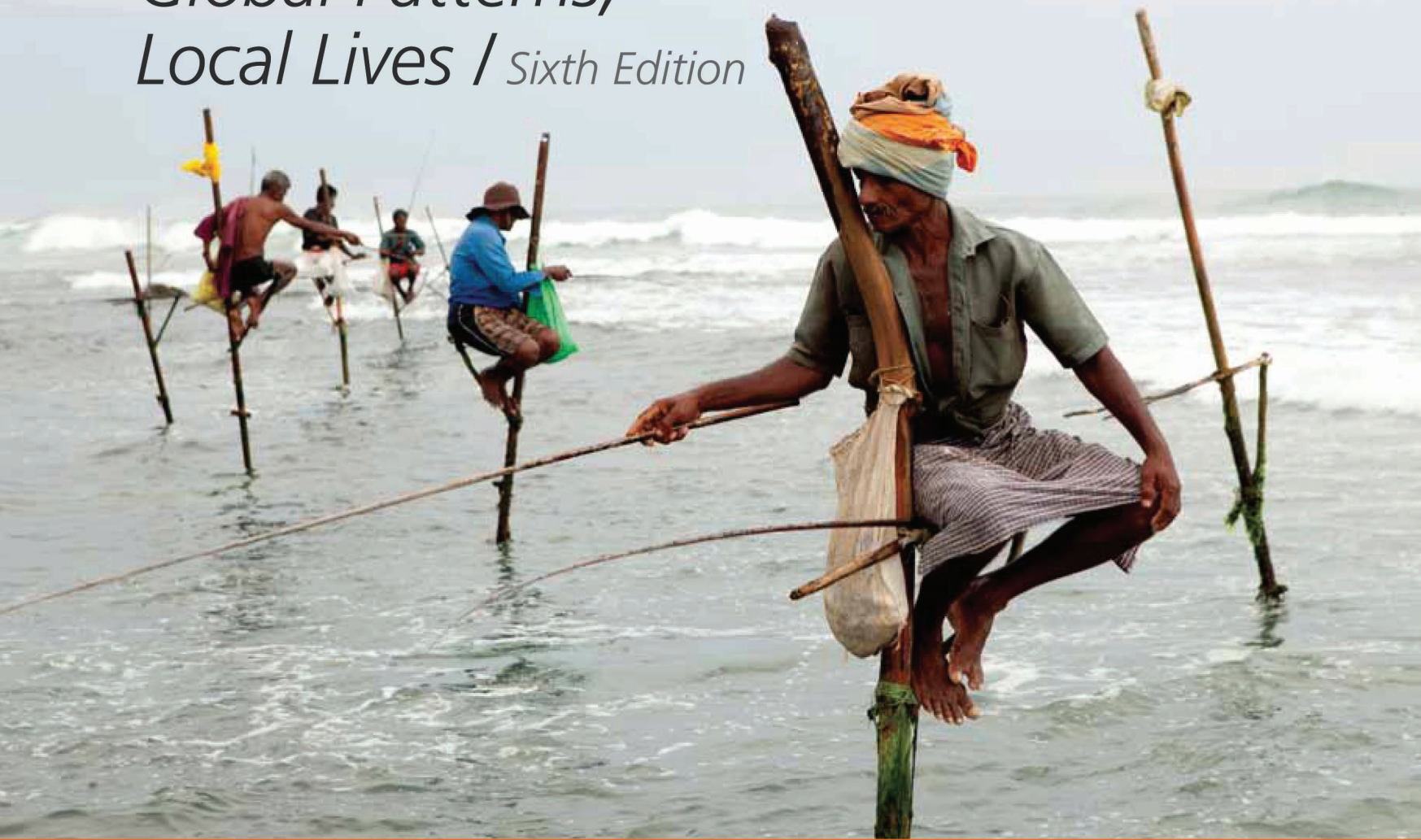


WORLD REGIONAL GEOGRAPHY

WITHOUT SUBREGIONS

*Global Patterns,
Local Lives / Sixth Edition*



Lydia Mihelič Pulsipher / Alex Pulsipher



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WORLD REGIONAL GEOGRAPHY

WITHOUT SUBREGIONS



Global Patterns, Local Lives

Sixth Edition

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University of Tennessee

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with the assistance of

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Anthropologist/Archaeologist and
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Alex A. Pulsipher is an independent scholar in Knoxville, Tennessee, who has conducted research on vulnerability to climate change, sustainable communities, and the diffusion of green technologies in the United States. In the early 1990s, while a student at Wesleyan University in Connecticut, Alex spent time in South Asia working for a sustainable development research center. He then completed his B.A. at Wesleyan, writing his undergraduate thesis on the history of Hindu nationalism. Beginning in 1995, Alex contributed to the research and writing of the first edition of *World Regional Geography* with Lydia Pulsipher. In 1999 and 2000, he traveled to South America, Southeast Asia, and South Asia, where he collected information for the second edition of the text and for the Web site. In 2000 and 2001, he wrote and designed maps for the second edition. He participated in the writing of the fourth edition and in restructuring the content of, and creating photo essays and maps for, the fifth edition. Alex worked extensively on the first and second editions of *World Regional Geography Concepts*. He has a master’s degree in geography from Clark University in Worcester, Massachusetts.



Conrad “Mac” Goodwin assisted in the writing of *World Regional Geography* and the *Concepts* version in many ways. Mac, Lydia’s husband, is an anthropologist and historical archaeologist with a B.A. in anthropology from the University of California, Santa Barbara; an M.A. in historical archaeology from the College of William and Mary; and a Ph.D. in archaeology from Boston University. He specializes in sites created during the European colonial era in North America, the Caribbean, and the Pacific. He has particular expertise in the archaeology of agricultural systems, gardens, domestic landscapes, and urban spaces. In addition to work in archaeology and on the textbook, for the past 10 years he has been conducting research on wines and winemaking in Slovenia, and delivering papers on these topics at professional geography meetings. For relaxation, Mac works in his organic garden, builds stone walls (including a pizza oven), and is a slow-food chef.

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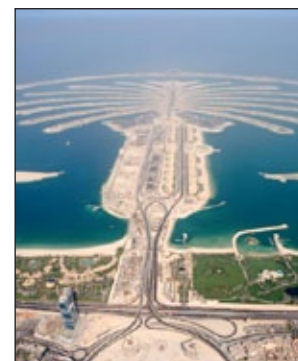


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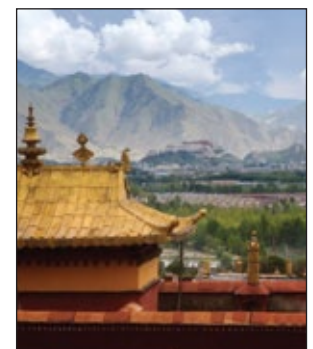


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In this text, we portray the rich diversity of human life across the world and humanize geographic issues by representing the daily lives of women, men, and children in the various regions of the globe. Our goal is to make global patterns of trade and consumption meaningful for students by showing how these patterns affect not only world regions but also ordinary people at the local level. In striving to reach this goal, we have made this sixth edition of *World Regional Geography* as current, instructive, and visually appealing as possible.

CONTINUING IN THE SIXTH EDITION

Thematic Concepts

Teaching world regional geography is never easy. Many instructors have found that focusing their courses on a few key ideas makes their teaching more effective and helps students retain information. With that goal in mind, we have identified nine thematic concepts that provide a few basic hooks on which students can hang their growing knowledge of the world and each of its regions. These thematic concepts are listed here in the order in which they are first covered in Chapter 1:

- **Population:** What are the major forces driving population growth or decline in a region? How have changes in gender roles influenced population growth? How are changes in life expectancy, family size, and the age of the population influencing population change?
- **Gender:** How do the lives and livelihoods of men and women differ, and how do gender roles influence societies in a region? To what extent do men and women differ in their contributions to family and community well-being? From what do persistent disparities in income, education, and rights between genders arise?
- **Development:** How do shifts in economic, social, and other dimensions of development affect human well-being? What paths have been charted by the so-called developed world, and how are they relevant, or irrelevant, to the rest of the world? What new “homegrown” solutions are emerging from the so-called less-developed countries?
- **Food:** How do food production systems impact environments and societies in a region? How has the use of new agricultural technologies impacted farmers? How have changes in food production created pressure to urbanize?
- **Urbanization:** Which forces are driving urbanization in a particular region? How have cities responded to growth? How is the region affected by the changes that accompany urbanization—for example, changes in employment, education, and access to health care?
- **Globalization:** How has a particular region been impacted by globalization, historically and currently? How are lives changing as flows of people, ideas, products, and resources become more global?

- **Power and Politics:** What are the main differences in the ways that power is wielded in societies? Which types of governance tend to arise from centralized power? Which tend to arise when individuals in a society have more say in the development of policies and the ways that governments are run?
- **Water:** How do issues of water scarcity, water pollution, and water management affect people and environments in a particular region? How might global climate change and changes in food production systems affect water resources?
- **Climate Change:** What are the indications that climate change is underway? How are places, people, and ecosystems in a particular region vulnerable to the shifts that climate change may bring? How are people and governments in the region responding to the threats posed by global warming? Which human activities contribute significant amounts of greenhouse gases?

Photos

Photos are a rich source of geographic information, and at the beginning of each regional chapter, a series of photos surrounding the regional map introduce the reader to landscapes within the region. **Photo Essay** figures illustrate particular thematic concepts. For example, a photo essay about urbanization might include a map of urban patterns in that region as well as photos that illustrate various aspects of current urban life in that part of the world. Photos also are central to new features on **Local Lives** and **Visual Histories**.



