GLOBAL EDITION

Diversity Amid Globalization

World Regions, Environment, Development

SIXTH EDITION

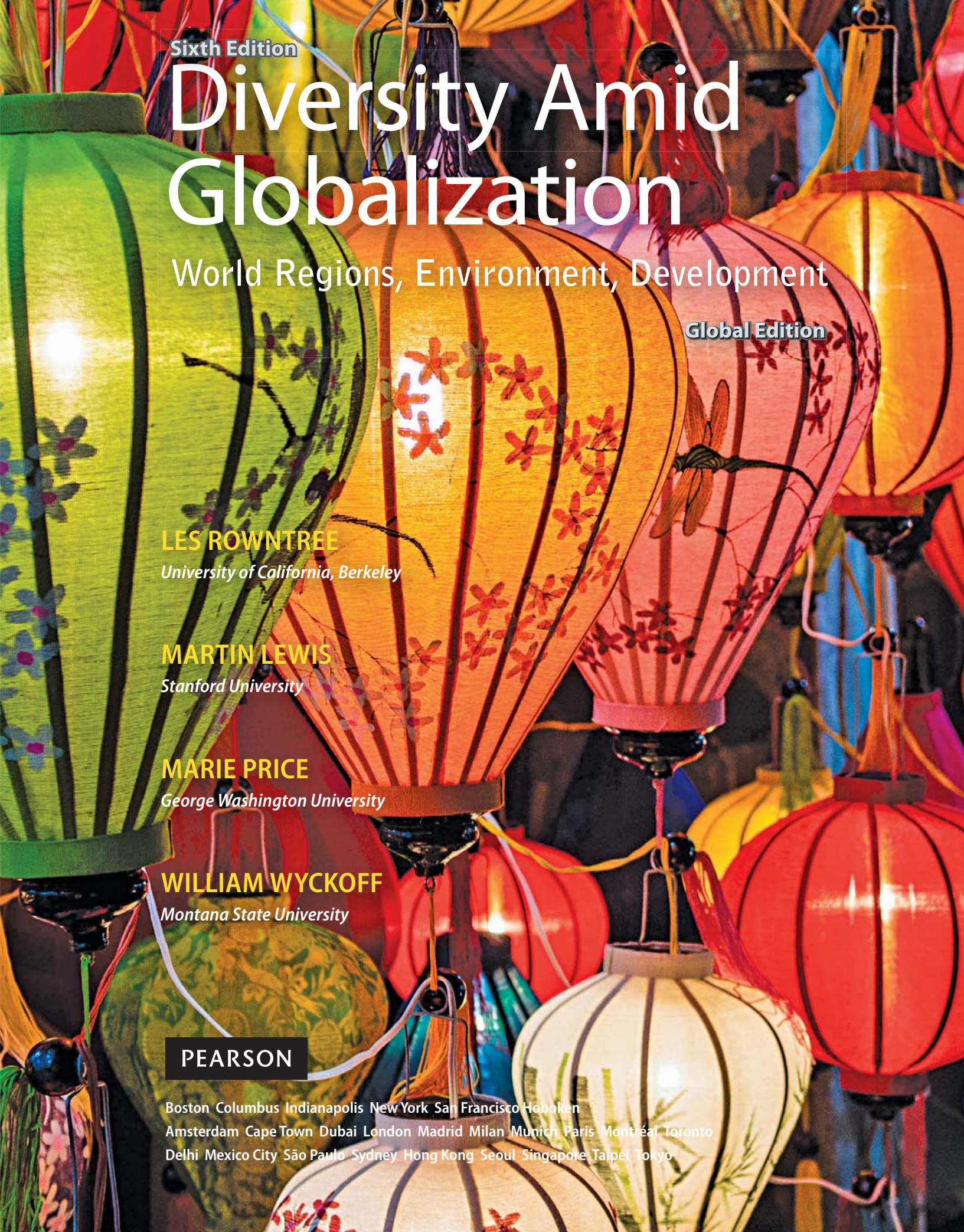
Lester Rowntree • Martin Lewis • Marie Price • William Wyckoff

ALWAYS LEARNING

PEARSON

World – Political

The Caribbean



Sixth Edition

Diversity Amid Globalization

World Regions, Environment, Development

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Brief Contents

Contents

Preface

Diversity Amid Globalization, Sixth Edition, is an issues-oriented textbook for college and university world regional geography classes that explicitly recognizes the vast geographic changes taking place because of globalization. With this focus, we join the many scholars who consider globalization to be the most fundamental reorganization of the world's socioeconomic, cultural, and geopolitical structure since the Industrial Revolution. That premise provides the point of departure and underlying assumptions for this book. Further, as geographers, we think it essential for our readers to understand and critique two interactive themes: the consequences of converging environmental, cultural, political, and economic systems inherent to globalization and the persistence—and even expansion—of geographic diversity and differences in the face of globalization. These two opposing forces, homogenization and diversification, are reflected in our book's title, *Diversity Amid Globalization.*

New to the Sixth Edition

- ***Working Toward Sustainability*** explores sustainability projects throughout the world, emphasizing positive environmental and social initiatives.
- ***Everyday Globalization*** illustrates how globalization permeates every aspect of one's life, even the most mundane and taken-for-granted, such as one's food, clothing, cell phones, and music.
- **Quick Response (QR) code links to Google Earth Virtual Tour Videos** appear in select sidebar features, providing mobile-ready, on-the-go virtual tours of the geography and places discussed in the sidebar.
- **Chapter opening** pages introduce readers to key themes and characteristics of the regions with large panoramic photographs, a selection of visual and brief textual previews of the chapter sections, and a real-world vignette.
- **Learning Objectives** listed at the start of each chapter help students prioritize key learning goals.
- **Review questions** at the end of each major thematic section help students check comprehension as they read.
- **Visual questions** integrated with select figures give students opportunities to apply critical thinking skills and perform visual analysis.
- **In Review** end-of-chapter sections provide a highly visual summary and review of each chapter, with integrated graphics, critical thinking questions, key terms, and author blogs.
- **Quick Response (QR) code links to Author Blogs** at the end of each chapter lead readers to two blogs where authors discuss everything from current events to their travels and field research. Both blogs are graphically rich with innovative maps and photos and help extend the print book with dynamically updated information and data.

New and Updated in Chapter 1: Concepts of World Geography

- ***Geography Matters.*** New discussion of fundamental geographic concepts, including areal differentiation, regions, and the cultural landscape.
- ***Geographer's Toolbox.*** New discussion of latitude and longitude, map projections, scale, chorographic maps, aerial photos, remote sensing, and GIS.
- **Expanded, integrated treatment of globalization.** A revised presentation of globalization, including the notions of "flat" versus "spiky" worlds.
- **Demographic transition revised.** Following the lead of professional demographers, a fifth stage has been added to the traditional demographic transition model to account for the current very low natural population rates in developed countries.
- ***The Nation-State Revisited.*** A critical view of the traditional nation-state concept sets the scene for regional material on post- and neocolonial tensions, microregionalism, ethnic separatism, migrant enclaves, and multicultural nationalism.

New and Updated in Chapter 2: Physical Geography and the Environment

- **An expanded and graphically rich section on climate controls.** This expanded section explains the climate controls of solar energy, latitude, land-water interactions, global pressure and wind systems, and topography.
- **An updated and expanded section on climate change and global warming.** Drawing upon the latest data from the Intergovernmental Panel on Climate Change's *Fifth Assessment Report* (2013–2014), this section presents not just the latest data about climate change and global warming, but also the complex international negotiations on limiting CO_2 emissions.
- **A new section on global energy issues.** Linked to the previous material on climate change and global warming, this new section discusses the geography of global energy resources, both renewable and nonrenewable, including material on hydraulic fracturing ("fracking").
- **Revised and expanded material on bioregions and biodiversity.** A more detailed cartographic depiction of biomes and bioregions is complemented by a fuller discussion of the world's ecological diversity, as well as the issues faced in protecting those environments around the globe.

Thematic Organization

Diversity Amid Globalization is organized around the world geographic regions of Africa, Europe, Asia, North America, and so on. The text will be discussing five important geographic themes as the structure for each regional chapter: First is *Physical Geography and Environmental Issues,* in which we not only describe the physical geography of each region, but also environmental issues, including climate change and energy. Next is *Population and Settlement,* where we examine the region's demography, migration patterns, land use, and settlement, including cities. Our third theme, *Cultural Coherence and Diversity,* covers the traditional topics of language and religion, but also examines the ethnic and cultural tensions resulting from globalization. Gender issues and popular culture topics such as sports and music are also included in this section. The next section, covering the *Geopolitical Framework,* examines the political geography of the region, taking on such issues as postcolonial tensions, ethnic conflicts, separatism, micro-regionalism, and global terrorism. We conclude each regional chapter with a section devoted to

Economic and Social Development. Here we explore each region's economic framework at both local and global scales and examine such social issues as health, education, and gender inequalities.

These 12 regional chapters follow two substantive introductory chapters that provide the geographic fundamentals of both human and physical geography. The first chapter, "Concepts of World Geography," begins by providing readers with background on the geographic dimensions of globalization, including a section on the costs and benefits of globalization according to proponents and opponents. Next is an introduction to the discipline of geography and its major concepts, which leads into a section called "The Geographer's Toolbox," where students are informed about such matters as map-reading, cartography, aerial photos, remote sensing, and GIS. This initial chapter concludes with a discussion of the concepts and tabular data that are used throughout the regional chapters.

Chapter Two, "Physical Geography and the Environment," builds an understanding of physical geography and environmental issues with discussions of geology; environmental hazards; weather, climate, and global warming; energy; hydrology and water stress; and global bioregions and biodiversity.

Chapter Features

- **Structured learning path.** Every chapter begins with an explicit set of learning objectives to provide students with the larger context of each chapter. Review questions after each section allow students to test their learning. Each chapter ends with an innovative, graphically rich "In Review" section, where students are asked to apply what they have learned from the chapter in an active-learning framework.
- **Comparable regional maps.** Of the many maps in each regional chapter, many are constructed on the same themes and with similar data so that readers can easily draw comparisons between different regions. Most regional chapters have maps of physical geography, climate, environmental issues, population density, migration, language, religion, and geopolitical issues.
- **Other chapter maps pertinent to each region.** The regional chapters also contain many additional maps illustrating important geographic topics such as global economic issues, social development, and ethnic tensions.
- **Comparable regional data sets.** Two thematic tables in each regional chapter facilitate comparisons between regions and provide important insight into the characteristics of each region. The first table provides population data on a number of issues, including fertility rates and proportions of the population under 15 and over 65 years of age, as well as net migration rates for each country within the region. The second table presents economic and social development data for each country, including gross national income per capita, gross domestic product growth, life expectancy, percentage of the population living on less than $2 per day, child mortality rates, and the United Nations gender inequality index.
- **Sidebar essays with Google Earth Video Tours.** Each of the regional chapters has five sidebars that expand on geographic themes; to further geographic understanding, three sidebars in each chapter contain hot links to Google Earth virtual tour videos. These sidebars are:

  Cityscapes, in which text, maps, photos, and hot links to virtual tour videos are combined to convey a sense of place for a major city within each region. These sidebars also speak to the fact that our globalized world is becoming increasingly urban.

  Working Toward Sustainability sidebars feature case studies that describe sustainability projects throughout the world, emphasizing positive environmental and social initiatives and their results.

  Exploring Global Connections uses case studies to investigate the many ways in which activities in different parts of the world are linked so that students understand that in a globalized world regions are neither isolated nor discrete.

  People on the Move sidebars capture the human geography behind contemporary migration as people relocate, legally and not so legally, as they respond to the varied currents and expressions of globalization.

  Everyday Globalization sidebars illustrate the many ways that globalization permeates one's everyday life, from food, to clothing, to cell phones, to music.

- **QR links to author blogs.** These links lead readers to two blogs where authors discuss everything from current events to their travels and field research. Both blogs are graphically rich with innovative maps and photos.

Acknowledgments

We have many people to thank for the conceptualization, writing, rewriting, and production of *Diversity Amid Globalization*. First, we'd like to thank the thousands of students in our world regional geography classes who have inspired us with their energy, engagement, and curiosity; challenged us with their critical insights; and demanded a textbook that better meets their need to understand the contemporary geography of their dynamic and complex world.

Next, we are deeply indebted to many professional geographers and educators for their assistance, advice, inspiration, encouragement, and constructive criticism as we labored through the different stages of this book. Among the many who provided invaluable comments on various drafts and editions of *Diversity Amid Globalization* or who worked on supporting print or digital material are:

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Martin Lewis
Marie Price
William Wyckoff

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About the Authors

Les Rowntree is a Research Associate at the University of California, Berkeley, where he researches and writes about global and local environmental issues. This career change came after more than three decades teaching both Geography and Environmental Studies at San Jose State University. As an environmental geographer, Dr. Rowntree's interests focus on international environmental issues, biodiversity conservation, and human-caused global change. He sees world regional geography as a way to engage and inform students by giving them the conceptual tools needed to critically assess the contemporary world. His current research and writing projects include a natural history book on California's Coast Range and essays on Europe's environmental issues; additionally he maintains an assortment of web-based natural history, geography, and environmental blogs and websites.

Martin Lewis is a Senior Lecturer in History at Stanford University, where he teaches courses on global geography. He has conducted extensive research on environmental geography in the Philippines and on the intellectual history of world geography. His publications include *Wagering the Land: Ritual, Capital, and Environmental Degradation in the Cordillera of Northern Luzon, 1900–1986* (1992), and, with Karen Wigen, *The Myth of Continents: A Critique of Metageography* (1997). Dr. Lewis has traveled extensively in East, South, and Southeastern Asia. His current research focuses on the geography of languages. In April 2009, Dr. Lewis was recognized by *Time* magazine as one of American's most favorite lecturers.

Marie Price is a Professor of Geography and International Affairs at George Washington University. A Latin American specialist, Dr. Price has conducted research in Belize, Mexico, Venezuela, Panama, Cuba, and Bolivia. She has also traveled widely throughout Latin America and Sub-Saharan Africa. Her studies have explored human migration, natural resource use, environmental conservation, and sustainability. She is a nonresident fellow of the Migration Policy Institute, a nonpartisan think tank that focuses on migration issues, and is a Vice-President of the American Geographical Society. Dr. Price brings to *Diversity Amid Globalization* a special interest in regions as dynamic spatial constructs that are shaped over time through both global and local forces. Her publications include the co-edited book *Migrants to the Metropolis: The Rise of Immigrant Gateway Cities* (2008) and numerous academic articles and book chapters.

William Wyckoff is a Professor of Geography in the Department of Earth Sciences at Montana State University, specializing in the cultural and historical geography of North America. He has written and co-edited several books on North American settlement geography, including *The Developer's Frontier: The Making of the Western New York Landscape* (1988), *The Mountainous West: Explorations in Historical Geography* (1995) (with Lary M. Dilsaver), *Creating Colorado: The Making of a Western American Landscape 1860–1940* (1999), and *On the Road Again: Montana's Changing Landscape* (2006). His most recent book, *How to Read the American West: A Field Guide*, appeared in the Weyerhaeuser Environmental Books series and was published in 2014 by the University of Washington Press. A World Regional Geography instructor for 26 years, Dr. Wyckoff emphasizes in the classroom the connections between the everyday lives of his students and the larger global geographies that surround them and increasingly shape their future.

Digital and Print Resources

Instructor Resource Manual (Download)

The *Instructor Resource Manual,* authored by Karl Byrand of the University of Wisconsin, follows the new organization of the main text. It includes a sample syllabus, chapter learning objectives, lecture outlines, a list of key terms, and answers to the textbook's review and end-of-chapter questions. Discussion questions, classroom activities, and advice on how to integrate visual supplements (including Learning Catalytics resources) are integrated throughout the chapter lecture outlines.

TestGen/Test Bank (Download)

TestGen is a computerized test generator that lets instructors view and edit *Test Bank* questions, transfer questions to tests, and print tests in a variety of customized formats. Authored by Elizabeth Lobb of Mount San Antonio College, this *Test Bank* includes approximately 1,500 multiple-choice, true/false, and short-answer/essay questions. Questions are correlated with the book's learning objectives, the revised U.S. National Geography Standards, chapter-specific learning outcomes, and Bloom's Taxonomy. The *Test Bank* is also available in Microsoft Word® and is importable into Blackboard.

This Instructor Resource content is also available online via **www.pearsonglobaleditions.com/Rowntree.**

The world's diverse regions in context

Conveying a strong sense of place and global context, this contemporary approach to world regional geography helps students understand the unique connections among the world's diverse regions.

▲ **NEW! Chapter opening** pages introduce readers to key themes and characteristics of the regions with large panoramic photographs, a selection of visual and brief textual previews of the chapter's themes and sections, followed by a real-world vignette.

Exploring **Global Connections**

Crisis Mapping in Haiti After the Earthquake

In response to the 2010 Haitian earthquake, social media, humanitarian organizations, and crisis mappers joined forces in a new and unique way that has changed how governments and civil societies will respond to complex humanitarian crises in the future. One of the leaders in the crisis-mapping movement is Patrick Meier, who was a key player in assembling the crisis-mapping team for Haiti. In 2013, Patrick Meier was a National Geographic Emerging Explorer where he blogged about the Haitian experience.

Crisis Mapping is the leveraging of mobile devices (texts and tweets), Web-based applications, participatory maps, satellite imagery, and crowd-sourced event data for rapid responses to complex humanitarian crises. Humanitarian workers need precise, real-time information that localities in crisis are often unable to provide. Working through an African-created platform called Ushahidi, crisis mappers assembled at Tufts University, just outside of Boston, Massachusetts, gathered tweets and text messages from Haitians (with translations provided by Haitians living in the U.S.). New global connections were forged, resulting in maps used by first responders that saved lives.

▼ **Figure 5.1.1 Crisis Mapping for Port-au-Prince** A portion of the map created using Open Street Map in the days after the Haitian earthquake. The circles represent the number of individual reports for that particular areas.

Close up of the Haiti Map. Each number represents the individual number of reports within the area. Users could zoom in further to see the individual reports. Credit: Ushahidi Haiti Project (UHP).

