HUMAN GEOGRAPHY

MARK BOYLE

A Concise Introduction

WILEY Blackwell

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About the Website

The *Human Geography: A Concise Introduction* companion website includes a number of resources created by the author that you will find helpful in using this book.

For Students:

- biographies of key authors in the field;
- links to further learning resources;
- student tutorial exercises;
- bonus Zoom-in Boxes.

For Instructors:

- additional essay-style exam questions;
- a multiple choice exam paper;
- PowerPoint slide lectures for each chapter.

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Take up the White Man's burden
Send forth the best ye breed
Go send your sons to exile
To serve your captives' need
To wait in heavy harness
On fluttered folk and wild
Your new-caught, sullen peoples,
Half devil and half child.

Rudyard Kipling (1899) The White Man's Burden:
The United States and the Philippine Islands

O wad some power the giftie gie us
To see oursels as ithers see us!
It wad frae mony a blunder free us,
An' foolish notion:
What airs in dress an' gait wad lea'e us,
An' ev'n devotion.

Robert Burns (1786) To a Louse: On Seeing
One on a Lady's Bonnet, at Church

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Acknowledgements

From conception to delivery this book took 20 months to complete. In reality it bears the traces of a lifetime of living and learning.

I count myself fortunate to have been introduced to Human Geography by some of the most inspirational instructors in the discipline. From the outset, at secondary school in Motherwell in Scotland I learned much about matters pedagogical by studying the infectious enthusiasm and towering personality of my Geography teacher, Brian Keown. My passion for the subject was nurtured by staff who taught on the BSc in Geography course at Glasgow University (1984–1988), including Ian B Thomson, who provided me with an unrivalled introduction to the Human Geography of France, John Jowett, a deep-thinking expert on India and China, Ronan Paddison, a peerless lecturer in Political and Urban Geography, Allan

my wife Deborah and sons Patrick and Joseph. In so many ways, their contribution to my personal and professional well-being is inestimable. They have yet to catch the Human Geography bug, or at least the virulent strain to which I have fallen prey. Undoubtedly, my overbearing enthusiasm to share my reading of the surrounding landscape with them during family holidays has furnished them with an impregnable immune system. Perhaps this might be the book to bring the fever on! In the meantime I say to them simply *Go raibh maith agaibh.*

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Mark Boyle
Maynooth, June 2014

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Preface

For Whom This Book Is Written and Why

The aim of this book is to provide undergraduate students who are embarking upon Geography programs in universities throughout the world with a concise introduction to Human Geography.

It is my view that all students completing a three- or four-year program of study in Human Geography should emerge with an understanding of the fundamental ideas, debates, concepts, and theories in the discipline, informed both by an appreciation of seminal texts and thinkers, and by current thinking and research. They should present themselves as imbued with and practiced in the basic intellectual skills of analysis, synthesis, reflection, and critical thinking. They should be intellectually responsible, adaptable, curious, and creative, and ready to begin the job of taking responsibility for their own learning. They should show an appreciation of the contribution of Human Geography to the formation of informed citizens, display an interest in ethics, and be prepared to formulate views on social, economic, cultural, technological, and environmental actions which both threaten and support the public good. Ideally, they should also emerge with a well-rounded appreciation of the breadth and richness of human knowledge and a recognition that Human Geography has much to gain by engaging with perspectives, theories, concepts, and methods in cognate disciplines.

A tall order indeed! Evidently much responsibility falls upon the shoulders of the Human Geography instructor. The question that presents itself here is how far an introduction to Human Geography should go toward preparing students for the journey that lies ahead. The response of this book is significantly far and perhaps farther than some existing introductory texts and introductory modules might imply.

For over 10 years now, I have taught semester-long "Introduction to Human Geography" modules to first year students at the University of Strathclyde in Glasgow, Scotland (circa 150 students a year) and the National University of Ireland, Maynooth in County Kildare (circa 430 students per year). In so doing I have come to realize that there already exists a historically unprecedented range of high quality introductory

textbooks in the field of Human Geography. But still I have felt compelled to write this book. Why so? Part of the answer resides in my belief that there is scope for introductory books to do better in three main areas:

a) Content should always be prioritized over aesthetics and spectacle. Some textbooks provide students only or mainly with a tsunami of colorful illustrations, facts, figures, and case studies and suffer from what might be termed "bells and whistles" syndrome. Whilst short, this book will not patronize students. Alongside case study illustrations, it will address concepts, ideas, and debates that are often avoided in introductory courses because they are difficult to summarize in a basic and digestible form. It will introduce students to seminal thinkers and influential texts. This will be a short book with sophisticated ideas communicated clearly and concisely.

b) Students learn best when a book has a strong organizing framework. It is said of some books that the whole is greater than the sum of the parts. But in some textbooks it is the parts themselves that are greater than the whole. This is perhaps because few introductory courses are taught by a single scholar and few introductory textbooks are written by a single author. Clearly, multi-contributory textbooks have a number of advantages. But there can be difficulties too; writing styles are often disparate and jar, concepts are sometimes used differently in different chapters, and chapters aren't always knitted together well enough. The result is that less confident students become disoriented. Penned by a single author, this book will be written with a clear organizing framework in mind. At the heart of this framework is the argument that history makes Geography. Central to this book is the claim that Human Geography is best introduced in and through the story of the rise, reign, and faltering of Western civilization from the fifteenth century. In an important way, to study the principal demographic, social, political, economic, cultural, and environmental processes which are unfolding in any region of the world today is to study how that region has figured and does figure in the story of the emergence, reign, and dethroning of the West. Each of the chapters will put flesh on the skeleton that this organizing framework provides

c) Some of the best human geographical writing can be found in related subjects such as Sociology, Anthropology, Political Science, International Relations, Economics, Regional Studies, Archaeology, Cultural Studies, Environmental Science, and so on. Human Geographers address the core social, political, economic, cultural, technological, and environmental challenges that will confront humankind in the twenty-first century. In so doing they draw from and contribute to cognate subjects in the social sciences, humanities, and even the sciences. Any introduction to Human Geography will fail in its mission if it refuses to cast its net wider than literature that is narrowly defined as "Human Geography." Indeed, to limit coverage thus would be to fail to report on some of the most exciting directions human geographical research is taking today.

Although not the first book to register and respond to these concerns, this book is perhaps unique in terms of its commitment to fostering student engagement with seminal thinkers and their ideas; its privileging of an overarching narrative and in particular a narrative that takes a historical perspective and that recognizes the ways in which the rise, reign, and faltering of Western civilization has forged the world in which we live today; and its insistence that Human Geography is practiced by many disciplines and not just by Human Geographers. To further differentiate this work from existing books I argue that there exists a need to complement existing long(er) introductions with a short(er) introduction. Whilst providing wonderfully broad panoramic overviews of Human Geography, some existing texts can prove too long and daunting for beginner undergraduates and some can overwhelm students who are only learning how to read an academic book for the first time. This book will be written in an economical way; tight, concise, crisp, and with a brisk pace. It will attempt to present students with a distilled introduction, cutting through the vast terrain of Human Geography, separating the wheat from the chaff, and furnishing students with an appreciation of the most essential ideas, debates, and case study examples.

