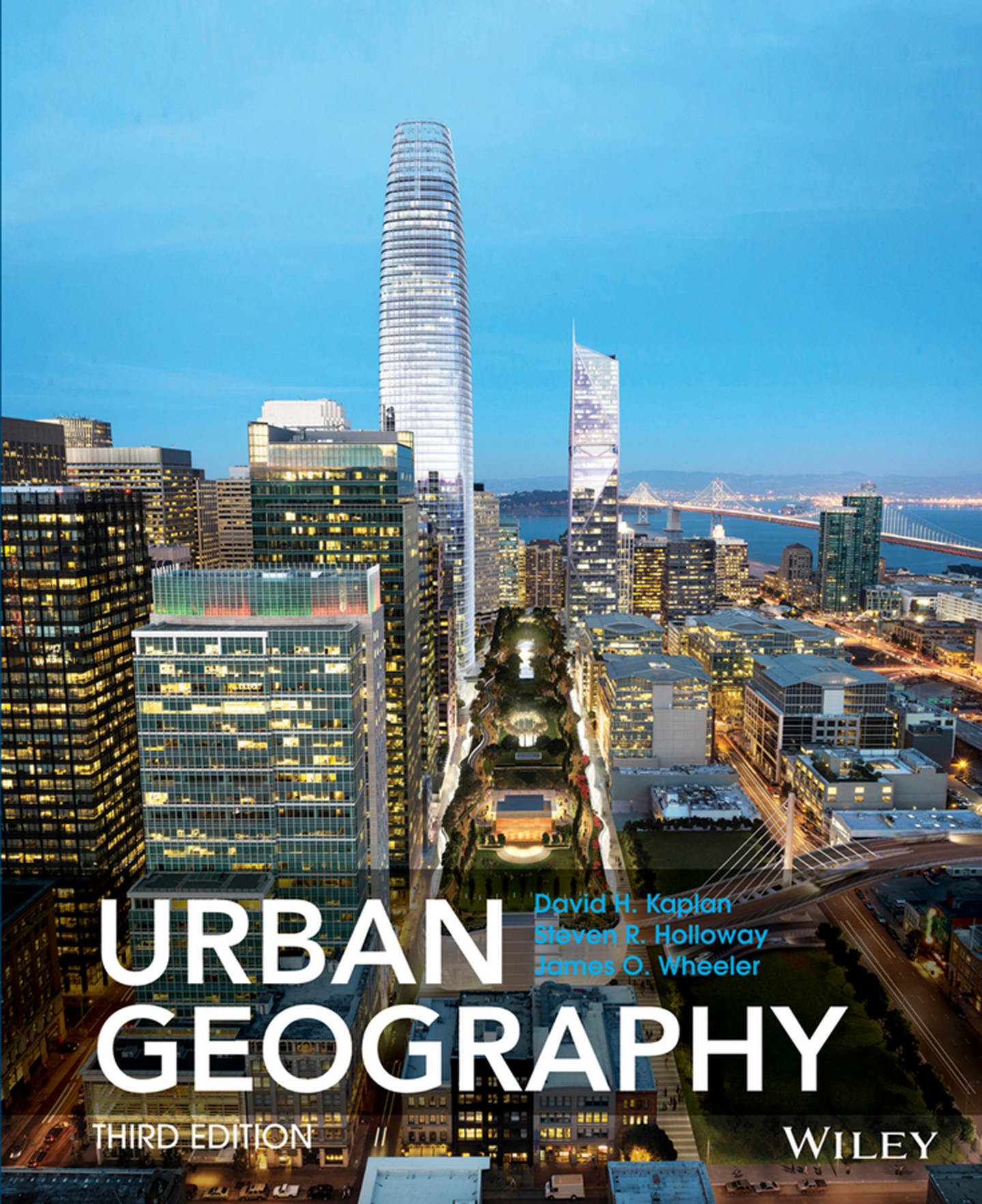
URBAN GEOGRAPHY
David H. Kaplan
Steven R. Holloway
James O. Wheeler
THIRD EDITION
WILEY

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DAVID H. KAPLAN

STEVEN R. HOLLOWAY

JAMES O. WHEELER

WILEY

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We dedicate the third edition of *Urban Geography* to James O. Wheeler, without whose energy and inspiration this work would not exist.