Two free and open-source mapping platforms were critical in moving crisis mapping forward: Ushahidi and Open Street Map. Ushahidi was developed by African bloggers who sought to report on postelection violence in Kenya in 2008 that was not covered by the media. Ushahidi (Swahili for "witness") relies on a Google Web-based map interface that plots acts of violence sent by crowd-sourced text messages. In the case of Haiti, Open Street Map was incorporated into the platform to allow for the construction of an extremely detailed and interactive map that people could use in the field and drill down to individual reports (Figure 5.1.1). Key to the success of the project was the creation of a team of crisis mappers (initially students at Tufts University) and translators who scanned for tweets. Later, through collaboration with Haiti's largest mobile phone provider, a texting number was set up so that anyone in Haiti could text urgent needs. As thousands of texts poured in, the Haitian population in the United Sates was mobilized to translate the texts from Haitian Creole to English so that the mappers could add the geo-referenced information to the map. As the real-time map grew, so did the number of contributors and users. The U.S. Coast Guard and Marines and various humanitarian groups on the ground in Port-au-Prince relied almost exclusively on its output.

Future Crisis Mapping Since the Haiti experience with crisis mapping, similar efforts have been used in response to earthquakes in Chile and Russia. An organization of crisis-mapping volunteers has formed to respond to future events. As Patrick Meier likes to say: "To map the world is to know it. But to map the world live is to change it before it's too late."

Source: Adapted from www.newswatch.nationalgeographic.com-How Crisis Mapping Saved Lives in Haiti, July 2, 2012.

Google Earth Virtual Tour Video

http://goo.gl/fqds4l

1. What factors led the residents of Havana to become leaders in urban agriculture?
2. Beyond increasing the food supply, what are the other advantages of growing food in cities?

◀ Updated **Exploring Global Connections** case studies reinforce the theme of globalization by illustrating the interesting and sometimes unexpected interconnections between regions. Examples include the Catholic Church and the Argentine Pope; Crisis mapping in Haiti after the earthquake of 2010; the heroin and opium trade from Afghanistan; Russian meteorite fragments going global; and many others.

Explore critical and contemporary issues

A focus on critical and socially-conscious topics—sustainability, gender issues, globalization impacts, global climate change—engage and involve students on multiple levels.

► **NEW! Working Toward Sustainability** features show diverse applications of how sustainability initiatives apply to people, groups, and settlements in different places and at different scales, emphasizing positive environmental and social initiatives and their outcomes. Examples include Japan's smart city movement; green schools and eco-tourism in Bhutan; Germany's energy transformation; Lake Balkal's Success Story; and many others.

Expanded coverage of gender issues, food, art, music, film, and sports brings these high-interest cultural topics to the forefront.

► **NEW! *Everyday Globalization*** features illustrate how globalization permeates every aspect of one's life—even the most ordinary and taken-for-granted, such as health care, food, education, cell phones, and video games.

Working Toward **Sustainability**

Lake Baikal's Success Story

Lake Baikal, located in southern Siberia (see Figure 9.2), has become one of Russia's most important settings for protecting its vast natural environment and for developing sustainable economic activities such as ecotourism. Remarkably, the lake contains about 20 percent of Earth's unfrozen fresh surface water. Not only is the lake almost 400 miles (644 kilometers) long, but it is also 5300 feet (1600 meters) deep, occupying a structural rift in the continental crust (Figure 9.2.1). It remains home to a large array of unique (or *endemic*) species found nowhere else on the planet, including the world's only freshwater seal.

A Threatened Treasure Lake Baikal suffered during the later Soviet period. Large pulp and paper mills were located along the lakeshore in the 1950s and 1960s because abundant forests were nearby and the lake's amazingly pure water was useful in producing high-quality wood fibers. Unfortunately, these industries discharged pollutants into the lake and into the surrounding atmosphere. With factory discharges, the lake's purity rapidly declined. However, things have improved since the early 1990s. Stricter regulations have reduced industrial pollution. Indeed, the lake has become *the* national "poster child" of the Russian environmental movement. In 1996, the lake became a UNESCO World Heritage Site, and three years later the Russian government formally created legislation designed to protect the lake.

Recently, the lake became the center of attention as Russia planned to expand a major Siberian oil pipeline linking Russian resources to East Asian markets. High oil prices have encouraged the Russians to make large new investments in their petroleum industry, but many environmentalists feared that these growing global demands for oil might have destructive local consequences for Lake Baikal. In 2006, major protests and petition-signing drives opposed the planned pipeline's close proximity to the north shore of the lake. The initiative caught the attention of Russian President Putin, who dramatically ordered that the pipeline be directed farther away from the lake's fragile ecosystem.

▲ **Figure 9.2.1 Lake Baikal** Southern Siberia's Lake Baikal is one of the world's largest deep-water lakes. Industrialization devastated water quality after 1950 as pulp and paper factories poured wastes into the lake. Recent cleanup efforts have helped, but environmental threats remain.

1. Examine the maps of agricultural production (Figure 9.5), population (Figure 9.14) and industrial zones (Figure 9.39) in relation to Lake Baikal. How do these patterns help explain the relatively pristine character of the lake today?
2. Follow the Trans-Siberian Railroad in Google Earth along Lake Baikal's southern shoreline. What are the dominant features visible on your trip?

Google Earth Virtual Tour Video

http://goo.gl/JDkwFv

Everyday **Globalization**

How the Russian Domain Shapes the Virtual World

It's a tough virtual world out there, especially when tanks, pirates, spacecraft, and battleships threaten us on every front.

The Russian Connection As every American college student knows, the video game and online gaming landscape has changed dramatically in the last 30 years, since Russian Alexie Pajitnov invented Tetris at the Soviet Academy of Sciences in 1984 (it has sold over 125 million copies on 30 different platforms). Less apparent, however, is the enduring connection between the Russian domain and the multi-billion-dollar video-gaming industry. Russian (1C Company), Belorussian (Wargaming.net), and Ukrainian (Persha Studia) software companies have all played pivotal roles in shaping the world's virtual landscapes. This includes outmaneuvering pirates in the Caribbean (*Age of Pirates*), organizing massive online tank-based clan wars (with more than 190,000 players online simultaneously) somewhere on the world map (*World of Tanks*), and completing house-to-house searches on the European battlefield during World War II (*Men of War*) (Figure 9.5.1).

Regional Advantages How did this region become so central in creating the virtual worlds shared today by hundreds of millions of gamers? Part of the answer is no doubt Soviet-era investments in pioneering computer technology and software development, much of it linked with the Cold War. Add to this a generation of sophisticated, technically trained computer geeks such as Pajitnov (who now lives in Washington State and works for an American software gaming company), who were well positioned to master the programming challenges of the budding industry. The Russian domain also offers a less expensive and less regulated environment where programmers have enjoyed considerable intellectual freedom beneath the radar of the bureaucracy.

Russia's Microsoft Although Belarus and Ukraine software developers certainly participate in the industry, Russia dominates the game. Boris Nuraliev was one of the corporate founders of the movement in the early 1990s. He created the 1C Company—often called Russia's Microsoft—which moved from the rather ordinary world of business software into the more extraordinary world of gaming (*Theater of War, Kings Bounty: The Legend, Pacific Fighters*, etc.). Today the company, based in Moscow, employs almost 1000 people (including 250 internal game developers) and is the largest game publisher and developer in the region. The company is also the most visible participant in the annual KRI (Russian Game Developers) Conference (begun in 2003), which is *the* place to be if you want to know the latest about online gaming, anti-piracy initiatives, or virtual worlds coming soon to a screen near you.

You might ponder the cultural significance of this massive Russian participation in the creation of our virtual worlds (Figure 9.5.2). Think about the landscapes we navigate, the strategic challenges we face, and the fascinating mix of fact (historical tanks and weapons, battle settings, and costumes are meticulously and accurately displayed) and fancy that makes up that world. Not surprisingly, a little bit of traditional Russian culture also gets passed our way. Just listen to the melody most associated with Tetris: Nikolai Nekrasov wrote the poem titled *Korobeiniki* in 1861, and the verse later became a Russian folk song that all Tetris enthusiasts have heard endless times as they skillfully maneuver their tetrominoes into place.

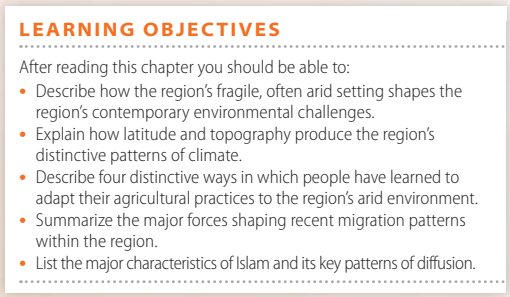
▲ **Figure 9.5.1 Belorussian Tanks Roll into California** The World of Tanks, a popular multiplayer online game, is being promoted in this publicity shot at the 2013 E3 Video Game Expo in Los Angeles. The game is produced by Wargaming.net, one of many Belorussian companies specializing in this global industry.

▲ **Figure 9.5.2 Russia's Blossoming Virtual World** These Russian youngsters eagerly explore the gaming cyberworld at the 2009 GameWorld interactive entertainment exhibition in Moscow.

Structured to facilitate learning

Each regional chapter is organized into five thematic sections— Physical and Environmental Geography, Population and Settlement, Cultural Coherence and Diversity, Geopolitical Framework, and Economic and Social Development—to encourage cross-regional comparisons and highlight issues in today's globalized world. Each chapter now also includes a new active learning path to help students engage with important concepts and check their understanding.

▶ **NEW! Learning Objectives** listed at the start of each chapter help students prioritize key learning goals.

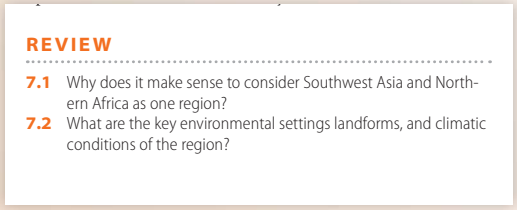


LEARNING OBJECTIVES

After reading this chapter you should be able to:

- Describe how the region's fragile, often arid setting shapes the region's contemporary environmental challenges.
- Explain how latitude and topography produce the region's distinctive patterns of climate.
- Describe four distinctive ways in which people have learned to adapt their agricultural practices to the region's arid environment.
- Summarize the major forces shaping recent migration patterns within the region.
- List the major characteristics of Islam and its key patterns of diffusion.

▶ **NEW! Review Questions** at the end of each major thematic section help students check their comprehension of the material as they read.



REVIEW

7.1 Why does it make sense to consider Southwest Asia and North-ern Africa as one region?

7.2 What are the key environmental settings landforms, and climatic conditions of the region?

▶ **NEW! Quick Response (QR) code links to Google Earth Virtual Tour Videos** appear in select sidebar features, providing mobile-ready, on-the-go virtual tours of the places discussed in the sidebar.

Google Earth Virtual Tour Video

http://goo.gl/D38KO1

1. Find Cairo on Google Earth, and examine parts of the old city as well as new suburban developments to the east. Describe three key visual differences you can detect between these old and new settlement patterns.
2. Find a work of literature (novel, short story, poem) focused on an urban setting in your region, and identify a passage (such as the one by Mahfouz) that captures a local sense of place.

▶ **NEW! Visual Questions** integrated into key figures in each chapter section give students opportunities to apply critical thinking skills and visual analysis.

▲ **Figure 7.43 Development Issues in Southwest Asia and North Africa: Childhood Mortality** Wealthier nations such as Israel and the United Arab Emirates have very low rates of childhood mortality, but poor countries such as Sudan, Morocco, and Iraq continue to struggle with very high rates. **Q: Why might it be argued that childhood mortality is a good measure of development?**

▶ **NEW! In Review** end-of-chapter features provide a highly visual summary and review of each chapter, with integrated graphics, critical thinking questions, key terms, Quick Response code links to the author blogs.

In Review • Chapter 7

Southwest Asia and North Africa

Physical Geography and Environmental Issues

Population and Settlement

Cultural Coherence and Diversity

Geopolitical Framework

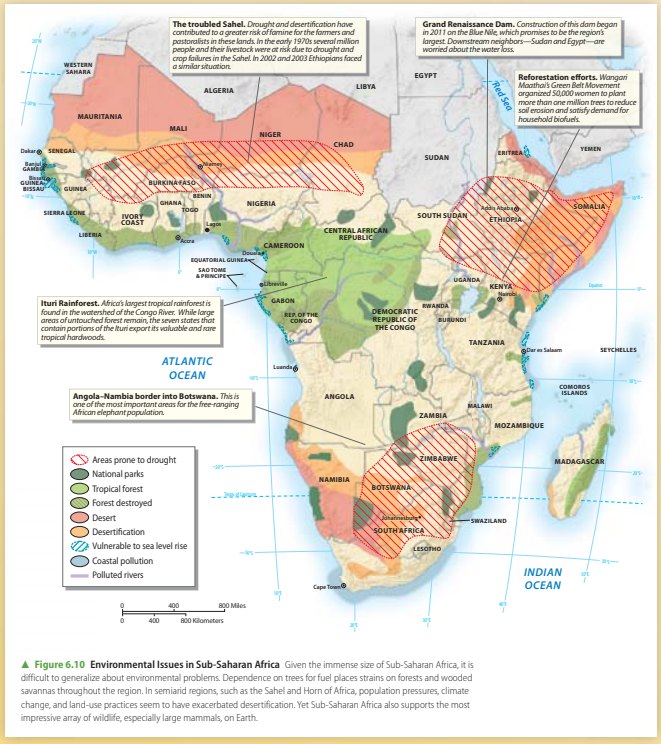
Economic and Social Development

Key Terms

Authors' Blogs

Visualize the world's places and people

A pedagogically-oriented cartography program provides many of the same thematic maps in each regional chapter. This system allows students to compare and contrast concepts and data both within and between regions. Large-format photos, satellite and remote-sensed imagery, paired population pyramids, and other visualizations of current data help students experience and understand the world's diverse regions.

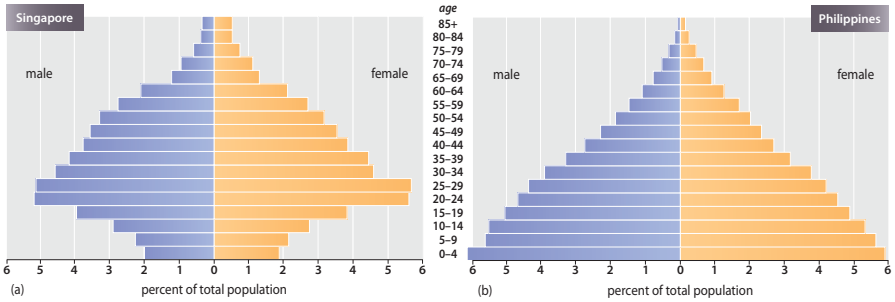


▲ **Figure 6.10 Environmental Issues in Sub-Saharan Africa** Given the immense size of Sub-Saharan Africa, it is difficult to generalize about environmental problems. Dependence on trees for fuel places strains on forests and wooded savannas throughout the region. In semiarid regions, such as the Sahel and Horn of Africa, population pressures, climate change, and land-use practices seem to have exacerbated desertification. Yet Sub-Saharan Africa also supports the most impressive array of wildlife, especially large mammals, on Earth.

▼ **Figure 10.31 Qinghai–Tibet Railway** China is engaged in a massive program to extend roads and railroads into the western half of the country. The main connection with the Tibetan Plateau is the recently completed Qinghai–Tibet Railway. This railway has resulted in a large increase in tourism in Tibet. **Q: Why have the railroad tracks been elevated so high above the valley floor?**

▲ **Figure 12.2 South Asia from Space** This satellite photo shows the four physical subregions of South Asia, from the snow-clad Himalayas in the north to the islands of the south. The irrigated lands of the Indus River Valley in Pakistan are clearly visible in the upper left.

▼ **Figure 13.13 Population Pyramids of Singapore and the Philippines** (a) Singapore has a very low birth rate and an aging population; as a result, its government encourages the immigration of skilled workers. (b) The Philippines, by contrast, has a high birth rate and a young population.



1 Concepts of World Geography

Converging Currents of Globalization

Although economic forces may drive many aspects of globalization, the effects are found in all aspects of land and life, with profound changes to world environments, cultures, settlement, demography, and geopolitics.

Geographer's Toolbox

Geography is the spatial science that describes and explains the world's physical and human environments. To do this geographers use a variety of tools such as maps, aerial photos, satellite images, global positioning systems (GPS), and geographic information systems (GIS).

Population and Settlement

While high birth rates characterize some parts of the world (Africa is an example), in many other areas (such as North America and Europe) natural growth rates are very low, thus migration becomes a major factor for demographic change.

Sao Paulo, Brazil. Home to 20 million people, Sao Paulo is the largest city in Brazil, Latin America, and the southern hemisphere. It also ranks among the world's 10 largest metropolitan areas, and illustrates how Earth recently became an urban world, with most of the its population now living in towns and cities. Sao Paulo is also a hub of Latin America's economic life, actively connected to the world economy through the globalization of commerce.

Cultural Coherence

Globalization creates a dynamic, ever-changing world cultural geography as some people take up new ways while others retreat farther into traditional cultures.

Geopolitical Framework

The last several decades have seen rapid geopolitical change linked to globalization. Not only have new countries appeared but within existing countries regionalism and ethnic separatism are causing major changes.

Economic and Social Development

Economic globalization has created new world trade patterns and centers of wealth, but not for all people in all places. Instead, critics say, economic and social disparities have actually increased the differences between rich and poor

Converging Currents of Globalization

One of the most important challenges facing the world in the 21st century is associated with **globalization**—the increasing interconnectedness of people and places through converging economic, political, and cultural activities. Once-distant regions and cultures are now increasingly linked through commerce, communications, and travel. Although earlier forms of globalization existed, especially during Europe's colonial period, the current degree of planetary integration is stronger than ever. In fact, many observers argue that contemporary globalization is the most fundamental reorganization of the world's socioeconomic structure since the Industrial Revolution.

Economic activities may be the major driving force behind globalization, but the consequences affect all aspects of land and life: Cultural patterns, political arrangements, environmental conditions, and social development are all undergoing profound change. Because natural resources are now global commodities, the planet's physical environment is also affected by globalization. Financial decisions made thousands of miles away now affect local ecosystems and habitats, often with far-reaching consequences for Earth's health and sustainability.

Pundits say globalization is like the weather: It's everywhere, all the time. It is a ubiquitous part of our lives and landscapes that is both beneficial and harmful, depending on our needs and point of view. Some people in some places embrace the changes brought about by globalization, whereas others resist and push back, seeking refuge in traditional habits and places. As a result, the handmaiden of globalization is **diversity**: a tension between the global and the local. In Asian philosophy, *yin* and *yang* are polar opposites, yet what are seemingly contrary are actually interconnected and interdependent. Indeed, this is the case with the diversity amid globalization that makes up contemporary world regional geography.

Pundits say globalization is like the weather: It's everywhere, all the time. It is a ubiquitous part of our lives and landscapes that is both beneficial and harmful, depending on our needs and point of view.