NEW TO THE SIXTH EDITION

New special features include **Geographic Insights**, **Visual Histories**, **On the Bright Side** commentaries, **Local Lives**, features, and **Thinking Geographically** questions.

The Thematic Concepts form the basis for this edition's new **Geographic Insights**. For each chapter, alone and in combination, the thematic concepts form the basis of five to six learning objectives that we call **Geographic Insights**. These insights are stated at the beginning of each chapter and discussed at the relevant point in the text. They also are reviewed in “Things to Remember” sections found throughout the chapter, as well as in new questions posed in the “Geographic Insights Review and Self-Test” section at the end of each chapter.

In this edition there are **Visual Histories** (with timelines) for each region, which use images to illustrate key points in the region's history. **On the Bright Side** commentaries explore some of the more hopeful patterns and opportunities emerging within each region. Three new **Local Lives** photo features in each region chapter add further human interest by showing regional customs related to foodways, people and animals, and festivals.

Environmental Issues

Geographic Insight 1

Climate Change, Food, and Water: Sub-Saharan Africa is particularly vulnerable to climate change because subsistence occupations are sensitive to even slight variations in temperature, rainfall, and water availability. In large part because of poverty, political instability, and having little access to cash, the region does not have much resilience to the effects of climate change.

To help instructors make use of all these new photo features in their teaching, the text offers **Thinking Geographically** questions with many photo essays and photo figures. The answers can be found on this book's Web site, where they form the basis of computer-graded exercises that can be assigned and automatically graded and entered into each instructor's grade book.



FIGURE 8.14

LOCAL LIVES

FESTIVALS IN SOUTH ASIA

A A village festival in Pakistan features Kabaddi, a popular South Asian sport in which teams take turns sending a “raider” across a field center line. That person must tag, or in some cases wrestle to the ground, members of the other team and then return to his or her own side without taking a breath. Kabaddi has been played at the Indian National Games since 1939 and at the Asian Games since 1991.

B Celebrants in Kolkata, India, during Holi—a festival celebrating the end of winter and beginning of spring. Holi evolved from temple worship practices involving the application of color to statues. In a riotous and celebratory atmosphere, people of different ages, genders, castes, and economic backgrounds temporarily disregard their differences and hurl the colors of the coming spring at each other.

C Pilgrims during the 2010 Kumbh Mela bathe in the Ganga River at Haridwar. During this event, which is held every 3 years, Hindus purify themselves by bathing in the sacred waters of the river. In 2013, the 45-day-long event attracted over 100 million participants.



Restructured Chapters

Each chapter includes a variety of features to support the teaching and learning of world regional geography.

Things to Remember At the close of every main section, a few concise statements review the important points in the section. The statements emphasize some key themes while encouraging students to think through the ways in which the material illustrates these points. They also review the Geographic Insights that begin each chapter.

THINGS TO REMEMBER

- Globalization encompasses many types of worldwide and interregional flows and linkages, especially the ways in which goods, capital, labor, and resources are exchanged among distant and very different places.

**Geographic
Insight 5**

- **Globalization and Development** Throughout the world, globalization is transforming patterns of economic development as local self-sufficiency is giving way to global interdependence and international trade.
- Under true free trade, all economic transactions are conducted without interference or regulation in an open marketplace. Under fair trade, an alternative to free trade, consumers are asked to pay a fair price to producers, and producers are expected to pay living wages and uphold environmental and safety standards in the workplace.

Geographic Insights Review and Self-Test At the end of each chapter, a series of questions, many tied to the chapter's Geographic Insights, encourage students to more broadly analyze the chapter content. These questions could be used for assignments, group projects, or class discussion.

Marginal Glossary of Key Terms Terms important to the chapter content are boldfaced on first usage and defined on the page on which they appear. The terms are listed at the end of the chapter, with the page numbers where they are defined. The key terms are also listed alphabetically and defined in the glossary at the end of the book.

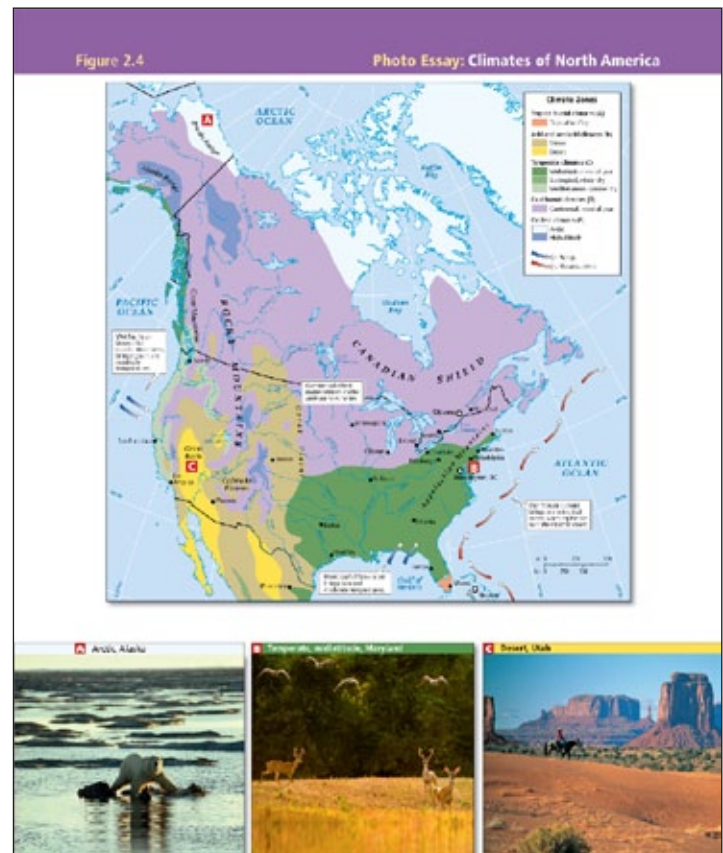
The Social Safety Net: Canadian and U.S. Approaches

The Canadian and U.S. governments have responded differently to the displacement of workers by economic change. Ultimately, these differences derive from prevailing political positions and widely held notions each country has about what the government's role in society should be. In Canada there is broad political support for a robust **social safety net**, the services provided by the government—such as welfare, unemployment benefits, and health care—that prevent people from falling into extreme poverty. In the United States there is much less support for these programs and a great deal of contention over nearly all efforts to strengthen the U.S. social safety net.

social safety net the services provided by the government—such as welfare, unemployment benefits, and health care—that prevent people from falling into extreme poverty

Consistent Base Maps This edition focuses on improving further what has often been cited as a principal strength of this text: high-quality, relevant, and consistent maps. To help students make conceptual connections and to compare regions, every chapter contains the following:

- Regional map with landscape photos at the beginning of each chapter
- Political map
- Climate map with photos of different climate zones



- Map of the human impacts on the biosphere, with photo essay
- Map of the region's vulnerability to climate change, with photo essay
- Urbanization map, with photo essay
- Map of regional power and politics, with photo essay
- Map of population density
- Maps of geographic patterns of human well-being

New Photos

An ongoing aim of this text has been to awaken students to the circumstances of people around the world, and photos are a powerful way to accomplish this objective. This edition continues our tradition of promoting careful attention to photos by including in Chapter 1 a short lesson on photo interpretation. Students are encouraged to use these skills as they look at every photo in the

text, and instructors are encouraged to use the photos as lecture themes and to help generate analytical class discussions.

Each photo was chosen to complement a Thematic Concept or situation described in the text. All photos are numbered and referenced in the text, making it easier for students to integrate the text with the visuals as they read. Moreover, the photos—like all of the book’s graphics, including the maps—have been given significant space and prominence in the page layout. The result is a visually engaging, dynamic, and instructive text. All photo credits are at the end of the book, listed according to figure numbers.

Figure 11.1D



Figure 11.8D

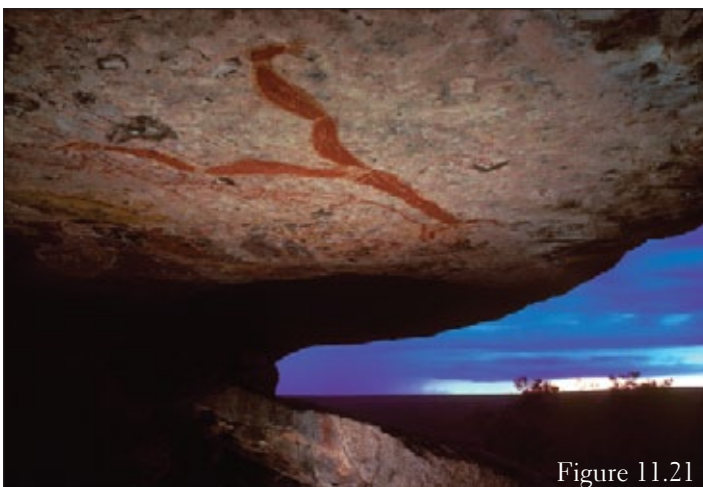


Figure 11.21

Videos

More than 300 videos clips (an average of 27 per chapter) are available with the sixth edition. Most videos are 2 to 6 minutes long and cover key issues discussed in the text. They can help instructors gain further expertise or can be used to generate class discussion. Each video is keyed to the text with an icon at the point in the discussion where it is most relevant. These videos, along with a related multiple-choice quiz, can be accessed at www.whfreeman.com/geographyvideos. Questions can be automatically graded and entered into a grade book. To access the videos, students need a password that can be bundled free with this textbook.

