GLOBAL EDITION

Diversity Amid Globalization

World Regions, Environment, Development

SIXTH EDITION

Lester Rowntree • Martin Lewis • Marie Price • William Wyckoff



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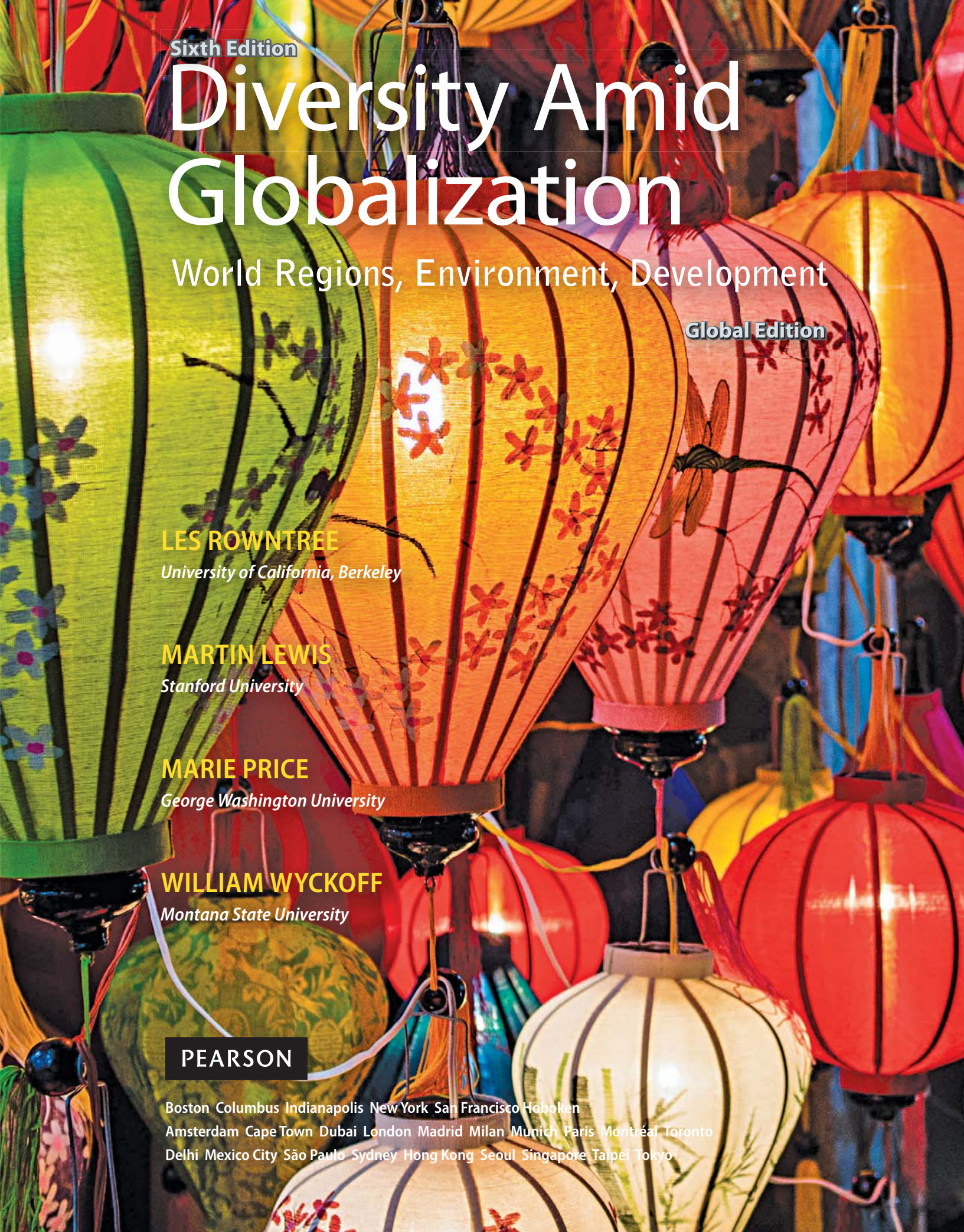
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World – Political



The Caribbean





Sixth Edition

Diversity Amid Globalization

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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.

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Les Rowntree
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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.