These immense and widespread global changes make understanding our contemporary world a challenging, yet necessary task. World regional geography is central to this task because of its integration of environmental, cultural, political, and economic themes and topics (see *Exploring Global Connections: A Closer Look at Globalization*).

Economic Globalization

Most scholars agree that the major component of globalization is the economic reorganization of the world. Although different forms of a world economy have existed for centuries, a well-integrated, truly global economy is primarily the product of the past several decades. The attributes of this system, while familiar, are worth stating:

- Global communication systems that link all regions and most people on the planet instantaneously (Figure 1.1)
- Transportation systems capable of moving goods quickly by air, sea, and land
- Transnational business strategies that have created global corporations more powerful than many sovereign nations
- New and more flexible forms of capital accumulation and international financial institutions that make 24-hour trading possible
- Global agreements that promote free trade
- Market economies and private enterprises that have replaced state-controlled economies and services
- An abundance of planetary goods and services that have arisen to fulfill consumer demand (real or imagined) (Figure 1.2)

LEARNING OBJECTIVES

After reading this chapter you should be able to:

- Identify the different components of globalization, including their controversial aspects.
- List several ways in which globalization is changing world geographies.
- Describe the conceptual framework of world regional geography.
- Summarize the major tools used by geographers to study Earth's surface.
- Explain the concepts and metrics used to document changes in global population and settlement patterns.
- Describe the themes and concepts used to study the interaction between globalization and the world's cultural geographies.
- Explain how different aspects of globalization have interacted with global geopolitics from the colonial period to the present day.
- Identify the concepts and data important to documenting changes in the economic and social development of more and less developed countries (MDCs and LDCs).

▲ **Figure 1.1 Global Communications** A fundamental component of globalization is the opening up of global communications through TV, the Internet, computers, and cell phones. In many parts of the world, for example, people use cell phones for doing business and personal finance, as this farmer is doing in India.

- Economic disparities between rich and poor regions and countries that drive people to migrate, both legally and illegally, in search of a better life
- An army of international workers, managers, and executives who give this powerful economic force a human dimension

As a result of this global reorganization, economic growth in some areas of the world has been unprecedented during recent decades; China is a good example. However, not everyone has gained from economic globalization, nor have all world regions shared equally in the benefits. Globalization is often touted as universally beneficial through trickle-down economics, but evidence is mounting that this process is happening neither in all places nor for all peoples. Additionally, the global recession of 2008–2010 demonstrated that economic interconnectivity can also increase economic vulnerability, as illustrated by the precipitous decline in Hawaii's tourist trade as the economies of both Japan and the United States went flat at the same time. Currently, economic recovery in the United States is affected by the slowing economies of both China and Europe.

Globalization and Changing Human Geographies

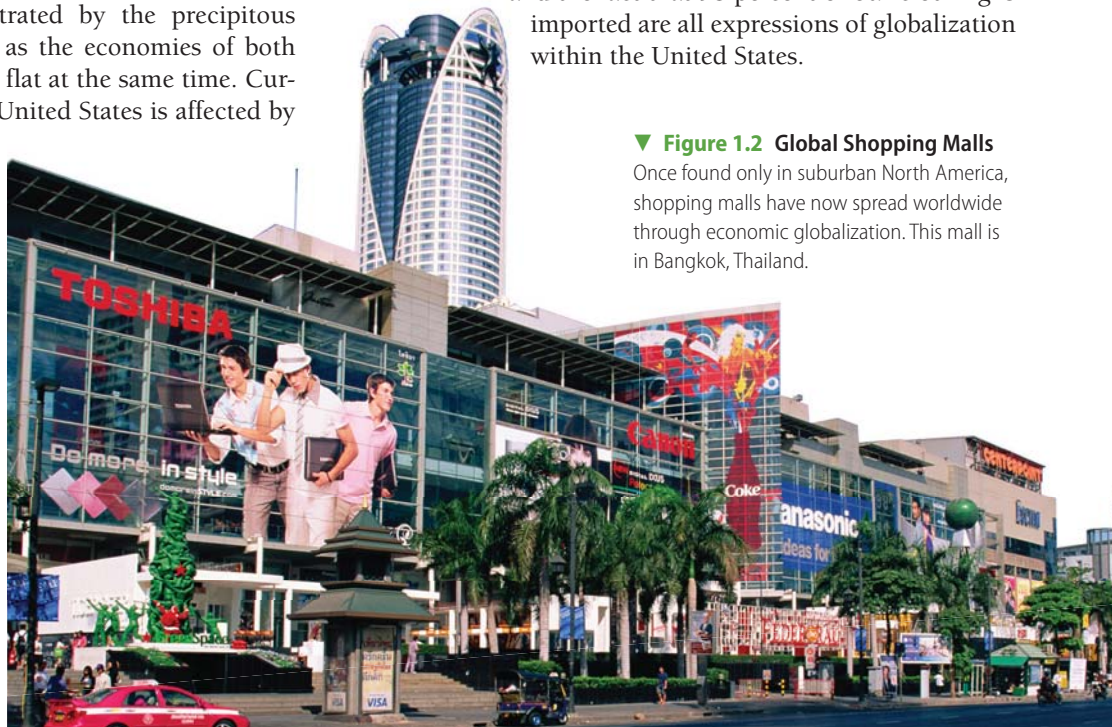
Economic changes also trigger cultural changes. The spread of a global consumer culture, for example, often accompanies globalization and frequently creates deep and serious social tensions between traditional cultures and a new, global outlook. Global TV, movies, Facebook, Twitter, and videos implicitly promote Western culture, which is then imitated by millions throughout the world, causing friction with traditional values and lifestyles.

Fast-food franchises are changing—some would say corrupting—traditional diets, with explosive growth in most of the world's cities. Although this change may seem harmless to North Americans because of its familiarity, it is not only an expression of the deep cultural changes the world is experiencing through globalization, but also generally unhealthy and environmentally destructive. The expansion of the cattle industry, for example, as a result of the new global demand for beef is doing serious environmental damage to tropical rainforests.

Although the media give much attention to the rapid spread of Western consumer culture, nonmaterial culture is also becoming more dispersed and homogenized through globalization. Language is an obvious example—American tourists in far-flung places are often startled to hear locals speaking an English full of Hollywood clichés. However, far more than speech is involved, as social values also are dispersed globally. Changing expectations about human rights, the role of women in society, and the intervention of nongovernmental organizations are also expressions of globalization that may have far-reaching effects on cultural change.

It would be a mistake, however, to view cultural globalization as a one-way flow that spreads from the United States and Europe into the corners of the world. In actuality, when U.S. popular culture spreads abroad, it is typically melded with local cultural traditions in a process known as *hybridization*. The resulting cultural hybrids, such as hip-hop and rap music or Asian food, can themselves resonate across the planet, adding yet another layer to globalization.

In addition, ideas and forms from the rest of the world are having a great impact on U.S. culture (Figure 1.3). The growing internationalization of American food, the multiple languages spoken in the United States, and the fact that 98 percent of our clothing is imported are all expressions of globalization within the United States.



▼ **Figure 1.2 Global Shopping Malls** Once found only in suburban North America, shopping malls have now spread worldwide through economic globalization. This mall is in Bangkok, Thailand.

Exploring **Global Connections**

A Closer Look at Globalization

Globalization comes in many shapes and forms as it connects far-flung people and places. Many of these interactions are common knowledge, such as the global reach of multinational corporations. Others are more complex and sometimes rather surprising. Who would expect to find Australian firefighters dowsing California wildfires as they migrate between Southern and Northern Hemisphere fire seasons? Would you predict that South Korean investors are buying up land in Madagascar to raise more cattle to supply Asian markets with more choice beefsteaks?

Indeed, global connections are ubiquitous and often complex—so much so that an understanding of the many different shapes, forms, and scales of these interactions is a key component of the study of global geography. To complement that study, each chapter of this book contains an *Exploring Global Connections* sidebar, which presents a case study drawn from a wide variety of topics.

In Chapter 8, for example, a case study illustrates how the current banking crisis in the divided country of Cyprus (located in the eastern Mediterranean) revealed not only that rich Russians had long been stashing their money in Cypriot banks, but also that any proposed solution to the Cyprus fiscal crisis is deeply entangled with the messy politics of global gas and oil. Other examples include the global linkage between the Philippines and the Baltimore, Maryland, school district, where Filipino teachers make up 10 percent of that city's teaching force (Chapter 13); how Antarctica is protected (Chapter 2); West Indian gardens in New York City (Chapter 3); and the Afghanistan opium and heroin trade (Chapter 10) (Figure 1.1.1). Many of these sidebars include Google Earth virtual tour videos.

1. Come up with an example of the complicated linkages of globalization based upon your own experiences. For example, what food from another part of the world did you buy today, and how did it get to your store?
2. Now choose a foreign place in a completely different part of the world, either a city, then discuss how globalization affects the lives of people in that place.

Google Earth Virtual Tour Video

http://goo.gl/5uPpKb

▼ **Figure 1.1.1 Afghan Farmer in His Poppy Field** Globalization connects the world community in both expected and surprising ways, from international banking, to climate change, to the Afghan drug trade.

Globalization also has a clear demographic dimension. Although international migration is not new, increasing numbers of people from all parts of the world are now crossing national boundaries, legally and illegally, temporarily and permanently (Figure 1.4). Migration from Latin America and Asia has drastically changed the demographic configuration of the United States, whereas migration from Africa and Asia has transformed western Europe. Countries such as Japan and South Korea, which have long been perceived as ethnically homogeneous, now have substantial immigrant populations. Even several relatively poor countries, such as Nigeria and Ivory Coast, have large numbers of immigrants coming from even poorer countries, such as Burkina Faso and Mali. Although international migration is restricted by a huge array of laws—much more so, in fact, than the movement of goods or capital—it is rapidly increasing, propelled by the uneven economic development associated with globalization.

▼ **Figure 1.3 Global Culture in the United States** While many think that globalization is the one-way spread of North American and European socioeconomic traits into the developing world, one needs only to look around their own neighborhood to find expressions of global culture within the United States, such as this Thai restaurant in Las Vegas, Nevada.

A significant criminal element is also a component of globalization, including terrorism (discussed later in this chapter), drugs, pornography, slavery, and prostitution. Illegal narcotics, for example, are definitely a global commodity (Figure 1.5). Some of the most remote parts of the world, such as the mountains of northern Burma, are thoroughly integrated into the circuits of global exchange through the

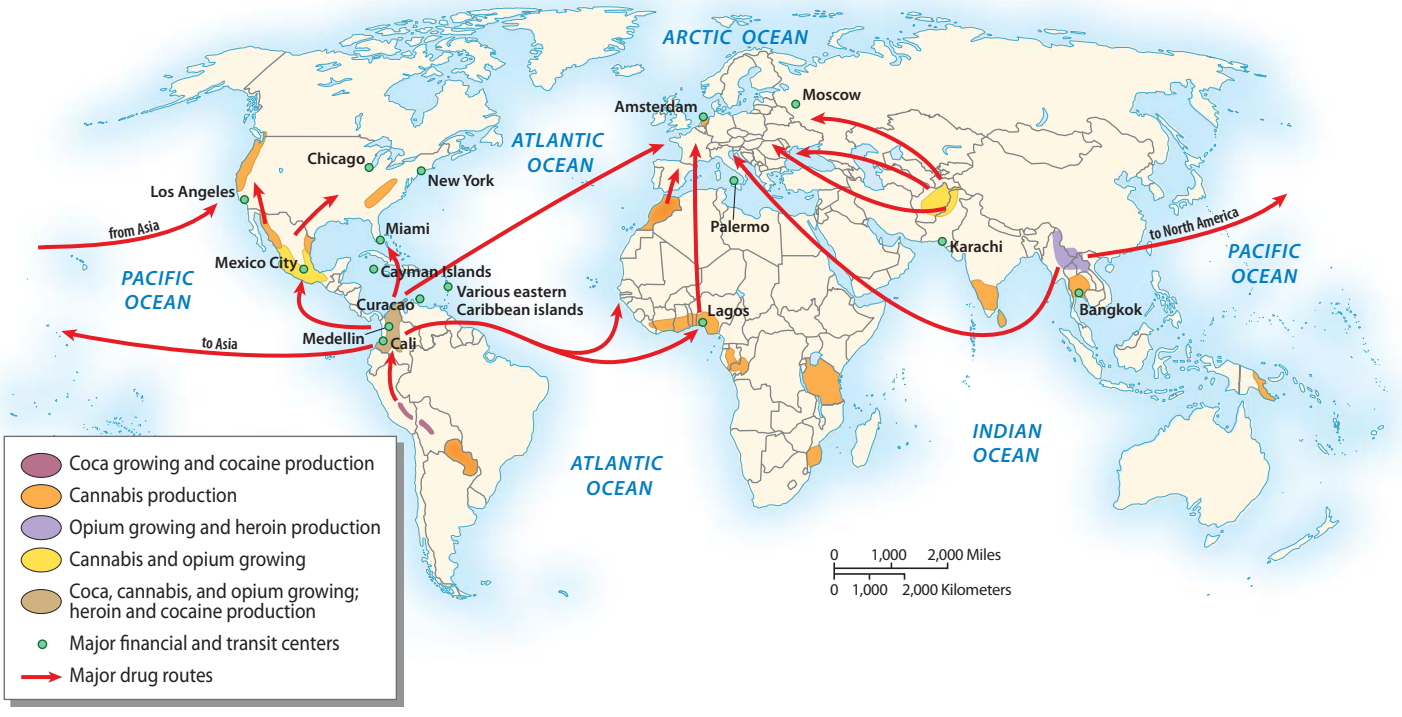
▲ **Figure 1.4 Global Migration** Globalization—in its many different forms—is connected to the largest migration in human history as people are drawn to centers of economic activity in hopes of a better life. But along with the pull forces that lure people to new places are the forces of civil strife, environmental deterioration, and economic collapse that push migrants out of their homelands. This photo is of a truckload of African migrants crossing the Sahara to the Mediterranean shore where many will attempt to illegally enter Europe through Spain or Italy. **Q: What international groups are found in your city?**

production of opium that is central to the world heroin trade. Even many areas that do not directly produce drugs are involved in their global sale and shipment. Many Caribbean countries have seen their economies become reoriented to drug transshipments and the laundering of drug money. Prostitution, pornography, and gambling have also emerged as highly profitable global businesses. Over the past decades, for example, parts of eastern Europe have become major sources of both pornography and prostitution, finding a lucrative, but morally questionable niche in the new global economy.

Geopolitics and Globalization

Globalization also has important geopolitical components. To many, an essential dimension of globalization is that it is not restricted by territorial or national boundaries. For example, the creation of the United Nations (UN) following World War II was a step toward creating an international governmental structure in which all nations could find representation. The simultaneous emergence of the Soviet Union as a military and political superpower led to a rigid division into Cold War blocs that slowed further geopolitical integration. However, with the peaceful end of the Cold War in the late 1980s and early 1990s, the former communist countries of eastern Europe and the Soviet Union were opened almost immediately to global trade and cultural exchange, which have changed those countries immensely (Figure 1.6).

Further, there is a strong argument that globalization—almost by definition—has weakened the political power of



▲ **Figure 1.5 The Global Drug Trade** The cultivation, processing, and transshipment of coca (cocaine), opium (heroin), and cannabis (marijuana) are global issues. The most important cultivation centers are Colombia, Mexico, Afghanistan, and northern Southeast Asia, and the major drug financing centers are located mostly in the Caribbean, the United States, and Europe. In addition, Nigeria and Russia play significant roles in the global transshipment of illegal drugs.

▲ **Figure 1.6 End of the Cold War** The peaceful end of the Cold War in 1990 greatly facilitated global economic expansion and jump-started cultural and political globalization. Here Germans celebrate the opening of the Berlin Wall that divided East and West Berlin from August 1961 to November 1989.

individual states by strengthening the power of regional economic and political organizations, such as the European Union and the World Trade Organization (WTO). In some world regions, a weakening of traditional state power has resulted in stronger local and separatist movements, as illustrated by the turmoil on Russia's southern borders and the plethora of separatist organizations in Europe.

The Environment and Globalization

As we mentioned, the expansion of a globalized economy is creating and intensifying environmental problems throughout the world. Transnational firms, which do global business through international subsidiaries, disrupt local ecosystems with their incessant search for natural resources and manufacturing sites. Landscapes and resources previously used only by small groups of local peoples are now thought of as global commodities to be exploited and traded in the world marketplace. As a result, native peoples are often deprived of their traditional resource base and displaced into marginal environments. An example is the displacement of native peoples in Peru's upper Amazon by Western oil companies.

On a larger scale, economic globalization is aggravating worldwide environmental problems such as climate change, air pollution, energy issues, water pollution, and deforestation. Yet it is only through global cooperation, as evidenced by the UN treaties on biodiversity protection and global warming, that these problems can be addressed. These topics are discussed further in Chapter 2.

Controversy About Globalization

Globalization, and especially its economic aspect, is one of today's most contentious issues. Supporters believe that it results in a greater economic efficiency that will eventually result in rising prosperity for the entire world. In contrast, critics claim that globalization largely benefits those who are already prosperous, leaving most of the world poorer than before as the rich and powerful exploit the less fortunate.

Economic globalization is generally applauded by corporate leaders and economists, and it has substantial support among the leaders of both major political parties in the United States. Beyond North America, moderate and conservative politicians in most countries generally support free trade and other aspects of economic globalization. Opposition to economic globalization is widespread in the labor and environmental movements, as well as among many student groups worldwide. Hostility toward globalization is sometimes deeply felt, as massive protests at World Bank and WTO meetings have made obvious (Figure 1.7).

Pro-globalization Arguments

Advocates argue that globalization is a logical and inevitable expression of contemporary international capitalism and that it benefits all nations and all peoples. Economic globalization can work wonders, they contend, by enhancing competition, increasing the flow of capital to poor areas, and encouraging the spread of beneficial new technologies and ideas. As countries reduce their barriers to trade, inefficient local industries are forced to become more efficient in order to compete with the new flood of imports, thereby enhancing overall national productivity. Those that cannot adjust will most likely go out of business, making the global marketplace more efficient.

Every country and region of the world, moreover, ought to be able to concentrate on those activities for which it is

▼ **Figure 1.7 Protests Against Globalization** Meetings of international groups such as the World Trade Organization (WTO) and International Monetary Fund (IMF) commonly draw large numbers of protesters against economic globalization. This group of protesters is at a recent meeting of the WTO in Geneva, Switzerland.

