

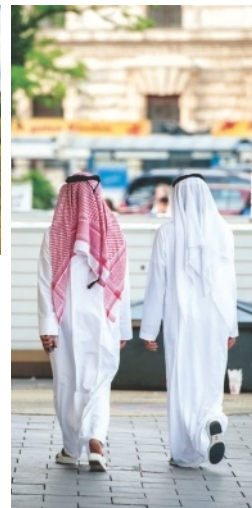


VISUALIZING

Human Geography: At Home in a Diverse World

ALYSON L. GREINER

THIRD EDITION



WILEY



VISUALIZING HUMAN GEOGRAPHY

At Home in a Diverse World

THIRD EDITION

Alyson L. Greiner
Oklahoma State University

WILEY

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PHOTO RESEARCHERS Billy Ray,
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How Is Wiley Visualizing Different?

Wiley Visualizing differs from competing textbooks by uniquely combining three powerful elements: a visual pedagogy, integrated with comprehensive text, the use of authentic situations and issues, and the inclusion of interactive multimedia in the *WileyPLUS* Learning Space learning environment. Together these elements deliver a level of rigor in ways that maximize student learning and involvement. Each key concept and its supporting details have been analyzed and carefully crafted to maximize student learning and engagement.

For more information on the Visualizing series go to <http://www.wiley.com//college/visualizing/>

Wiley Visualizing and the *WileyPLUS* Learning Space Environment are designed as a natural extension of how we learn

Visuals, comprehensive text, and learning aids are integrated to display facts, concepts, processes, and principles more effectively than words alone can. To understand why the visualizing approach is effective, it is first helpful to understand how we learn.

1. Our brain processes information using two channels: visual and verbal. Our *working memory* holds information that our minds process as we learn. In working memory we begin to make sense of words and pictures and build verbal and visual models of the information.
2. When the verbal and visual models of corresponding information are connected in working memory, we form more comprehensive, or integrated, mental models.
3. After we link these integrated mental models to our prior knowledge, which is stored in our *long-term memory*, we build even stronger mental models. When an integrated mental model is formed and stored in long-term memory, real learning begins.

The effort our brains put forth to make sense of instructional information is called *cognitive load*. There are two kinds of cognitive load: productive cognitive load, such as when we're engaged in learning or exert positive effort to create mental models; and unproductive cognitive load, which occurs when the brain is trying to make sense of needlessly complex content or when information is not presented well. The learning process can be impaired when the amount of information to be processed exceeds the capacity of working memory. Well-designed visuals and text with effective pedagogical guidance can reduce the unproductive cognitive load in our working memory.

How Has Wiley Visualizing Been Shaped by Contributors?

Wiley Visualizing and the *WileyPLUS* learning environment would not have come about without lots of people, each of whom played a part in sharing their research and contributing to this new approach.

Academic Research Consultants

Richard Mayer, Professor of Psychology, UC Santa Barbara. Mayer's *Cognitive Theory of Multimedia Learning* provided the basis on which we designed our program. He continues to provide guidance to our author and editorial teams on how to develop and implement strong, pedagogically effective visuals and use them in the classroom.

Jan L. Plass, Professor of Educational Communication and Technology in the Steinhardt School of Culture, Education, and Human Development at New York University. Plass co-directs the NYU Games for Learning Institute and is the founding director of the CREATE Consortium for Research and Evaluation of Advanced Technology in Education.

Matthew Leavitt, Instructional Design Consultant, advises the Visualizing team on the effective design and use of visuals in instruction and has made virtual and live presentations to university faculty around the country regarding effective design and use of instructional visuals.

Independent Research Studies

SEG Research, an independent research and assessment firm, conducted a national, multisite effectiveness study of students enrolled in entry-level college Psychology and Geology courses. The study was designed to evaluate the effectiveness of Wiley Visualizing. You can view the full research paper at www.wiley.com/college/visualizing/huffman/efficacy.html.

Instructor and Student Contributions

Throughout the process of developing the concept of guided visual pedagogy for Wiley Visualizing, we benefited from the comments and constructive criticism provided by the instructors and colleagues listed below. We offer our sincere appreciation to these individuals for their helpful reviews and general feedback:

Reviewers of *Visualizing Human Geography 3e*

Geordie Armstrong, *Santa Barbara City College*
Henry Bullamore, *Frostburg State University*
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Tracy Edwards, *Frostburg State University*

Marilyn Hall, *Carroll Community College*
Taylor Mack, *Louisiana Tech University*
Eileen Pena, *San Jose State University*

Why *Visualizing Human Geography 3e*?

We live in an ever-changing world in which geographical knowledge is central to the well-being of our communities and society. Perhaps nowhere is the urgency of geographical knowledge made clearer to us than through issues involving the local, national, and global impacts of climate change; the British vote to leave the European Union; or the civil war in Syria. Simultaneously, technological innovations continue to open new horizons in mapping and techniques for visualizing geographic information that enable us to see, explore, and understand local and global processes as never before. What a challenging and invigorating time to be either a student or an instructor of geography.

Geographic literacy

Visualizing Human Geography 3e provides an engaging textbook for building geographic literacy and introducing students to the richness of geography, including its many different approaches, perspectives, techniques, and tools. Geographic literacy seeks to endow students with geographic and analytical skills to be creative and capable decision makers and problem solvers. More specifically, geographic literacy includes:

1. fostering the skills of spatial analysis so that students gain an understanding of the importance of scale and can evaluate and interpret the significance of spatial variation;
2. enhancing students' comprehension of the interconnectedness of social and environmental dynamics, and the implications of this for people's livelihoods, their use of the Earth, and environmental change;

3. cultivating global awareness in students and exposing them to divergent views so they are prepared and equipped to participate in an increasingly interconnected world; and
4. educating students about the advantages and limitations of tools such as GIS and GPS in the acquisition and use of geographic information.

A fundamental premise guiding the presentation of material in this book is that such key geographical concepts as place, space, and scale cannot be divorced from a study of process. In other words, questions of why and how are vital to our understanding of where activities, events, or other phenomena are located. Thus, every chapter contains at least one Process Diagram in order to show the diverse factors and complex relations among them that drive social and environmental change.