Locating Seminal Thinkers

As you will discover in this book, Human Geography is a child of Western civilization and as such has developed thus far largely as a quintessential Western academic subject. In many ways, Human Geography continues to bear the stamp of its emergence in and through the rise of the West from the fifteenth century, its embroilment in the West's dominance of global affairs for over 500 years, and its entanglement in the West's faltering in the twentieth and twenty-first centuries. Reflecting its origins and center of gravity, primarily this book will provide you with an introduction to Western and in particular Anglo-American thinkers, ideas, and debates. But it also considers one of its duties to be to help you to achieve a greater consciousness of the origins and limitations of the approaches to which you are being introduced. A variety of strategies are used throughout the book to assist you, and a concluding chapter will explicitly address the question of the virtues and vices of the Western centricity of much existing human geographical writing. Here though, you might like simply to note that this book will explicitly identify the nationality and occupation of the various authors whose work is under discussion. Where authors have significant and formative ties to various locations (place of birth, place of past and present residence, etc.) and subjects (Geography, Sociology, Anthropology, Political Science, International Relations, Economics, Regional Studies, Archaeology, Cultural Studies, Environmental Science, and so on) these multiple locations and specialities will be noted.

Some will find this tagging of seminal thinkers helpful whilst others will find it irritating. Whichever camp you are in, you would do well to pause from time to time throughout the book to reflect upon the ways in which the background and education of key scholars in the discipline have helped shape their ways of making sense of the world.

Learning Supports

To assist instructors and students, this book has incorporated a number of learning supports. Use of these learning supports will help you to make the most of the book.

Chapter Learning Objectives and Checklist Of Key Ideas: To clarify for students the core points to be alert to, each chapter will begin with a box summarizing "Chapter Learning Objectives" and will end with a "Checklist Of Key Ideas." Of course, these boxes will cover only the bare bones and it is hoped that you will learn much more besides. But they will provide you with a useful initial orientation as to what is expected and what ought to be given preferential attention.

Zoom-in Boxes: Throughout each chapter you will encounter a number of clearly focused "Zoom-in Boxes." These boxes are designed to aid your understanding in four principal ways. First, some Zoom-in Boxes will incorporate content that merits more detailed illustration, elaboration, and commentary than is possible within the main body of the text. Second, other Zoom-in Boxes will provide you with a guided tour of some of the most important, seminal books in the discipline. Third, given that learning is sometimes assisted by provocative quotes from leading thinkers, which stimulate reflection and deeper insight, a number of such quotes will be included in yet other Zoom-in Boxes. Finally, a group of Zoom-in Boxes will include a series of case study examples to illustrate important processes and patterns.

Chapter Essay Questions: Each chapter will conclude with a list of three essay questions students should be able to attempt having read the chapter. The completion of these essays will enable you to gauge how far you have understood the contents of the chapter and are able to engage critically with the material contained therein.

Want to read more? Students will find a list of references cited in the text at the end of each chapter. In addition, to support those who are keen to read more, at the end of each chapter students will find guidance on further reading. To ensure that you are not overwhelmed, only a selective number of key readings will be included.

Glossary: A number of key technical terms will be used throughout the book. The meaning of these terms will most often be explained in full in the main text. Nevertheless, to assists students to better understand and further clarify particularly technical terms, a glossary (organized alphabetically) has been included at the end of the book. Terms included in the glossary will be marked in bold when they are first mentioned in each chapter.

Internet learning resources: This book is supported by a parallel collection of internet learning resources. Here instructors and students will find bonus Zoom-in Boxes, more biographical information on the key authors cited in the book, guidance on supplementary websites of relevance, multiple choice self-test quizzes, further essay-style questions, tutorial exercises, and PowerPoint lecture slide presentations for each chapter.

Nomenclature on Dates

This book frequently references key dates in human history. When surveying a long sweep in human history, the titles MYBP and BP are used to refer to Million Years Before the Present Day, and Before the Present Day, respectively. When surveying recent developments in human history the title Common Era (CE) will be used.

Although based upon the Gregorian Calendar CE is preferred because it is less invested with Western and Christian connotations and is therefore open to more universal adoption. Readers should note that CE is equivalent to Anno Domino (AD), whilst BCE, which stands for Before the Common Era, is equivalent to Before Christ. 500 BCE is equivalent to 500 BC, whilst AD 500 is equivalent to 500 CE.

Finally … A Pre-departure Safety Briefing

I have found from first-hand experience that not enough students show evidence of reading in their final examinations. This lament would appear to be widely shared; if I had a Dollar, Euro, Pound, Yuan, or Yen for every time I have heard colleagues from around the world complain that their students don't read enough, lack critical thinking skills when reading, fail to read independently, show insufficient or no evidence of reading in assignments, and progress to later years of study insufficiently equipped, I would be a very rich man! Here we are forced to confront what appears to be a generational issue with complex roots. Perhaps because of prior educational experiences, perhaps because of the busy lives we all live, or perhaps because the internet provides a deluge of information at the touch of a button, students today are inclined to read in ways that encourage rote learning, the memorizing of facts, and the regurgitation of case studies. The result is that even when they engage with textbooks students often complete modules with a bank of facts and a coterie of examples but an insufficient grasp of the core concepts and key debates in the discipline, and the contributions made by pioneering thinkers and classic texts.

The optimum outcome of any university program is a student community which has learned how to learn, that is, which feels empowered to learn over the longue durée, well after university life has finished. Perhaps as you read the pages which follow you might consider US educationalists Richard Paul and Linda Elder's (2001: 4) definition of critical thinking as "thinking about your thinking while you're thinking in order to make your thinking better." For Paul and Elder (2001: 4) Critical thinking is in essence "self-directed, self-disciplined, self-monitored, and self-corrective thinking." In their book *The Aspiring Thinker's Guide to Critical Thinking* (Elder and Paul, 2009), Elder and Paul set out six stages which students need to pass through if they are to learn to read independently and become critical thinkers: the unreflective thinker stage; the challenged thinker stage; the beginning thinker stage; the practicing thinker stage; the advanced thinker stage; and finally, the accomplished thinker stage. Of course, many (but by no means all) students enter university already at least at the beginning thinker stage. But no matter from what stage you depart, room for improvement always exists:

- *The unreflective thinker stage*: Unreflective thinkers act without thinking, that is, they are unable to reflect introspectively about their thinking practices and how these thinking practices are informing their actions. When their actions go awry they lack the ability to recognize that it is their flawed thinking that is the underlying cause of their woes.
- *The challenged thinker stage*: Confronted by mounting evidence that the problem is them and not others, unreflective thinkers eventually register that thinking plays a determining role in their lives and that their thinking itself needs to be placed under scrutiny.

- *The beginning thinker stage*: Recognizing that they have basic problems with their decision-making processes, evaluative capacities, and judgment, beginning thinkers make initial efforts to better understand how they can assume control over and work to improve their thinking practices. Lacking any insight into their thinking practices, however, beginning thinkers find it difficult to modify ingrained bad habits.
- *The practicing thinker stage*: Practicing thinkers recognize not merely that their thinking practices are deficient but that they need to tackle these deficiencies systematically through a coherent plan. They develop a set of habits and routines which help them to recognize, monitor, and rectify thinking that is biased, lazy, egocentric, and lacking in neutrality.
- *The advanced thinker stage*: Advanced thinkers are thinkers who have mastery over their critical thinking faculties and who are able to place under heightened surveillance their thought processes and decision-making processes. Critical thinking remains a learned activity though; forced and unnatural and yet to become internalized and intuitive.
- *The accomplished thinker stage*: Accomplished thinkers are thinkers who not only assume deep, systematic, and robust ownership of their thinking practices, but who in addition continually monitor, revise, and rethink strategies for improving the quality of their thinking. Accomplished thinkers have significant control over egocentric thinking and eventually think rigorously, independently, and critically as a matter of routine.