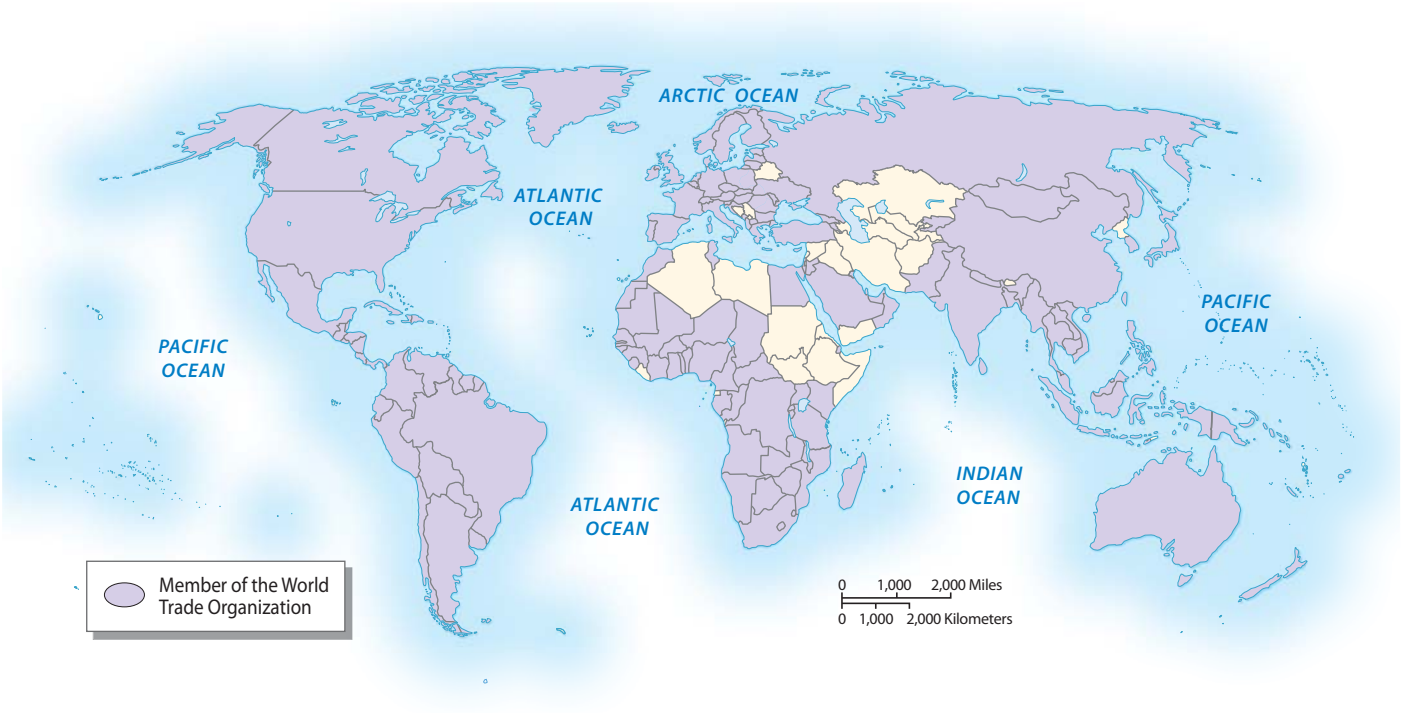
best suited in the global economy. Enhancing such geographic specialization, the pro-globalizers argue, creates a more efficient world economy. Such economic restructuring is made increasingly possible by the free flow of capital to those areas that have the greatest opportunities. By making access to capital more readily available throughout the world, economists contend, globalization should eventually result in a certain global **economic convergence**, implying that the world's poorer countries will gradually catch up with the more advanced economies.

The American journalist and author Thomas Friedman, one of the first to write about globalization, argues that the world has not only shrunk, but also become economically "flat," so that financial capital, goods, services, and workers can flow freely from place to place. Friedman also describes the great power of the global "electronic herd" of bond traders, currency speculators, and fund managers who either direct money to or withhold it from developing economies, resulting in economic winners and losers (Figure 1.8).

The pro-globalizers also strongly support the large multinational organizations that facilitate the flow of goods and capital across international boundaries. Three such organizations are particularly important: the World Bank, the International Monetary Fund (IMF), and the WTO. The primary function of the World Bank is to make loans to poor countries so that they can invest in infrastructure and build more modern economic foundations. The IMF is concerned with making short-term loans to countries that are in financial difficulty—those having trouble, for example, making interest payments on the loans that they had previously taken. The WTO, a much smaller organization than the other two, works to reduce trade barriers between countries to enhance economic globalization. It also tries to mediate between countries and trading blocs that are engaged in trade disputes (Figure 1.9).

To support their claims, pro-globalizers argue that countries that have been highly open to the global economy

▲ **Figure 1.8 The Electronic Herd** One component of globalization is the rapid movement of capital within the global economic system, creating financial hotspots and stampedes as money moves quickly from place to place. This electronic herd is in the Hong Kong stock exchange.



▲ **Figure 1.9 World Trade Organization** One of the most powerful institutions of economic globalization is the World Trade Organization (WTO), which was created in 1995 to oversee trade agreements, encourage open markets, enforce trade rules, and settle disputes. The WTO currently consists of 154 member countries. In addition to these member countries, more than 30 states have "observer status," including Iran and Iraq.

have generally had much more economic success than those that have isolated themselves by seeking self-sufficiency. The world's most isolated countries, Burma (Myanmar) and North Korea, have become economic disasters, with little growth and rampant poverty, whereas those that have opened themselves to global forces in the same period, such as Singapore and Thailand, have seen rapid growth and substantial reductions in poverty.

Critics of Globalization

Virtually all of the claims of the pro-globalizers are strongly contradicted by the critics of globalization. Opponents often begin by arguing that globalization is not a "natural" process. Instead, it is the product of an explicit economic policy promoted by free-trade advocates, capitalist countries (mainly the United States, but also Japan and the countries of Europe), financial interests, international investors, and multinational firms.

Further, because the globalization of the world economy is creating greater inequity between rich and poor, the trickle-down model of developmental benefits for all people in all regions has yet to be validated. On a global scale, the richest 20 percent of the world's people consume 86 percent of the world's resources, whereas the poorest 80 percent use only 14 percent. The growing inequality of this age of globalization is apparent on both global and national scales. Globally, the wealthiest countries have grown much richer over the past two decades, while many of the poorest countries have lost ground. Nationally, even in developed countries such as the United States, the wealthiest 1 percent of the population has reaped almost all of the gains that globalization has offered, while the remaining 99 percent has seen real income decline as wages have remained static and jobs have been lost to outsourcing (Figure 1.10).

Opponents also contend that globalization promotes free-market, export-oriented economies at the expense of localized, sustainable activities. World forests, for example, are increasingly cut for export timber, rather than serving local needs. As part of their economic structural adjustment package, the World Bank and the IMF often encourage developing countries to expand their resource exports so they have more hard currency to make payments on their foreign debts. This strategy, however, usually leads to overexploitation of local resources. Opponents also note that the IMF often requires developing countries to adopt programs of fiscal austerity that entail substantial reductions in public spending for education, health, and food subsidies. By adopting such policies, critics warn, poor countries end up with even more impoverished populations than before.

Furthermore, anti-globalizers contend that the "free-market" economic model commonly promoted for developing countries is not the one that Western industrial countries used for their own economic development. In Germany, France, and even to some extent the United States, governments historically have played a strong role in directing investment, managing trade, and subsidizing chosen sectors of the economy.

Those who challenge globalization also worry that the entire system—with its instantaneous transfers of vast sums of money over nearly the entire world on a daily basis—is inherently unstable. The British author and noted critic of globalization John Gray, for example, argues that the same "electronic herd" that Thomas Friedman applauds is a dangerous force because it is susceptible to "stampedes." International managers of capital tend to panic when they think their funds are at risk; when they do so, the entire intricately linked global financial system can quickly become destabilized, leading to a crisis of global proportions. The rapid downturn of the global economy in 2008 seems to support that assertion.

Even when the "herd" spots opportunity, trouble may still ensue. As vast sums of money flow into a developing country, they may create a speculatively inflated **bubble economy** that cannot be sustained. Such a bubble economy emerged in Thailand and many other parts of Southeast Asia in the mid-1990s. Analysts have also used the concept of a bubble economy to explain the tragic collapse of the Icelandic and Irish economies in 2009.

▼ **Figure 1.10 U.S. Unemployment and Globalization** One criticism of globalization is that the United States has lost jobs as commerce has moved offshore to lower-wage countries. While true to some extent, this job loss is also the result of other kinds of change in world and domestic economies. These job seekers are in Rochester Hills, Michigan.

A Middle Position

Not surprisingly, many experts argue that both the anti-globalization and the pro-globalization stances are exaggerated. Friedman, the American reporter mentioned earlier, says, "Those who think globalization is either all good or all bad don't get it," meaning that globalization is so pervasive, is so complex, and has so many aspects to it that are both negative and positive, it is unwise to limit your views with a biased generalization.

In fact, those in the middle ground tend to argue that economic globalization is indeed unavoidable. They further contend that, although globalization holds both promises and pitfalls, it can be managed, at both the national and the international levels, to reduce economic inequalities and protect the natural environment. These experts stress the need for strong, yet efficient national governments, supported by international institutions (such as the UN, World

▲ **Figure 1.11 Diversity Amid Globalization** Although much of globalization results in geographic and cultural homogeneity, geographic uniqueness and cultural diversity still persists, as shown in this photo of Masai women in a village in Kenya, Africa.

Bank, and IMF) and globalized networks of environmental, labor, and human rights groups.

Unquestionably, globalization is one of the most important issues of the day—and certainly one of the most complicated. This book does not pretend to resolve the controversy, nor does it take a position, but it does encourage readers to reflect on these critical points as they apply to different world regions.

Diversity in a Globalizing World

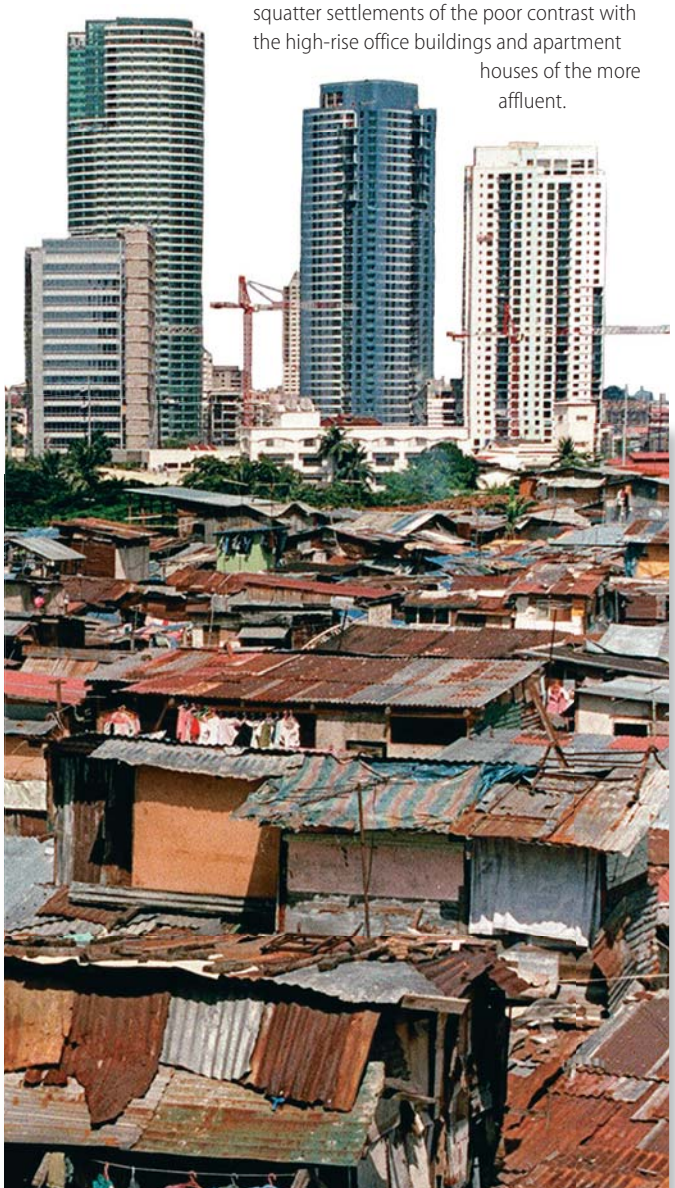
As globalization increases, many observers foresee a world far more uniform and homogeneous than today's. The optimists among them imagine a universal global culture uniting all humankind into a single community untroubled by war, ethnic strife, or resource shortage—a global utopia of sorts.

A more common view, however, is that the world is becoming blandly homogeneous as different places, peoples, and environments lose their distinctive character and become indistinguishable from their neighbors. This, too, is an exaggerated view, for the world is still a highly diverse place (Figure 1.11). We still find marked differences in culture (language, religion, architecture, foods, and many other attributes of daily life), economy, and politics—as well as in the physical environment. Such diversity is so vast that it cannot readily be extinguished, even by the most powerful forces of globalization. Diversity may be difficult for a society to live with, but it also may be dangerous to live without. Nationality, ethnicity, cultural distinctiveness—all are the legitimate legacy of humanity. If this diversity is blurred, denied, or repressed through global homogenization, humanity loses one of its defining traits.

In fact, globalization often provokes a strong reaction on the part of local people, making them all the more determined to maintain what is distinctive about their way of life. Thus, globalization is understandable only if we also examine the diversity that continues to characterize the world and, perhaps most important, the tension between these two forces: the homogenization of globalization, on the one hand, and the reaction against it in terms of protecting cultural and political diversity, on the other.

The politics of diversity also demand increasing attention as we try to understand worldwide tensions over terrorism, ethnic separateness, regional autonomy, and political independence. Groups of people throughout the world seek self-rule of territory they can call their own. Today most wars are fought *within* countries, not *between* them. As a result, our interest in geographic diversity takes many forms and goes far beyond simply celebrating traditional cultures and unique places. People have many ways of making a living throughout the world, and it is important to recognize this fact as the globalized economy becomes increasingly focused on mass-produced retail goods. Furthermore, a stark reality of today's economic landscape is unevenness: While some people and places prosper, others suffer from unrelenting poverty. This, unfortunately, is also a form of diversity amid globalization (Figure 1.12).

▼ **Figure 1.12 The Landscape of Economic Diversity** The geography of diversity takes many expressions. One of these is economic unevenness, as depicted in this photo from New Delhi, India, where squatter settlements of the poor contrast with the high-rise office buildings and apartment houses of the more affluent.



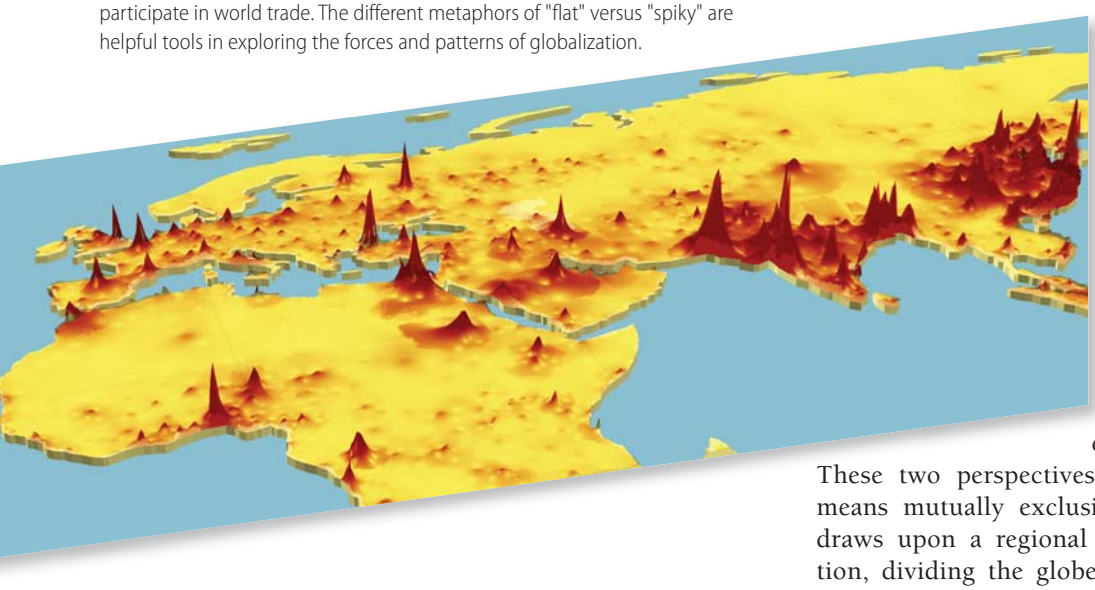
Flat and Spiky Worlds

Mentioned earlier was Friedman's notion that the globalized world has become increasingly flat in socioeconomic terms. This term is a metaphor for the ability of financial capital and production to flow easily from one place to another, changing locations to take advantage of technological innovation and labor costs and developing new products that can be shipped and sold anywhere in the world, both physically and digitally. Examples abound that illustrate Friedman's notion of global flatness, such as the way Silicon Valley firms have created a 24-hour workday by drawing upon skilled engineers half a world away in South Asia, who continue working on projects during California's nighttime. Although Friedman says his notion of a flat world has been overblown and generalized beyond his initial intentions, the fact is that his best-selling book *The World Is Flat* (and its sequels) captured the public's imagination, thereby providing the public with a handy metaphor for capturing the essence of globalization.

Predictably, as with any popular idea, criticism and alternatives have been proposed to Friedman's flat-world notion. Most notably, Richard Florida, in his book *The Rise of the Creative Class,* argues that the world is not flat at all, but is instead mountainous and spiky, consisting of peaks and valleys that alternatively encourage and inhibit the flow of ideas and goods around the globe. Some locations are privileged (the peaks), whereas others are not (the valleys), thus producing an uneven socioeconomic topography of winners and losers (Figure 1.13).

Clearly, both metaphors, flat and spiky, are valuable in describing the complexities of today's globalized world. We have attempted to capture that complexity by titling this book *Diversity Amid Globalization* because both are equally important in the study of world regional geography.

▼ **Figure 1.13 Spiky World** This map of eastern hemisphere urban agglomerations, which combines density and city size, conveys Richard Florida's notion of a spiky world of innovation centers (cities, usually). This contrasts with Thomas Friedman's earlier contention that globalization has made the economic world flat, with all locations theoretically able to participate in world trade. The different metaphors of "flat" versus "spiky" are helpful tools in exploring the forces and patterns of globalization.



REVIEW

- **1.1** Describe and explain five components of economic globalization.
- **1.2** Describe the relationship between globalisation and diversity.
- **1.3** Consider some of the positive and negative aspects of globalisation on human wellbeing.
- **1.4** What are the characteristics of "flat" and "spiky" worlds?