Human geography is well suited to a visually oriented approach for three reasons. First, maps and images are fundamental tools of geographers that help to reveal patterns or trends that might not otherwise be apparent. Second, within the practice of human geography there is a longstanding tradition of studying cultural landscapes for evidence about such processes as diffusion, urbanization, or globalization in order to more fully understand social difference and to assess human use of the Earth. Third, many human geographers are interested in representation, including the kinds of images that are used by different agencies and entities to characterize places, regions, people, and their activities. Therefore, a visual approach enables a more complete instructional use of photographs, maps, and other visually oriented media to explore and evaluate the significance of different representations.

Other features of this book include:

- content that reflects the latest developments in geographic thought;
- coverage of geographical models and theory as well as their real-world applications;
- top-notch cartography;
- accurate and up-to-date statistics;
- an appendix devoted to understanding map projections.

New to this edition

This Third Edition of *Visualizing Human Geography* offers a new organization as well as new and revised content. In response to reviewer feedback, the order of the chapters has been slightly altered. The chapters “Agricultural Geographies” and “Changing Geographies of Industry and Services” now precede the chapter, “Geographies of Development.”

A strong effort has been made to keep the text concise, relevant, and lively. Other changes include:

- **Up-to-date content.** Throughout the text, the information and data have been updated to reflect the most recent data available at the time of the revision.
- **Updated visuals.** Many maps and diagrams have been revised, and a wide variety of new photos have been added throughout to support the learning objectives.
- **New coverage of important topics.** This edition continues the practice of incorporating examples and discussions from relevant current affairs.
- **Chapter 1** (What is Human Geography?) introduces the concept of the Anthropocene to the discussion of human-environment relationships, and features an improved discussion of absolute, relative, and relational space. It also uses a new diagram to link the discussion of GPS, time-space paths, and mobility.

- **Chapter 2** (Globalization and Cultural Geography) incorporates new visuals to explore the geography of multinational corporations, specifically using the example of the Walt Disney Company.
- **Chapter 3** (Population and Migration) now includes a discussion of the relationship between place and quality of life, a new visual depicting the different contributions of developed and developing regions to global population growth, and a new section that examines the relationships between consumption, overpopulation, and the concept of Ecological Footprints.
- **Chapter 4** (Geographies of Language) adds new visuals to the discussion of large languages. Other new visuals and content explore some of the regional patterns in the usage of African American English on Twitter.
- **Chapter 5** (Geographies of Religion) opens with a new feature discussing spirituality and the geography of incense. The chapter also features a new *Process Diagram* that examines the sanctification of the World Trade Center site.
- **Chapter 6** (Geographies of Identity) includes updated discussions of gender roles. These discussions cover the policy changes that now permit women in the military to serve in combat, as well as the controversy over gender-neutral bathrooms. A new *What is Happening in this Picture?* explores the symbolic meanings of jambiyas in Yemen.
- **Chapter 7** (Political Geographies) has a significantly revised section on Global Geopolitics, which includes new coverage of democratic and authoritarian regimes, the geography of freedom, and a case study of the Russian annexation of Crimea. In addition, the material on the European Union now covers the Brexit referendum.
- **Chapter 8** (Urban Geographies) incorporates a new chapter opener on bicycle mobility in Copenhagen. The chapter also now features a new section and supporting visuals related to the foreclosure crisis. A new *Geography InSight* feature focuses on St. Louis, segregation, and events in Ferguson, Missouri.
- **Chapter 9** (Agricultural Geographies) begins with a consideration of our food supply and the value of (and sometimes a distaste for) eating insects. The section on food crises has been revised to emphasize current global food issues such as the consequences of the growing demand for meat.
- **Chapter 10** (Changing Geographies of Industry and Services) adds new visuals to accompany the discussion of commodity dependence, updates the discussion of trends in manufacturing, and incorporates a new *What is Happening in this Picture?* feature on the ship-breakers of Bangladesh.
- **Chapter 11** (Geographies of Development) includes a significantly revised section on global wealth and income inequality, as well as updated information on income inequality in the United States. This is followed by a revised and improved discussion of factors affecting income distribution. A new section discusses alternative approaches to development and covers the United Nations' new agenda for sustainable development.
- **Chapter 12** (Environmental Challenges) presents the latest data and information on patterns of fossil fuel and renewable energy production and consumption. A new discussion of the shale revolution has been added, along with a discussion of the impacts on OPEC. The presentation of land-use and land-cover change has been revised to improve clarity. Coverage of the Paris Agreement has also been added to the material on greenhouse gas reductions.

Instructor Material

(available in *WileyPLUS* Learning Space and on the book companion site)

PowerPoint Presentations

A complete set of highly visual PowerPoint presentations—one per chapter—is available online and in *WileyPLUS* Learning Space to enhance classroom presentations. Tailored to the text's topical coverage and learning objectives, these presentations are designed to convey key text concepts, illustrated by embedded text art. Lecture Launcher PowerPoints also offer embedded links to videos to help introduce classroom discussions with short, engaging video clips.

Test Bank

The Test Bank has a diverse selection of test items including multiple-choice and essay questions that incorporate visuals from the book. The Test Bank is available online in MS Word files and within *WileyPLUS* Learning Space.

Instructor's Manual

The Instructor's Manual includes creative ideas for in-class activities, discussion questions, and lecture transitions.

Clicker PowerPoint Presentations

These PowerPoint Presentations contain relevant questions for each chapter that can be used in class to test the students' knowledge of the material.

Image Gallery

All photographs, figures, maps, and other visuals from the text are online and in *WileyPLUS* Learning Space and can be used as you wish in the classroom. These online electronic files allow you to easily incorporate images into your PowerPoint presentations as you choose, or to create your own handouts.

WILEYPLUS LEARNING SPACE

WileyPLUS Learning Space is an easy way for students to learn, collaborate, and grow. With WileyPLUS Learning Space, students create a personalized study plan, assess progress along the way, and make deeper connections as they interact with the course material and each other.