PREFACE

Jim Wheeler, a longtime professor of geography at University of Georgia and founder and co-editor of the journal *Urban Geography* for more than 20 years, decided in late 1999 that that the time was right for a new textbook in the field of urban geography. He saw that students needed a book that would uncover all of the excitement and richness found in cities, that would present urban geographical theory in an accessible manner, and that would tackle the variety of urban challenges. Moreover, he envisioned a textbook that would address the urban experience through time, from the origins of cities to the present day, and through space, looking at first at cities in the United States, but also uncovering the variety of urban experiences in cities throughout the world.

Jim soon brought together two other authors: David Kaplan, a professor at Kent State University, and Steven Holloway, a professor at the University of Georgia. The first two editions of this book clearly filled a niche in the area of urban geography, as it soon became the leading urban geography textbook in the field. As plans were made to develop a third edition, Jim Wheeler passed away at the end of 2010 after a lifetime of service to the field of geography. Dave and Steve decided to carry on the tradition and took over the writing and publication of the new edition.

This third edition of *Urban Geography* has benefited from comments of several outside reviewers and especially the comments from colleagues who use the book in their own classrooms. We appreciate all of the helpful suggestions and hope that this proves to be a much stronger book. The major revisions in the third edition involve reworking Chapters 1, 3, 4, 5, and 6. In addition to these major changes, every chapter has been updated to include information from the first decade of the twenty-first century. When possible, we have used information from the 2010 U.S. Census, although some of the information that was available in 2000 is unfortunately missing in the most recent census. We have also tried to include updated statistical and factual information from other countries when appropriate.

Dave Kaplan was primarily responsible for writing Chapters 2, 3, 5, 10, 11, 12, 13, 14, and 15. Steve Holloway focused on Chapters 1, 4, 6, 7, 8, and 9. We endeavored throughout this joint effort to make this a textbook that reflected our vision as a whole, so that the entire book is a product of both authors.

Dave Kaplan appreciates the input of several individuals. This third edition in particular benefited from the help of two students, Gina Butrico and Christabel Devadoss. Moreover, Dave appreciates the graphics assistance of Jennifer Mapes. These individuals have added to the work of others who have also been instrumental in creating this urban geography textbook: James M. Smith, Leena Woodhouse, Samantha Hoover, Najat Al-Thaibani, and Rajrani Kalra. Dave is grateful to Jim Wheeler for having brought him into this project, and to Steve Holloway, for years of fruitful collaboration, of which this book is but the latest example.

Steve Holloway deeply appreciates the intellectual, professional, and personal support he received from Jim Wheeler, both during graduate school days as a young student of urban geography, and as a faculty colleague. Without Jim's eager and enthusiastic support Steve would not be the scholar or colleague he is today. Jim's presence and contribution is deeply missed. Steve also thanks his graduate students, who received much less of his time and energy than they deserve during the months he spent working on the third edition of the textbook. Several of Steve's University of Georgia colleagues have been a source of constant support and encouragement, especially Hilda Kurtz, who used the second edition of

this text in her classes and provided very useful feedback in the process of preparing the third edition. Finally, Steve is grateful to Dave for the mutual interest in all things urban, especially the conviction that any understanding of cities and urbanization without understanding their historical roots is deeply impoverished.

In addition, we thank the many people at John Wiley & Sons, Inc., who performed their essential, behind-the-scenes activities in producing and marketing the third edition of this book. We would like to offer especially strong thanks to Ryan A. Flahive, Executive Editor for Geography and Geology, who has directed us through all three editions of this book. Particular thanks also go to Denise Powell, who prodded us through that crucial first edition. For this third edition, we have been very happy for the kind and generous oversight of Darnell Sessoms who has been assisting us every step of the way. And at the final production stage, we have appreciated the work of Brian Baker, Marian Provenzano, James Russiello, and Wanqian Ye at Wiley, our copyeditor Veronica Jurgena, and Lavanya Murlidhar at Laserwords.

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Part I

Introduction to Cities and Urban Geography

CHAPTER 1

AN INTRODUCTION TO THE CHANGING FIELD OF URBAN GEOGRAPHY

Since it has taken more than five thousand years to arrive at even a partial understanding of the city's nature and drama, it may require an even longer period to exhaust the city's still unrealized potentialities.