This book issues you with an open invitation to think critically, read independently, and learn deeply. This is not a tome to be toiled over sentence by sentence, memorized, and regurgitated, simply to pass an exam. Moreover, you will do this book – and, more importantly, yourself – a disservice if you attempt to skim-read it for surface headlines or subject it to a smash-and-grab raid by plucking ideas from this or that page, out of context. Of course, it is unlikely that you will become an accomplished thinker in the early years of your undergraduate course. But you will benefit most if you approach this text as an opportunity to practice your thinking skills and to learn how to learn about Human Geography; to become, in other words, a practicing thinker at the least, if not an advanced thinker. By all means, mark key sections with color pens, write notes on pages that invite you to express an opinion, scribble reactions to arguments, underline key terms and definitions, and cross-reference materials from different chapters that, in your view, raise interconnected issues. In other words, feel free to deface this book with purpose! In my experience too many textbooks are sold on to students in later years seemingly unopened and in pristine condition. My plea to you is to make this book an exception.

References

Paul R and Elder L (2001) *The Miniature Guide to Critical Thinking: Concepts and Tools* (Foundation for Critical Thinking, Dillon Beach, CA).

Elder L and Paul R (2009) *The Aspiring Thinker's Guide to Critical Thinking* (Foundation for Critical Thinking, Dillon Beach, CA).

Chapter 1

A Concise Introduction to Human Geography

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:
1) awaken your sense of curiosity about the world beyond your doorstep and gain a new awareness of your own geographical imagination;
2) provide a working definition of Human Geography and identify the five central concerns of Human Geography;
3) recognize the importance of the rise, reign, and faltering of the West from the fifteenth century in the making of the contemporary world;
4) understand how this book is structured and reflect upon how you might approach the task of reading and digesting it.

Introduction

In the twenty-first century humanity will be forced to confront a number of questions of epic significance. How many people will exist on planet earth in the year 2100 and where will these people live? Can the earth support continued population and economic growth? Is climate change really happening and what might its consequences be? How can societies make better usage of renewable energy resources? Why are **natural hazards** seemingly occurring with increasing frequency and why do they tend to affect vulnerable people dwelling in poorer countries most? Why are cities across the world expanding so rapidly and what are the implications of this rapid urbanization of the earth's surface? Why are people migrating in ever-larger numbers, where are they moving from and to, and what might the consequences be for both sending and receiving countries? Why do cultures clash with one another and how might intercultural understanding and dialogue be promoted? Will the world in future be governed by supranational entities like the European Union instead of **nation states**? Will the **Brici countries** oust the United States and become global economic leaders by the end of this century? Will the blight of world poverty finally be ended by 2100?

If these questions exercise your mind too then congratulations! You have made a good start already by choosing to study Human Geography. In this book you will discover the ways in which Human Geography's unique take on the world makes it singularly well placed to contribute insights and perhaps even on occasions solutions to the grand challenges facing humankind today. You will also be invited to view Human Geography itself as a work in progress and to reflect upon the ways in which the subject needs to develop in future if it is to continue to make sense of an ever-changing and complex world.

The purpose of this book is to provide you with a concise introduction to Human Geography. The objective of this opening chapter is to encourage you to become more conscious of your own mental map of the world, to provide you with a working definition of Human Geography and an understanding of Human Geography's five key concerns, and to introduce you to the overarching explanatory framework around which this book is written.

Becoming Conscious of Your Geographical Imagination

Indulge your imagination for a second and try to visualize the sorts of people, places, and landscapes you might encounter were you to embark upon a whirlwind tour of the world. What do you see in your mind's eye? Try to imagine that you are now in some of those locations. What is your sense of the places you are visiting? If you have a vivid imagination perhaps you will be able to convince yourself that you can actually smell, touch, taste, and hear, as well as see certain places? Perhaps your virtual voyage has even stirred within you a renewed sense of wonderment, puzzlement, and intrigue about the arrangement, texture, shape, and color of the varied human landscapes that mark the face of the earth.

The purpose of this exercise is to force you to flex what might be called your **geographical imagination**, that is, it has forced you to think more consciously

about the different ways in which human beings have occupied the surface of the earth in different parts of the world. If you have found this exercise fun and enjoyable then it is likely that you possess the kind of curiosity that will make you a good human geographer. It is the aspiration of this book to further cultivate this curiosity. If you have found this exercise relatively easy then it is likely that you already enjoy a well-developed geographical imagination. This book will help you to become more conscious of this imagination and assist you to reassess and to strengthen it.

For now, the accuracy or otherwise of your mental map of the world and the specific itinerary you followed during your imaginary tour is not of especial importance. As you read this book, nevertheless, you might find it illuminating to reflect upon your choices and descriptions (see Zoom-in Box 1.1). Why did you make the selections you did? How do you visualize places beyond your own doorstep? Are your choices and descriptions strictly personal? Does it matter that you are looking at the world from a particular location? If so, how does your present location affect your "ways of seeing" or perceptions? Is it possible to overcome such bias and to look at the world as a neutral? Does it matter? If so, why?

Zoom-in Box 1.1: From Where Do You View the World?

For a number of years now I have asked students embarking upon introductory courses in Human Geography at universities in both Scotland and Ireland to choose places that interest them from around the world and then to describe their sense of these places. A rich variety of images are normally conjured up without pause for reflection. Some of the more memorable include:

- the quiet solitude enjoyed by isolated hamlets in Nuuk in Greenland;
- the rich bounty yielded in the regimented and rustic colored plains of the Canadian prairies;
- the chaotic hustle, bustle, and din of impoverished and overcrowded Delhi;
- the plume of pollutants filling the Valley of Mexico and enveloping Mexico City;
- nomads trekking silently and skillfully through parched sand dunes in the Saharan desert;
- the lucrative palm oil plantations in hot and humid Malaysia;
- flooded paddy fields in Vietnam drowning rows of rice arranged neatly in series;
- feverish factories, manufacturing for the world, in Guangzhou and Shenzhen in Southern China;
- salubrious shopping malls in Dubai and Abu Dhabi;
- skyscrapers towering proudly over Manhattan Island in New York City;
- gigantic rows of stacked shipping containers lining the industrious port of Rotterdam;
- traumatized refugees glancing nervously through wire mesh fences in makeshift refugee camps in the horn of Africa;

(Continued)

Box 1.1   (*Continued*)

- the spectacular Three Gorges Dam hued into the rugged valleys that contain the Yangtze River;
- Mecca, Saudi Arabia, thronged with pilgrims during the Hajj;
- large clearances in the Amazonian forests created by the brutal lancing of swathes of tropical rainforest;
- spiritual vibrations emanating from Uluru (Ayres Rock) in the vast and empty Australian outback.

Did any of these destinations make it on to your list too? Most of the students completing this exercise identified themselves as British, Scottish, or Irish. Do you think that their backgrounds made any difference to their choices and descriptions? If so, how and why? Reflect now on your choices and descriptions. Are these strictly personal to you? In what ways might your past and upbringing have played a role?

What is Human Geography?

Human Geography is a branch of knowledge which *seeks to venture descriptions of and explanations for the uneven distribution of human activity across the surface of the earth.* Or to phrase it slightly differently, Human Geography *seeks to describe and explain variations from place to place in the ways in which human beings have inhabited the face of the earth.* According to the National Council for Geographic Education and the Association of American Geographers' *Guidelines for Geographic Education, Elementary, and Secondary Schools* (Lanegran and Natoli, 1984), Human Geography is built around five key concerns: location, place, interactions between people and the environment, movement, and region. These five themes provide beginner undergraduate students too with a good introduction to Human Geography's anchor ideas.