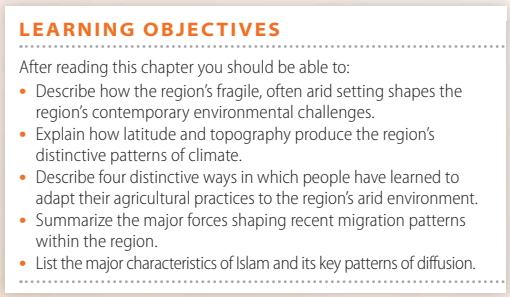


▲ **Figure 9.5.2 Russia's Blossoming Virtual World** These Russian youngsters eagerly explore the gaming cyberworld at the 2009 GameWorld interactive entertainment exhibition in Moscow.

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.

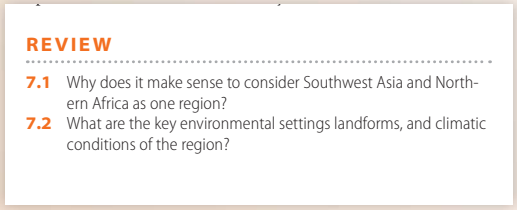


LEARNING OBJECTIVES

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

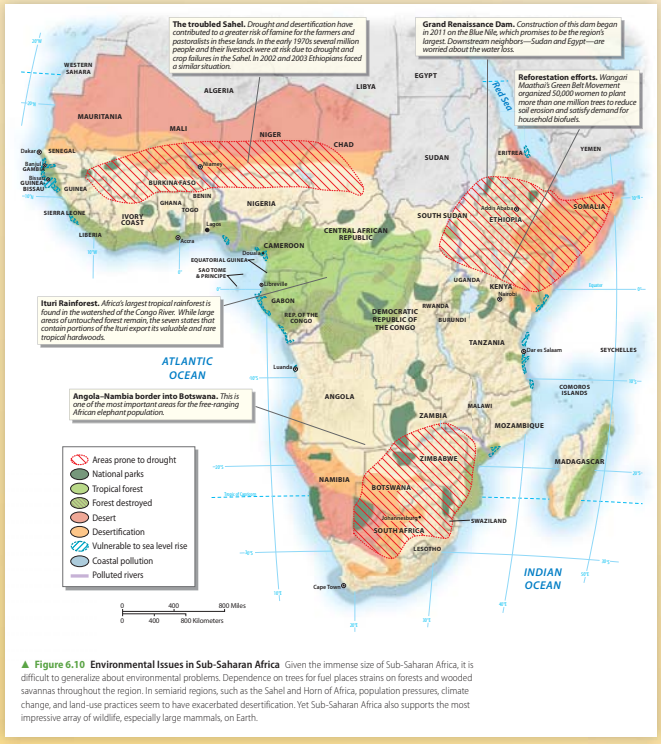
Economic and Social Development

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.



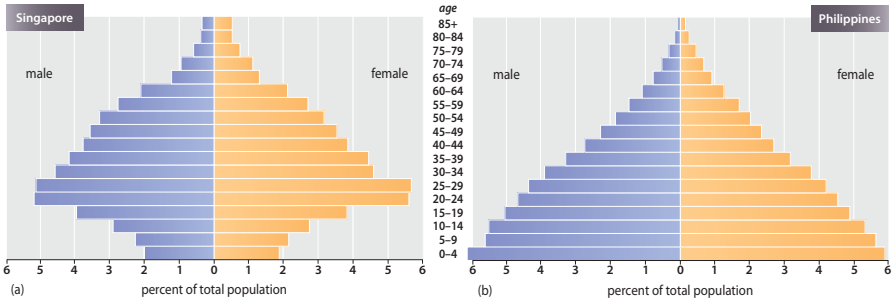
▼ **Figure 10.31 Qinghai–Tibet Railway** China is engaged in a massive program to extend roads and railroads into the western half of the country. The main connection with the Tibetan Plateau is the recently completed Qinghai–Tibet Railway. This railway has resulted in a large increase in tourism in 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.

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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