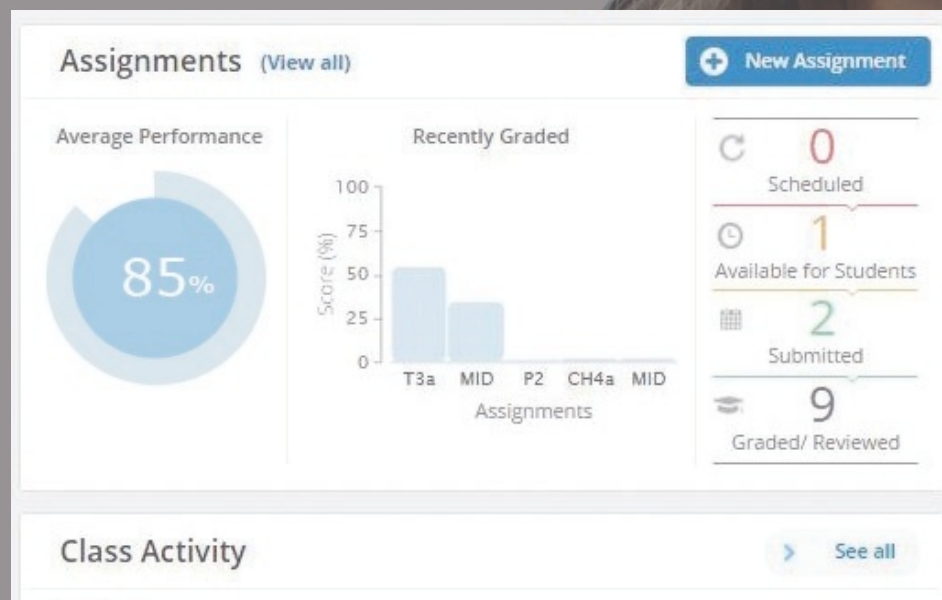
Through a combination of dynamic course materials and visual reports, this collaborative learning environment gives you and your students immediate insight into strengths and problem areas in order to act on what's most important.

New features for *Visualizing Human Geography 3e* include:

- Interactive Graphics throughout the text that invite the student to participate with the figure in order to learn important pedagogical material.
- Study Tip Videos and Player at the end of each chapter provide valuable information about studying, while the player allows the instructor to customize and add their own videos/content into the course.

An easy way to help students learn, collaborate, and grow.

Designed to engage today's student, WileyPLUS Learning Space will transform any course into a vibrant, collaborative learning community.



Identify which students are struggling early in the semester.

Educators assess the real-time engagement and performance of each student to inform teaching decisions. Students always know what they need to work on.



Facilitate student engagement both in and outside of class.

Educators can quickly organize learning activities, manage student collaboration, and customize their course.



Measure outcomes to promote continuous improvement.

With visual reports, it's easy for both students and educators to gauge problem areas and act on what's most important.

Dedication

For my mother, Annie L. Greiner, who encouraged me to go places.

Special Thanks

This book would not have been possible without the assistance of many talented people. I owe special thanks to Executive Publisher Petra Recter for her support and oversight of this project. From the beginning, Executive Editor Jessica Fiorillo provided unflagging enthusiasm and a keen commitment to geographic education. I am immensely grateful for Associate Development Editor, Mallory Fryc. She not only provided expert guidance along the way, but has been incredibly patient as we have waded through the various challenges that a project of this magnitude presents, not least of which is working with the idiosyncrasies of authors. I also appreciate the efforts of Photo Researchers, Billy Ray and Elizabeth Blomster, who worked diligently to track down elusive photos. I am especially grateful for the adept Production Services provided by Aptara, including the tireless commitment and leadership of Project Manager, Denise Showers. I would like to recognize the expert cartographic assistance provided by the team at Mapping Specialists, Inc. Their work has greatly enhanced the maps in this book.

I also wish to express special thanks to: Casseia Lewis, Editorial Assistant, who helped keep our work running smoothly on a day-to-day basis; John Du Val and Laura Byrnes, Media Specialists, who have been essential to the creation of all manner of high-quality, supporting electronic components; Svetlana Barskaya, Senior Content Manager and Elizabeth Swain, Senior Production Editor, for guiding and overseeing the production of the book; Alan Halfen, Senior Marketing Manager, who has skillfully and steadfastly promoted the book; Geraldine Osnato, Product Designer and Tom Nery, Cover Design, for their vision and creativity.

I greatly appreciate the several reviewers and instructors who provided insightful comments and very helpful suggestions for improving this book. My colleagues in the Department of Geography at Oklahoma State University have likewise been generous in their support for me and this book. I sincerely thank the many students who have used and commented on this book. I remain ever grateful to my husband, Luis D. Montes, for his unwavering support.

About the Author

Alyson L. Greiner is Professor of Geography at Oklahoma State University. She earned her PhD in Geography from the University of Texas at Austin. She has taught courses on cultural geography, world regional geography, the history of geographic thought, and the regional geography of Europe, Africa, and the Pacific Realm. She regularly teaches undergraduate, graduate, and honors students. She has received a Distinguished Teaching Achievement Award from the National Council for Geographic Education. From 2009–2012 she served as a Regional Councilor for the Association of American Geographers. Her scholarly publications include *Anglo-Celtic Australia: Colonial Immigration and Cultural Regionalism* (with Terry G. Jordan-Bychkov) and several peer-reviewed journal articles. She is presently the editor of the *Journal of Cultural Geography*.



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What Is Human Geography?

GEOGRAPHY, INQUIRY, AND SEEING THE LIGHT

Can you find your hometown or city on this image of the Earth at night? Bigger cities and more urbanized or built-up areas shine the brightest. Japan appears very brightly lit because the country is highly urbanized and has a high density of commercial and industrial activity. Try to find the trans-Siberian railroad in Russia or interstates in the United States to see how night lights reveal human activity.