Location: How are human activities distributed across the face of the earth? Human beings and human activities (for example industry, agriculture, cities, political boundaries, and populations) are rarely scattered randomly over the earth's surface. Human geographers believe that there is an order to the uneven ways in which human beings have inhabited the planet. A simple glance at a satellite image of the earth at night quickly reveals that humans have occupied the world in uneven ways (Plate 1.1). Some areas are densely populated, others less so. Human activity is concentrated in some areas and dispersed widely in others. One pattern develops here, another there. Human geographers pinpoint places by referring to their **absolute location** (for example, their latitude and longitude) and their **relative location** (for example, whether they are near to or far from other places). Human geographers are also interested in the ways in which the distribution of human beings and their activities change over time. There can be a drift to the north, south, east

Plate 1.1 Black marble: Europe, the Middle East, and Africa by night. Source: NASA Worldview.

and/or west. **Centrifugal forces** can drive human beings together and create clusters, concentrations, and agglomerations whilst **centripetal forces** can disperse human beings and distribute human activities over a wider area. Patterns can dissolve and recrystallize.

Place: What is it like in particular locations? Human geographers are also interested in finding out what locations are actually like to live and work in and to visit. How have human beings converted this or that patch of the earth's surface into a home? Human geographers examine how human culture (population, economy, government, race, religion, ethnicity, class, gender, language, and so on) develops differently in different places. They believe that human beings attach emotions, significances, and values to places and in so doing turn empty locations and environments into intensely meaningful places. They use the idea of the **cultural landscape** to capture the ways in which human cultures etch their imprints onto the face of the earth. For context, human geographers are also interested in the physical characteristics of places including the geological, hydrological, atmospheric, and biological processes which collectively define the local physical environment.

Human/Environment Interaction: What is the relationship between humans and their environment? In making earth home, human beings necessarily enter into relationships with the natural environment. Societies exist by metabolizing resources from their surrounding natural environments and in so doing create an **ecological footprint**, but natural environments, and in particular environmental hazards, exert a reciprocal influence over their trajectories. Human geographers examine how societies use natural resources (for example, soils, water, oil, and minerals), how in so doing they often pollute the environment (for example, effect climate change, poison rivers, and salinate soils), and how natural hazards

(such as earthquakes, tsunamis, hurricanes, floods, and droughts) can become social, political, economic, and cultural disasters.

Movement: How and why are places connected with one another? Societies are increasingly becoming interconnected with one another, meaning that it makes sense to study places only in relation to the wider networks in which they are enmeshed. Human geographers use the idea of diffusion to track the spread of humans and their activities and ideas from a particular origin or a hearth. Relocation diffusion refers to the physical relocation of people (migrants, refugees, and tourists), pollutants, trade, capital, disease, and aid, from a central hearth. Expansion diffusion refers to the spread of an idea, piece of information, or culture from one place to another. Interconnections between places are often structured around power relationships which are hierarchical. Often one place meddles in the affairs of another motivated principally by self-interest. As places interact a **hierarchical network** often forms, in which only dominant places (or command and control nodes) get to orchestrate the direction of movements.

Regions: How and why is one area similar to another? Human geographers often group places that share particular characteristics into larger regions. Regions can vary enormously in **scale**. Regions can be formal, functional, or vernacular. Formal regions are those that are designated by official boundaries, such as countries, local authorities, states, counties, and parishes. Functional regions are those that are held together by social and economic processes; for example, major cities are often said to be part of a wider functional region that includes suppliers, customers, and workers drawn into the life of the city from the hinterland. Vernacular regions are regions that exist principally in the imagination. They may lack any official status but nevertheless they are popularly imagined to exist as powerful entities; examples include the West, Asia, the Islamic world, the Baltic countries, the Caucuses, Latin America, and so on.

We might say, then, that the mission of Human Geography is to describe and explain how and why human beings locate themselves and their activities unevenly over the earth's surface, create distinctive places, generate various kinds of ecological footprints, connect places into webs and networks, and invent regions of various scales (see Zoom-in Box 1.2).

The Rise, Reign, and Faltering of Western Civilization from the Fifteenth Century in the Making of the Modern World

The mission of Human Geography is to describe and explain variations from place to place in the ways in which human beings have inhabited the face of the earth. But how might one go about making sense of these variations? What explanatory frameworks might guide us? Although one of the first books of this ilk to be written for beginner undergraduates, this book forms part of a growing tradition of human geographical writing which places front and center the role of the rise, reign, and faltering of Western civilization from the fifteenth century in the making of the world.

Zoom-in Box 1.2: Five Key Themes in Human Geography: The Case of London

A useful way to become more familiar with the five key themes in Human Geography is to apply them to particular places. Start with the place you call home and then – if different – the place you are currently studying in. How might you use the five key themes to make sense of the Human Geography of both places? In what ways might the ideas of location, place, human–environment interactions, movement, and region help you to gain a better appreciation of these places? Practice your technique by undertaking similar exercises for places that interest you.

By way of example let us take the case of London, in the United Kingdom.

Location: London is located in the South East of England and its absolute location is Latitude 51°30′30″ N and Longitude 0°07′32″ W. London's relative location can be defined in terms of its embroilment in the Age of European Empire, its relationship (as a capital city) to the rest of the United Kingdom, its proximity to the European Union, and its location with respect to the global economy.

Place: London is located in the temperate lands of the Global North and enjoys a mild climatic regime which is neither too cold nor too hot during any season, nor normally too dry or too wet. It is a city with approximately 8.3 million inhabitants. The landscape, urban design, iconic buildings, and majestic parks speak of London's role as former capital city overseeing the British Empire. As home to the British Parliament, London remains a key political center and site of power. Recently, it has consolidated its status as a leading financial center in the world economy, housing the largest banks, pension funds, and insurance companies, and a globally significant stock exchange. But like any global city, London has its fair share of low paid, poor, and underprivileged communities, many of whom work as unskilled laborers in the service industries.

Human–Environment interactions: As a world city with a surging economy and large population, London has an enormous ecological footprint. London is a thirsty city and draws water primarily from the River Thames and the River Lea. Antiquated infrastructure, however, ensures that supply systems are beset by wasteful leakages. Notwithstanding the comparative decline in recent years in the manufacturing industry and growth in the service industries, as the engine in the United Kingdom economy London still produces a significant quantity of greenhouse gases. Air pollution remains a problem. Moreover, London secretes enormous amounts of waste; currently London recycles and reuses nearly two thirds of all its waste but alas less than a quarter of **Municipal Solid Waste (MSW)** is recycled or reused. Landfill and incineration continue to be overused solutions and present environmental risks. London remains at risk from flooding but

(*Continued*)

> **Box 1.2**   (*Continued*)
>
> flood defense systems introduced along the River Thames have to an extent mitigated these risks.
>
> *Movement*: London is a key node in large-scale flows of people, trade, culture, information, investment, and finance. London plays a command and control role in networks of global finance, connecting with other leading financial centers around the globe and lending to and trading on behalf of capitalists and governments based in economies all around the world. London houses migrants from the four corners of the world. These migrants bring with them cultures which enrich the life of the city. They also stay connected with their countries of origin (through remittances, social media, visits, investment, philanthropy, voting, etc.) making London a point of origin for complex transnational flows. Londoners also consume products from around the world, and these goods are shipped in through British ports and routed through airports via a restless supply chain. Finally, with world-class airports and attractions such Buckingham Palace, Big Ben, and the Houses of Parliament, London is a magnet for tourists.
>
> *Region*: London forms part of a number of regions of different scale, including Greater London, England, the United Kingdom, the European Union, the British Commonwealth, and finally the West.