—LEWIS MUMFORD, 1961, P. 3–4

The purpose of this chapter is, first, to introduce you to the field of urban geography within its historical and contemporary context. We begin by looking at the array of fields and disciplines that are interested in cities, noting how urban geography both overlaps with and is distinct from these fields. We then briefly describe some of the ways that urban geographers have studied the city. We then explore some basic but really important questions that confront anyone interested in the city: (1) how to define the city, especially in relation to other kinds of presumably nonurban places, and (2) how to define the spatial extent of the city and how to think about boundaries. At the end of the chapter we introduce you to the contents and approach of this book in order to capture the excitement and dynamics of modern urban geography, a field of growing educational importance as more and more people live in cities, both in the industrial and nonindustrial countries of the world.

WHY WE STUDY CITIES

Cities are incredibly exciting places and are home to an ever-increasing share of humanity. Although it has now been reported dozens of times, the mid-1990s marked the first time that more than 50 percent of the world's population lived in urban areas. By the mid-2010s, more than 3.6 billion out of the roughly 7 billion people on the planet lived in cities, and more than 1 out of every 5 humans lived in cities larger than 1 million in population. The trend only magnifies when projected into the future—the United Nations predicts that by 2050 about two-thirds of the planet's 9 billion residents will call cities home.

The relatively recent transition into a majority urban world is all the more stark when we recall that just over 100 years ago, at the beginning of the twentieth century, only 14 percent of the earth's population lived in cities. One hundred years before that, at the beginning of the nineteenth century, only 3 percent lived in cities. Figure 1.1 demonstrates how rapidly the planet has urbanized over the last several centuries.

The urban population percentages are of course much greater in the advanced capitalist economies of the world, such as the United States and Canada, Western Europe, Japan, Australia and New Zealand, and the rapidly emerging economies of Korea, Singapore, and Taiwan. In the United States and Canada, over 80 percent of the population is classified as urban and virtually everyone is dependent

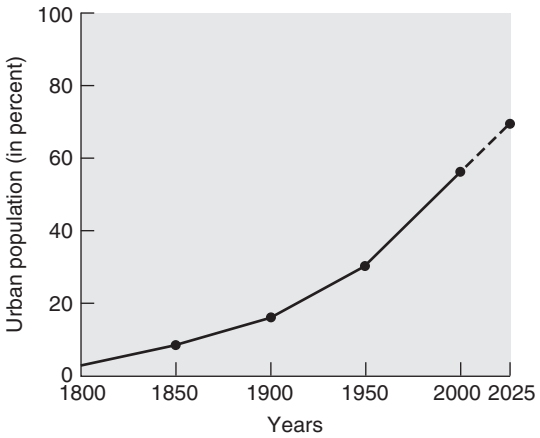

Figure 1.1 World urbanization trends, 1800–2025.
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on urban connections in everyday life. The world has become urban, and the advanced capitalist countries—themselves strongly linked—are almost totally locked into the urban way of life. Even rural areas in North America are utterly dependent upon large urban centers for their life sources, such as information, economic viability, social ties, entertainment and leisure activities, political expressions and attitudes, cultural attributes, and popular cultural manifestations of behavior. We are all part of the city, whether we physically live there or not.

In 2010, over 83 percent of Americans lived in a metropolitan area, which is an extended form of urban area that consists of a large politically defined **central city** plus all of the surrounding counties that contain **suburbs** economically interconnected with the central city. This population was concentrated into less than one-quarter of the U.S. land area. The New York metropolitan area is by far the largest with 19.6 million people, compared to second-ranked Los Angeles with 12.8 million and third-ranked Chicago with 9.5 million (Table 1.1). Eleven other metropolitan areas have between 4 and 7 million population: Dallas-Fort Worth, Philadelphia, Houston, Washington, Miami, Atlanta, Boston, San Francisco, Detroit, Riverside, and Phoenix. A total of 37 U.S. metropolitan areas have between 1 million and 4 million people. The top 50 metropolitan areas are home to more than half of the total U.S. population.

