoretical and applied approaches from cultural and biological anthropology to the study of human health and disease. The work of medical anthropologists sheds light on connections between human health and political and economic forces, both locally and globally. Examples of this

medical anthropology A specialization in anthropology that brings theoretical and applied approaches from cultural and biological anthropology to the study of human health and disease.

cultural anthropology The study of patterns in human behavior, thought, and emotions, focusing on humans as culture-producing and culture-reproducing creatures. Also known as *social* or *sociocultural anthropology*.

culture A society's shared and socially transmitted ideas, values, and perceptions, which are used to make sense of experience and generate behavior and are reflected in that behavior.

ethnography A detailed description of a particular culture primarily based on fieldwork.

fieldwork The term anthropologists use for on-location research.

participant observation In ethnography, the technique of learning a people's culture through social participation and personal observation within the community being studied, as well as interviews and discussion with individual members of the group over an extended period of time.

ethnology The study and analysis of different cultures from a comparative or historical point of view, utilizing ethnographic accounts and developing anthropological theories that help explain why certain important differences or similarities occur among groups.

specialization appear in many of the Biocultural Connection features in this text, including “Picturing Pesticides.”

Cultural Anthropology

Cultural anthropology (also called *social* or *sociocultural anthropology*) is the study of patterns of human behavior, thought, and feelings. It focuses on humans as culture-producing and culture-reproducing creatures. To understand the work of cultural anthropologists, we must clarify the meaning of **culture**—a society's shared and socially transmitted ideas, values, and perceptions, which are used to make sense of experience and which generate behavior and are reflected in that behavior. These are the (often unconscious) standards by which societies—structured groups of people—operate. These standards are socially *learned*—not acquired through biological inheritance. Cultures may vary considerably from place to place, but no person is “more cultured” in the anthropological sense than any other.

Integral to all the anthropological fields, the concept of culture might be considered anthropology's distinguishing feature. After all, biological anthropologists are distinct from biologists *primarily* because they take culture into account. Cultural anthropologists may study the legal, medical, economic, political, or religious system of a given society, knowing that all aspects of culture interrelate as part of a unified whole. They may focus on divisions in a society—such as gender, age, or class. These same categories are also significant to archaeologists who study a society through its material remains, to linguistic anthropologists who examine ancient and modern languages, and to biological anthropologists who investigate the physical human body.

Cultural anthropology has two main components: ethnography and ethnology. An **ethnography**—a detailed description of a particular culture—is based on **fieldwork**, the term *all* anthropologists use for on-location research. Ethnographic fieldwork entails a combination of social participation and personal observation within the community being studied and interviews and discussions with individual members of a group. This methodology, commonly referred to as **participant observation** (Figure 1.4), provides the information used to make systematic comparisons of cultures all across the world. Known as **ethnology**, such cross-cultural research allows anthropologists to develop theories about differences and similarities among groups.

Ethnography

Through participant observation—eating a people's food, sleeping under their roof, learning how to speak and behave acceptably, and personally experiencing their habits and customs—the ethnographer seeks to understand a particular way of life. Being a participant observer does not mean that the anthropologist must join in battles to study a culture in which warfare is prominent; but by living among a warring people, the ethnographer can ascertain how warfare fits into the overall cultural framework.



Figure 1.4 Fieldwork among Urban Drug Users

For over ten years, anthropologist Philippe Bourgois and photographer-ethnographer Jeff Schonberg spent time among heroin and crack users on the streets of San Francisco. Their research—including photographs, field notes, and audio recordings—explores the experience of homelessness, addiction, and marginalization. Their book, *Righteous Dopefiend: Homelessness, Addiction, and Poverty in Urban America*, and an accompanying traveling exhibit are based on their findings.

Jeffrey Schonberg

Ethnographers must take care not to place too much emphasis on one part of a culture at the expense of another. Only by discovering how *all* parts—social, political, economic, and religious practices and institutions—relate to one another can ethnographers begin to understand the cultural system. Ethnographers' essential tools are notebooks, pen/pencil, camera, recording devices, laptop computer, and, increasingly, smartphones. Most important of all, they need flexible social skills.

The popular image of ethnographic fieldwork is that it occurs among hunters, herders, or farmers who live in far-off, isolated places. To be sure, much ethnographic work continues to be done in remote villages in Asia, Africa, or Latin America, islands of the Pacific Ocean, and deserts of Australia. However, with the demise of colonialism in the mid-20th century, anthropologists now also focus on industrialized societies and urban neighborhoods.