Up-to-Date Content

Because the world is constantly changing, it is essential that a world regional geography text be as current as possible. To that end, the sixth edition discusses the Arab Spring and its aftermath in North Africa and Southwest Asia; the varying effects of the global recession on regions, countries, and individuals; civil unrest in once-stable Thailand; the new influence of Arabic media outlets, such as Al Jazeera, which now affect thinking around the world; and the consequences of global climate change on Pacific Island nations. Some of the major content areas of the book that have been updated include:

- Political revolutions and conflict in North Africa and Southwest Asia (the Middle East)
- Maps reflecting the new country of South Sudan (some data remain based on Sudan as a whole because South Sudan has not yet begun reporting statistics)
- The global economic recession and its effect on migrants, labor outsourcing, and job security in importing and exporting countries
- Domestic and global implications of the U.S. political, economic, and military stances
- The role of terrorism in the realignment of power globally and locally
- Immigration and the ways it is changing countries economically and culturally
- Recent economic crises in the European Union which may bring about significant reorganization that has consequences for the original EU members, new and potential member states, and the global community
- Changing gender roles, particularly in developing countries
- The increasing role and influence of Islam around the world
- Climate change and its environmental, political, and economic implications

THE ENDURING VISION: GLOBAL AND LOCAL PERSPECTIVES

The Global View

In addition to the new features and enhancements to the text, we retain the hallmark features that have made the first five editions of this text successful for instructors and students. For the sixth edition,

we continue to emphasize global trends and the interregional linkages that are changing lives throughout the world, including those trends related to changing gender roles. The following linkages are explored in every chapter, as appropriate:

- The **multifaceted economic linkages** among world regions. These include (1) the effects of colonialism; (2) trade; (3) the role in the world economy of transnational corporations such as Walmart, Norilsk Nickel, Nike, and Apple; (4) the influence of regional trade organizations such as ASEAN and NAFTA; and (5) the changing roles of the World Bank and the International Monetary Fund as the negative consequences of structural adjustment programs become better understood.
- **Migration.** Migrants are changing economic and social relationships in virtually every part of the globe. The societies they leave are changed radically by the migrants' absence, just as the host societies are changed by their presence. The text explores the local and global effects of foreign workers in places such as Japan, Europe, Africa, the Americas, and Southwest Asia, and the increasing number of refugees resulting from conflicts around the world. Also discussed are long-standing migrant groups, including the Overseas Chinese and the Indian diasporas.
- **Mass communications and marketing techniques** are promoting **world popular culture** across regions. The text integrates coverage of popular culture and its effects in discussions of topics such as tourism in the Caribbean and Southeast Asia; the wide-ranging impact of innovations originating in modernizing economies, such as Ushahidi in Kenya; and the blending of Western and traditional culture in places such as South Africa, Malawi, Japan, and China.
- **Gender issues** are covered in every chapter with the aim of covering more completely the lives of ordinary people. Gender is intimately connected to other patterns, including internal and global migration, and these connections and other region-wide gender patterns are illustrated in a variety of maps and photos and in vignettes that illustrate gender roles as played out in the lives of individuals. The lives of children, especially with regard to their roles in families, are also covered, often in concert with the treatment of gender issues.

The Local Level

Our approach pays special attention to the local scale—a town, a village, a household, an individual. Our hope is, first, that stories of individual people and families will make geography interesting and real to students; and second, that seeing the effects of abstract processes and trends on ordinary lives will dramatize the effects of these developments for students. Reviewers have mentioned that students particularly appreciate the personal vignettes, which are often stories of real people (with names disguised). For each region, we examine the following local phenomena:

- **Local lives:** We use photo essays to focus on particular regional customs and traditions as they relate to foodways, festivals, and the relationship of animals to the people of a region.

- **Cultural change:** We look closely at changes in the family, gender roles, and social organization in response to urbanization, modernization, and the global economy.
- **Impacts on well-being:** Ideas of what constitutes “well-being” differ from culture to culture, yet broadly speaking, people everywhere try to provide a healthful life for themselves in a community of their choosing. Their success in doing so is affected by local conditions, global forces, and their own ingenuity.
- **Issues of identity:** Paradoxically, as the world becomes more tightly knit through global communications and media, ethnic and regional identities often become stronger. The text examines how modern developments such as the Internet and related technologies are used to reinforce particular cultural identities, often bringing educated emigrants back to help with reforms or to facilitate rapid responses in crises.
- **Local attitudes toward globalization:** People often have ambivalent reactions to global forces. They are repelled by the seeming power of these forces, fearing effects on their own lives and livelihoods and on local traditional cultural values, but they are also attracted by the economic opportunities that may emerge from greater global integration. The text looks at how the people of a region react to cultural and economic globalization.

ONE VISION, TWO VERSIONS: WITH OR WITHOUT SUBREGIONAL COVERAGE

To better serve the different needs of diverse faculty and curricula, three versions of this textbook are available.

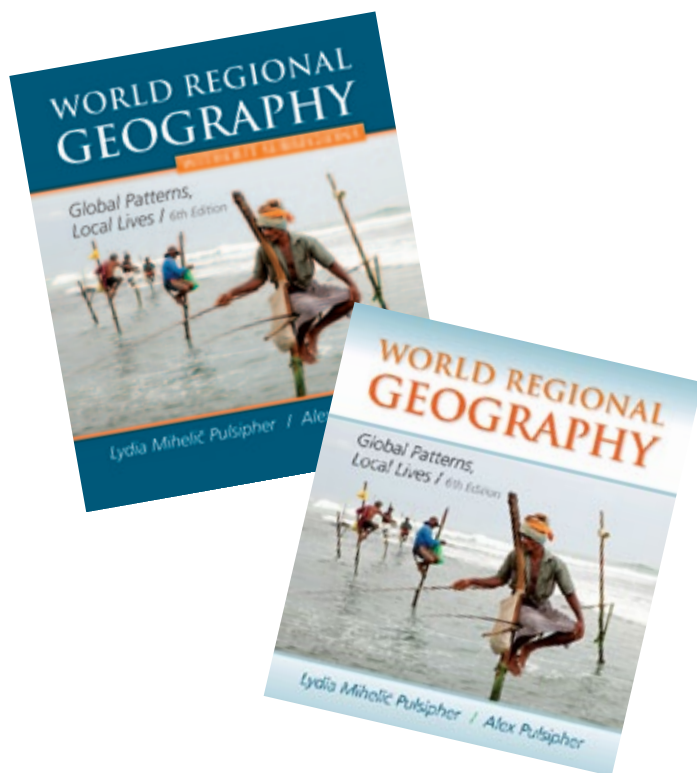
World Regional Geography with Subregions, Sixth Edition (1-4641-1070-0)

The sixth edition continues to employ a consistent structure for each chapter. Each chapter beyond the first is divided into three parts: **The Geographic Setting, Current Geographic Issues, and Subregions.**

The subregion coverage provides a descriptive characterization of particular countries and places within the region that expands on coverage in the main part of the chapter. For example, the sub-Saharan Africa chapter considers the West, Central, East, and Southern Africa subregions, providing additional insights into differences in well-being and into social and economic issues across the African continent.

World Regional Geography Without Subregions, Sixth Edition (1-4641-1069-7)


The briefer version provides essentially the same main text coverage as the version described above, omitting only the subregional sections. This version contains all the types of pedagogy found in the main version.



World Regional Geography Concepts, Third Edition (1-4292-5366-5)

This more compact version is designed to allow instructors to cover all world regions in a single semester.

**FOR THE INSTRUCTOR: A WEALTH
OF RESOURCES ONLINE AT
LAUNCHPAD FOR PULSIPHER,
WORLD REGIONAL GEOGRAPHY**

 www.whfreeman.com/pulsipher6e
(before August 2014)

www.whfreeman.com/launchpad/pulsipher6ewithsubregions
(after August 2014)

www.whfreeman.com/launchpad/pulsipher6ewithoutsubregions
(after August 2014)

The authors have taught world regional geography many times and understand the need for quick, accessible aids to instruction. Many of the new features were designed to streamline the job of organizing the content of each class session, with the goal of increasing student involvement through interactive discussions. Ease of instruction and active student involvement were the principal motivations behind the book's key features—the thematic concepts and geographic insights, the photo essays, the content maps that facilitate region-to-region comparisons, the photo features on local lives and regional customs, the feature commentaries that highlight bright and emerging reasons for optimism, and the wide selection of videos.

All of the following are available on the book's companion Web site, at www.whfreeman.com/pulsipher6e. Many resources offer free and open access. Premium resources are available on LaunchPad, a complete course management system featuring full gradebook and reporting capacities. For a demo of LaunchPad, please email us at geography@whfreeman.com.