Among the 20 largest U.S. metropolitan areas (Table 1.1), the fastest growing between 2000 and 2010 were Riverside (29.8%), Phoenix (28.9%), Houston (26.1%), and Atlanta (24.0%). Some metropolitan areas with population more than 1 million grew exceptionally fast. Las Vegas and Raleigh, North Carolina each grew by an astonishing 41.8 percent, and Austin, Texas grew by 37.3 percent. Of the 20 largest metropolitan areas, Detroit lost 3.5 percent of its 2000 population, and Boston, Chicago, Los Angeles, and New York each grew at a very modest rate (<4.0%).

The importance of cities extends well beyond the demographic fact that most people live in and depend upon them. Noted urbanist Lewis Mumford wrote more than 75 years ago:

> The city, as one finds it in history, is the point of maximum concentration for the power and culture of a community. It is the place where the diffused rays of many separate beams of life fall into focus, with gains in both social effectiveness and significance. The city is the form and symbol of an integrated social relationship: it is the seat of the temple, the market, the hall of justice, the academy of learning. Here in the city the goods of civilization are multiplied and manifolded; Here is where human experience is transformed into viable signs, symbols, patterns of conduct, systems of order. Here is where the issues of civilizations are focused: here, too, ritual passes on occasion into the active drama of a fully differentiated and self-conscious society. (1938, p. 3)

What was true as Mumford looked back at the city in history is also true today. Cities, great and mundane, are sites of power and importance in almost every realm of life, including politics, economics, law, education, and culture. Richard Florida argued in his initial post on *The Atlantic Cities* blog (www.theatlanticcities.com) in 2011: "Cities are our greatest invention. They generate wealth and improve living standards while providing the density, interaction, and networks that make us more

Table 1.1 20 Largest U.S. Metropolitan Areas in Population, 2010, and Percentage Change, 2000–2010

Rank	*Metropolitan Area*	*2010 Population (in millions)*	*Percentage Change, 2000–2010*
1	New York, NY	19.6	3.3
2	Los Angeles, CA	12.8	3.7
3	Chicago, IL	9.5	4.0
4	Dallas-Fort Worth, TX	6.4	23.5
5	Philadelphia, PA	6.0	4.9
6	Houston, TX	5.9	26.1
7	Washington, DC	5.6	16.5
8	Miami, FL	5.6	11.1
9	Atlanta, GA	5.3	24.0
10	Boston, MA	4.6	3.7
11	San Francisco, CA	4.3	5.1
12	Detroit, MI	4.3	−3.5
13	Riverside, CA	4.2	29.8
14	Phoenix, AZ	4.2	28.9
15	Seattle, WA	3.4	13.0
16	Minneapolis-St. Paul, MN	3.3	10.5
17	San Diego, CA	3.1	10.0
18	St. Louis, MO	2.8	4.2
19	Tampa-St. Petersburg, FL	2.8	16.2
20	Baltimore, MD	2.7	6.2

Source: U.S. Bureau of the Census, 2010; compiled by authors

creative and productive. They are the key social and economic organizing units of our time, bringing together people, jobs, and all the inputs required for economic growth."

Bruce Katz and Jennifer Bradley point out in their recent book *The Metropolitan Revolution* (2013) how disproportionately important metropolitan areas are to the national economy. The 100 top U.S. metropolitan areas occupy only 12 percent of the nation's land mass, but house two-thirds of its population and are responsible for three-quarters of the national total economic output. They argue that metropolitan areas increasingly matter because they "embody concentration and agglomeration—networks of innovative firms, talented workers, risk-taking entrepreneurs, and supportive institutions and associations that cluster together in metropolitan areas and coproduce economic performance and progress. There is, in essence, no American (or Chinese or German or Brazilian) economy; rather, a national economy is a network of metropolitan economies" (Katz and Bradley, 2013, 1).

Even for those who do not care for them, cities deserve respect and a sincere effort at answering basic questions. What is it that brings human beings together in such concentrated agglomerations that we call cities, urban areas, or metropolitan centers? Why do humans, who throughout almost all of their history lived in small, often migratory groups of kinship tribes at low population densities, have only in the past eight or nine millennia come to cluster in large settlements? Why was it only around 1900 that the total U.S. urban population first exceeded 30 million, a figure easily surpassed today by metropolitan

New York and Los Angeles combined? And why is it that in 1920 the percentage of urban Americans first came to exceed 50 percent of the total U.S. population? And finally, why is it that more than 50 metropolitan areas in the United States and Canada with populations of more than 1 million people have emerged? What are these powerful, seemingly inexorable forces pulling human beings increasingly together in our metropolitan regions and at the same time pushing us apart in the suburbs? The purpose of this book, in large part, is to provide insight and answers to these fundamental questions of human settlement concentrations and diffusions.