Why do the spaces of illumination vary from one continent to another? What inferences can you make about well-lit places and settlement patterns, wealth, or environmental modification? Geographers ask these and similar kinds of questions. Embedded within such questions are concepts relating to location, place, space, region, scale, distribution, and interconnectedness. Thus, geographical inquiry has its roots in a fundamental curiosity about the world. However, there is more to geographical inquiry than simply asking questions. Geographers also step back when studying a topic or phenomenon and examine relationships between data in order to generate new

CHAPTER OUTLINE

Introducing Human Geography 2

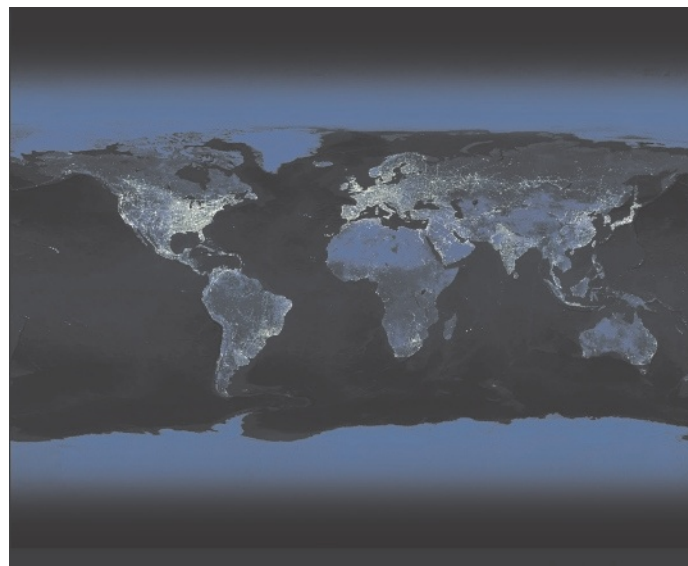
- Where Geographers Click: Careers in Geography
- Nature and Culture
- Cultural Landscapes and Regions

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- Place
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- Remote Sensing
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- Geographic Information Systems



Data courtesy Marc Imhoff of NASA GSFC and Christopher Elvidge of NOAA NGDC. Image by Craig Mayhew and Robert Simmon, NASA GSFC

insights about how the world works. In this way, geographical inquiry and analysis contribute to the development of geographical theory—knowledge that advances our understanding of the social, spatial, regional, and ecological facets of our world.

Simply stated, this book is designed to introduce you to geographical inquiry and theory through a perspective that emphasizes people and the spatial variation in their activities around the world. This chapter introduces human geography and illustrates how geographers approach their work, including some of the tools they use.

CHAPTER PLANNER ✓

- Study the picture and read the opening story.
- Scan the Learning Objectives in each section: p. 2 p. 8 p. 18
- Read the text and study all visuals. Answer any questions.

Analyze key features

- Geography InSight, p. 3 p. 19 p. 23
- Process Diagram, p. 12
- What a Geographer Sees, p. 16
- Stop: Answer the Concept Checks before you go on: p. 8 p. 18 p. 23

End of chapter

- Review the Summary and Key Terms.
- Answer the Critical and Creative Thinking Questions.
- Answer What is happening in this picture?
- Complete the Self-Test and check your answers.

Introducing Human Geography

LEARNING OBJECTIVES

1. **Describe** the scope of geography and its main branches of study.
2. **Outline** four geographical approaches to the relationship between nature and culture.
3. **Explain** how geographers study landscapes and regions.

We are going to let you in on a little secret: Geography majors go places—in their careers, that is. They also have a lot of fun in the process. This is quite likely because geography is a discipline that encourages people to find a topic or region they are passionate about and explore its many different dimensions. Are you interested in music? Music geographers are needed to understand the globalization of hip-hop as well as its local variations. If you are a sports fan, sports geographers help identify optimal locations for stadiums, golf courses, and other athletic facilities. If your passion is nutrition or health, medical geographers help track and limit the spread of epidemics and study ways to improve people's access to medical care. See *Where Geographers Click* to learn more about careers in geography.

Some nongeographers rather naively thought that globalization would make geography irrelevant. Globalization, they claimed, made the world smaller, more accessible, and therefore, easier to know and understand. Meanwhile, geographers politely noted that globalization was not a new phenomenon and that geography had, to the contrary, taken on even greater relevance. For example, understanding the consequences of global climate change for different countries, agricultural production, and coastal populations demands geographic awareness. Similarly, we cannot solve the problem of poverty until we know better its geographic dimensions—where it occurs, how spatially extensive it is, whom it affects, and how it is related to access to resources, such as land, water, and housing. Globalization has moved geography to center stage. Simultaneously, improvements and innovations in technology have expanded the geographer's toolbox. These new tools include ways of acquiring data about the Earth with improved GPS receivers, higher resolution satellite imagery, and new ways of visualizing this information with virtual globes such as Google Earth.

The word *geography* derives from Greek words (*geo* + *graphia*) meaning *to write about or describe the Earth*. As a field of study, however, geography is much more than a description of

human geography

A branch of geography centered on the study of people, places, spatial variation in human activities, and the relationship between people and the environment.

Where Geographers CLICK

Careers in Geography



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Visit the Jobs and Careers section of the American Association of Geographers website (www.aag.org) for career preparation tips, job listings, and other resources.

the Earth or a factual listing of countries, their capitals, and resources.

Geography consists of two main branches: physical geography and human geography (**Figure 1.1**). Physical geography focuses on *environmental dynamics* (e.g., water quality, soil erosion, forest management), whereas **human geography** focuses on *social dynamics* (e.g., economic development, language diffusion, ethnic identity). Some physical and human

The two main branches of the discipline have given rise to three broad areas of emphasis. On the diagram, colored terms identify major subfields.

a. Mount Vesuvius rises behind Naples

Mountain geography includes the study of alpine soils, landscapes, and environments.



Stephen J. Stadler

b. Tourists in the Dominican Republic

Economic geography studies tourism trends and patterns of trade, as well as business location data.