- **All text images** in PowerPoint and JPEG formats with enlarged labels for better projection quality.
- **PowerPoint lecture outlines** by Bharath Ganesh, University College London. The main themes of each chapter are outlined and enhanced with images from the book, providing a pedagogically sound foundation on which to build personalized lecture presentations.
- **Instructor's resource manual** by Jennifer Rogalsky, State University of New York, Geneseo, and Helen Ruth Aspaas, Virginia Commonwealth University, contains suggested lecture outlines, points to ponder for class discussion, and ideas for exercises and class projects. It is offered as chapter-by-chapter Word files to facilitate editing and printing.
- **Test Bank** by Rebecca Johns, University of South Florida, expanded from the original test bank created by Jason Dittmer, University College London, and Andy Walter, West Georgia University. The Test Bank is designed to match the pedagogical intent of the text and offers more than 2500 test questions (multiple choice, short answer, matching, true/false, and essay) in a Word format that makes it easy to edit, add, and resequence questions. A **computerized test bank** (powered by Diploma) with the same content is also available. Please use the following ISBNs to request your computerized test bank on disc: 1-4641-2119-2 (with subregions), 1-4641-2128-1 (without subregions).
- **Clicker questions** by Rebecca Johns, University of South Florida. Prepared in Word, clicker questions allow instructors to jump-start discussions, illuminate important points, and promote better conceptual understanding during lectures.
- **Syllabus posting online**
- An integrated **gradebook** that records students' performance on online and video quizzes

Course Management

All instructor and student resources are also available via **BlackBoard**, **WebCT**, **Canvas**, **Angel**, **Moodle**, **Sakai**, and **Desire2Learn**. W. H. Freeman offers a course cartridge that populates your site with content tied directly to the book.

W. H. Freeman World Regional Geography DVD

This DVD, available free to adopters of the sixth edition, builds on the book's purpose of putting a face on geography by giving students and instructors access to the fascinating personal stories of people from all over the world. The DVD contains 35 projection-quality video clips from 3 to 7 minutes in length, with over 300 videos also available online. An **instructor's video manual** is also included on the DVD.

FOR THE STUDENT: *WORLD REGIONAL GEOGRAPHY ONLINE* AT LAUNCHPAD FOR PULSIPHER, *WORLD REGIONAL GEOGRAPHY*



www.whfreeman.com/pulsipher6e
(before August 2014)

www.whfreeman.com/launchpad/pulsipher6ewithsubregions
(after August 2014)

www.whfreeman.com/launchpad/pulsipher6ewithoutsubregions
(after August 2014)

A wealth of resources to support the textbook are available online, including the following free and open assets on the companion Web site:

- **Chapter quizzes:** These multiple-choice quizzes help students assess their mastery of each chapter.
- **Thinking Geographically questions:** These multiple-choice questions relate to select photos found throughout the book. The question sets form the basis of computer-graded exercises that can be assigned and automatically graded and entered into the instructor's online grade book.
- **Thinking Critically About Geography:** These activities, fully updated for the sixth edition, allow students to explore a set of current issues, such as deforestation, human rights, or free trade, and see how geography helps clarify our understanding of them. Linked Web sites are matched with a series of questions or with brief activities that help students think about the ways in which they themselves are connected to the places and people they read about in the text.
- **Map Builder software and Map Builder exercises:** The Map Builder program allows students to create layered thematic maps on their own, while Map Builder Exercises offer a specific activity for each chapter in the second edition.
- **Map learning exercises:** Students can use this interactive feature to identify and locate countries, cities, and the major geographic features of each region.
- **Blank outline maps:** Printable maps of the world, and of each region, are available for note taking, exam review, or both, as well as for preparing assigned exercises.
- **Flashcards:** Matching exercises teach vocabulary and definitions.
- **Audio pronunciation guide:** This spoken guide helps students learn to pronounce place names, regional terms, and names of historical figures.

- **World recipes and cuisines:** From *International Home Cooking*, the United Nations International School cookbook, this provides students with the opportunity to explore foods from around the world.

LaunchPad offers all the instructor and student resources listed above, as well as premium resources available only on the portal:

- An eBook of *World Regional Geography*, complete and customizable. Students can quickly search the text and personalize it just as they would the printed version; complete with highlighting, bookmarking, and note-taking features
- **A Guide to Using Google Earth** for the novice, plus step-by-step **Google Earth** exercises for each chapter
- Selected articles from *Focus on Geography* magazine (one for each chapter in the textbook) and accompanying quizzes for each article
- **Physical geography videos** for instructors who want to cover physical geography topics in more detail
- Online **news feeds** for highly respected magazines such as the *Economist*

For more information or to schedule a demo of LaunchPad, please contact your W. H. Freeman sales representative.

NEW! Learning Curve

LEARNINGCurve Learning Curve is an intuitive, fun, and highly effective formative assessment tool that is based on extensive educational research. It is a key asset of LaunchPad. Students can use Learning Curve to test their knowledge in a low-stakes environment that helps them improve their mastery of key concepts and prepare for lectures and exams. This adaptive quizzing engine moves students from basic knowledge through critical thinking and synthesis skills as they master content at each level. For a demo, visit www.learningcurveworks.com.

Rand McNally's *Atlas of World Geography*

This atlas, available at a greatly reduced price when bundled with the textbook, contains:

- Fifty-two physical, political, and thematic maps of the world and continents; 49 regional, physical, political, and thematic maps; and dozens of metro-area inset maps
- Geographic facts and comparisons, covering topics such as population, climate, and weather
- A section on common geographic questions, a glossary of terms, and a comprehensive 25-page index

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World Regional Geography, First Edition

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These world regional geography textbooks have been a family project many years in the making. Lydia Pulsipher came to the discipline of geography at the age of 5, when her immigrant father, Joe Mihelič, hung a world map over the breakfast table in their home in Coal City, Illinois, where he was pastor of the New Hope Presbyterian Church, and quizzed her on the location of such places as Istanbul. They soon moved to the Mississippi Valley of eastern Iowa, where Lydia's father, then a professor at the Presbyterian theological seminary in Dubuque, continued his geography

lessons on the passing landscapes whenever Lydia accompanied him on Sunday trips to small country churches. Lydia's sons, Anthony and Alex, got their first doses of geography in the bedtime stories she told them. For plots and settings, she drew on Caribbean colonial documents she was then reading for her dissertation. They first traveled abroad and learned about the hard labor of field geography when, at age 12 and 8, respectively, they were expected to help with the archaeological and ethnographic research conducted by Lydia and her colleagues on the eastern Caribbean island of Montserrat. It was Lydia's brother John Mihelič who first suggested that Lydia, Alex, and Mac write a book like this one, after he too came to appreciate geography. He

has been a loyal cheerleader during the process, as have family and friends in Knoxville, Montserrat, California, Slovenia, and beyond.

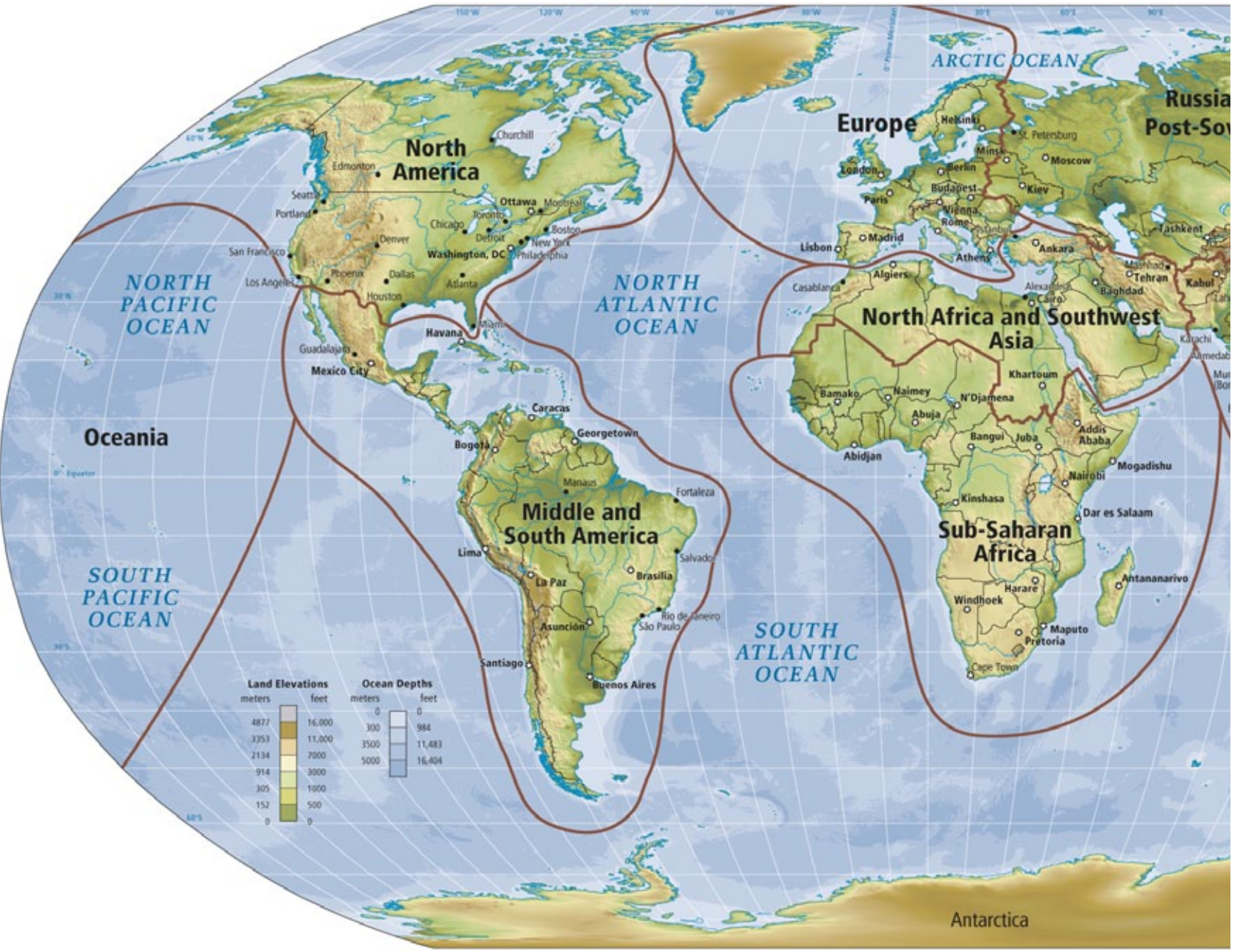
The author team was aided by Ola Johansson (University of Pittsburgh at Johnstown), who revised Chapter 5 (Russia and the Post-Soviet States) and Chapter 9 (East Asia) for this new edition and improved the final work in innumerable ways. Graduate students and faculty colleagues in the geography department at the University of Tennessee have been generous in their support, serving as helpful impromptu sounding boards for ideas. Ken Orvis, especially, has advised us on the physical geography sections of all editions. Yingkui (Philippe) Li provided information on glaciers and climate change; Russell Kirby wrote one of the vignettes based on his research in Vietnam; Toby Applegate, Alex Pulsipher (in his capacity as an instructor), Michelle Brym, and Sara Beth Keough helped the authors understand how to better assist instructors; and Ron Kalafsky, Tom Bell, Margaret Gripshover, and Micheline Van Riemsdijk chatted with the authors many times on specific and broad issues related to this textbook.