Geography Matters: Environments, Regions, Landscapes

Geography is one of the most fundamental sciences, a discipline awakened and informed by a long-standing human curiosity about our surroundings and the world. The term **geography** has its roots in the Greek words for "describing the Earth," and this discipline has been central to all cultures and civilizations as they explore the world. In a simplistic way, geography can be compared to history: Historians describe and explain what has happened over time, whereas geographers primarily describe and explain the world's spatial dimensions and how Earth differs from place to place. Of course, geographers—particularly historical geographers—also document geographical changes through time (just as some historians do spatial analyses).

Given the broad scope of geography, it is no surprise that geographers have different conceptual approaches to investigating the world. At the most basic level, geography can be broken into two complementary pursuits: *physical* and *human geography*. Physical geography examines climate, landforms, soils, vegetation, and hydrology, whereas human geography concentrates on the spatial analysis of economic, social, and cultural systems.

A physical geographer, for example, studying the Amazon Basin of Brazil, might be interested primarily in the ecological diversity of the tropical rainforest or the ways in which the destruction of that environment changes the local climate and hydrology. A human geographer, in contrast, would focus on the social and economic factors explaining the migration of settlers into the rainforest or the tensions and conflicts over resources between new migrants and indigenous peoples.

Another conceptual division is that between focusing on a specific topic or theme and analyzing a place or a region. The first approach is referred to as *thematic* or *systematic geography,* whereas the second is called *regional geography*. These two perspectives are complementary and by no means mutually exclusive. This textbook, for example, draws upon a regional scheme for its overall organization, dividing the globe into 12 separate world regions.

▲ **Figure 1.14 Areal Differentiation** This satellite photo of oasis villages on the southern slope of Morocco's Atlas Mountains is a classic illustration of areal differentiation, or of how landscapes can differ significantly within short distances. The dark green band are irrigated date palm and vegetable fields, watered by rivers that rise in the high mountains, then flow southward into the Sahara Desert. Since irrigated fields near the rivers are precious land, the village settlements are nearby in the dry areas.

It then presents each chapter thematically, examining the topics of physical geography and environmental issues, population and settlement, cultural coherence and diversity, geopolitical framework, and economic and social development in a systematic way. In doing so, each chapter combines four kinds of geography: physical, human, thematic, and regional.

Areal Differentiation and Integration

As a spatial science, geography is charged with the study of Earth's surface. A central component of that responsibility is describing and explaining the differences that distinguish one piece of the world from another. The geographical term for this is **areal differentiation** (*areal* means "pertaining to area"). Why is one part of Earth humid and lush, while another, just a few hundred kilometers away, is an arid desert (Figure 1.14)?

Geographers are also interested in the connections between different places and how they are linked. This theme is one of **areal integration**, or the study of how places interact with one another. An example is the analysis of how and why the economies of Singapore and the United States are closely intertwined, even though the two countries are situated in entirely different physical, cultural, and political environments. Questions of areal integration are becoming increasingly important because of the new global linkages inherent to globalization.

Global and Local All scientific inquiry has a sense of scale, whatever the discipline. In biology, some scientists study the smaller units of cells, genes, or molecules, while others take a larger view, analyzing plants, animals, or whole ecosystems. Geographers also work at different scales. One may concentrate on the analysis of a local landscape—perhaps a single village in southern China—whereas another might focus on the broader regional picture, examining all of southern China. Other geographers do research on a still larger global scale, perhaps studying emerging trade networks between southern India's center of information technology in Bangalore and North America's Silicon Valley or investigating how India's monsoon might be connected to and affected by the Pacific Ocean's El Niño.

But even though geographers may be working at different scales, they never lose sight of the interactivity and connectivity among local, regional, and global scales. They will note, for example, the ways that the village in southern India might be linked to world trade patterns or how the late arrival of the monsoon could affect agriculture and food supplies in different parts of India.

Regions: Formal, Functional, and Vernacular

The human intellect seems driven to make sense of the universe by lumping phenomena together into categories that emphasize similarities. Biology has its taxa of living organisms, history marks off eras and periods of time, and geology classifies epochs of Earth history. Geography, too, organizes information about the world, by compressing it into units of spatial similarity called **regions**.

Sometimes, the unifying threads of a region are physical, such as climate and vegetation, resulting in a regional designation like the *Sahara Desert* or the *Amazonian rainforest*. Other times, the threads are more complex, combining economic and cultural traits, as in the use of the term *Corn Belt* for parts of the central United States. People commonly compress large amounts of information into stereotypes, and in a way a geographic region is just that—a spatial stereotype for a portion of Earth that has some special signature or characteristic that sets it apart from other regions.

Geographers designate three types of regions: formal, functional, and vernacular (Figure 1.15). **Formal regions** take their name from the fact that these regions are defined by some aspect of physical form, such as a mountain range, valley, or climate. Cultural features can also be used to define formal regions. An example is the area where a certain language is spoken or a specific religion dominates. Many of the maps in this book denote formal regions. In contrast, a **functional region** is one where a certain activity (or cluster of activities) takes place. The earlier example of America's Corn Belt fits this terminology because it forms a region where a specific economic activity dominates. The

▶ **Figure 1.15 Geographic Regions** This map illustrates three different kinds of geographic regions: vernacular, formal, and functional. A vernacular region is an abstraction that has indistinct cognitive borders, as shown by the general outline of what the public considers to be Silicon Valley. Other vernacular regions would be "the Midwest," "the Deep South," and "the Pacific Northwest." In contrast, formal regions have distinct boundaries, such as that for the Santa Clara Valley, defined as the lowland between two bordering mountain ranges. A functional region is based on a certain activity or organizational structure, such as the civic government of San Jose, bounded by its legal city limits.
Q: In what regions—formal, functional, and vernacular—do you live?

Megalopolis of the eastern United States (Boston to Washington, DC) is another example, as are newspaper circulation areas and the spatial dimension of a sports team's fan base. (Think of the line somewhere in the Midwest between Chicago and St. Louis that divides baseball and football fans of each city.) Last, **vernacular regions** are defined solely in people's minds as spatial stereotypes that have no visible boundaries in the physical landscape. Examples abound: the South, the Midwest, Silicon Valley, New England, and so on.

The Cultural Landscape: Space into Place

Humans transform space into distinct places that are unique and heavily loaded with meaning and symbolism. This diverse fabric of *placefulness* is of great interest to geographers because it tells us much about the human condition throughout the world. Places can tell us how humans interact with nature and among themselves; where there are tensions and where there is peace; where people are rich and where they are poor.

A common tool for the analysis of place is the concept of the **cultural landscape**, which is, simply stated, the visible, material expression of human settlement, past and present. Thus, the cultural landscape is the tangible expression of the human habitat. It visually reflects the most basic human needs—shelter, food, and work. Additionally, the cultural landscape acts to bring people together (or keep them apart) because it is a marker of cultural values, attitudes, and symbols. Because cultures vary greatly around the world, so do cultural landscapes (Figure 1.16).

Increasingly, however, we see the uniqueness of places being eroded by the homogeneous landscapes of globalization—shopping malls, fast-food outlets, business towers, theme parks, and industrial complexes. Understanding the forces behind the spread of these landscapes is important because they tell us much about the expansion of global economies and cultures. Although a modern shopping mall in Hanoi, Vietnam, may seem familiar to someone from North America, this new landscape represents yet another component of globalized world culture that has been implanted into a once remote and distinctive city.

▲ **Figure 1.16 The Cultural Landscape** Humans, through their subsistence needs and cultural values, change the natural environmental into cultural landscapes. In this photo of an Austrian alpine village, the native forest has become essentially domesticated as pasture grassland has been increased and tree species changed to better serve timber and fuel needs. Also, the unique farmstead architecture expresses local customs and preferences.

REVIEW

1.5 Describe the relationship between scale and areal integration in geographical inquiry.
1.6 How do functional regions differ from formal and vernacular regions?
1.7 Provide an example of how cultural landscapes can be mapped as a formal region.

The Geographer's Toolbox: Location, Maps, Remote Sensing, and GIS

Geographers use many different tools to analyze the world. Today's digital tools offer geographers and other scientists an array of analytic methods not imagined just decades ago. Often, however, these new computer-based tools are combined with tried and true concepts long used by people to locate themselves in world space.

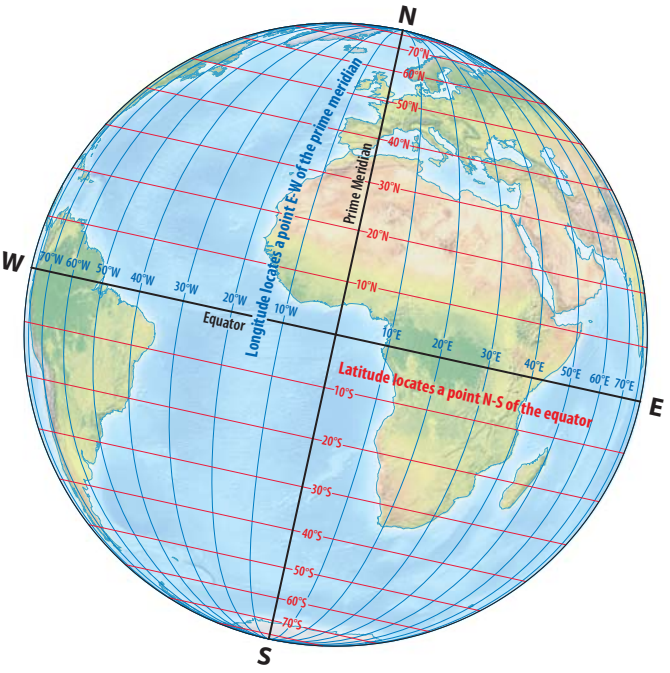
Latitude and Longitude

To navigate your way through your daily tasks, you generally use a mental map of *relative locations* that locate specific places in terms of their relationship to other landscape features. The shopping mall is near the highway, perhaps, or the college campus is along the river. In contrast, map makers use *absolute location*—often called a mathematical location—which draws upon a universally accepted coordinate system providing every place on Earth with a specific numerical address based upon latitude and longitude. The absolute location for the Geography Department at the University of Oregon, for example, has the mathematical address of 44 degrees, 02 minutes, and 42.95 seconds north and 123 degrees, 04 minutes, and 41.29 seconds west. This is written 44° 02' 42.95" N and 123° 04' 41.29" W.

Lines of latitude, called **parallels**, run east–west around the globe and are used to locate places north and south of the equator, which is 0 degrees latitude. In contrast, lines of longitude, referred to as **meridians,** run from the north pole, located at 90 degrees north latitude, to the south pole, located at 90 degrees south latitude. Longitude locates places east or west of the **prime meridian**, located at 0 degrees longitude at the Royal Naval Observatory in Greenwich, England (just east of London) (Figure 1.17). The equator itself divides the globe into northern and southern hemispheres, whereas the prime meridian divides the world into eastern and western hemispheres; these two east-west hemispheres meet at 180 degrees longitude in the western Pacific Ocean. The International Date Line, where each new solar day begins, lies along much of 180 degrees longitude, deviating where necessary to ensure that small Pacific island nations remain on the same calendar day.

Each degree of latitude measures 60 nautical miles or 69 land miles (111 km) and is made up of 60 minutes, each of which is 1 nautical mile (1.15 land miles). Each minute has 60 seconds of distance, each of which is approximately 100 feet (30.5 meters).

From the equator, parallels of latitude are used to mathematically define the tropics: the Tropic of Cancer at 23.5 degrees north and the Tropic of Capricorn at 23.5 degrees south. These lines of latitude denote where the Sun is directly overhead at noon on the solar solstices in June and December. Similarly, the Arctic and Antarctic circles, at



▲ **Figure 1.17 Latitude and Longitude** Latitude locates a point between the equator and the poles and is designated as so many degrees north or south. Longitude locates a point east or west of the prime meridian, which is located at the Royal Observatory in Greenwich, England, just east of London.
Q: What is the latitude and longitude of your school?

66.5 degrees north and south latitude, respectively, mathematically define where these areas experience 24 hours of sunlight on the summer solstice and 24 hours of complete darkness on the winter solstice.

Global Positioning Systems (GPS)

Historically, precise measurements of latitude and longitude were determined by a complicated method of celestial navigation, based upon the observer's location relative to the Sun, Moon, planets, and stars. Today, though, absolute location on Earth (or in airplanes above Earth's surface) is achieved through satellite-based **global positioning systems (GPS)**. These systems use time signals sent from a specific location to a satellite and back to the GPS receiver to calculate precise coordinates of latitude and longitude. These systems were first used by the U.S. military in the 1960s and were then made available to the public in the later decades of the 20th century. Today GPS guide airplanes across the skies, ships across the oceans, private autos on the roads, and hikers through wilderness areas, to name only a few of many uses. True GPS plot locations accurately with 3 feet (or a meter) on Earth's surface. Although smartphones have locational systems built into their software, most cell phones use a ground-based system of triangulation from cell phone towers, which is not quite as accurate as satellite-based GPS.

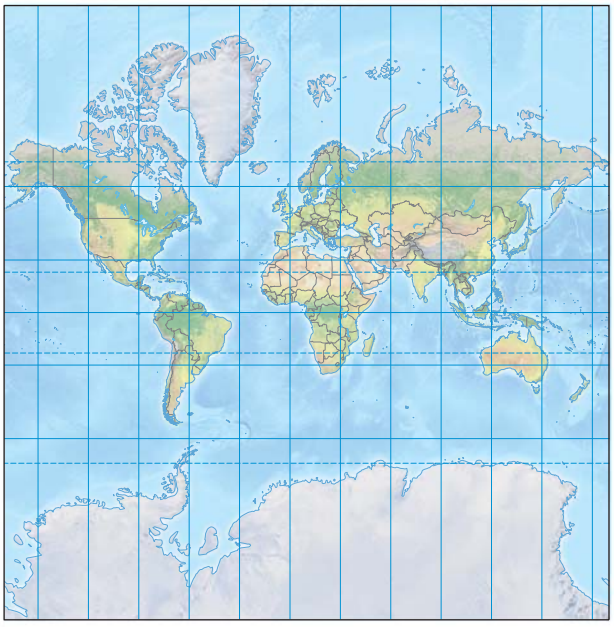
Map Projections

Because the world is spherical, mapping the globe on a flat piece of paper creates inherent distortions in the latitudinal, or north–south, depiction of Earth's land and water areas. Cartographers (those who make maps) have tried to limit these distortions by using various **map projections**, which are the different ways maps are projected onto a flat service. Historically, the Mercator projection was the projection of choice for maps used for oceanic exploration. However, just a brief look at the inflated landmasses for Greenland and Russia shows its weakness in accurate depiction of high-latitude land areas (Figure 1.18). Over time, cartographers have created literally hundreds of different map projections in their attempts to find the best and most accurate way of mapping the world.

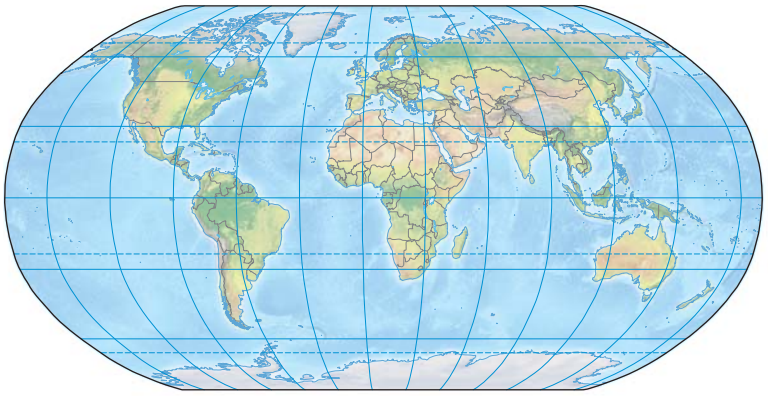
We won't go into the details of this vexatious quest, but in the last several decades cartographers have generally used the Robinson projection for their maps and atlases. In fact, several professional cartographic societies tried unsuccessfully in 1989 to actually ban projections such as the Mercator because of their spatial distortions. Like many other professional publications, in this book we use only the Robinson projection for our maps.

Map Scale

All maps must reduce the area being mapped to a smaller piece of paper. This reduction involves the use of **map scale**, or the mathematical ratio between the map and the surface area being mapped. Many maps note their scale as a ratio or fraction between a unit on the map and the same unit in the area being mapped. An illustration is 1:63,360 or 1/63,360, which means that 1 inch on the map represents 63,360 inches on the land surface; thus, the scale is 1 inch equals 1 mile. Although 1:63,360 (1 inch equals 1 mile) is a convenient mapping scale to understand, the amount of surface area that can be mapped and fitted on a common-sized sheet of paper at this scale is limited to about 20 square miles. But at this scale mapping a larger area, say 100 square miles would produce a much larger, unwieldy map. Therefore, the ratio must be changed to a larger

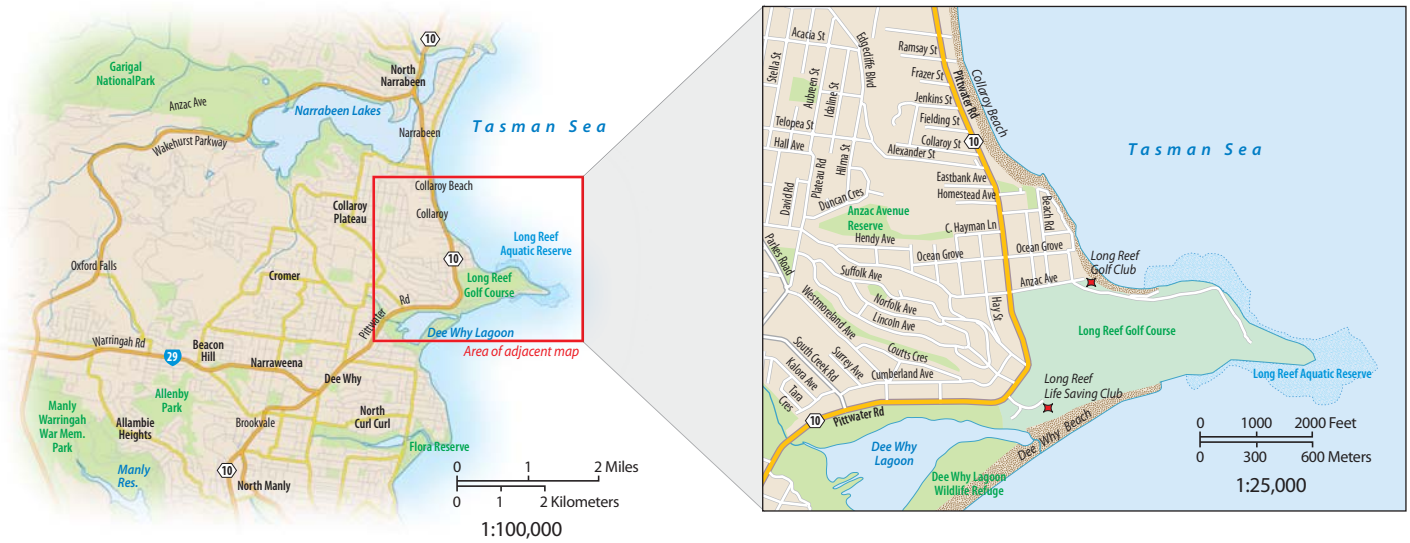


(a)



(b)

▲ **Figure 1.18 Map Projections** Cartographers have long struggled with how best to accurately map the world given the inherent distortions when transferring features on a round globe to a flat piece of paper. Early map makers commonly used the Mercator projection (a) which distorts features in the high latitudes, but worked fairly well for seagoing explorers. The map on the right (b) is the Robinson projection, which was developed in the 1960s and is now the industry standard because it minimizes cartographic distortion.