How We Study Cities

There are many fields and disciplines that have an interest in understanding and studying the city. You may be majoring in one of these fields! In Figure 1.2, "The City" is depicted at the center of the image surrounded by multiple boxes with the names of academic disciplines. Each of these disciplines has a branch that studies cities. For example, there is a long tradition in Sociology of studying The City—urban sociology is one of the major subfields. Similarly, each of the other disciplines has an urban subfield. Some of these subfields have been around for a long time, like urban sociology, while others are more recent, like urban ecology, or the study of "environmental" systems in and as affected by cities.

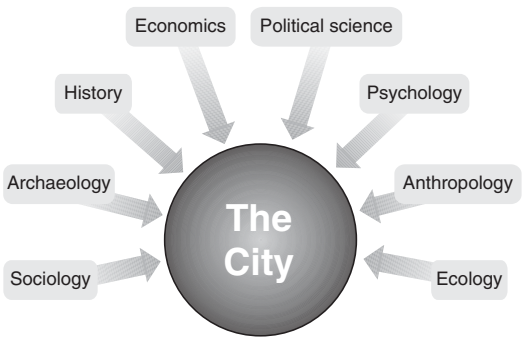

Figure 1.2 Since cities are such widespread and vital parts of contemporary human existence, many traditional academic disciplines have subfields that study cities. Urban sociology, for example, is a very important subfield of sociology present from the origins of the discipline. Urban ecology, or the study of how cities affect and are affected by nonhuman environmental processes, is a relatively new subfield. *Source*: Authors.

You will note that geography does not appear in Figure 1.2. This is because geography is a synthetic discipline, which means that geography's core concerns require knowledge produced by ALL of the other disciplines! The dimension across which geography synthesizes is space. Urban history is also something of a synthetic discipline that integrates across the dimension of time.

Figure 1.3 depicts Urban Geography at the center of the image, connected to the other disciplines with arrows that point in both directions. This means that urban geographers use information and knowledge produced by the other disciplines, but also that urban geographers produce knowledge and understanding that is used by the other disciplines.

In addition to the traditional disciplines that provide understanding of cities and urban systems, there are multiple applied disciplines that provide training in professions where people need to understand cities and/or want to change cities. First, urban planning is the most closely related to urban geography and can lead to careers in government or the private sector. Second, urban design and related professions like architecture, landscape architecture, and environmental design are also very closely related to urban geography—many students from these disciplines take urban geography. Third, public administration provides training for students who want to work in the public sector. While not all public administration relates to cities or urban areas, professionals with PA degrees often end up in jobs that have a great degree of impact over the urban environment. Fourth, the age-old maxim of real estate is "location, location, location." Given that urban geography provides great understanding of location within urban environments, real estate and development careers often provide opportunities to apply urban geographic knowledge. Fifth, engineering, civil engineering in particular, provides the practical skills that are

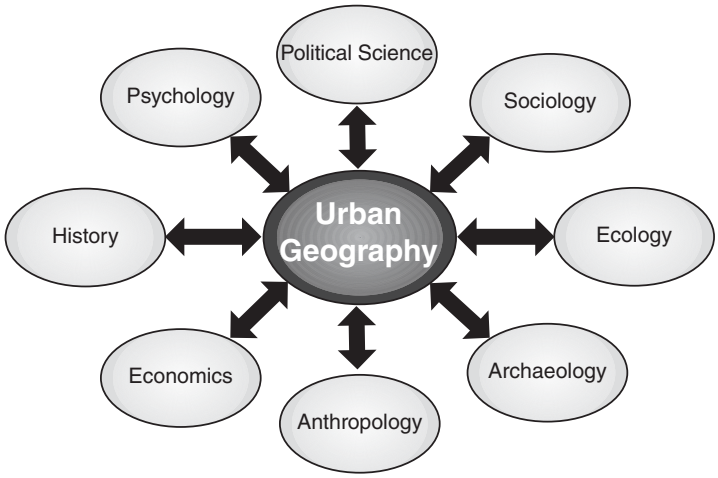

Figure 1.3 Urban geography is a synthetic discipline that draws from and contributes to a variety of closely related fields. *Source*: Authors.

needed in the construction and operation of urban environments. Sixth, there is a broad array of nongovernmental and nonprofit organizations (NGOs) that attempt to improve the city and its residents.