Maps for this edition were conceived by Mac Goodwin and Alex Pulsipher and produced by Will Fontanez and the University of Tennessee cartography shop staff and by Maps.com under the direction of Mike Powers. Alex Pulsipher created and produced the photo essays and chose all the photos used in the book.

Liz Widdicombe and Sara Tenney at W. H. Freeman were the first to facilitate the idea that together we could develop a new direction for *World Regional Geography*, one that included the latest thinking in geography written in an accessible style and well illustrated with attractive, relevant maps and photos. In accomplishing this goal, we are especially indebted to our first developmental editor, Susan Moran, and to the W. H. Freeman staff for all they have done in the first years and since to ensure that this book is well written, beautifully designed, and well presented to the public.

We would also like to gratefully acknowledge the efforts of the following people at W. H. Freeman: Steven Rigolosi, publisher for this sixth edition, who has been extraordinarily supportive and resourceful; Elaine Epstein, developmental editor, who has remained calm and congenial under great pressure; Vivien Weiss, senior project editor; Tom Digiano, marketing manager; Anna Paganelli, copyeditor; Blake Logan, design manager; Matt McAdams, art manager; Susan Wein, production manager; and Stephanie Ellis, assistant editor.

Given our ambitious new photo program, we are especially grateful for Blake Logan's brilliant work and responsiveness as designer for the sixth edition, as well as for Hilary Newman and Jennifer MacMillan's guidance and direction as our photo editors for the sixth edition. We are also grateful to the supplements authors, who have created what we think are unusually useful, up-to-date, and labor-saving materials for instructors who use our book.



1 Geography: An Exploration of Connections



FIGURE 1.1 Regions of the world.

GEOGRAPHIC INSIGHTS

After you read this chapter, you will be able to discuss the following geographic insights as they relate to the nine thematic concepts, which are explained further on page 12:

- 1. Physical and Human Geographers:** The primary concerns of both physical and human geographers are the study of the Earth's surface and the interactive physical and human processes that shape the surface.
- 2. Regions:** The concept of *region* is useful to geographers because it allows them to break up the world into manageable units in order to analyze and compare spatial relationships. Nonetheless, regions do not have rigid definitions and their boundaries are fluid.
- 3. Gender and Population:** The shift toward greater gender equality is having an influence on population growth patterns, patterns of economic development, and the distribution of power within families, communities, and countries.
- 4. Food and Urbanization:** Modernization in food production is pushing agricultural workers out of rural areas toward urban areas where jobs are more plentiful but where food must be purchased. This circumstance often leads to dependency on imported food.
- 5. Globalization and Development:** Increased global flows of information, goods, and people are transforming patterns of economic development.
- 6. Power and Politics:** There are major differences across the globe in the ways that power is wielded in societies. Modes of governing that are more authoritarian are based on the power of the state or community (or tribal) leaders. Modes that are more democratic give the individual a greater say in how policies are developed and governments are run. There are also many other ways of managing political power.
- 7. Climate Change and Water:** Water and other environmental factors often interact to influence the vulnerability of a location to the impacts of climate change. These vulnerabilities have a spatial pattern.

Where Is It? Why Is It There? Why Does It Matter?

Where are you? You may be in a house or a library or sitting under a tree on a fine fall afternoon. You are probably in a community (perhaps a college or university), and you are in a country (perhaps the United States) and a region of the world (perhaps North America, Southeast Asia, or the Pacific). Why are you where you are? Some answers are immediate, such as "I have an assignment to read." Other explanations are more complex, such as your belief in the value of an education, your career plans, and your or someone's willingness to sacrifice to pay your tuition. Even past social movements that opened up higher education to more than a fortunate few may help explain why you are where you are.

The questions *where* and *why* are central to geography. Think about a time you had to find the site of a party on a Saturday night, the location of the best grocery store, or the fastest and

safest route home. You were interested in location, spatial relationships, and connections between the environment and people. Those are among the interests of geographers.

Geographers seek to understand why different places have different sights, sounds, smells, and arrangements of features. They study what has contributed to the look and feel of a place, to the standard of living and customs of the people, and to the way people in one place relate to people in other places. Furthermore, geographers often think on several scales, from the local to the global. For example, when choosing the best location for a new grocery store, a geographer might consider the physical characteristics of potential sites, the socioeconomic circumstances of the neighborhood, traffic patterns locally and in the city at large, as well as the store's location relative to the main population concentrations for the whole city. She would probably also consider national or even international transportation routes, possibly to determine cost-efficient connections to suppliers.

To make it easier to understand a geographer's many interests, try this exercise. Draw a map of your most familiar childhood landscape. Relax, and recall the objects and experiences that were most important to you there. If the place was your neighborhood, you might start by drawing and labeling your home. Then fill in other places you encountered regularly, such as your backyard, your best friend's home, or your school. **Figure 1.2** shows the childhood landscape remembered by Julia Stump in Franklin, Tennessee.

Consider how your map reveals the ways in which your life was structured by space. What is the scale of your map? That is, how much space did you decide to illustrate on the map? The amount of space your map covers may represent the degree of freedom you had as a child, or how aware you were of the world around you. Were there places you were not supposed to go? Does your map reveal, perhaps subtly, such emotions as fear, pleasure, or longing? Does it indicate your sex, your ethnicity, or the makeup of your family? Did you use symbols to show certain features? In making your map and analyzing it, you have engaged in several aspects of geography:

- Landscape observation
- Descriptions of the Earth's surface and consideration of the natural environment
- Spatial analysis (the study of how people, objects, or ideas are related to one another across space)
- The use of different scales of analysis (your map probably shows the spatial features of your childhood at a detailed *local scale*)
- Cartography (the making of maps)

As you progress through this book and this course, you will acquire geographic information and skills. Perhaps you are planning to travel to other lands or are thinking about investing in East Asian timber stocks. Maybe you are searching for a good place to market an idea or are trying to understand current events in your town within the context of world events. Knowing how to practice geography will make your task easier and more engaging.

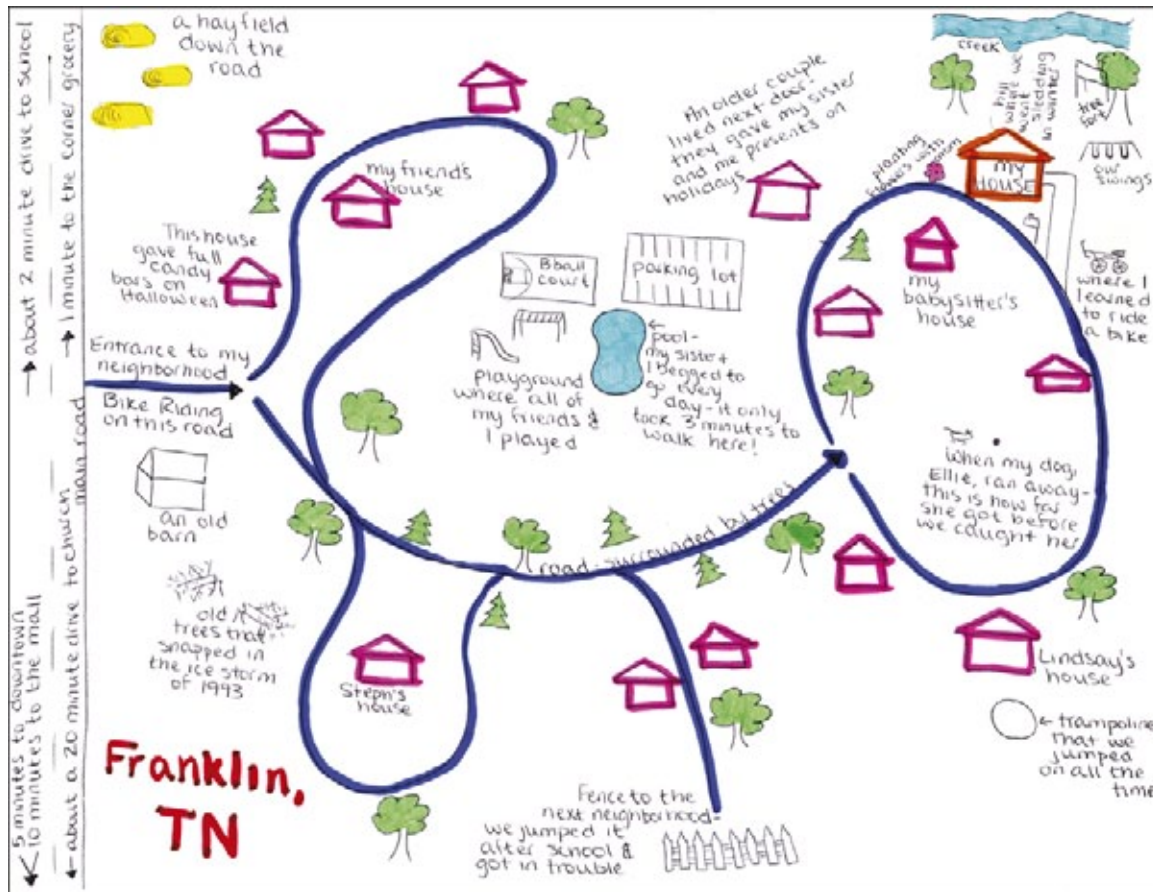


FIGURE 1.2 A childhood landscape map. Julia Stump drew this map of her childhood landscape in Franklin, Tennessee, as an exercise in Dr. Pulsipher's world geography class.