▲ **Figure 1.19 Small and Large Scale Maps** A portion of Australia's east coast north of Sydney is mapped at two scales, one (on the left) at a small scale and other (on the right) at a large scale. Note the differences in distance depicted on the linear scales of the two different maps. There is more close-up detail in the large-scale map, but it covers only a small portion of the area mapped at a small scale.

number, such as 1:316,800. This ratio signifies that 1 inch on the map now represents 5 miles (8 km) of distance on land.

Based upon the **representative fraction**, which is the cartographic term for the numerical value of map scale, maps are categorized as having either large or small scales (Figure 1.19). It may be easy to remember that large-scale maps make landscape features like rivers, roads, and cities *larger,* but because the features are larger, the maps must cover *smaller* areas. Conversely, small-scale maps cover *larger* areas, but to do so, these maps must make landscape features *smaller.* A bit harder to remember is that the larger the second number of the representative fraction—the 63,360 in the fraction 1/63,360 or the 100,000 in the fraction 1/100,000, for example—the smaller the scale of the map.

Map scale is probably easiest to interpret when it is simply portrayed in a **graphic or linear scale**, which visually depicts in a horizontal bar distance units such as feet, meters, miles, or kilometers. Most of the maps in this book are small-scale maps of large areas; thus, the graphic scale is in miles and kilometers. You can measure distances between two points on the map by making two tick marks on a piece of paper held next to the points and then measuring the distance between the two marks on the linear scale.

Map Patterns and Legends

Maps come in a wide array of colors and patterns, which depict everything from the most basic representation of topographic and landscape features to complicated patterns of population, migration, economic conditions, and so forth. Whether the map is a simple *reference map* that shows the location of certain features or a *thematic map* that displays more complicated spatial phenomena, the map legend provides the details by explaining the different map patterns.

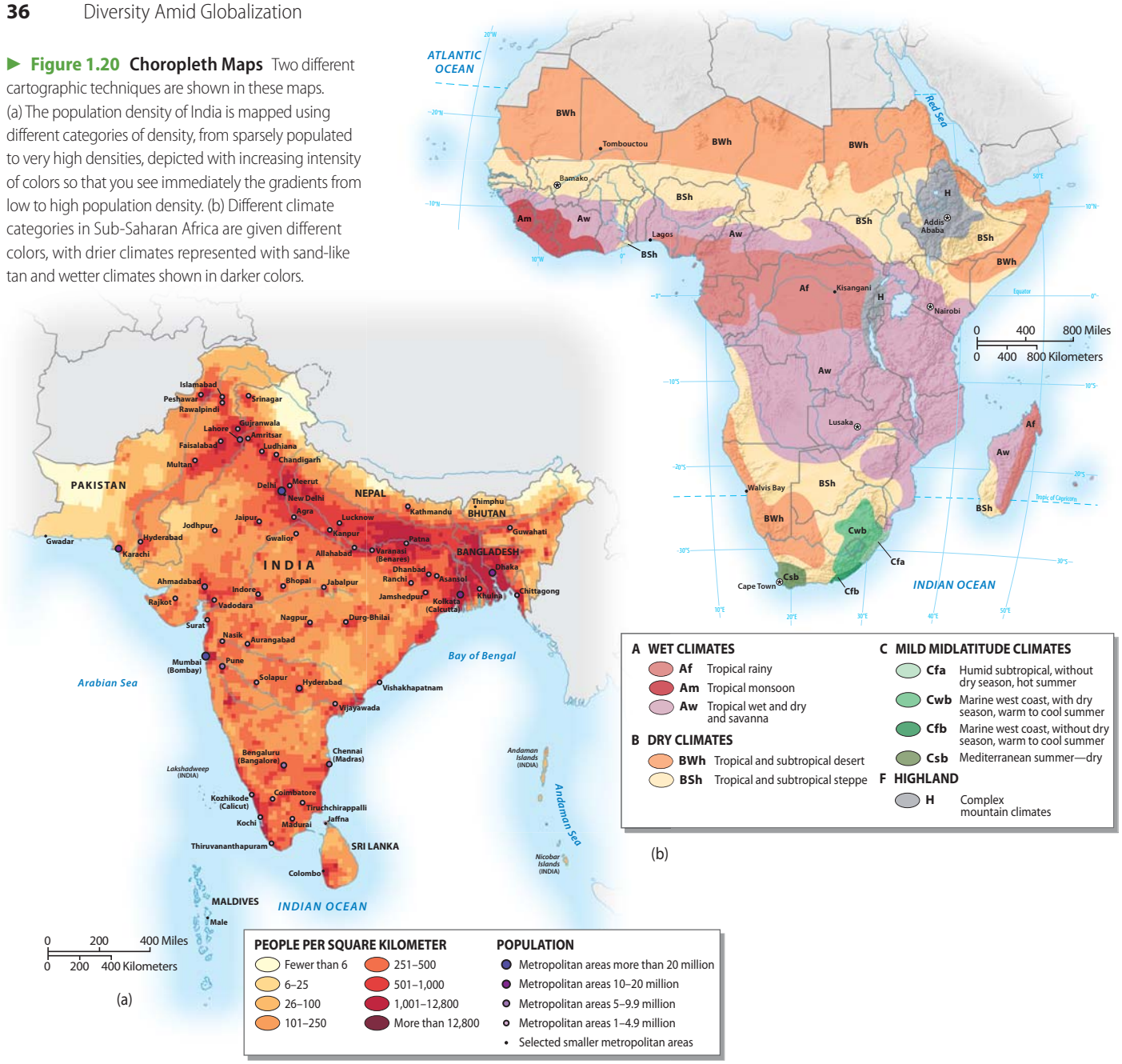
Many maps in this book are **choropleth maps**, which map different levels of intensity of data, such as per capita income or population density, placed within discrete spatial units, such as countries, cities, counties, or cultural regions (Figure 1.20). Along with choropleth data, many of our maps contain flow arrows that depict the movement of people or the flow of trade goods.

Aerial Photos and Remote Sensing

Although maps are a primary tool of geography, much can be learned about Earth's surface by deciphering patterns on photographs taken from airplanes, balloons, or satellites. Originally, these photographs were only in black and white, but today color aerial photographs are common.

Even more information about Earth comes from electromagnetic images referred to as **remote sensing**, taken from aircraft or satellites. This technology has many scientific applications, including monitoring the loss of rainforests, tracking the biological health of crops and woodlands, and even measuring changes in ocean surface temperatures. It is also central to national defense issues, such as monitoring troop movements or the building of missile sites in hostile countries. In simple terms, aerial photographs are merely photographs taken from balloons, airplanes, or satellites, whereas remote sensing gathers electromagnetic data that then must be processed and interpreted by computer software to produce images of Earth's surface.

The Landsat satellite program launched by the United States in 1972 is a good example of both the technology



▶ **Figure 1.20 Choropleth Maps** Two different cartographic techniques are shown in these maps. (a) The population density of India is mapped using different categories of density, from sparsely populated to very high densities, depicted with increasing intensity of colors so that you see immediately the gradients from low to high population density. (b) Different climate categories in Sub-Saharan Africa are given different colors, with drier climates represented with sand-like tan and wetter climates shown in darker colors.

and the uses of remote sensing. These satellites collect data simultaneously in four broad bands of electromagnetic energy, from visible through near-infrared wavelengths, that is reflected or emitted from Earth. Once these data are processed by computers, they display a range of images, as illustrated in Figure 1.21. The resolution on Earth's surface ranges from areas 260 feet (80 meters) square down to 98 feet (30 meters) square.

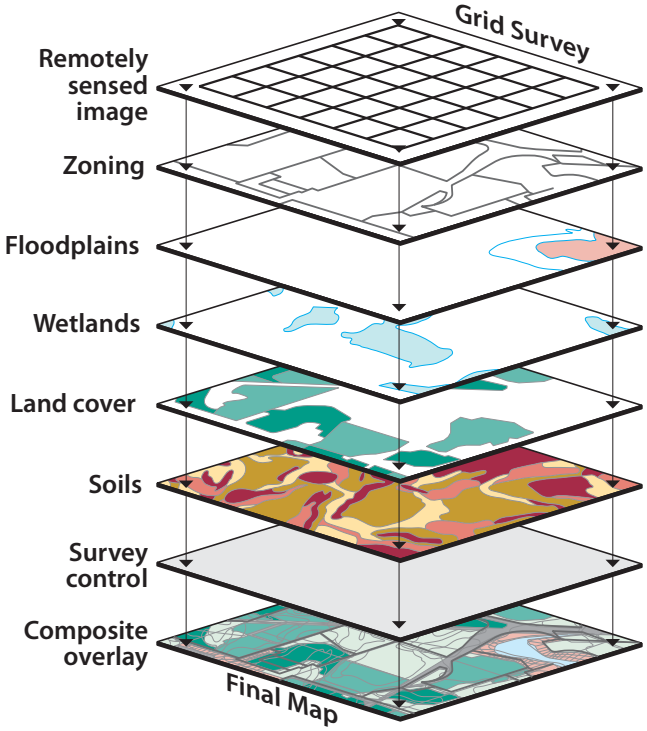
Landsat 4 and 5 satellites pass from north to south over the equator at an altitude of 440 miles (700 km) each day at about 10 A.M., which allows detection of change to the environment on a continual basis. Of course, cloud cover often compromises the continuous coverage of many parts of the world.

Geographic Information Systems (GIS)

Vast amounts of computerized data from different sources, such as maps, aerial photos, remote sensing, and census tracts, are brought together in **geographic information systems (GIS)**. The resulting spatial databases are used to analyze a wide range of resource problems. Conceptually, GIS can be thought of as a computer system for producing a series of overlay maps showing spatial patterns and relationships (Figure 1.22). A GIS map, for example, might combine a conventional map with data on toxic waste sites, local geology, groundwater flow, and surface hydrology to determine the source of pollutants appearing in household water systems.

Although the earliest GIS dates back to the 1960s, it is only in the last several decades—with the advent of desktop computer systems and remote sensing technology—that GIS has become absolutely central to geographic problem solving. It has a central role in city planning, environmental science, earth science, and real estate development, to name only a few of the many activities using these systems.

▼ **Figure 1.21 Remote Sensing of the Dead Sea** This NASA satellite image of the Dead Sea, the lowest spot on Earth at 1300 feet (400 meters) below sea level, uses false-color remote sensing to capture different elements of the environment. Black is deeper water, with light blue showing shallow waters. The green areas along the shoreline are irrigated crops, whereas the white areas are salt evaporation ponds.



▲ **Figure 1.22 GIS Layers** Geographic information systems (GIS) maps usually consist of many different layers of information that can be viewed and analyzed either separately or as a composite overlay. This illustration is of a typical environmental planning map where different physical features (such as wetlands and soils) are combined with zoning regulations.

REVIEW

1.8 What is the difference between relative location and absolute location?

1.9 Compare the Mercator projection to the Robinson projection and consider why cartographers tried to ban the use of the Mercator projection.

1.10 What is a choropleth map?

1.11 What is the difference between a large scale map and a small scale map? How is it linked to the representative fraction?

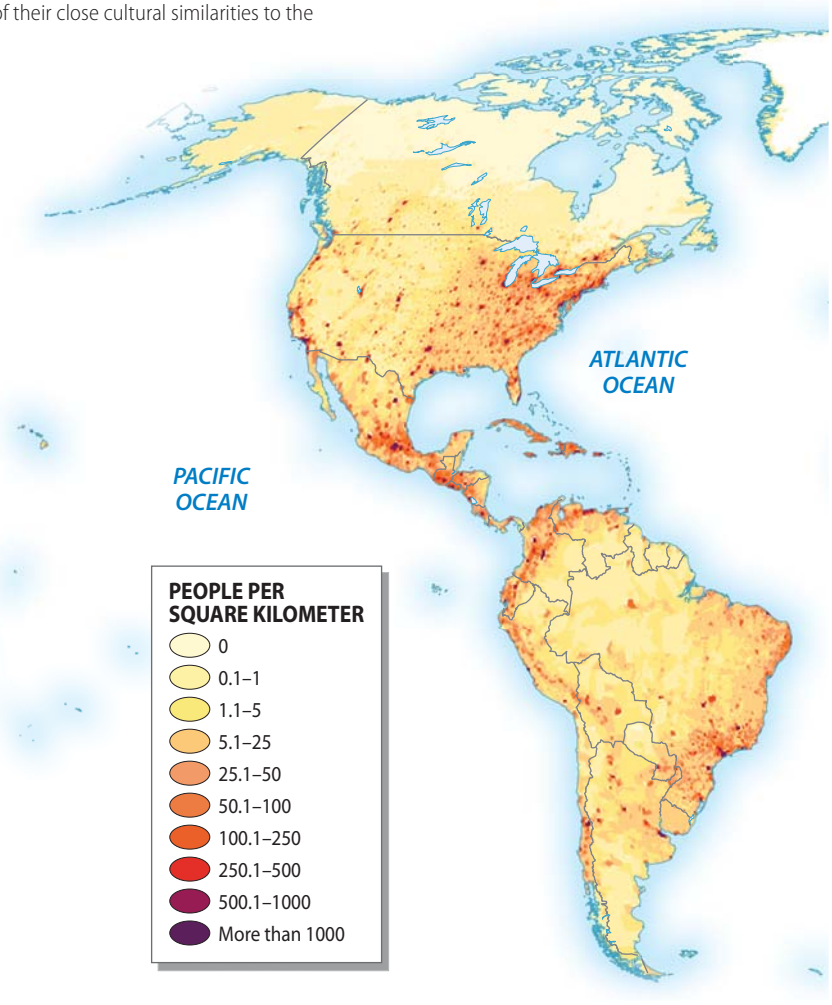
Themes and Issues in World Regional Geography

Following two introductory chapters, this book adopts a regional perspective, grouping all of Earth's countries into a framework of 12 world regions (Figure 1.23). We begin with a region familiar to most of our readers—North America—and then move on to Latin America, the Caribbean, Africa, the Middle East, Europe, Russia, and the different regions of Asia, before concluding with Australia and Oceania. Each of the 12 regional chapters employs the same five-part thematic structure—physical geography and environmental issues, population and settlement, cultural coherence and diversity, geopolitical framework, and economic and social development. The concepts and data central to each theme are discussed in the following sections.

▲ **Figure 1.23 World Regions** These regions are the basis for the 12 regional chapters in this book. Countries or areas within countries that are treated in more than one chapter are designated on the map with a striped pattern. For example, western China is discussed in both Chapter 10, on Central Asia, and Chapter 11, on East Asia. Also, three countries on the South American continent are discussed as part of the Caribbean region because of their close cultural similarities to the island region.

Physical Geography and Environmental Issues: The Changing Global Environment

Chapter 2 provides background on world physical and environmental geography, outlining the global elements fundamental to human settlement—geology, climate, energy, hydrology, and vegetation. In the regional chapters, the physical geography sections explain the environmental issues relevant to each world region, covering topics such as climate change, sea-level rise, acid rain, energy issues, tropical rainforest destruction, and wildlife conservation. These environmental issues sections are not simply a list of problems, but also cover plans and policies developed to resolve those issues (see *Working Toward Sustainability: Managing Resources and Protecting the Environment*).



▶ **Figure 1.24 World Population** This map emphasizes the different population densities in the areas of the world. East Asia stands out as the most populous region, with high densities in Japan, Korea, and eastern China. The second most populous region is South Asia, dominated by India, which is second only to China in total population. In North Africa and Southwest Asia, population clusters are often linked to the availability of water for irrigated agriculture, as is apparent with the population cluster along the Nile River. Higher population densities in Europe, North America, and other countries are usually associated with large cities, their extensive suburbs, and nearby economic activities.