Ethnographic fieldwork is no longer expert Western anthropologists studying people in “other” places; today it is a collaborative approach among anthropologists from all parts of the world and the varied communities in which they work. Anthropologists from around the globe employ the same research techniques developed in the study of non-Western peoples to explore diverse subjects such as religious movements, street gangs, refugee settlements, land rights, corporate bureaucracies, and health-care systems in Western cultures.

Ethnology

Largely descriptive in nature, *ethnography* provides raw data needed for *ethnology*—the branch of cultural

anthropology that involves cross-cultural comparisons and theories that explain differences or similarities among groups. Cross-cultural comparisons can lead to insights about one's own beliefs and practices. Consider, for example, the amount of time spent on domestic chores by industrialized peoples and traditional food foragers—people who rely on wild plant and animal resources for subsistence. Anthropological research has shown that, despite access to “labor-saving” appliances such as dishwashers, washing machines, vacuum cleaners, and microwave ovens, urban dwellers in the United States who are not working outside their homes put 55 hours a week into their housework. In contrast, Aboriginal women in Australia devoted 20 hours a week to their chores (Bodley, 2008, p. 106). Nevertheless, consumer appliances have become important indicators of a high standard of living across the globe due to the widespread belief that they reduce housework and increase leisure time. Systematic comparisons allow ethnologists to generate scientific explanations of cultural features and social practices in all times and places.

Applied Cultural Anthropology

Today, cultural anthropologists contribute to applied anthropology in a variety of contexts ranging from business to education to healthcare to governmental interventions to humanitarian aid. For example, anthropologist Nancy Scheper-Hughes (2003) has taken her investigative work on the global problem of illegal organ trafficking and used it to help found Organs Watch, an organization dedicated to solving this human rights issue.

BIOCULTURAL CONNECTION

Picturing Pesticides

The toxic effects of pesticides have long been known. After all, these compounds are designed to kill bugs. However, it has not been as simple to document the toxic effects of pesticides on humans because those impacts may take years to become apparent.

Anthropologist Elizabeth Guillette, working in a Yaqui Indian community in Mexico, combined ethnographic observation, biological monitoring of pesticide levels in the blood, and neurobehavioral testing to document the impairment of child development by pesticides.^a Working with colleagues from the Technological Institute of Sonora in Obregón, Mexico, Guillette compared children and families from two Yaqui communities: a valley farm whose residents were exposed to large doses of pesticides and a ranching village in the foothills nearby.

Guillette found that the frequency of pesticide use among the farming Yaqui was forty-five times per crop cycle with two crop cycles per year. In the farming valleys, she also noted that families tended to use household bug sprays on a daily basis, thus increasing their exposure to toxic pesticides. In the foothill ranches, she found that the only pesticides that the

Yaqui were exposed to consisted of DDT sprayed by the government to control malaria. In these communities, indoor bugs were swatted or tolerated.

Pesticide exposure was linked to child health and development through two sets of measures. First, levels of pesticides in the blood of valley children at birth and throughout their childhood were examined and found to be far higher than in the children from the foothills. Further, Guillette found that the breast milk of nursing mothers from the valley farms revealed the presence of pesticides.

Second, children from the two communities were asked to perform a variety of normal childhood activities, such as jumping, memory games, playing catch, and drawing pictures. The children exposed to high doses of pesticides showed significantly poorer stamina, eye-hand coordination, large motor coordination, and drawing ability compared to the Yaqui children from the foothills. Notably, although the valley children exhibited no overt symptoms of pesticide poisoning, their delays and impairment in neurobehavioral abilities may be irreversible.

Though Guillette's study was thoroughly embedded in one ethnographic community, she emphasizes that the