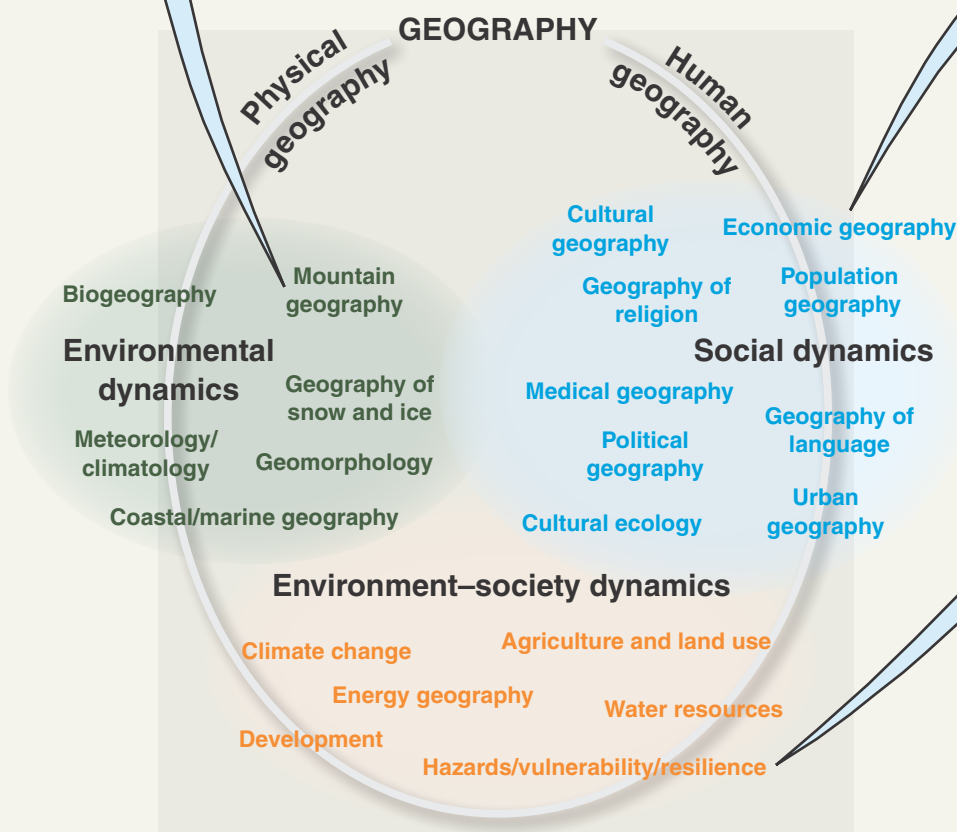


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c. Devastation in Japan from the Fukushima-Daiichi nuclear accident

This accident—the result of an earthquake, tsunami, and planning oversights—reveals the interconnectedness of people and the environment.

The Asahi Shimbun via Getty Images



Ask Yourself

1. On the diagram, why are the borders between the different areas of emphasis shown as indistinct?
2. Using the photo in **a**, explain how the study of mountain geography could lead to a study in environment-society dynamics.

geographers focus on *environment–society dynamics* and work on topics that span both branches of the discipline (e.g., vulnerability to environmental hazards, impacts of fossil fuel consumption, social consequences of global climate change). The unity of geography as a discipline stems from a shared philosophy that recognizes the urgency of better understanding the spatial aspects of human and environmental processes and using geographic knowledge to generate solutions to the social and environmental challenges in our world.

Human geography, like the discipline of geography more broadly, is both a science and an art. The science of human geography stresses the importance of acquiring adequate knowledge about specific processes, events, or interactions in order to explain where and why they occur. For example, a human geographer studying migration seeks to explain the events or developments that propelled people to move from one place to another.

In contrast, the art of human geography emphasizes a different way of knowing that focuses less on explanation and more on understanding and meaning. The human geographer studying migration also learns about the experiences of the groups that migrated and how they form attachments to different places. This might include understanding how migrants perceive their new home and build their lives in it, or whether they feel as though they have homes in more than one country. Thus, the artistic and scientific aspects of human geography are complementary.

Nature and Culture

What do the words *nature* and *culture* mean to you? At first they seem straightforward, but the longer you think about them the more you realize that they both have a variety of different meanings. For example, nature can refer to the intrinsic qualities of a person, or to the outdoors, and culture can refer to taste in the fine arts or to customary beliefs and practices. Because of this definitional looseness, geographer Noel Castree (2001, p. 5) calls *nature* “a promiscuous concept.” The same can be said about *culture*. Nevertheless, these concepts are so fundamental to the practice of geography that we should examine them briefly here.

Very broadly speaking, **nature** is the physical environment; it is external to people and does not include them. People, because of their capacity for intellectual and moral development, are the bearers of culture, and it is culture that distinguishes people from nature. When understood in this way, these concepts yield a dualistic framework that sets nature and culture in opposition to one another.

This **nature–culture dualism** has had a significant impact on ways of thinking about social difference. During the 18th century, some European scholars used this distinction between nature and culture to argue that it was the human capacity for culture that made people *superior* to

nature. This line of reasoning was subsequently extended and used to rank societies. So, for example, non-Westerners were seen as being closer to nature than so-called civilized and cultured Westerners, and therefore inferior. Although the origins of these ideas are difficult to unravel, they matter because the way we see human societies in relation to nature and to one another affects not just how we use the environment but also how we interact with others.

Today, many geographers and other social scientists reject the nature–culture dualism because of the way it separates nature from culture. These scholars stress instead that people—in spite of their capacity for culture—are very much a part of nature. This perspective is central to **cultural ecology**, an important subfield within human geography that studies the relationship between people and the natural environment.

When conceptualizing the relationship between people and nature, cultural ecologists and other geographers recognize several different approaches. We discuss four of these next: environmental determinism, possibilism, humans as modifiers of the Earth, and the Earth as a dynamic, integrated system.

Environmental determinism The position that natural factors control the development of human physiological and mental qualities is called **environmental determinism**. We can trace the intellectual roots of environmental determinism in Western thought to the ancient Greeks, who speculated that human diversity resulted from both climatic and locational factors. For example, plateau environments seemed to produce people who were docile. Similarly, they thought that climatic extremes adversely affected mental capacities. In their view, the people with the sharpest minds came from temperate areas rather than hot, humid environments or extremely cold climates.