To some this starting point might appear a little strange. This is, after all, a book about Human Geography and not human history. That is until it is realized that it is impossible to make sense of how human beings have inhabited the surface of the earth (their location and distribution over the earth's surface, the places they have crafted, their ecological footprints, the movements, webs and networks they have contrived, and the regions they have willed into existence), without paying attention to the West's ascent to the pinnacle of world history from the fifteenth century, its subsequent supremacy for over 500 years, and its precarious dominance over global affairs today. In important ways, it remains the case that to study the historical development of any world region, including its principal demographic, social, cultural, economic, technological, political, and environmental features, is to study how that region figured in the story of the rise, reign, and faltering of the West as a global superpower (see Zoom-in Box 1.3).

We will certainly have cause to question the integrity and coherence of the very idea of "Western civilization" throughout this book. Indeed, arguably there is no more slippery a word in the English language than the "West." There are, it seems, as many "Wests" as there are commentators. But this should not stop us from recognizing that from the fifteenth century a number of dramatic intellectual, social, cultural, political, and economic changes coalesced in Europe and propelled European, and then later other countries, to a position of global dominance. These changes were given first life by the European Renaissance, the

Zoom-in Box 1.3:   Denis E Cosgrove's Plea for Historical Understanding

Denis E Cosgrove was a British historical and cultural geographer. His core concern was with the history of Western ways of thinking about landscapes, regions, and places – and in later years the whole of planet earth. His musings focused initially upon cultures in early modern Europe (1450–1650 – his early work, for instance, sought to understand landscape design, depiction, and modification in sixteenth-century Renaissance Venice) but toward the end of his life his focus broadened to include cultural imaginings in twentieth-century Rome and to twentieth-century popular cultural images of the globe. This led him to an awareness of the role of the ascendance of the West, and in particular the European capitalist economy, in the making of popular views, perceptions, and images of regions, places, landscapes, and eventually the globe itself.

According to Cosgrove, the rise of the West was a world historical event that ought to be central to geographical enquiry. Consider his opening remarks in his 1984 book *Social Formation and Symbolic Landscape*:

> Between 1400 and 1900 much of Europe and the society it founded in North America were progressing towards a characteristic form of social and economic organisation which we now term capitalist. … In developing a capitalist mode of production Europeans established and achieved a dominance over a global economy and a global division of labour which remains a critical determinant of our present social and economic geography. The European transition from societies dominated by feudal social relations and their associated cultural assumptions to capitalist centrality in a worldwide system of production and exchange is a phenomenon of central historical importance in making sense of our own world. We understand a great deal about many of the fundamental features of the change: its associated demographic trends, alterations in agricultural and commodity production, the political reorganisation of peoples and territories, and the changing relations between individuals, groups, and classes. Whatever the specific focus of historical attention, it is the internal reorganisation and outward expansion of European societies, gathering pace throughout the period, which insistently compels historical enquiry and demands historical understanding. (Cosgrove, 1984: 2–3)

Like Cosgrove, this book too insists that historical enquiry is central to Human Geography. Like Cosgrove, it too argues that to understand the Human Geography of the world today it is necessary to study the ways in which the rise of European society from the fifteenth century has profoundly shaped (but clearly not determined) the fate of all world regions. This book seeks to convince you that Cosgrove's view of the world remains as relevant and vital today as it did in 1984.

Protestant Reformation, and the Age of Reason or European Enlightenment. They bore witness to the rise of European modernity and a new tradition of Western **utopian** thought. At Westphalia (in Germany) they stimulated the formation of sovereign nation states and, through the Age of Revolutions, witnessed the rise of liberal democracy (where political rulers are voted in and out in free and open elections and on the basis of mass enfranchisement). At their heart were the development of free-market capitalist economic systems (based upon private ownership of property and systems of production, distribution, and consumption), the industrial revolution, and the rise of a global capitalist economy. Through the European Age of Exploration and the Age of European Empires, they presided over the rapacious march of European countries to the four corners of the world.

As these developments unfolded, a number of powers (incorporating countries we recognize today as Portugal, Austria, Belgium, France, Germany, Italy, the Netherlands, Spain, Russia, and the United Kingdom) steadily broke from the pack and collectively climbed to the summit of world history. For 500 years these countries came to dominate world affairs. Through exploration, colonization, and exploitation of Latin America, Asia, Africa, Australasia, and the Polar Regions, they expanded their prowess and exerted their will over the entire world. The fate of other civilizations became inextricably intertwined with their fate. Through mass emigration from Europe to the New World, they were subsequently to be joined, and in some instances trumped, by their offshoots, the newer Western countries of the United States, Canada, Australia, and New Zealand. Meanwhile, from the eighteenth century, and under the influence of the Netherlands, Japan began its Datsu-A Ron ("leaving of Asia" or "Good-bye Asia") and became Asia's leading pioneer of **Occidentalism**. Thereafter through all sorts of complex and tortuous routes, and to varying degrees, other countries too embraced the ways of the West.

From the mid-twentieth century onward the ascent of the West began to peter out and, indeed, according to some, the West began to degenerate. Perhaps the most visible sign of the West's reversal of fortunes was the collapse of the European imperial project. **Decolonization**, which had begun in Latin America from the late eighteenth century, swept across Asia and Africa, and Europe was forced into retreat. From the mid-1970s onward, on virtually every measure of development, the gap between the West and most of Latin America, Asia, and even parts of Africa began to narrow. Today the West's flagship nation, the United States, would appear to be losing ground to the Brici countries. Perhaps the second half of the twenty-first century will belong to China. Meanwhile, the West is being forced in a variety of ways to reap the harvest of its past misdeeds in Latin America, Asia, and Africa. All the while, anticolonial movements, perhaps wearing the clothes of radical Islam, continue to remind the West that many around the world perceive it to be a rapacious and abusive power.

It is undoubtedly premature to announce the death of the West and in no sense is the decline of the West irreversible or inevitable. But in an important sense our world is a world currently coming to terms with the fate of a civilization which for 500 years directed global affairs but which is now struggling to maintain its dominance (see Zoom-in Box 1.4).

Zoom-in Box 1.4:   An Image of the World Today?
The Monument to the Discoveries, Lisbon, Portugal

Standing proudly on the northern bank of the River Tagus in the city of Lisbon is the famous Portuguese Monument to the Discoveries (Plate 1.2). This monument commemorates Portugal's pioneering role in the European Age of Discovery; that period commencing in the fifteenth century when European explorers began to venture forth and to discover the existence of lands in Latin America, Africa, Asia, Oceania, and the Polar Regions.

At the head of the monument sits Prince Henry the Navigator (1394–1460), inventor of modern seafaring navigation and founding father of the European Age of Discoveries. Among the many other Portuguese luminaries to feature on the monument are: Vasco da Gama (1460–1524, pioneer of shipping routes between Europe and India); Pedro Álvares Cabral (1467–1520, the first European to discover Brazil); Bartolomeu Dias (1451–1500, the first European to sail through the Cape of Good Hope); and, Diogo Cão (1452–1485, whose explorations in Africa revealed to Europeans the existence of the Congo River).