What Is Geography?

Geographic Insight 1

Physical and Human Geography: The primary concerns of both physical and human geographers are the study of the Earth's surface and the interactive physical and human processes that shape the surface.

Geography is the study of our planet's surface and the processes that shape it. Yet this definition does not begin to convey the fascinating interactions of human and environmental forces that have given the Earth its diverse landscapes and ways of life.

Geography, as an academic discipline, is unique in that it links the physical sciences—such as geology, physics, chemistry, biology, and botany—with the social sciences—such as anthropology, sociology, history, economics, and political science. **Physical geography** generally focuses on how the Earth's physical processes work independently of humans, but increasingly, physical geographers have become interested in how physical processes may affect humans and how humans affect these processes in return. **Human geography** is the study of the various aspects of human life that create the distinctive landscapes and regions of the world.

Physical and human geography are often tightly linked. For example, geographers might try to understand:

- How and why people came to occupy a particular place.
- How people use the physical aspects of that place (climate, landforms, and resources) and then modify them to suit their particular needs.
- How people may create environmental problems.
- How people interact with other places, far and near.

Geographers usually specialize in one or more fields of study, or subdisciplines. Some of these particular types of geography are mentioned over the course of the book. Despite their individual specialties, geographers often cooperate in studying **spatial interaction** between people and places and the **spatial distribution** of relevant phenomena. For example, in the face of increasing global warming, climatologists, cultural geographers, and economic geographers work together to understand the spatial distribution of carbon dioxide emissions, as well as the cultural and economic practices that

physical geography the study of the Earth's physical processes: how they work and interact, how they affect humans, and how they are affected by humans

human geography the study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface

spatial interaction the flow of goods, people, services, or information across space and among places

spatial distribution the arrangement of a phenomenon across the Earth's surface

might be changed to limit such emissions. This could take the form of redesigning urban areas so that people can live closer to where they work, or encouraging food production in locations closer to where the food will be consumed.

Many geographers specialize in a particular region of the world, or even in one small part of a region. Regional geography is the analysis of the geographic characteristics of a particular place, the size and scale of which can vary radically. The study of a region can reveal connections among physical features and ways of life, as well as connections to other places. These links are key to understanding the present and the past, and are essential in planning for the future. This book follows a “world regional” approach, focusing on general knowledge about specific regions of the world. We will see just what geographers mean by *region* a little later in this chapter.

Geographers’ Visual Tools

Among geographers’ most important tools are maps, which they use to record, analyze, and explain spatial relationships, as you did on your childhood landscape map. Geographers who specialize in depicting geographic information on maps are called **cartographers**.

Understanding Maps

A map is a visual representation of the surface of the Earth used to record, display, analyze, and explain spatial relationships. **Figure 1.3** on pages 5–6 explains the various features of maps.

Legend and Scale

The first thing to check on a map is the **legend**, which is usually a small box somewhere on the map that provides basic information about how to read the map, such as the meaning of the symbols and colors used (see parts A–C and the “Legend” box in **Figure 1.3**). Sometimes the scale of the map is also given in the legend.

In cartography, *scale* has a slightly different meaning than it does in general geographic analysis. **Scale** on a map refers to the relationship between the size of things on the map and the actual size they have on the surface of the Earth. It is usually represented with a scale bar (see **Figure 1.3D–G**) but is also sometimes represented by a ratio (for example 1:8000) or a fraction (1/8000), which indicates what one unit of measure on the map equals in the same units on the ground. For example, 1:8000 in. means that 1 inch on the map represents 8000 inches (about an eighth of a mile) on the surface of the Earth.

cartographer geographers who specialize in depicting geographic information on maps

legend a small box somewhere on a map that provides basic information about how to read the map, such as the meaning of the symbols and colors used

scale (of a map) the proportion that relates the dimensions of the map to the dimensions of the area it represents; also, variable-sized units of geographical analysis from the local scale to the regional scale to the global scale

longitude the distance in degrees east and west of Greenwich, England; lines of longitude, also called meridians, run from pole to pole (the line of longitude at Greenwich is 0° and is known as the prime meridian)

latitude the distance in degrees north or south of the equator; lines of latitude run parallel to the equator, and are also called parallels

A scale of 1/800 is considered to be larger than a scale of 1/8000 because the features on a 1/800 scale map are larger and can be shown in greater detail. The larger the scale of the map, the smaller the area it covers. A larger-scale map shows things larger; a smaller-scale map shows more things—with each thing smaller, less visible. You can remember this with the following statement: “Things look larger on a larger-scale map.”

In parts A–C of **Figure 1.3**, different *scales of imagery* are demonstrated using maps, photographs, and a satellite image. Read the captions carefully to understand the scale being depicted in each image. Throughout this book, you will encounter different kinds of maps at different scales. Some will show physical features, such as landforms or climate patterns at the regional or global scale. Others will show aspects of human activities at these same regional or global scales—for example, the routes taken by drug traders. Yet other maps will show patterns of settlement or cultural features at the scale of countries or regions, or cities, or even local neighborhoods (**Figure 1.3D–G**).

It is important to keep the two types of scale used in geography—*map scale* and *scale of analysis*—distinct, because they have opposite meanings! In spatial analysis of a region such as Southwest Asia, scale refers to the spatial extent of the area that is being discussed. Thus a large-scale analysis means a large area is being explored. But in cartography, a large-scale map is one that shows a given area blown up so that fine detail is visible, while a small-scale map shows a larger area in much less detail. In this book, when we talk about scale we are referring to its meaning in spatial analysis (larger scale = larger area), unless we specifically indicate that we are talking about scale as used in cartography (larger scale = smaller area). In the Understanding Maps: Scale box in **Figure 1.3**, the largest-scale map is that on the left (D); the smallest is on the right (G).