THE FIELD OF URBAN GEOGRAPHY

Our discussion so far shows how urban geography relates to other urban-focused disciplines, but we haven't been very specific yet about urban geography's core substantive concerns. Geographers broadly study both the world's physical and human environments. They explore how humans have altered and are currently altering our natural landscapes, our atmosphere, our water, and our soils. Whereas physical geographers examine landforms (geomorphology), long-term weather trends and patterns (climatology), and the natural and human-modified spatial distributions of plant and animals (biogeography), human geographers focus their attention on the location of people and their activities over geographic space. This locational focus may emphasize economic activities and behaviors, social and cultural features of human society, and political and power relations as expressed in places or over spaces (regions). Urban geography is typically thought of as a subfield of human geography, a subfield that studies cities or urban areas. Today, however, urban geographers are increasingly concerned with the interrelationship between cities and biophysical processes, and with concepts of sustainability and resilience, which represents a bridging between human and physical geography.

Urban geographers have centered their attention on the study of cities and metropolitan areas in two ways and at two scales. First, by stressing relationships *among* a system or group of cities at the regional, national, or global level, we adopt an ***inter*metropolitan**, or urban systems, approach. A satellite view of all of the city lights in the United States (Box 1.1) stimulates many questions about urban systems.

The second approach that urban geographers use highlights the internal locational arrangements of humans, activities, and institutions *within* metropolitan areas, known as an ***intra*metropolitan** approach. Our questions shift to how space is structured within cites: Where is the downtown business

BOX 1.1 Bright Lights, Big Cities

NASA has created a new composite of satellite images that depicts the intensity of light at night (Figure B1.1):

This image of the continental United States at night is a composite assembled from data acquired by the Suomi NPP satellite in April and October 2012. The image was made possible by the satellite's "day-night band" of the Visible Infrared Imaging Radiometer Suite (VIIRS), which detects light in a range of wavelengths from green to near-infrared and uses filtering techniques to observe dim signals such as city lights, gas flares, auroras, wildfires and reflected moonlight. (www.nasa.gov/mission_pages/NPP/news/earth-at-night.html)

The nation's largest metropolitan areas are clearly visible—New York, Chicago, Los Angeles, and Atlanta are labeled. See if you can find a city close to where you live. The image prompts the kinds of urban systems, or intermetropolitan location, questions that urban geographers like to ask. Why are the cities located where they are? Why are some cities larger than others? How did cities grow in the way they did? How do the cities interrelate with one another? If we had a similar image from 100 years ago, it would look much dimmer, of course, but some aspects of the basic structure and pattern of the system of cities would be similar. Why? The comparison would prompt us to ask, why have some cities, like Atlanta, grown as much and as rapidly as it has over the last 50+ years?

Another thing you should note on this image is what occurs between cities. Linear arrays of lights almost look like strings connecting the large metropolitan blobs. These are highways, which suggests that we think about the ways in which cities are connected to one another. These connections can be via transportation infrastructure like highways or airlines routes, but linkages can also be in form of money, or information, or culture. All of these questions illustrate our concern with urban systems—we will address these questions throughout the book.

It is interesting to note that this satellite image (when the colors are inverted) matches almost perfectly a detailed dot map—where each person is represented on a map by a dot—created from the 2010 census (http://bmander.com/dotmap/index.html#4.00/40.00/-100.00), which demonstrates the convergence of very different forms of data collection and analysis to reveal the extent and pattern of urbanization! There are features visible on the NASA image, however, that cannot be seen on the

district located? Where do rich people live? Where do black people and/or immigrants live? Why and to what consequence? How does the city work in terms of internal transportation, including roads and highways, public transit, railroads, and a variety of other modes of getting around the city? Some of the topics that we consider using this approach include land use/land cover, land value, the evolving character of the built environment, the nature and health of the local economy, the nature of the social structure and how that is reflected in the spatial pattern of the city, typically thinking in terms of segregation, and nature—how do cities alter nonhuman environmental processes and how do cities govern and respond to these environmental processes? The impacts of global climate change in general, and sea level rise in particular, are of increasing concern to many cities, for example.