Portuguese exploration raised awareness of the potential riches which might be procured from the colonization and domination of lands that lay beyond the horizon. Perhaps not unexpectedly, Portugal emerged thereafter as a global power, presiding over a vast empire that reached into the four corners of the world. Portugal's most famous colonies included Brazil, Angola, Mozambique, Guinea-Bissau, Cape Verde, São Tomé, Príncipe, Goa, East Timor, and Macau.

But the Monument to the Discoveries is far from a symbol of Portuguese greatness. Initially designed as a showpiece for the World Fair held in Lisbon in 1940, the Monument was eventually built in the late 1950s and unveiled in 1960, during the **Estado Novo**, Portugal's so-called Second Republic. Under the reign of António de Oliveira Salazar, Prime Minister of Portugal from 1932 to 1968, the Estado Novo was a Roman Catholic, conservative, authoritarian, and nationalistic regime which bemoaned the loss of Portuguese influence in the world. Salazar's mission was to return Portugal to the halcyon and glory days of old.

By 1960, of course, many colonies had gained independence, and other countries in Europe were actively preparing to downsize their empires. Salazar, in contrast, was determined to stand alone and to defend what remained. In particular, he displayed a dogged refusal to cede any of the remaining Portuguese colonies in Africa. His quest was to be in vain. By 1975, Portugal had lost its last two jewels in the imperial crown, Angola and Mozambique. The winds of change could not be arrested or reversed.

The Monument to the Discoveries, then, was a statement of defiance in the wake of a crumbling empire. It sought to revel in the achievements of Portuguese explorers at precisely that point in time when the sun was setting on the Portuguese empire. At once a celebration of Portugal's ascendance

(Continued)

Box 1.4   (*Continued*)

and global dominance and a desperate act of vanity by a nation in the throes of decline, in an important sense, the story of the Monument to the Discoveries captures exactly the state of the world as it presents itself today.

Plate 1.2   Monument to the Discoveries, Lisbon, Portugal. Source: © Atlantide Phototravel/Corbis.

How to Read This Book

This book will be structured as follows. Chapter 2 will provide you with a brief history of Human Geography and will introduce you to the idea that Human Geography itself is a child of Western civilization and to this day remains a quintessential Western subject. Chapter 3 will examine key watersheds in human history that preceded and made possible the rise of the West. It will explore environmental history explanations which hold that the deep origins of the West's ascendance and dominance lie in the head start **Eurasia** secured at the time of the Neolithic Revolution from as early as the tenth century BCE. The purpose of the remaining chapters will be to show you the ways in which the story of the West's rise, reign, and faltering has become intertwined and interlaced with key geographical processes and has shaped their outcome. Specifically, it will reveal the ways in which the rise, reign, and faltering of the West triggered and shaped: the establishment of **capitalism** as an economic system, the formation of a world capitalist economy, and the engraving of uneven development across the surface of the earth (Chapter 4); the innovation of the sovereign nation state and liberal

democracy, the violent colonization of and command over by European nation states large parts of Latin America, Asia, Africa, Oceania, and the Polar Regions, and the postcolonial geopolitical order which is emerging today (Chapter 5); civilizing missions evangelizing the myth that "West is best" and resulting culture wars over what constitutes civilized spaces and unruly places (Chapter 6); a dramatic rise in world population and a redistribution of human beings across the earth's surface (Chapter 7); the super-exploitation by human beings of the earth's resources and a historically unprecedented ecological footprint (Chapter 8); **urbanization** and the emergence of a new generation of megacities (Chapter 9); patterns of migration, migrant experiences in host countries, and transnational ties within and between countries in the Global South and the Global North (Chapter 10); and, notwithstanding a new mastery over the natural environment, the heightened exposure of whole new swathes of humanity to natural hazards (Chapter 11). Chapter 12, the conclusion, will draw upon earlier chapters in the book and will ruminate on the topic of explanation in Human Geography. It will argue that, to the extent to which the West has made it what it is, Human Geography offers an indispensable but inadequate set of tools through which sense might be made of the world. A postcolonial future for Human Geography will be advocated.

Three points should be borne in mind whilst reading this textbook. First, this book has been written with a particular chronological sequence in mind (see Figure 1.1). But in no sense should you assume that the sequencing of chapters settled on implies a simple causal chain, with processes examined in any particular chapter being "explained" by processes introduced in prior chapters. Indeed, the sequence presented need not be strictly followed by instructors or students. An introduction to the past, present, and future of Human Geography as an academic
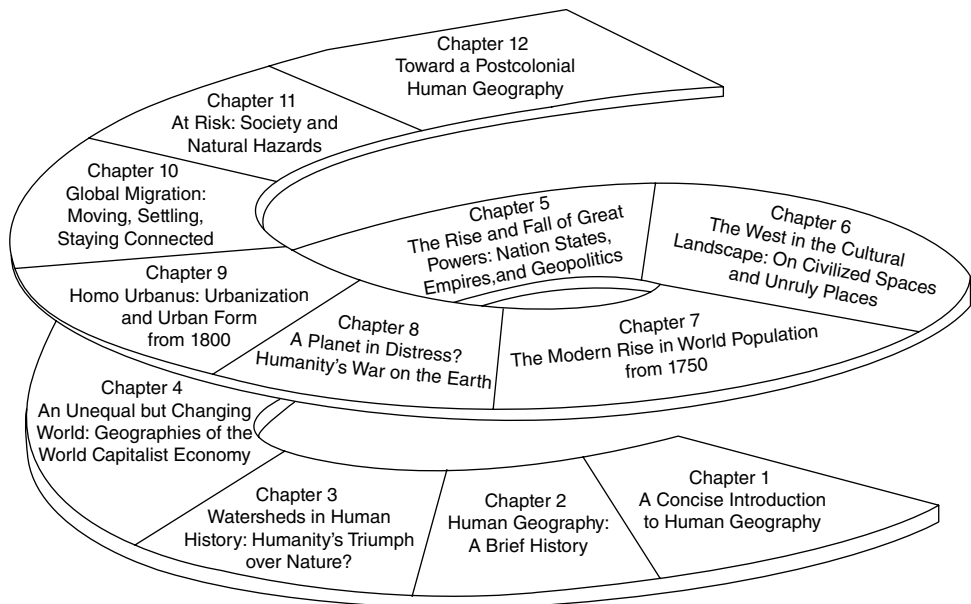
Figure 1.1 The story of the rise, reign, and faltering of Western civilization and the making of the contemporary world.

discipline provides a suitable foundation for the book (Chapter 2). Moreover, it is my view that human history (Chapter 3) provides a useful context within which to study the rise of the European capitalist economy (Chapter 4), and that both provide a backdrop against which the rise of European empires (Chapter 5) and the rapacious march of Western culture to the four corners of the world (Chapter 6) might be better understood. In turn, this bundle of chapters helps to inform understandings of the modern rise in world population (Chapter 7), the unprecedented pressures which humanity is now placing on the earth's resources and ecosystems (Chapter 8), the urbanization of the surface of the earth (Chapter 9), the growing scale of international migration and the routes traversed by such migrants (Chapter 10), and the uneven vulnerability of people in different parts of the world to natural hazards (Chapter 11). And the above together make the conclusion reached in the final chapter (Chapter 12) possible. But no single process is necessarily antecedent or more of a progenitor of history than any other and no chapter is intrinsically better as a point of departure or logically prior to any other. Moreover, if you find it difficult to master any single chapter, fear not; each chapter is in a sense autonomous from the rest and can be read and digested on its own merits.