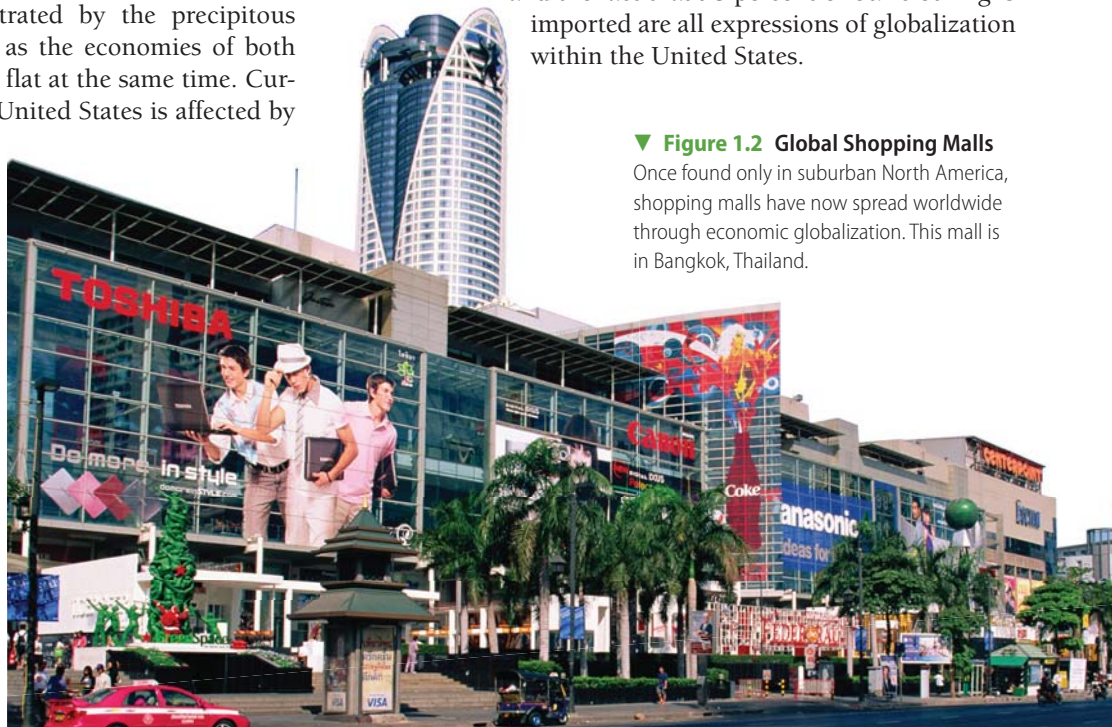
Economic changes also trigger cultural changes. The spread of a global consumer culture, for example, often accompanies globalization and frequently creates deep and serious social tensions between traditional cultures and a new, global outlook. Global TV, movies, Facebook, Twitter, and videos implicitly 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



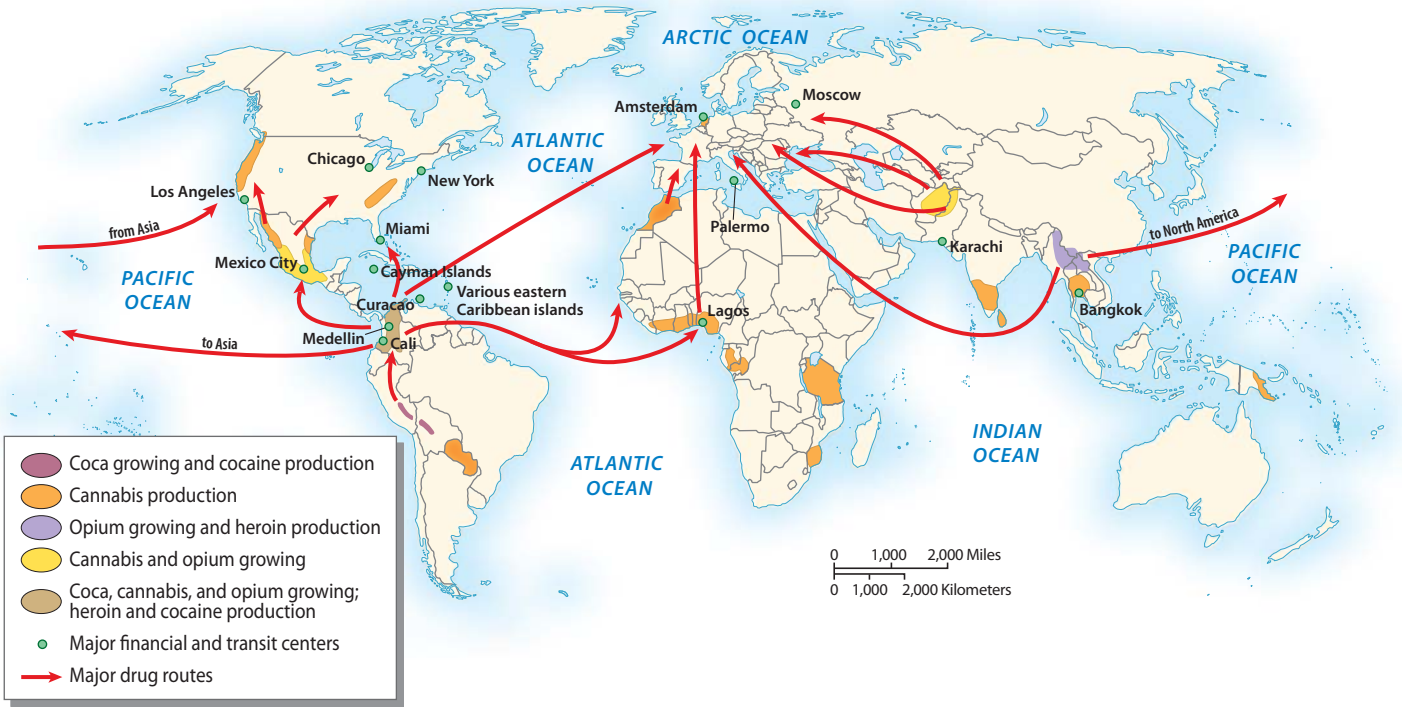
▲ **Figure 1.4 Global Migration** Globalization—in its many different forms—is connected to the largest migration in human history as people are drawn to centers of economic activity in hopes of a better life. But along with the pull forces that lure people to new places are the forces of civil strife, 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.