At the same time that urban geographers may organize their analyses based on the scale or level of the urbanization process (by following either the intermetropolitan or intrametropolitan approach), they also differentiate their work by either studying a specific city (a case study) or cities in a specific region of the world (Russian cities, Arabic cities) or by examining topical issues (poverty, ethnicity) and attempting to fashion general explanations that apply to many cities in many regions. In this book,

dot map. The bridges crossing San Francisco Bay and Tampa Bay can be seen clearly in the NASA image, for example. Also, oil-drilling rigs along the Gulf Coast can be seen in the NASA light.

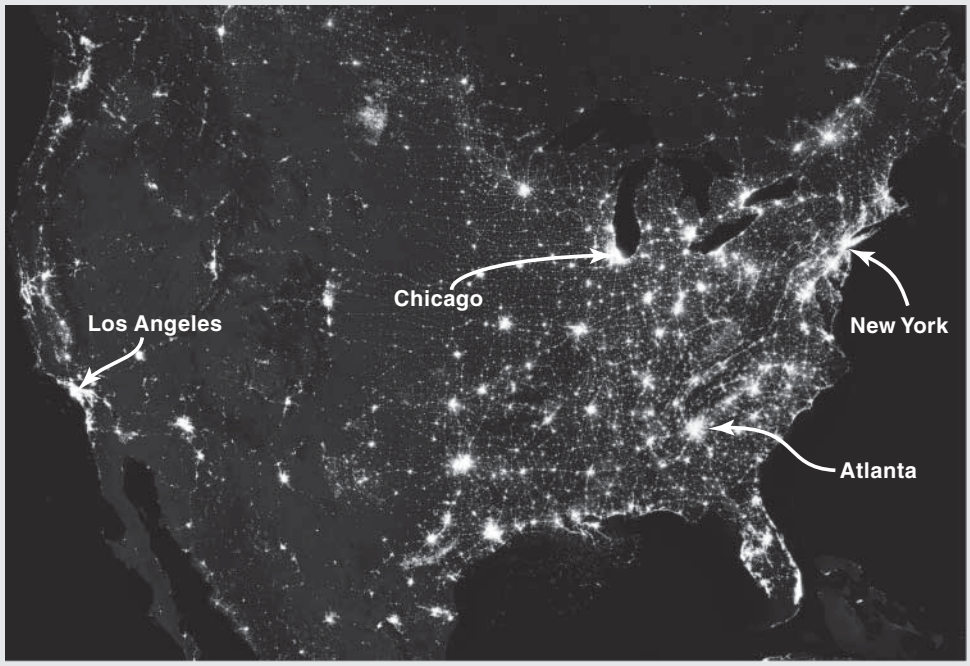

Figure B1.1 NASA composite of satellite images that depicts the intensity of light at night. *Source*: NASA Earth Observatory/NOAA National Geophysical Data Center. www.nasa.gov/mission_pages/NPP/news/earth-at-night.html.

Part II (Metropolitan Systems—Chapters 3–5) follows the intermetropolitan, topical approach (lower left quadrant of Figure 1.4); Parts III, IV, and V (Chapters 6–12) adopt the intrametropolitan, topical perspective (lower right quadrant of Figure 1.4), and Part VI (Cities Around the World—Chapters 13–15) pursues the regional tradition, utilizing both intermetropolitan and intrametropolitan viewpoints (along the top of Figure 1.4).

An important additional way that urban geographers study urban centers—whether at the intermetropolitan or the intrametropolitan scale—is by understanding the varying levels of interaction or linkages among places, either among cities or among places within cities (Figure 1.5). For example, consider a group of urban areas within a region that are connected via volume of truck traffic. Some centers, because of their size and proximity (interstate highways) to other centers, will experience a greater volume of traffic flows between themselves and the other centers. The volume of these flows is a measure of the **spatial interaction**, defined as linkages over space among the centers. Likewise, at the intrametropolitan level, traffic volume will vary among the different districts, again displaying various levels of spatial interaction.