Second, Chapters 3 to 11 have been written so as to introduce you to core themes within systematic branches of Human Geography (see Figure 1.2). And so, for instance, in addition to providing you with a snapshot overview of key watersheds in human history, Chapter 3 will also familiarize you with core ideas within Environmental History. In turn, Chapter 4 will furnish you with an induction on Economic Geography; Chapter 5, Political Geography; Chapter 6, Cultural Geography; Chapter 7, Population Geography; Chapter 8, Environmental/ Resource Geography; Chapter 9, Urban Geography; Chapter 10, the Geography of Migration; and finally, Chapter 11, the Geography of Hazards. Because these
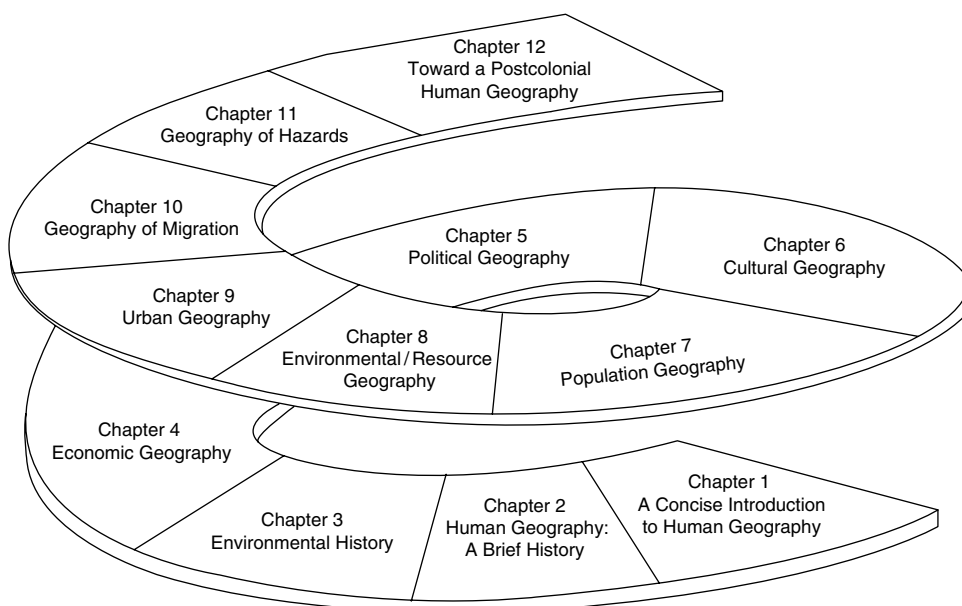
Figure 1.2 Systematic branches of Human Geography engaged in each chapter.

systematic branches of Human Geography are being introduced in and through the story of the rise, reign, and faltering of Western civilization, in no sense will a comprehensive coverage of each be presented. Moreover, whilst incorporated in different ways into different chapters, no single chapter has been dedicated to such systematic branches of Human Geography as Rural Geography, the Geography of Health, or the Geography of Tourism. Nevertheless, the intention is that by the end of the book you will know more about the key ideas that undergird some of Human Geography's most important subfields.

Finally, insofar as it places the story of the past, present, and future of Human Geography under scrutiny, Chapter 2 provides a fitting introduction for the book. I believe it is important that an introductory textbook should furnish students with an opportunity for taking stock of Human Geography's heritage, biography, and future aspirations. But Chapter 2 treats Human Geography itself as an object of study in a way that is consonant with the overall framework of the book. In my view, a solid understanding of the rise, reign, and faltering of Western civilization is necessary before it is possible to appreciate the history and philosophy of the discipline of Human Geography. As you will see, in many ways Human Geography is a child of the West and to this day remains in important respects a quintessential Western subject. Human Geography is both a product of and has contributed variously to the rise, reign, and faltering of the West from the fifteenth century. Today, its central challenge is to become less ethnocentric and **Western-centric** and more capable of rendering the world intelligible from other vantage points. Locating this chapter at the outset, then, is a little problematic. You may need to understand Chapters 1 and 3 to 12 if you are to properly grasp the story of the birth, development, and aspirations of Human Geography. For this reason, Chapter 2 is perhaps best read as a floating chapter, to be engaged with repeatedly as you digest each subsequent chapter. Certainly, it ought to be revisited at the end of the book when its full meaning might be culled.

Conclusion

The purpose of the book is to help you register, nourish, expand, and fortify your geographical imagination. The mission of Human Geography is to describe and explain the irregular distribution of human activity over the face of the earth (location), the variety of places which are emerging today (place), the ecological footprint which society is now creating (human–environment interactions), interconnections between places forged as people (migrants, refugees, tourists), information, trade, capital, aid, and culture circulate around the world (movement) and the organization of the world into distinctive regions (region). In seeking to describe and explain the ways in which human beings currently inhabit planet earth this book takes seriously the role of the rise, reign, and faltering of the West from the fifteenth century in the fashioning of the modern world. Historical enquiry is central to Human Geography. To understand why our world can be described as unequal and unfair but amidst a process of rebalance and change, it is necessary to situate the present with respect to events which have unfolded in the past or at least whose roots lie in the past.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) Everyone has a geographical imagination, that is, a mental map of the different ways in which human beings have occupied the surface of the earth in different parts of the world. Becoming conscious of one's own geographical imagination is a prelude to strengthening and cultivating that imagination through formal education.

2) Human Geography is at root a discipline which seeks to describe and explain the differentiation of human activity across the face of the earth. Human Geography has five central concerns: the location of human beings and their activities; the places human beings create; the relationships human beings have with their surrounding environment; the movements generated by human activities and the interconnections between places which result; and the regions human beings invent.

3) This book places front and center the role of the rise, reign, and faltering of the West from fifteenth century in the making of the modern world.

4) This book is written around 12 chapters which will introduce you to the role of the rise, reign, and faltering on the West in the forging of the contemporary world, and which will also provide you with an introduction to key systematic branches of study within Human Geography. Although sequenced in a way intended to be helpful to you, in principle it ought to be possible for you to read any particular chapter as a standalone entity and to read chapters in any order. Chapter 2 is a distinctive chapter in that it introduces you to past and present schools of thought within Human Geography and reflects upon the direction in which the subject is going.

Chapter Essay Questions

a) Write an essay titled: "My Geographical Imagination." Include in this essay a commentary on the ways in which the place in which you were born and the places in which you have lived might have played a role in shaping your mental map of the world.

b) Provide a definition of Human Geography and outline and comment upon Human Geography's five key concerns. Using these five key concerns, describe the Human Geography of the area in which you live.

c) The story of the rise of the West from the fifteenth century and its role in the making of the modern world is of central interest to human geographers. Discuss.

References

Cosgrove D E (1984) *Social Formation and Symbolic Landscape* (Croom Helm, London).
Lanegran D A and Natoli S (1984) *Guidelines for Geographic Education in the Elementary and Secondary Schools* (Association of American Geographers, Washington, DC).

Guidance for Further Reading

Coverage of the five central concerns of Human Geography can be found in:
Lanegran D A and Natoli S (1984) *Guidelines for Geographic Education in the Elementary and Secondary Schools* (Association of American Geographers, Washington, DC).

An excellent book tackling the fundamental question, what is Human Geography? is provided by:
Bonnett A (2008) *What is Geography* (Sage, London).