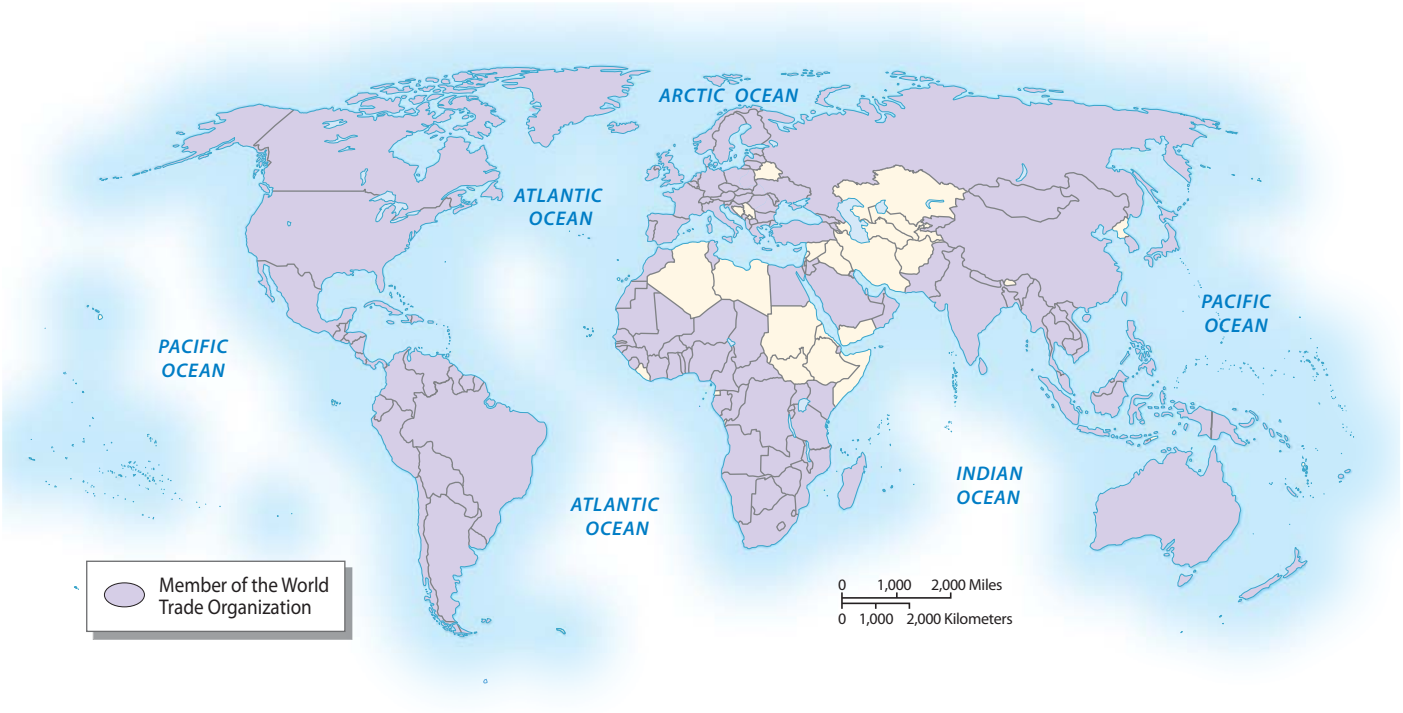
The American journalist and author Thomas Friedman, one of the first to write about globalization, argues that the world has not only shrunk, but also become economically "flat," so that financial capital, goods, services, and workers can flow freely from place to place. Friedman also describes the great 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