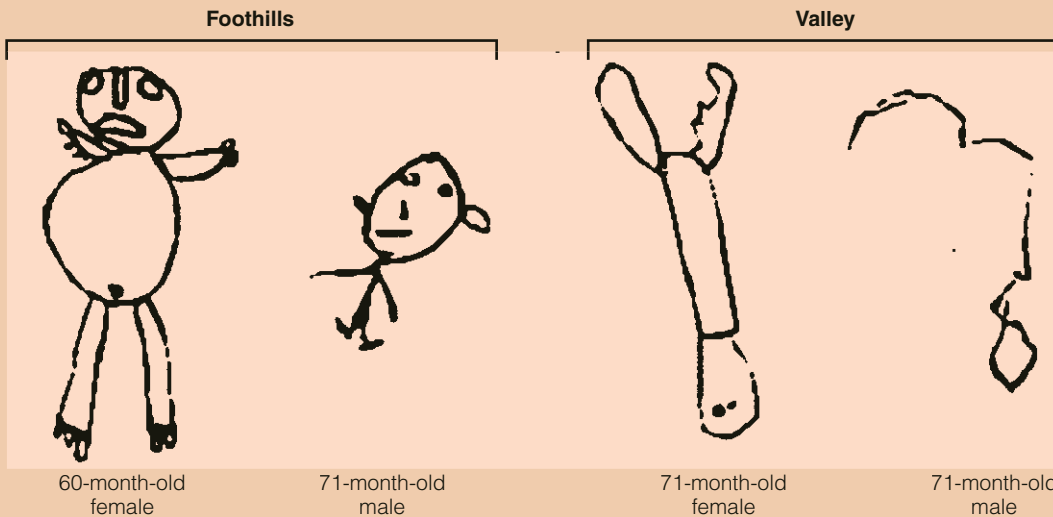


exposure to pesticides among the Yaqui farmers is typical of agricultural communities globally and has significance for changing human practices regarding the use of pesticides everywhere.

Biocultural Question

Given the documented developmental damage these pesticides have inflicted on children, should their sale and use be regulated globally? Are there potentially damaging toxins in use in your community?

^aGuillette, E. A., Meza, M. M., Aquilar, M. G., Soto, A. D., & Garcia, I. E. (1998, June). An anthropological approach to the evaluation of preschool children exposed to pesticides in Mexico. *Environmental Health Perspectives* 106 (6), 347–353



From E. A. Guillette, et al. (1998). An anthropological approach to the evaluation of preschool children exposed to pesticides in Mexico. *Environmental Perspectives* 106(6), 347–353. Courtesy of Dr. Elizabeth A. Guillette.

Compare the drawings typically done by Yaqui children heavily exposed to pesticides (*valley*) to those made by Yaqui children living in nearby areas who were relatively unexposed to pesticides (*foothills*).



Figure 1.5 Preserving Endangered Languages

Linguistic anthropologist Greg Anderson (*right*) has devoted his career to documenting and saving indigenous languages. He founded and now heads the Living Tongues Institute for Endangered Languages and works throughout the globe to preserve languages that are dying out at a shocking rate of about one every two weeks. Here he is recording for the first time the language of Koro, spoken by some 1,000 people in India's remote northeastern state, Arunachal Pradesh. Situated near India's contested border with China, this region offers much for linguistic investigation.

Linguistic Anthropology

Perhaps the most distinctive feature of the human species is language. Although the sounds and gestures made by some other species—especially apes—may serve functions comparable to those of human language, no other animal has developed a system of symbolic communication as complex as that of humans. Language allows people to create, preserve, and transmit countless details of their culture from generation to generation.

Linguistic anthropology focuses on the structure and history of human languages and their relation to social and cultural contexts. It shares data, theories, and methods with the more general discipline of linguistics, but it also includes distinctly anthropological questions, such as, how does language influence or reflect culture? And how does language use differ among distinct members of a society?

In its early years, linguistic anthropology emphasized the documentation of languages of cultures under ethnographic study—particularly those whose future seemed precarious due to colonization, forced assimilation, population decimation, capitalist expansion, or other destructive forces. When the first Europeans began to colonize the world five centuries ago, an estimated 12,000 distinct languages existed. By the early 1900s—when anthropological research began to take off—many languages and peoples had already disappeared or were on the brink of extinction (**Figure 1.5**). Sadly, this trend continues, with predictions that nearly half of the world's remaining 6,000 languages will become extinct over the next hundred years (Crystal, 2002; Knight, Studdert-Kennedy, & Hurford, 2000).

Linguistic anthropology has three main branches: descriptive linguistics, historical linguistics, and language in relation to social and cultural settings. All three yield valuable information about how people communicate and how they understand the world around them.

Descriptive Linguistics

This branch of linguistic anthropology involves the painstaking work of dissecting a language by recording, delineating, and analyzing all of its features. This includes studying its structure (including grammar and syntax), its unique linguistic repertoire (figures of speech, word plays, and so on), and its relationship to other languages.

Historical Linguistics

Languages, like cultures, are alive, malleable, and changing. Online tools such as *Urban Dictionary* track the changes in North American slang, and traditional dictionaries include new words and usages each year. Historical linguists track these changes to increase understanding of the human past. By working out relationships among languages and examining their spatial distributions, these specialists may estimate how long the speakers of those languages have lived where they do. By identifying those words in related languages that have survived from an ancient ancestral tongue, historical linguists can suggest not only where but also *how* speakers of an ancestral language lived. Such work has shown, for example, how the Bantu family of languages spread from its origins in western Africa (in the region of today's Nigeria and Cameroon) to the majority of the continent. Over the course of several millennia, Bantu-speaking peoples came to inhabit most of sub-Saharan Africa, bringing the language, farming technology, and other aspects of their culture with them.

linguistic anthropology The study of human languages—looking at their structure, history, and relation to social and cultural contexts.