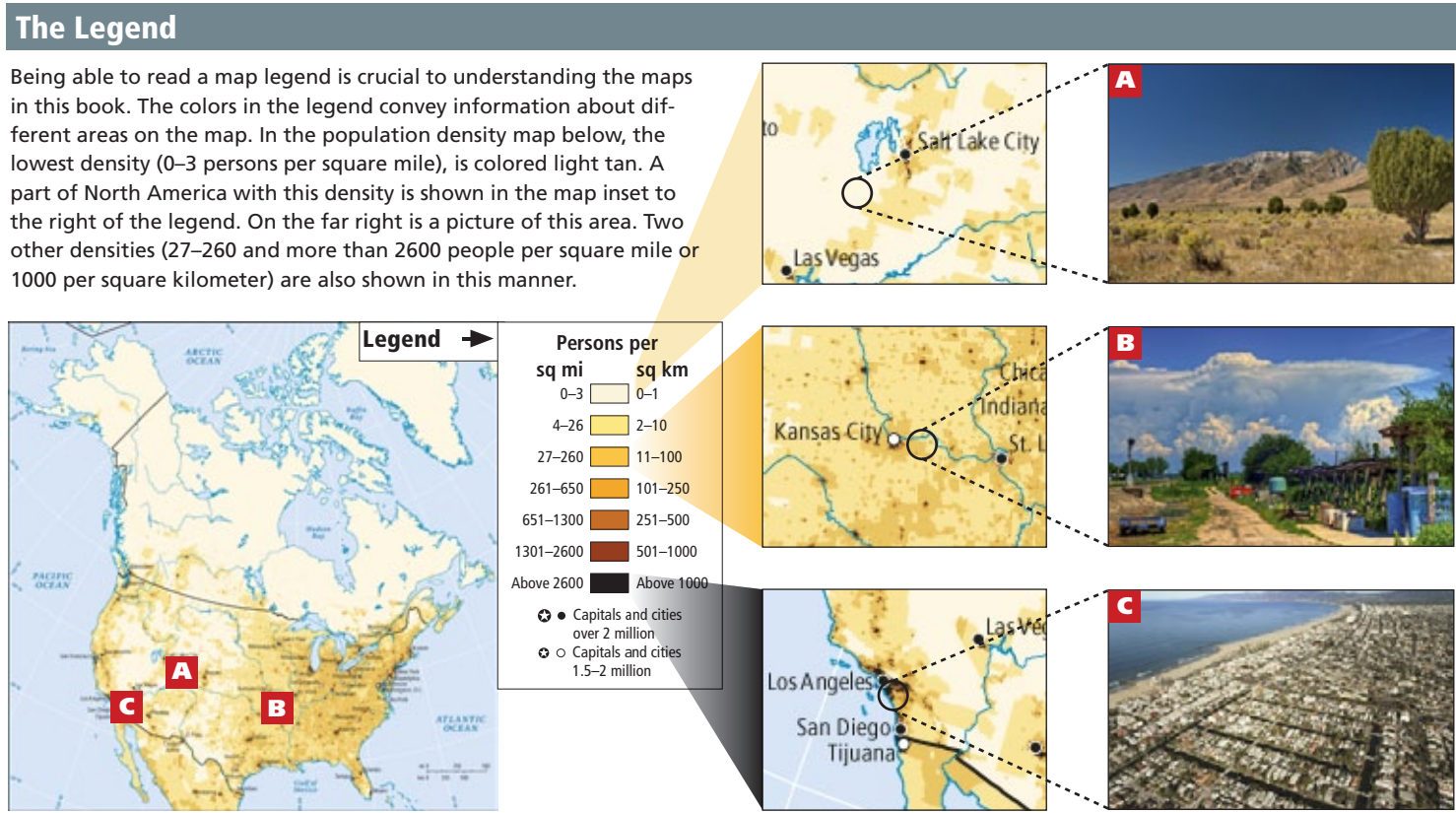
Longitude and Latitude

Most maps contain lines of latitude and longitude, which enable a person to establish a position on the map relative to other points on the globe. Lines of **longitude** (also called *meridians*) run from pole to pole; lines of **latitude** (also called *parallels*) run around the Earth parallel to the equator (see **Figure 1.3H**).

Both latitude and longitude lines describe circles, so there are 360° (the symbol ° refers to degrees) in each circle of latitude and 180° in each pole-to-pole semicircle of longitude. Each degree spans 60 minutes (designated with the symbol ′), and each minute has 60 seconds (designated with the symbol ″). Keep in mind that these are measures of relative linear space on a circle, not measures of time. They do not even represent real distance because the circles of latitude get successively smaller to the north and south of the equator until they become virtual dots at the poles.

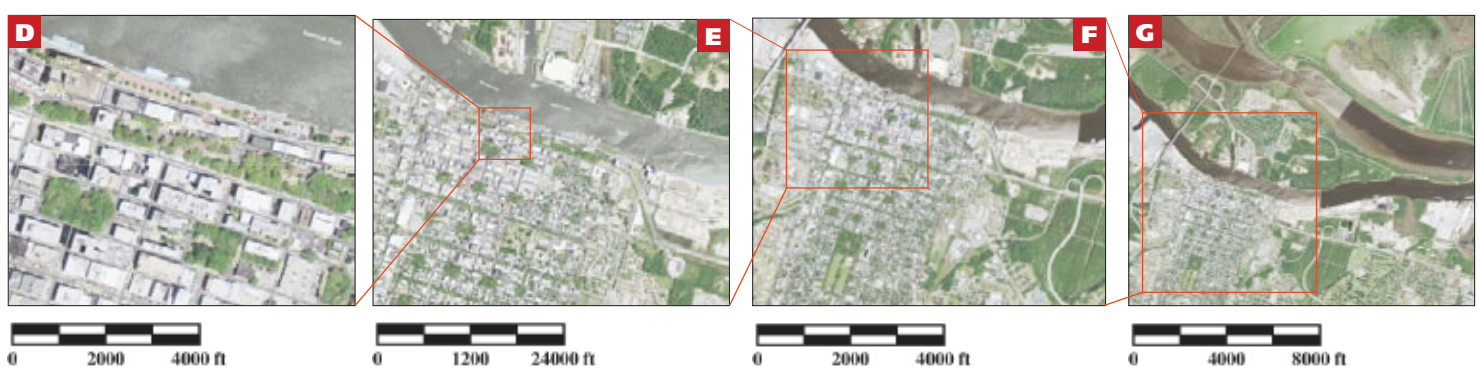
The globe is also divided into hemispheres. The Northern and Southern hemispheres are on either side of the equator. The Western and Eastern hemispheres are defined as follows. The prime meridian, 0° longitude, runs from the North Pole through Greenwich, England, to the South Pole. The half of the globe’s surface west of the prime meridian is called the Western Hemisphere; the half to the east is called the Eastern Hemisphere.

FIGURE 1.3 Understanding Maps



Scale

Maps often display information at different spatial scales, which means that lengths, areas, distances, and sizes can appear dramatically different on otherwise similar maps. This book often combines maps at several different scales with photographs taken by people at Earth's surface and photographs taken by satellites or astronauts in space. All of these visual tools convey information at a spatial scale. Here are some of the map scales you might encounter in this book. The scale is visible below each image.



Representation of Scale

Here are some representations of map scale that you may encounter on maps in this book and elsewhere.

This scale bar means that the length of the entire box represents 8000 feet on the ground.

This scale bar works like the one on the left, but also gives lengths in miles and kilometers.

1:8000

This means that 1 unit of measure (an inch, or finger width) equals 8000 similar units of measure on the ground.

FIGURE 1.3 Understanding Maps (continued)

Latitude and Longitude

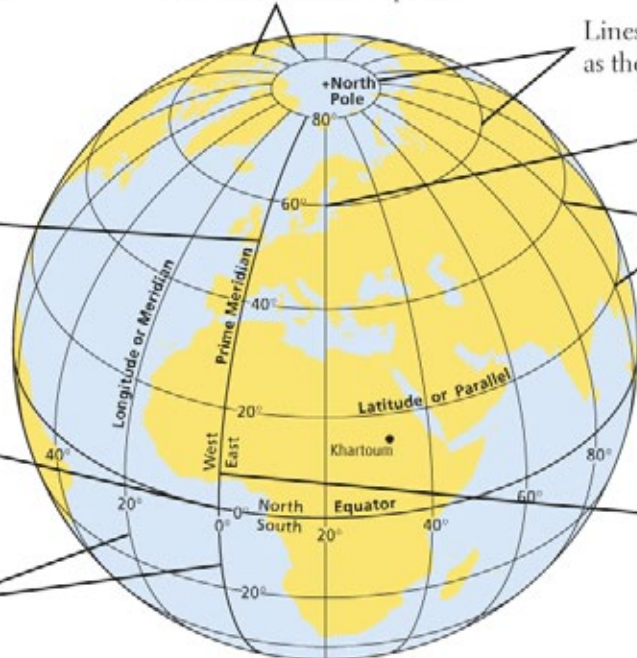
(H) Lines of longitude and latitude form a global scale grid that can be used to designate the location of any place on the planet.

The prime meridian is at zero degrees longitude and passes through Greenwich, England.

The equator divides the globe into Northern and Southern Hemispheres.

All lines of longitude or meridians are of equal length.

The distance between lines of longitude decreases toward the poles.



Lines of latitude decrease in length as they approach the poles.

Lines of latitude and longitude intersect at right angles.

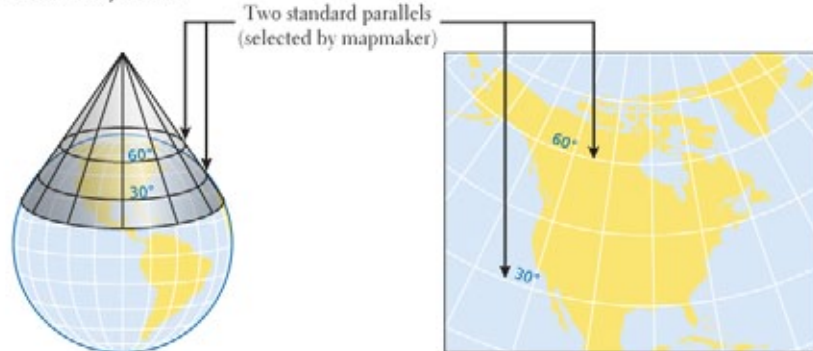
Lines of latitude are parallel to each other.

The equator is at zero degrees latitude.

The half of the globe's surface west of the prime meridian is called the Western Hemisphere; the half to the east is called the Eastern Hemisphere.

Projections

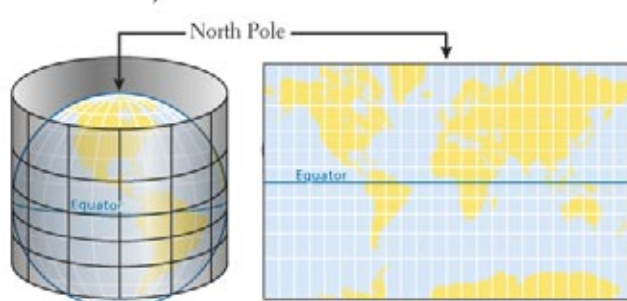
(I) Albers Projection



Pros: Minimal distortion near two parallels (lines of latitude)

Cons: Areas farther away from these lines will have distortion.

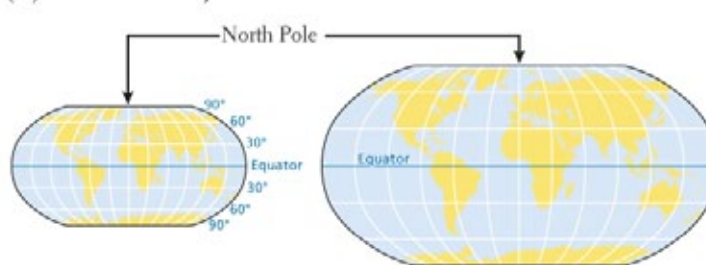
(J) Mercator Projection



Pros: A straight line between two points on this map gives an accurate compass direction between them. Minimal distortion within 15 degrees of the equator.