Environmental determinism prevailed among American geographers during the early 20th century and then fell quickly into disfavor. Three major criticisms of environmental determinism prompted this change in perspective. First, geographers found overly simplistic the linear, cause–effect relationship that forms the basis of environmental determinism. People, they argued, are more than automatons that simply respond to stimuli, such as the prevailing winds or temperatures in a specific place. Nonenvironmental factors, such as systems of government and law, also help explain human diversity. A second criticism of environmental determinism is that similar natural settings do not produce the same cultural practices or human behavior. Third, environmental determinism tends to contribute to ethnocentric interpretations of sociocultural differences. It is therefore not much of a surprise that some ancient Greek scholars attributed the flourishing of the Greek civilization to the temperate climate of the Mediterranean.

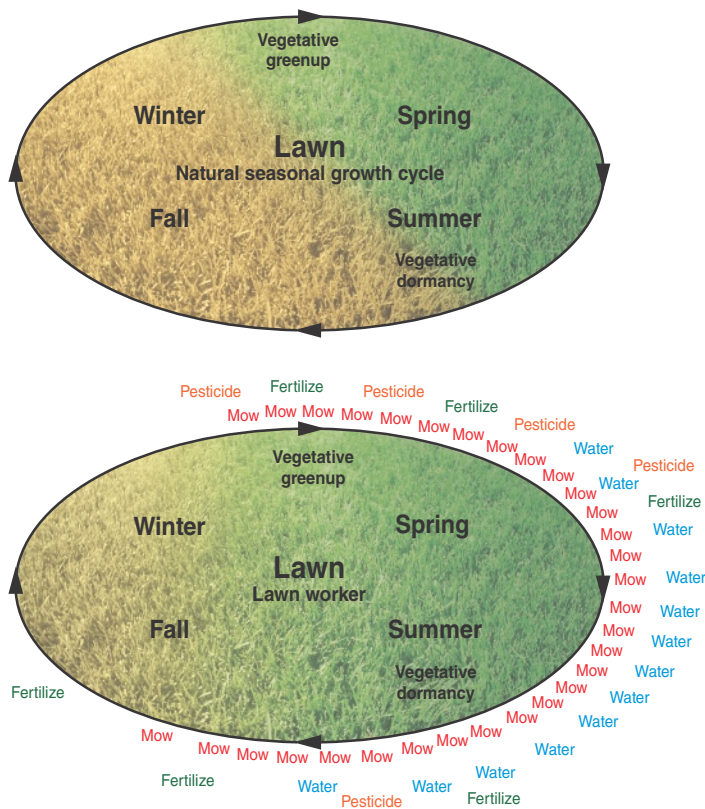
In recent years a radical reinterpretation of environmental determinism has emerged that involves **actor-network theory**. For example, in his book *Lawn People*, the geographer Paul Robbins argues that the decision of American homeowners to apply pesticides or other chemicals to their lawns is the product of multiple interacting factors. These factors include the supply of and demand for lawn chemicals, the importance of property values, community pressure to maintain a well-kept lawn, lawn aesthetics (e.g., ideas about how a lawn should look), and the lawn itself (**Figure 1.2**).

actor-network theory A body of thought that emphasizes that humans and nonhumans are linked together in a dynamic set of relations that, in turn, influence human behavior.

Actor-network theory challenges the idea that people have free will. Rather, nonhuman entities gain agency (the ability to exert influence) by virtue of the networks of relations in which they are embedded. As Robbins observes, “the nonhuman world does have an active, ongoing, and crucial role in directing the conditions of the economy and the character of human culture” (2007, p. 137). Unlike

Actor-network theory • Figure 1.2

Actor-network theory acknowledges that our surroundings influence us. The lawn, the availability of fertilizers, and aesthetics influence human behavior by prompting a homeowner to mow, fertilize, and maintain it. (Source: Adapted from Robbins, 2007.)



environmental determinism, actor-network theory gives agency to natural factors as well as anything human-made (e.g., lawns, machines, or laws), but not in a simplistic cause-effect relationship.

Possibilism Reactions against environmental determinism in the early 20th century gave rise to **possibilism**—the view that people use their creativity to decide how to respond to the conditions or constraints of a particular natural environment. The word *constraints* is important here because it indicates that the environment is seen as limiting the choices or opportunities that people have. Possibilists, then, do not completely reject the idea of environmental influence; however, they are reluctant to view the environment as the sole or even the strongest force shaping a society. Thus, a possibilist sees technological diversification as one mechanism for expanding the range of choices a society has.

Humans as modifiers of the Earth A different approach to the relationship between people and the environment was advanced by geographer Carl Sauer (1889–1975), beginning in the 1920s. Sauer rejected environmental determinism and emphasized instead human impacts, specifically the ability of people to modify their surroundings. He observed that, over time, human activities transform natural landscapes into **cultural landscapes**. Significantly, Sauer’s work helped raise awareness of the human role in landscape change. Visually, evidence of humans as modifiers of the Earth is all around us, from our cities to our cultivated agricultural fields (**Figure 1.3**).

An important extension of the humans as modifiers of the Earth approach involves seeing nature as a *social construction*—an invented concept derived from shared



An extreme cultural landscape? • Figure 1.3

If your country lacks snow-covered mountains, why not manufacture them? This mountain-themed resort facility is in the United Arab Emirates and features year-round skiing even though outside temperatures rarely dip below 70° Fahrenheit.

perceptions and understandings. This perspective acknowledges that people shape the natural environment through their practices *and* their ideas about what nature is or should be. A good example of this involves the idea of wilderness in the United States. The environmental historian William Cronon has shown that in the 18th century wilderness was equated with wasteland, but by the 19th century wilderness was strongly associated with natural beauty.

Earth as a dynamic, integrated system In this approach, geographers see people as intricately connected with the natural world. Two key principles sum up this approach: (1) the Earth functions as a system made up of diverse components that interact in complex ways; and (2) the Earth is constantly changing as a result of natural and human-induced events.