Population and Settlement: People on the Land

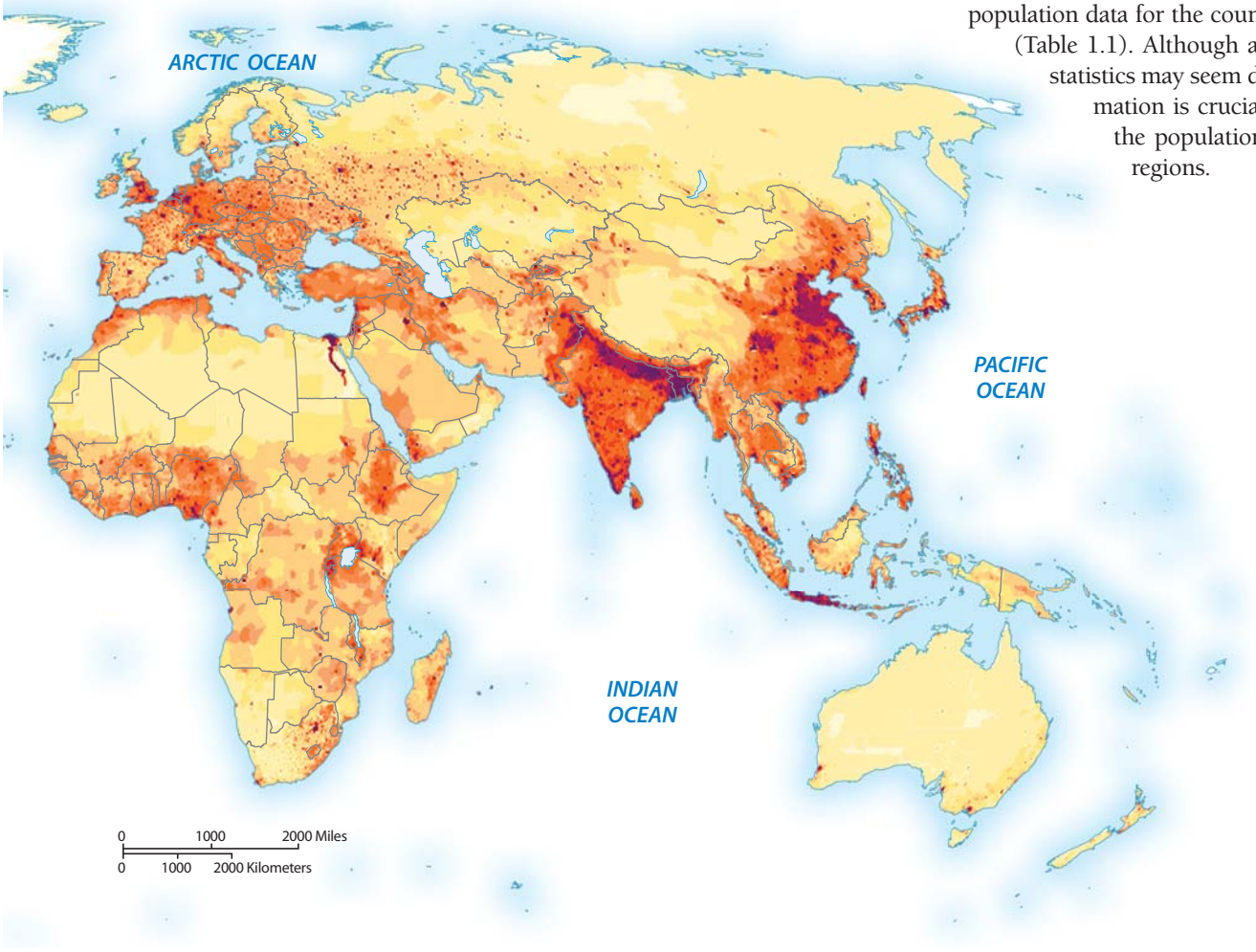
Currently, Earth has more than 7.2 billion people, with demographers forecasting an increase to 9.6 billion by 2050. Most of that increase will take place in Africa, particularly in Sub-Saharan Africa (Figure 1.24). In contrast, the European and Russian regions will probably shrink in population size, illustrating the complexity of population issues worldwide. Some countries are trying to slow population growth, but others face an uncertain future with either very slow or non-existent population growth.

Population is obviously a very complex topic, but several points may help to focus the issues:

- As mentioned, very different rates of population growth occur throughout the world. Some countries, such as India, are growing rapidly; others, such as Italy and many other European countries, have essentially no natural growth at all. Any population growth results from in-migration.
- The current rate of population growth is now half the peak rate experienced in the 1960s. At that time, talk of "the population bomb" and "population explosions" was common, warning that the world either was very close to or had already passed a sustainable carrying capacity. Still, even with slower growth, about 20 percent of the world's population is undernourished.
- Population planning takes many forms, from the fairly rigid one- or two-child policies of late-20th-century China to the family-friendly policies of no-growth countries attempting to increase their natural birth rates (Figure 1.25).
- Not all attention should be focused on natural growth because migration is increasingly the root cause of population growth in today's world. Although most international migration is driven by a desire for a better life in the richer regions of the developed world, millions of migrants are refugees from civil strife, political persecution, and environmental disasters.
- The greatest migration in human history is going on now, as millions of people move from rural to urban environments. As of 2009, a landmark was reached when demographers estimated that more than half the world's population already lives in towns and cities.

Population Growth and Change

Because of the central importance of population growth, each regional chapter in this book includes a table of population data for the countries in that region (Table 1.1). Although at first glance these statistics may seem daunting, this information is crucial to understanding the population geography of the regions.



▲ **Figure 1.25 Family Planning** Many countries with fast-growing populations attempt to slow growth through government clinics like this one in Agra, India, that offer women advice on family planning matters.

Natural Population Increase A common starting point for measuring demographic change is the **rate of natural increase (RNI)**, which provides the annual growth rate for a country or region as a percentage. This statistic is produced simply by subtracting the number of deaths from the number of births in a given year. Important to remember, however, is that population gains or losses through migration are not considered in the RNI.

Also, instead of using raw numbers for a large population, demographers divide the gross numbers of births and deaths by the total population, thereby producing a number per 1000 of the population. This is referred to as either the *crude birth rate* or the *crude death rate*. For example, in 2013 the crude birth rate for the whole world was **20** per 1000, with a crude death rate of 8 per 1000. Thus, the natural growth rate was 12 per 1000. Converting that figure to a percentage produces the RNI; therefore, the global RNI in 2013 was 1.2 percent per year.

Because birth rates vary greatly among peoples and cultures (and between countries and regions of the world), rates of natural increase also vary greatly. In Africa, for example, several countries have crude birth rates of more than 40 per 1000 people. Because in these countries death rates are generally less than 11 per 1000, the rates of natural increase are greater than 3.3 percent per year, which are the highest population growth numbers found anywhere in the world.

Total Fertility Rate Although the crude birth rate gives some insight into current conditions in a country, demographers place more emphasis on the **total fertility rate (TFR)** to predict future growth. The TFR is an artificial and synthetic number that measures the fertility of a statistically fictitious, yet average group of women moving through their childbearing years. If women marry early and have many children over a long span of years, the TFR is a high number. Conversely, if data show that women marry late and have few children, the number is correspondingly low (Figure 1.26). Important to note is that any number less than 2.1 implies that a population has no natural growth because it takes a minimum of two children to replace their parents, with a fraction more to compensate for infant mortality. From population data collected in the past decade, the current TFR for the world is 2.5. This is the average for the whole world, but the variability among regions is striking. To illustrate, the current TFR for Africa is 4.8, whereas in no-growth Europe it is only 1.6.

Young and Old Populations One of the best indicators of the momentum (or its lack) for continued population growth

Table 1.1 Population Indicators

Country	Population (millions) 2013	Population Density (per square kilometer)	Rate of Natural Increase (RNI)	Total Fertility Rate	Percent Urban	Percent < 15	Percent > 65	Net Migration (Rate per 1000)
China	1,357.4	142	0.5	1.5	53	16	9	0
India	1,276.5	388	1.5	2.4	31	30	6	0
United States	316.2	33	0.5	1.9	81	19	14	2
Indonesia	248.5	130	1.5	2.6	50	29	5	–1
Brazil	195.5	23	0.9	1.8	85	25	7	0
Pakistan	190.7	230	2.3	3.8	35	37	4	–2
Nigeria	173.6	189	2.8	6.0	50	44	3	0
Bangladesh	156.6	1,087	1.5	2.3	26	31	5	–3
Russia	143.5	8	0.0	1.7	74	16	13	2
Japan	127.3	337	–0.2	1.4	91	13	25	1

Sources: Population Reference Bureau, *World Population Data Sheet, 2013.*

Working Toward **Sustainability**

Managing Resources and Protecting the Environment

The idea of sustainability seems to be everywhere, with much talk about sustainable cities, agriculture, forestry, businesses, corporations—even sustainable lifestyles. The list seems endless at times, and with so many different uses of the word, it's appropriate to revisit its original definitions.

The dictionary tells us that *sustainable* has two main roots. The first meaning is to endure and be able to maintain something at a certain level so that it lasts. The second definition refers to something that can be upheld or defended, such as a *sustainable idea* or *action*. Resource management has long used terms such as *sustained-yield forestry* to refer to timber practices where the amount of tree harvesting is attuned to the natural rate of forest growth so that the resource is not exhausted, but is able to renew itself over time.

Moral and ethical dimensions were added to this traditional usage in 1987 when the UN World Commission on Environment and Development addressed the complicated relationship between economic development and environmental deterioration. The commission stated that "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This cautionary message expands the notion of sustainability from a narrow focus on managing a specific resource, such as trees or grass, to include the whole range of human "needs," in both the present and the future. Fossil fuels, for example, are finite, so we should not consume them greedily in the present without considering their availability for future generations. Similar cautions apply to the sustainable uses of all other resources—air, water, soil, genetic biodiversity, wildlife habitats, farming, and so on.

Achieving the sustainable use of a specific resource, however, can be extremely difficult because it requires knowing the total amount of the resource in question and the current rate of consumption and then estimating the needs of future generations. These challenges have given rise to the new field of *sustainability science,* which emphasizes measuring and quantifying these factors. Because of these measurement difficulties, many researchers suggest that sustainability is better thought of as a process, rather than an achievable state.

In the following chapters, we explore the many different ways people are thinking about and working toward environmental and resource sustainability worldwide. Examples include the use of small-scale solar lighting in African villages (Chapter 2); the return of bison to North America's northern Great Plains (Chapter 3) (Figure 1.2.1); Japan's Smart City movement (Chapter 11); and the plight of Oceania's Low Islands as vulnerability increases because of global warming (Chapter 14). Many of these sidebars have links to Google Earth video tours.

1. Does your college or community have a sustainability plan? If so, what are the key elements?
2. How might the concept of sustainability differ for a college or university in, say, India or China? Look on the Internet to see what you can learn about sustainability programs in foreign colleges.

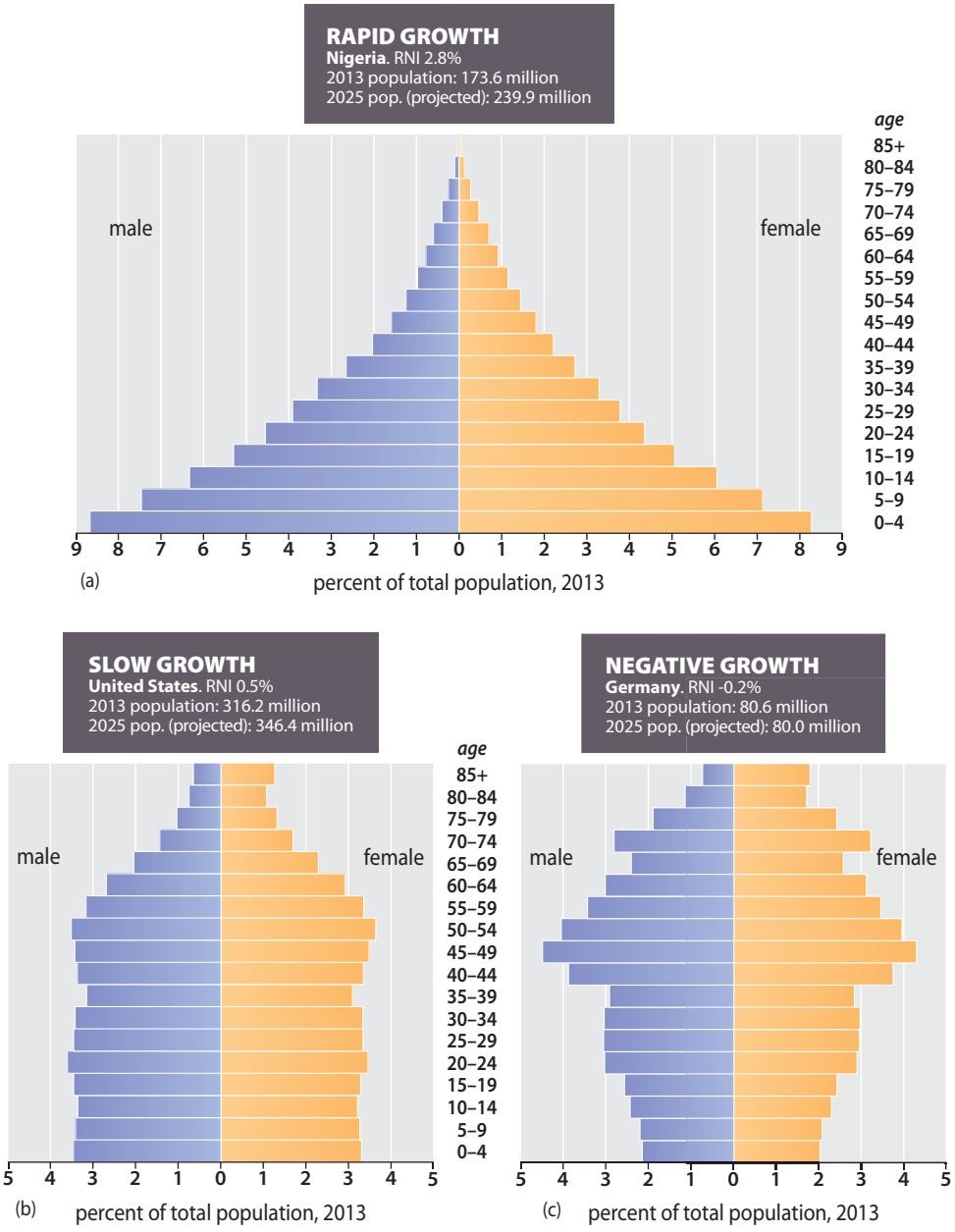
Google Earth Virtual Tour Video

http://goo.gl/08UbVj

▼ **Figure 1.2.1 Home on the Range** These bison (many have been imported from protected lands in Alberta) south of Malta, Montana, are quickly adjusting to their new home.

is the youthfulness of a population, since this shows the proportion of a population about to enter the prime reproductive years. The common statistic for this measure is the percentage of a population under age 15. Currently, the global average is that 26 percent of the population is younger than age 15. However, in fast-growing Africa, that figure is 41 percent, with several African countries approaching 50 percent.

◄ **Figure 1.26 Total Fertility Rate** Birth rates and death rates vary widely around the world. Fertility rates result from an array of variables, including state family-planning programs and the level of a woman's education. This family lives in the state of Rajasthan, India.



◀ **Figure 1.27 Population Pyramids of Nigeria, United States, and Germany** The term *population pyramid* comes from the shape of the graph assumed by a rapidly growing country such as (a) Nigeria, when data for age and sex are plotted as percentages of the total population. The broad base illustrates the high percentage of young people in the country's population, which indicates that rapid growth will probably continue for at least another generation. This pyramidal shape contrasts with the narrow bases of slow- and negative-growth countries, such as the (b) United States and (c) Germany, which have fewer people in the child-bearing years. **Q: Find two examples for countries that fit into each of the three categories, rapid growth, slow growth, and negative growth?**

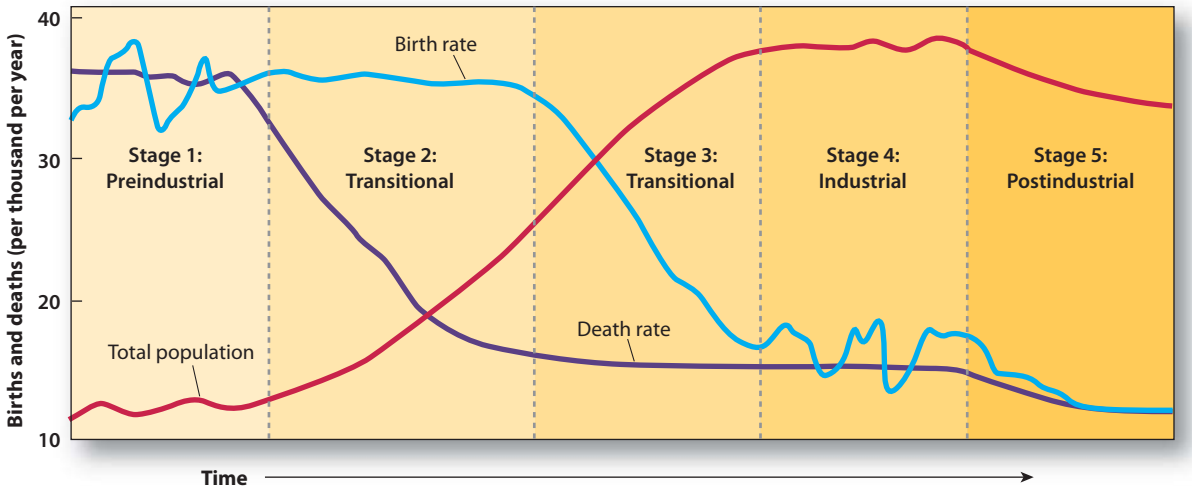
This strongly suggests that rapid population growth in Africa will continue for at least another generation, despite the tragedy of the AIDS epidemic. In contrast, Europe has only 16 percent of its population under 15, and North America has 19 percent.

The other end of the age spectrum is also important, and it is measured by the percentage of a population over age 65. This number is useful for inferring the needs of a society in providing social services for its senior citizens and pensioners. In Japan, for example, about a quarter of the population is over the age of 65.

Population Pyramids The best graphical indicator of a population's age and gender structure is the **population pyramid**. This graph depicts the percentage of a population (or, in some cases, the raw number) that is male or female in different age classes, from young to old (Figure 1.27). If a country has higher numbers of young people than old, the graph has a broad base and a narrow tip, thus taking on a pyramidal shape that commonly forecasts rapid population growth. In contrast, slow-growth or no-growth populations are top-heavy, with a larger number of seniors than people of younger age.

Not only are population pyramids useful for comparing different population structures around the world at a given point in time, but also they can capture the structural changes of a population in time if it transitions from fast to slow growth. Population pyramids are also useful for displaying gender differences within a population, showing whether or not there is a disparity in the numbers of males and females. In the mid-20th century, for example, population pyramids for those countries that fought in World War II (such as the United States, Germany, France, and Japan) showed a distinct deficit of males, indicating those lost to warfare. Similar patterns are found today in those countries experiencing widespread conflict and civil unrest.

Cultural preferences for one sex or another, such as the preference for male infants in China and India, also show up in population pyramids. Because of their usefulness in showing different population structures, comparative population pyramids are found throughout the regional chapters of this book.



▲ **Figure 1.28 Demographic Transition** As a country goes through industrialization, its population moves through the five stages in this diagram, referred to as the *demographic transition*. In Stage 1, population growth is low because high birth rates are offset by high death rates. Rapid growth takes place in Stage 2, as death rates decline. Stage 3 is characterized by a decline in birth rates. The transition was initially thought to end with low growth once again in Stage 4, resulting from a relative balance between low birth rates and low death rates. But with a large number of developed countries now showing no natural growth, demographers have recently added a fifth stage to the traditional demographic transition model, one that shows no or even negative natural growth.

Life Expectancy Another demographic indicator that contains information about health and well-being in a society is **life expectancy**, which is the average length of a life expected at the birth of a typical male or female in a specific country. Because a large number of social factors—such as health services, nutrition, and sanitation—influence life expectancy, these data are often used as an indicator of the level of social development in a country. In this book, we use life expectancy as a social indicator; thus, these data are found in the economic and social development tables instead of in the population data tables.