Cons: Extreme distortion near the poles, especially above 60 degrees latitude.

(K) Robinson Projection



Pros: Uninterrupted view of land and ocean. Less distortion in high latitudes than in the Mercator projection.

Cons: The shapes of landmasses are slightly distorted due to the curvature of the longitude lines.

The longitude lines both east and west of the prime meridian are labeled from 1° to 180° by their direction and distance in degrees from the prime meridian. For example, 20 degrees east longitude would be written as 20° E. The longitude line at 180° runs through the Pacific Ocean and is used roughly as the international date line; the calendar day officially begins when midnight falls at this line.

The equator divides the globe into the Northern and Southern hemispheres. Latitude is measured from 0° at the equator to 90° at the North Pole or South Pole.

Lines of longitude and latitude form a grid that can be used to designate the location of a place. In Figure 1.3H, notice the dot that marks the location of Khartoum below the 20th parallel in eastern Africa. The position of Khartoum is 15° 35' 17" N latitude by 32° 32' 3" E longitude.

Map Projections

Printed maps must solve the problem of showing the spherical Earth on a flat piece of paper. Imagine drawing a map of the Earth on an orange, peeling the orange, and then trying to flatten out the orange-peel map and transferring it exactly to a flat piece of paper. The various ways of showing the spherical surface of the Earth on flat paper are called **map projections**. All projections create some distortion. For maps of small parts of the Earth's surface, the distortion is minimal. Developing a projection for the whole surface of the Earth that minimizes distortion is much more challenging.

For large midlatitude regions of the Earth that are mainly east/west in extent (North America, Europe, China, Russia), an *Albers projection* is often used. As you can see in Figure 1.3I, this is a conic, or cone-shaped, projection. The cartographer chooses two standard parallels (lines of latitude) on which to orient the map, and these parallels have no distortion. Areas along and between these parallels display minimal distortion. Areas farther to the north or south of the chosen parallels have more distortion. Although all areas on the map are proportional to areas on the ground, distortion of actual shape is inherent in the projection, because, as previously discussed, parts of the globe are being projected onto flat paper.

The *Mercator projection* (see Figure 1.3J) has long been used by the general public, but geographers rarely use this projection because of its gross distortion near the poles. To make his flat map, the Flemish cartographer Gerardus Mercator (1512–1594) stretched out the poles, depicting them as lines equal in length to the equator! As a result, Greenland, for example, appears about as large as Africa, even though it is only about one-fourteenth Africa's size. Nevertheless, the Mercator projection is still useful for navigation because it portrays the shapes of landmasses more or less accurately, and because a straight line between two points on this map gives the compass direction between them; but actual distance measurements are distorted.

The *Robinson projection* (see Figure 1.3K) shows the longitude

lines curving toward the poles to give an impression of the Earth's curvature, and it has the advantage of showing an uninterrupted view of land and ocean; however, as a result, the shapes of landmasses are slightly distorted. In this book we often use the Robinson projection for world maps.

Maps are not unbiased. Most currently popular world map projections reflect the European origins of modern cartography. For example, Europe or North America is often placed near the center of the map, where distortion is minimal; other population centers, such as East Asia, are placed at the highly distorted periphery. For a less-biased study of the modern world, we need world maps that center on different parts of the globe. Another source of bias in maps is the convention that north is always at the top of the map. Some cartographers think that this can lead to a subconscious assumption that the Northern Hemisphere is somehow superior to the Southern Hemisphere.

Geographic Information Science (GISc)

The acronym **GISc** is now widespread and usually refers to **Geographic Information Science**, the body of science that supports spatial analysis technologies. GISc is multidisciplinary, using techniques from cartography (mapmaking), geodesy (measuring the Earth's surface), and photogrammetry (the science of making reliable measurements, especially by using aerial photography). Other sciences, such as cognitive psychology and spatial statistics (geomatics or geoinformatics) are increasingly being used to give greater depth and breadth to three-dimensional spatial analysis. GISc, then, can be used in medicine to analyze the human body, in engineering to analyze mechanical devices, in architecture to analyze buildings, in archaeology to analyze sites above and below ground, and in geography to analyze the Earth's surface and the space above and below the Earth's surface.

GISc is a burgeoning field in geography, with wide practical applications in government and business and in efforts to assess and improve human and environmental conditions. GIS (without the *c*) is an older term that refers to geographic information *systems* and is applied to the computerized analytical systems that are the tools of this newest of spatial sciences.

The now widespread use of GISc, particularly by governments and corporations, has dramatically increased the amount of information that is collected and stored, and changed the way it is analyzed and distributed. These changes create many new opportunities for solving problems, for example, by increasing the ability of local governments to plan future urban growth. However, these technologies also raise serious ethical questions. What rights do people have over the storage, analysis, and distribution of information about their location and movements, which can now be gathered from their cell phones? Should this information reside in the public domain? Should individuals have the right to have their location-based information suppressed from public view? Should a government or corporation have the right to sell information to anyone, without special permission, about where people spend their time and how frequently they go to particular places? Progress on these societal questions has not kept pace with the technological advances in GISc.

map projections the various ways of showing the spherical Earth on a flat surface

Geographic Information Science (GISc) the body of science that underwrites multiple spatial analysis technologies and keeps them at the cutting edge

THE DETECTIVE WORK OF PHOTO INTERPRETATION

Most geographers use photographs to help them understand or explain a geographic issue or depict the character of a place. Interpreting a photo to extract its geographical information can sometimes be like detective work. Below are some points to keep in mind as you look at the pictures throughout this book; try them out first with the photo on this page in **Figure 1.4**.

(A) Landforms: Notice the lay of the land and the landform features. Is there any indication of how the landforms and humans have influenced each other? Is environmental stress visible?

(B) Vegetation: Notice whether the vegetation indicates a wet or dry, or warm or cold environment. Can you recognize specific species? Does the vegetation appear to be natural or influenced by human use?

(C) Material culture: Are there buildings, tools, clothing, foods, plantings, or vehicles that give clues about the cultural background, wealth, values, or aesthetics of the people who live where the picture was taken?

(D) What do the people in the photo suggest about the situation pictured?

(E) Can you see evidence of the global economy, such as goods that probably were not produced locally?

(F) Location: From your observations, can you tell where the picture was taken or narrow down the possible locations?

You can use this system to analyze any of the photos in this book or elsewhere. Practice by analyzing the photos in this book before you read their captions. Here is an example of how you could do this with the photo below (Figure 1.4):

(A) Landforms:

1. The flat horizon suggests a plain or a river delta.

Environmental stress is visible in several places.

2. This oily liquid doesn't look natural. Could it be crude oil?

What would have caused the landscape transformation? Maybe an oil spill?

(B) Vegetation:

3. This looks like a palm tree. There are quite a few palm trees and other trees.

This must be the tropics and be fairly wet and warm.

(C) Material culture:

There is not much that is obviously material culture here, just a single person. The whole area might be abandoned.

(D) People:

4. The clothing on this person doesn't look like he made it. It looks mass produced.

This suggests that he has access to goods produced some distance away, maybe in a nearby city. Or possibly, he could buy things in a market where imported goods are sold.

(E) Global economy: See (D).

(F) Location: This could be somewhere tropical where there could have been an oil spill. Hint: Use this book! See Figure 6.26 for a figure showing OPEC members. This suggests that the photo could be of Venezuela, Ecuador, Nigeria, Angola, or Indonesia. Suggestion: Look for relevant information in Chapter 7.



FIGURE 1.4 Oil development and the environment. A

man walks through swampy land in 2010. An international development company began extracting products from this area 50 years ago. A recent UN report stated that now these areas need one of the world's largest cleanups, which could take up to 30 years and cost over a billion dollars. The area has experienced around 300 incidences of pollution a year since the 1970s, causing an unknown number of deaths. More information about this situation can be found in Chapter 7.

The Region as a Concept

Geographic Insight 2

Regions: The concept of *region* is useful to geographers because it allows them to break up the world into manageable units in order to analyze and compare spatial relationships. Nonetheless, regions do not have rigid definitions and their boundaries are fluid.

A **region** is a unit of the Earth's surface that contains distinct patterns of physical features and/or distinct patterns of human development. It could be a desert region, a region that produces rice, or a region experiencing ethnic violence. Geographers rarely use the same set of attributes to describe any two regions. For example, the region of the southern United States might be defined by its distinctive vegetation, architecture, music, foods, and historical experience. Meanwhile Siberia, in eastern Russia, could be defined primarily by its climate, vegetation, remoteness, and sparse settlement.

Another issue in defining regions is that they may shift over time. The people and the land they occupy may change so drastically in character that they no longer can be thought of as belonging to a certain region, and become more closely aligned with another, perhaps adjacent, region. Examples of this are countries in Central Europe, such as Poland and Hungary, which, for more than 40 years, were closely aligned with Russia and the Soviet Union, a vast region that stretched across northern Eurasia to the Pacific (Figure 1.5A). Poland and Hungary's borders with western Europe were highly militarized and shut to travelers. With the demise of the Soviet Union in the early 1990s and the drastic political and economic changes that then came about, Poland and Hungary became members of the European Union (EU) in 2004 (Figure 1.5B). Their western borders are now open, while their eastern borders are now more heavily guarded in order to keep unwelcome immigrants and influences

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FIGURE 1.5 Changing country alliances and relationships in Europe, pre-1989 (A) and 2013 (B).



(A) Pre-1989 alignment of countries in Europe and the Soviet Union.