Today many geographers and other scientists agree that the extent of human impact on Earth systems has been so profound that we now live in the “Anthropocene,” or the new age of humankind. In this view, people are understood to be modifiers of the Earth, but on a level much greater than ever before because the impacts of human activity on the environment are now global.

Some scholars trace the beginning of the Anthropocene to the rise of industrialization and note that ongoing city growth, habitat loss, and changes in the chemical makeup of the oceans and air support the idea of a world that bears a very deep imprint of human activity. Thus, questions about the **sustainability** of human practices, or how we can ensure the long-term health of the planet for future generations, are directly related to how we think about our relationship with the world. We explore these ideas further in Chapter 12.

Cultural Landscapes and Regions

As we have discussed, culture is sometimes used to refer to a person’s intellectual improvement through education, particularly the development of an aesthetic appreciation for the arts. In other instances, culture refers to beliefs and practices—such as dietary customs, religious beliefs, and so on—held in common by a group of people. Thus, a cultural group shares certain traits or elements of culture. This understanding of culture guided much of the practice of human geography until the late 20th century. More specifically, two long-standing approaches to the study of culture emphasize reading the cultural landscape and performing regional analysis. The emphasis on cultural landscapes reflects Carl Sauer’s influence on geography, especially his view that culture is the driving force for landscape change.

Reading the cultural landscape works from the premise that the cultural landscape constitutes a rich repository of information about cultural beliefs and practices. In other words, the cultural landscape resembles a

palimpsest—a parchment that, though cleaned, still bears the traces of what was previously inscribed on it. To a human geographer, the visible expressions of culture—for example, the settlement patterns, the structures people build, the architectural styles they choose, and the ways people use land—all provide clues about people’s values, identity, and more broadly, their cultures.

Regional analysis involves studying the distinctiveness of regions. In the United States, this might include understanding how and why the South differs from New England culturally, economically, and politically. Or, regional analysis might examine the ways in which the War in Iraq (2003–2011) altered the demographic and religious makeup of the country’s provinces, and the ramifications of these changes.

Types of regions Geographers identify three types of regions: formal, functional, and perceptual. A **formal region** is an area that possesses one or more unifying physical or cultural traits. Unlike formal regions, a **functional region** is an area unified by a specific economic, political, or social activity. Every functional region has at least one node, usually the business, office, or entity that coordinates the activity. For example, each state in the United States constitutes a functional region with its state capital serving as the node. In contrast to both formal and functional regions, **perceptual regions** derive from people’s sense of identity and attachment to different areas. The borders of perceptual regions tend to be highly variable since people often have very personal reasons for perceiving an area a certain way (**Figure 1.4**).

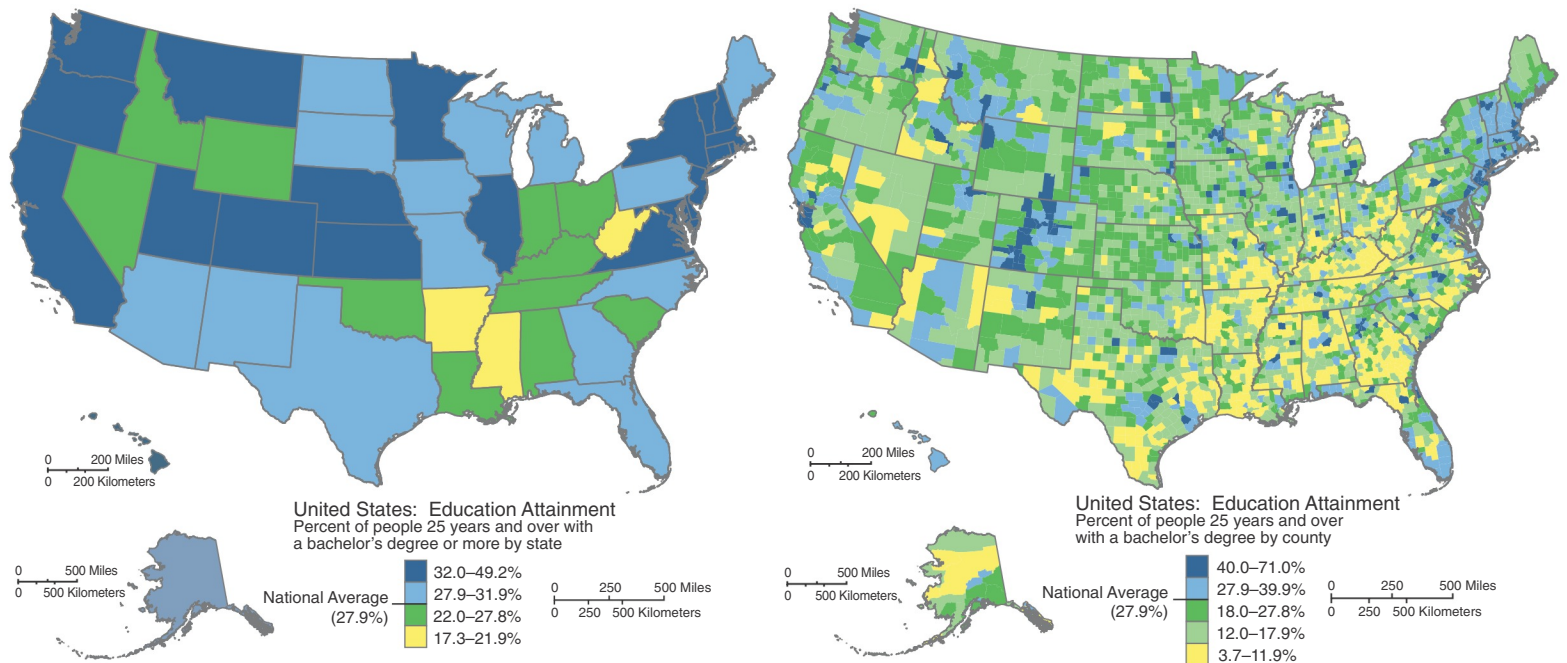
Culture reconceptualized Recently, certain geographers have stressed the point that we should think of culture as an abstract concept, not as a material item or collection of cultural traits. According to Don Mitchell, for example, “There’s no such *thing* as culture” (emphasis added) (1995, p. 102). By this he means to caution people against trying to limit culture to specific and fixed habits of life. In his view, the visible and tangible expressions of culture are important, but they need to be understood in their dynamic context—in relation to prevailing economic, social, political, and other factors. Similarly, other geographers stress that an understanding of culture that defines the term as a way of life fails to recognize other crucial aspects of culture. Consequently, over the past several decades there has been a significant reconceptualization of **culture** that draws on the following three attributes:

1. Culture is a social creation that reflects diverse economic, historical, political, social, and environmental factors.

culture A social creation consisting of shared beliefs and practices that are dynamic rather than fixed, and a complex system that is shaped by people and, in turn, influences them.