Not surprisingly, because social conditions vary widely around the world, so do life expectancy figures. In general, though, life expectancy has been increasing over the decades, implying that the conditions supporting life and longevity are improving. To illustrate, in 1975 the average life expectancy figure for the world was 58 years, whereas today it **70**. In Sub-Saharan Africa, however, life expectancy has changed very little over the last 30 years because of the HIV/AIDS epidemic. As a result, the life expectancy for the region is just about the same (56) as it was in 1975 (52).

The Demographic Transition The historical record suggests that population growth rates slow down over time in a similar way from country to country. More specifically, in Europe, North America, and Japan, population growth slowed as countries became increasingly industrialized and urbanized. From these historical data, demographers generated the **demographic transition model**, a conceptualization that tracked the changes in birth rates and death rates over time. Originally, this model had four stages; however, a fifth stage is now commonly added to characterize the fact that many countries have slowed even further to a no-growth point (Figure 1.28).

In the demographic transition model, Stage 1 is characterized by both high birth rates and high death rates, resulting in a very low rate of natural increase. Historically, this stage is associated with Europe's preindustrial period, a time that predated common public health measures such as sewage treatment, an understanding of disease transmission, and the most fundamental aspects of modern medicine. Not surprisingly, death rates were high and life expectancy was short. Tragically, these conditions are still found today in some parts of the world.

In Stage 2, death rates fall dramatically, while birth rates remain high, thus producing a rapid rise in the RNI. In both historical and contemporary times, this decrease in death rates is commonly associated with the development of public health measures and modern medicine. Additionally, one of the assumptions of the demographic transition model is that these health services become increasingly available only after some degree of economic development and urbanization takes place.

However, even as death rates fall and populations increase, it takes time for people to respond with lower birth rates, which happens only in Stage 3. This, then, is the second transitional stage, in which people become aware of the advantages of smaller families in an urban and industrial setting, contrasted with the earlier need for large families in rural, agricultural settings or where children worked at industrial jobs (both legally and illegally).

People on the Move

Migrants and Refugees

Globalization has led to one of the largest migrations in human history. People are leaving their homes in search of better living conditions elsewhere, either because of desperate conditions at home—what geographers call "push forces"—or because of the lure of a better life elsewhere—the "pull forces." Often, though, it's a combination of the two that makes people move.

A third factor in the migration chain is the informational network people draw upon to make their move. Sometimes it's family connections, as people follow relatives who have successfully migrated. Other times a paid agent or labor contractor is involved. Stories abound, unfortunately, of migrant agents (called *coyotes* in Spanish) who, after taking the migrants' money, abandon them on the open seas or in the Mexican desert, or worse.

Accurate data on migration are notoriously difficult to gather because people often migrate without documentation. However, the UN says that currently at least 190 million people are legally living in a country different from where they were born. Although most of those people have moved to cities in the developed Western world, considerable migration has also occurred to magnet cities in the developing world, places such as Delhi, Dubai, Rio de Janeiro, and Mexico City. Furthermore, that UN statistic does not include those people who stay within their own country, yet leave home, like the highland peasants of Bolivia moving to La Paz or a farmer from Iowa cashing in his farm to take a job in Atlanta.

Nor does that statistic count the estimated 35 million people who are classified as refugees, those who have fled violence or natural disasters. Or the untold numbers who are not in established refugee camps, but instead are making do somehow on their own.

Because the human geography of global migration wears many different faces and tells many different stories, each of our chapters sheds light on this complicated process of migration through our *People on the Move* sidebars. Examples are the case of European Roma (also known as gypsies; Chapter 8); Chinese workers in Africa (Chapter 6) (Figure 1.3.1); and North Korea's hidden migration (Chapter 11).

Google Earth Virtual Tour Video

http://goo.gl/82kUAu

1. Does your community include international migrants? If so, where did they come from? What are the push and pull forces that influenc tional decisions?
2. Now choose a foreign city in either Europe or Asia and, using the Internet, collect information on its international migrant population.

▼ **Figure 1.3.1 Chinese Merchant in Africa** Push or pull forces often compel people to leave their homeland in search of better opportunity elsewhere.

Then, in Stage 4, a low RNI results from a combination of low birth rates and very low death rates. Until recently, this stage was assumed be the static end point of change of a developing, urbanizing population. However, as mentioned earlier, that does not seem to be the case. In many highly urbanized developed countries, particularly those in Europe and Russia, the death rate now exceeds the birth rate. As a result, the RNI falls below a replacement level, as attested to by a negative number. This negative growth state argues for the addition of a fifth stage to the traditional demographic transition model.

Remember, though, that the RNI is just that—the rate of natural increase. Thus, it does not include a country's growth or loss from migration. In the United States, for example, although the RNI is below the replacement level, the overall population continues to grow because of immigration from other countries. The same is true of many other developed countries, particularly those in Europe. This topic is discussed further in Chapter 8.

Global Migration and Settlement

Never before in human history have so many people been on the move. Today more than 190 million people live outside the country of their birth and thus are officially designated as migrants by international agencies. Much of this international migration is directly linked to the new globalized economy because half of the migrants live either in the developed world or in developing countries with vibrant industrial, mining, or petroleum extraction economies. In the oil-rich countries of Kuwait and Saudi Arabia, for example, the labor force is composed primarily of foreign migrants. In total numbers, fully one-third of the world's migrants live in seven industrial countries: Japan, Germany, France, Canada, the United States, Italy, and the United Kingdom (see *People on the Move: Migrants and Refugees*).

Moreover, most of these migrants have moved to cities; in fact, 20 percent of migrants live in just 20 world cities. Further, because industrial countries usually have very low

birth rates, immigration accounts for a large proportion of their population growth. For example, about one-third of the annual growth in the United States is due to in-migration.

However, not all migrants move for economic reasons. War, persecution, famine, and environmental destruction cause people to flee to safe havens elsewhere. Accurate data on refugees are often difficult to obtain for several reasons (such as individuals not legally crossing international boundaries and countries deliberately obscuring the number for political reasons), but UN officials estimate that some 35 million people should be considered refugees. More than half of these are in Africa and western Asia (Figure 1.29).

Net Migration Rates The amount of immigration (in-migration) and emigration (out-migration) is measured by the **net migration rate**, a statistic that indicates whether more people are entering or leaving a country. A positive figure means the population is growing because of in-migration, whereas a negative number means more people are leaving than arriving. As with other demographic indicators, the net migration rate is provided for the number of migrants per 1000 of a base population. To illustrate, the net migration rate for the United States is 49 per 1000 people, whereas Canada, which receives even more immigrants than the United States, has a net migration rate of 2. In contrast, Mexico, the source of many migrants to North America, has a net migration rate of −2.

Some of the highest net migration rates are found in countries that depend heavily on migrants for their labor force. These include Qatar, with a net migration rate of **49**, and Kuwait, at 37. Countries with the highest negative migration rates are Tonga, –17; Samoa, –17; Micronesia, –15; and several Caribbean islands with rates close to –10.

Population Density The average number of people per unit of area (square mile or square kilometer) is referred to as **population density**. This statistic conveys important information about settlement patterns and landscape in a specific area or country. In Table 1.1, you can see the striking difference between the high population density of India and the much lower figure for the United States. Flying over these two countries and looking down at the settlement patterns explains this contrast (Figure 1.30). Much of the United States is covered by farms covering hundreds of acres, with houses and barns several miles from their neighbors. In contrast, the landscape of India is made up of small villages, distant from each other by only a mile or so. This results in a population density in India three times higher than that in the United States. Japan has a settlement pattern similar to that of India, even though it is primarily an urban, industrial country. Bangladesh, one of the most densely settled countries in the world, must somehow squeeze its large and rapidly growing population into a limited amount of dry land built by the deltas of two large rivers, the Ganges and the Brahmaputra.

Because population densities differ considerably between rural and urban areas, the gross national figure can be a bit misleading. Many of the world's largest cities, for example, have densities of more than 30,000 people per square mile (10,300 per square km), with the central areas of Mumbai (Bombay) and Shanghai easily twice as dense because of the prevalence of high-rise apartment buildings. In contrast, most

▼ **Figure 1.29 Global Refugees** The United Nations estimates that some 35 million people are refugees from war and civil unrest, as illustrated by this Afghan family at a refugee camp near Peshawar, Pakistan

▲ **Figure 1.30 Contrasting Settlement Densities in the United States and India** In the United States, the population density is 33 per square kilometer, whereas it is 388 per kilometer in India. The relatively low density for the United States results from a vast area of dispersed housing, as illustrated in the bottom photo from Iowa, while India (top photo) has denser settlement in both cities and countryside.

Cityscapes

The Human Habitat

Most of the world's population lives in cities. Thus, knowing more about the world's global urban habitats is an important part of world regional geography. After all, even though cities share some traits, they also differ considerably. Few people would say, for example, that Los Angeles is like New York City or that Seattle is like New Orleans. Further, the economic and social roles cities play in the world can also differ considerably. Mexico City and Shanghai have about the same population (around 25 million), but their global economic and political roles are very different.

To further our understanding of world urbanism, each regional chapter contains a "Cityscapes" sidebar and Google Earth video tour of a prominent place in that part of the world. Vancouver, British Columbia; La Paz, Bolivia; Cairo, Egypt (Figure 1.4.1); Kabul, Afghanistan; Perth, Australia; and Hong Kong, China, are examples of the different cities featured. As you read about and tour these cities, keep the following facts in mind.

Although cities are old (the earliest date back to 4000 BCE), urbanism—when most of a country's population lives in cities—is new. England is thought to be the first country to have most of its population living in cities, an event that happened late in the 19th century as a result of that country's industrialization. The United States became an urban nation later, sometime between 1910 and 1920. China, the world's largest country, became predominantly urban only in the last several years, but will become increasingly urban with the government's plan to uproot and move 250 million rural people into cities by 2025.

Cities look different from one another because of what is called *urban morphology*, which is, simply put, the brick-and-mortar physical landscape of a city. Older parts of the city look different from the new because of street patterns, building architecture, and even the construction materials used. Consequently, we can learn much from studying the visual landscape of a city. Some of the earliest continually inhabited cities are found in Lebanon, Iraq, China, and Pakistan; although the most ancient parts of these cities are long gone, you can still find historical differences in the urban morphology.

Also important is deciphering where different *urban functions*, or activities, take place within the city. Where is the business district, and how does it contrast with downtowns in other cities in other parts of the world? Or consider the residential areas: Are they low or high density, or both? What about the illegal (yet often tolerated) squatter settlements where the poor often reside? The answers to these questions often tell us much about the culture and historical background of the people who live there.

1. What city that you have visited has the most unique and memorable cityscape? Why?
2. Find a major city in another part of the world; and discuss its urban morphology and cityscape.

Google Earth Virtual Tour Video

http://goo.gl/Cd3NKB

► **Figure 1.4.1 The Cityscape of Cairo, Egypt** The largest city in the Africa and the Arab world, Cairo has an iconic and expansive landscape.

North American cities have densities of fewer than 10,000 people per square mile (3800 per square km), due largely to the cultural preference for single-family dwellings on individual urban lots.

An Urbanizing World The focal points of the contemporary, globalizing world are the cities—the fast-paced centers of deep and widespread economic, political, and cultural change. Because of this vitality and the options cities offer to impoverished and uprooted rural peoples, they are also magnets for migration. The scale and rate of growth of some world cities are absolutely staggering. Estimates are that between natural growth and in-migration, Mumbai (Bombay) will add over 7 million people by 2020. Assuming growth is constant throughout the period (perhaps a questionable assumption), this would mean that the urban area would add over 10,000 new people each week. The same projections would have Lagos, Nigeria, which currently has the highest annual growth of any megacity, adding almost 15,000 per week (see *Cityscapes: The Human Habitat*).

As mentioned, based upon data on the **urbanized population**, which is the percentage of a country's population living in cities, at least half the world's population now lives in cities. Demographers predict that the world will be 60 percent urbanized by 2025.

Tables in this book's regional chapters include data on the urbanization rate for each country. To illustrate, more than 80 percent of the populations of Europe, Japan, Australia, and the United States live in cities. Generally speaking, most countries with such high rates of urbanization are also highly industrialized because manufacturing tends to cluster around urban centers. In contrast, the urbanized rate for developing countries is usually less than 50 percent, with figures closer to 40 percent not uncommon. Urbanization figures also show where there is high potential for urban migration. If the urbanized population is relatively small, as in Zimbabwe (Africa), where only **39** percent of the population lives in cities, the probability for high rates of urban migration in the next decades is high.

REVIEW

1.12 What is used to calculate the rate of natural increase and are there other factors influencing population growth that are not included?
1.13 What is the total fertility rate?
1.14 If a population pyramid has a wide base and a narrow top what does it say about the population of a place?
1.15 Why is migration an important determinant of population growth in countries, such as the United State, Japan and the United Kingdom?

Cultural Coherence and Diversity: The Geography of Change and Tradition

Social scientists often say that culture binds together the world's diverse social fabric. If this is true, one glance at the daily news suggests this complex global tapestry could be unraveling because of widespread cultural tensions and conflict. As noted earlier, with the recent rise of global communication systems (satellite TV, films, videos, etc.), stereotypical Western culture is spreading at a rapid pace. Although some societies accept these new cultural influences willingly, others resist and push back against what they perceive as cultural imperialism with protests, censorship, and even terrorism. The geography of cultural coherence and diversity, then, entails an examination of both tradition and change, of tensions and conflict, of global patterns and unique local custom, as well as the formation of blended cultural hybrids.

Culture in a Globalizing World

Given the dynamic changes connected with globalization, traditional definitions of culture must be stretched somewhat to provide a viable conceptual framework. A very basic definition provides a starting point. **Culture** is learned, not innate, and is behavior held in common by a group of people, empowering them with what is commonly called a "way of life" (Figure 1.31).

▶ **Figure 1.31 Culture as a Way of Life** The clothing and appearance of this young couple give clue to their membership in Brooklyn Hipster culture.

In addition, culture has both abstract and material dimensions. Speech, religion, ideology, livelihood, and value systems are part of culture, but so are technology, housing, foods, and music. These varied facets of culture are relevant to the study of world regional geography because they tell us much about the way people interact with their environment, with one another, and with the larger world. Not to be overlooked is that culture is dynamic and ever changing, not static. Thus, culture is a process, not a condition—an abstract, yet useful concept that is constantly adapting to new circumstances. As a result, there are always tensions between the conservative, traditional elements of a culture and the newer forces promoting change (see *Everyday Globalization: Complexities in the Common*).

When Cultures Collide Cultural change often takes place within the context of international tensions. Sometimes, one cultural system will replace another; at other times, resistance by one group to another's culture will stave off change. More commonly, however, a newer, hybrid form of culture results from an amalgamation of two cultural traditions. Historically, colonialism was the most important perpetuator of these cultural collisions; today, though, globalization in its varied forms is a major vehicle of cultural tensions and change (Figure 1.32).

▼ **Figure 1.32 Culture Clash in Goa, India** A beach-loving western tourist gets better acquainted with a sacred symbol of Hindu culture.

Everyday **Globalization**

Complexities in the Common

Globalization is so ubiquitous that it's often taken for granted and unnoticed. Your clothing is an example. Chances are good that what you're wearing was made in a foreign country, since 98 percent of all U.S. apparel is imported. Your clothing was probably made in China, but perhaps in Bangladesh, Thailand, Haiti, Mexico, or India, all of which are major manufacturing centers for the world's clothing. Even some of the "Made in the U.S.A." clothing might be pushing the truth a bit by being produced in the U.S. commonwealth countries of Puerto Rico and the Northern Mariana Islands in the far western Pacific. However, if you paid $300 or so for your jeans, they could be made in the United States, most probably in Los Angeles, where 30 different apparel firms turn out designer jeans.

The point is not about what you're wearing, but rather that globalization is not only about multinational corporations doing business all over the world. Globalization is everywhere in your daily life, from what you eat to what you wear to the smartphone in your hand to the coffee you drink. Chances are that whatever it is involves an interesting and complex world geography.

We illustrate this idea with examples in each of the regional chapters: how your hamburger may or may not come from the tropical rainforest (Chapter 2); why the National Basketball Association is so successful globally (Chapter 3); the geography behind diamond engagement rings (Chapter 6); international students in Europe (Chapter 8) (Figure 1.5.1); and why you're talking to someone in India about your credit card (Chapter 12), to name just a few.

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1. Identify a commonplace item or activity in your life that has an interesting backstory involving globalization.
2. How has globalization changed higher education in the United States?

▼ **Figure 1.5.1 Students at the University of Tübingen, Germany**
Globalization has accelerated the growth of students studying abroad.

The active promotion of one cultural system at the expense of another is called **cultural imperialism**. Although many expressions of cultural imperialism still exist today, the most severe examples occurred in the colonial period. In those years, European cultures spread worldwide, often overwhelming, eroding, and even replacing indigenous cultures. During this period, Spanish culture spread widely in South America, French culture diffused into parts of Africa and Southeast Asia, and British culture overwhelmed South and Southwest Asia. New languages were mandated, new educational systems were implanted, and new administrative institutions replaced the old. Foreign dress styles, diets, gestures, and organizations were added to existing cultural systems. Many vestiges of colonial culture are still evident today (Figure 1.33). In India, the makeover was so complete that pundits are fond of saying, with only slight exaggeration, that "the last true Englishman will be an Indian."

Today's cultural imperialism is seldom linked to an explicit colonizing force, but more often comes as a fellow traveler with economic globalization. Though many expressions of cultural imperialism carry a Western (even U.S.) tone—such as McDonald's, MTV, KFC, Marlboro cigarettes, and the widespread use of English as the dominant language of the Internet—these facets result more from a search for new consumer markets than from deliberate efforts to spread modern U.S. culture throughout the world.

The reaction against cultural imperialism is **cultural nationalism**. This is the process of protecting and defending a cultural system against diluting or offensive cultural expressions, while at the same time actively promoting national and local cultural values. Often cultural nationalism takes the form of explicit legislation or official censorship that simply outlaws unwanted cultural traits. Examples of cultural nationalism are common. France has long fought the Anglicization of its language by banning "Franglais" in official governmental language, thereby exorcising commonly used words such as *weekend, downtown, chat,* and *happy hour.* France has also sought to protect its national music and film industries by legislating that radio DJs play a certain percentage of French songs and artists each broadcast day (40 percent currently). Similarly, many Muslim countries limit Western cultural influences by restricting or censoring international TV, an element they consider the source of many undesirable cultural influences. Most Asian countries as well are increasingly protective of their cultural values, and many are demanding changes to tone down the sexual content of MTV and other international TV networks.