Formal, functional, and perceptual regions • Figure 1.4

A wide variety of business, government, and planning agencies make decisions based on spatial information related to these three types of regions.



a. Formal regions

These maps show formal regions based on the trait of educational attainment. Each color identifies a different formal region that spans multiple states. (Source: Data from U.S. Census Bureau, American Community Survey, 2005–2009.)

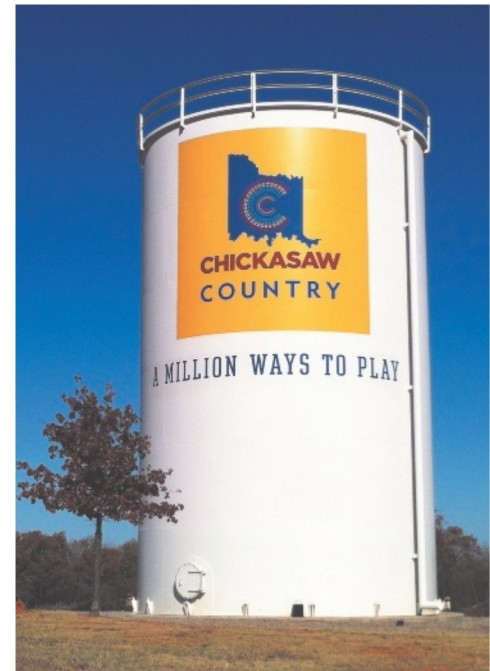


b. Functional region

A university campus is a functional region. On the University of Texas campus, the Tower is part of the Main Building, an administrative node that includes the president's and provost's offices, among others.

Think Critically

1. What kind of region is a county? What kind of region is a national park?
2. What geographic patterns do these maps reveal about college graduates?



c. Perceptual region

Chickasaw Country is a perceptual region in Oklahoma that is associated with the territory of the Chickasaw Nation, depicted in dark blue in the photo. History, politics, recreation, tourism, and even aspects of the physical geography of an area can shape the characteristics of perceptual regions.



© Rich Legg/Stockphoto

Culture, power, and landscape • Figure 1.5

We can read the cultural landscape to discern that this gated residential community is exclusive. If our approach is informed by a fuller understanding of culture, however, we are better equipped to examine the invisible dimensions of power, identity, or class, for example, that also factored in this community's establishment.

2. Culture is dynamic, not fixed, and can be contested. This is illustrated by the phrase “culture wars.”
3. Culture is a complex system. Through interactions with one another, people create and express culture, and in turn, culture shapes and influences people.

The significance of this reconceptualization of culture is that it seeks to make the practice of human geography even more vigorous. For those who work within the reading the landscape approach, this reconceptualization of culture means that sometimes what remains on the landscape provides only a partial understanding of the complex and dynamic forces that created it. Consider, for example, gated residential communities (Figure 1.5).

CONCEPT CHECK



1. **What** is human geography?
2. **How** does actor–network theory conceptualize the relationship between people and the environment?
3. **How** are formal, functional, and perceptual regions different?

Thinking Like a Human Geographer

LEARNING OBJECTIVES

1. **Contrast** the concepts of place and space.
2. **Distinguish** between spatial variation and spatial association.
3. **Identify** four different types of diffusion.
4. **Explain** the relationship between globalization, spatial interaction, and time–space convergence.
5. **Review** the different scales used in geographical research.

All you need to begin to think like a human geographer is a curiosity about places in the world, whether they are nearby or far away. This curiosity might spur questions similar to those we raised about nighttime illumination in the chapter opener, or it might prompt questions about the connections between different places. Thus, to think like a human geographer is to cultivate a perspective that includes a consideration of one or more of

the following concepts: place, space, spatial diffusion, spatial interaction, or scale.

Place

When geographers use the term **place** they are referring to a locality distinguished by specific physical and social characteristics. Every place can be identified by its *absolute location*, or position, reckoned by latitude and longitude on the globe, as well as its **site** and **situation** (Figure 1.6).

Places matter because they contribute to the social, political, and economic functioning of our world. Indeed, the tourism industry capitalizes on the fact that no two places are identical and that

site The physical characteristics of a place, such as its topography, vegetation, and water resources.

situation The geographic context of a place, including its political, economic, social, or other characteristics.

Site and situation • Figure 1.6

By considering site and situation, we can make sense of the location and context of any place. What aspects of Istanbul's site and situation make it strategic?



a. Physically, Istanbul occupies a hilly site adjacent to a deep harbor and has grown on both sides of the Bosphorus, a narrow and strategic waterway that connects the Mediterranean and Black seas. From left to right across the hilltop are the Hagia Sophia, now a museum, and the Blue Mosque.

b. These maps depict the situation of Istanbul, Turkey's largest city, in relation to the surrounding bodies of water, the rest of the country, and neighboring regions. By virtue of its situation, Istanbul straddles the regions of Europe and Asia.

MUSTAFA OZER/AFP/Getty Images



c. Istanbul's growth as a major port stems from attributes of its site and situation along an important strait. What this photo does not capture, however, is the dynamic nature of a place's situation. Numerous ferries and cargo ships ply the surrounding waters, but a workers' strike or inclement weather can quickly alter Istanbul's situation.