Whilst this book provides you with a short introduction to Human Geography, longer introductions to the subject can be found in:
Cloke P, Crang M, and Goodwin M (eds.) (2014) *Introducing Human Geographies* (3rd edition) (Routledge, London).
Daniels P, Bradshaw M, Shaw D, and Sidaway J (2012) *An Introduction to Human Geography: Issues for the 21st Century* (4th edition) (Pearson, New Jersey).
Fouberg E H, Murphy A B, and de Blij H J (2012) *Human Geography: People, Place, And Culture* (10th edition) (John Wiley & Sons, Ltd, Chichester).
Knox P and Marston S (2012) *Places and Regions in Global Context: Human Geography* (6th edition) (Pearson, New Jersey).
Norton W (2013) *Human Geography* (8th edition) (Oxford University Press, Cary, NC).
Rubenstein J M (2012) *Contemporary Human Geography* (2nd edition) (Pearson, New Jersey).
Rubenstein J M (2013) *The Cultural Landscape: Introduction to Human Geography* (11th edition) (Pearson, New Jersey).

An excellent introduction to Human–Environment interactions from a geographical perspective is provided in:
Moseley W G, Perramond E, Hapke H M, and Laris P (2014) *An Introduction to Human–Environment Geography* (John Wiley & Sons, Ltd, Chichester).

Short introductions to Human Geography which adopt very different approaches to the one adopted in this book can be found in:
Jones A (2012) *Human Geography: The Basics* (Routledge, London).
Short J R (2014) *Human Geography: A Short Introduction* (Oxford University Press, Cary, NC).

Excellent resources for students wishing to explore the full breadth of Human Geography include:
Agnew J A and Duncan J S (2011) *The Wiley-Blackwell Companion to Human Geography* (Wiley-Blackwell, Oxford).
Castree N and Gregory D (eds.) (2011) *Human Geography: Major Works in Social Science, the Humanities and the Physical Sciences* (Sage, New Delhi).
Kitchin R, Thrift N, Castree N *et al.* (eds.) (2009) *International Encyclopedia of Human Geography* (Elsevier, Amsterdam).
Kuby M, Harner J, and Gober P (2013) *Human Geography in Action* (6th edition) (John Wiley & Sons, Ltd, Chichester).
Lee R, Castree N, Kitchin R *et al.* (eds.) (2014) *The SAGE Handbook of Human Geography* (Sage, London).

Students wanting to learn more about key thinkers and seminal works in the discipline should consult:
Hubbard P, Kitchin R, and Valentine G (eds.) (2011) *Key Thinkers in Space and Place* (2nd edition) (Sage, London).

For definitions and discussions of key ideas in Human Geography students might find it useful to consult:

Gregory D, Johnson R, Pratt G *et al.* (eds. (2009) *The Dictionary of Human Geography* (5th edition) (John Wiley & Sons, Ltd, Chichester).

Rogers A, Castree C, and Kitchin R (2013) *A Dictionary of Human Geography* (Oxford University Press, Oxford).

For insights into the kinds of careers human geographers often follow see:

Solem M, Foote K, and Monk J (2012) *Practicing Geography: Careers for Enhancing Science and Society and Environment* (Pearson, London).

For guidance on how to research and write essays in Human Geography see:

Northey N, Knight D B, and Draper D (2012) *Making Sense in Geography and Environmental Sciences: A Student's Guide to Research and Writing* (5th edition) (Oxford University Press, New York).

For practical exercises illustrating Human Geography in action see:

Noble B, Hackett P, and Gunn J (2013) *Lab Manual to Accompany William Norton's Human Geography* (8th edition) (Oxford University Press, Cary, NC).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 2

Human Geography:
A Brief History

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:

1) distinguish between "internalist" and "contextualist" approaches to the writing of the history of Human Geography; with reference to the latter, propose a framework through which the story of the history of Human Geography might be recounted;

2) describe and comment upon the ways in which Human Geography developed in the premodern era;
3) describe and comment upon the ways in which Human Geography developed in the modern era; distinguish between the mission and concerns of Human Geography in each of the early modern, modern, and late modern periods;
4) describe and comment upon the ways in which Human Geography is developing in the postmodern era; describe and comment upon what is meant by Postmodern Human Geography; define "Big Data" and discuss the impact of Big Data on Human Geography's quest to make sense of the world.

Introduction

The purpose of this chapter is to provide you with a brief history of Human Geography as a distinctive branch of knowledge. The story of Human Geography's genesis and mutation over time is an epic one. Reflecting the overarching framework that guides this book, we might say that the birth of Human Geography and the many trials and tribulations it has faced over the course of its history have been inextricably wound up with the rise, reign, and faltering of the West from the fifteenth century. This chapter will attempt to show you the ways in which both developments necessarily unfolded together. In many ways, Human Geography is a child of Western civilization and continues to this day to exist as a quintessential Western academic subject. Equally, the West's climb to the summit of world history would be unthinkable without geographical knowledge, much of which was produced by the formal academic discipline of Geography.

But the story of the history of Human Geography is of more than mere historical curiosity. The mission of Human Geography is to describe and explain variations from place to place in the ways in which human beings have inhabited the surface of the earth. Given the subject's long and eventful history, it is perhaps unsurprising that human geographers have conspired to create a variety of approaches to description and explanation. It is essential that you understand something about these various approaches. Some of them remain insightful and continue to serve a useful purpose. Others have long since been recognized as flawed and have been junked. But still these discarded perspectives remain worthy of scrutiny lest mistakes made in the past be repeated. If we are to understand the present condition of Human Geography and its future prospects we need to place the subject as it presents itself today within its proper historical context.

A Framework for Studying the History of Geography

It is common to speak today of Physical Geography and Human Geography as two distinctive specialisms. But it has to be remembered that both Physical Geography and Human Geography have their origins in the unified discipline of Geography. The date at which it was deemed necessary to break Geography into two streams, Physical

and Human, remains the subject of debate. For some, the divorce was never that clear cut and it is still meaningful to speak of the existence of an overarching subject called Geography which bridges both. For others, Physical and Human Geography are now on such different paths that never the twain shall again meet. Either way, it is impossible to tell the story of the history of Human Geography without spilling over into the wider history of the discipline of Geography.

But how might one tell the story of the history of Human Geography? Here we might usefully distinguish between "internalist" and "contextualist" histories of the discipline of Geography.

In the past, Geographers have tended to think of their subject as developing over time, largely at the behest of processes internal to their own community. A series of internalist histories have followed. In *The Structure of Scientific Revolutions* published in 1962 for example, US physicist, historian, and philosopher of science Thomas Samuel Kuhn proposed a "**paradigm** theory," which contended that academic disciplines oscillate between periods of calm when particular paradigms (world views or ways of making sense of the world) dominate and periods of revolution (when these world views no longer appear capable of solving problems that discipline wishes to solve) (Kuhn, 1962). This theory has been extensively used to make sense of the history of Geography. Human geographers have sought to add to and develop Kuhn's paradigm theory. For example, they have added to understandings of the catalysts that trigger revolutionary change and the rise of a new paradigm by drawing attention to the role of youth (new recruits seek to make a name for themselves by challenging traditions) and great thinkers (the random injection into the subject of great minds which confront existing orthodoxies).

More recently however, geographers have recognized that the discipline has not unfolded in a vacuum and that to understand the history of Geography it is necessary to understand the history of the societies of which Geography is part (Harvey, 1984). Accordingly, a number of contextualist histories of the discipline have been written. An especially erudite introduction to the contextualist approach is provided in Northern Irish geographer David Livingston's 1993 book *The Geographical Tradition*: *Episodes in the history of a contested tradition*. Livingston's focus is upon a number of "key episodes" in the development of geographical thought from 1400. Livingstone contends that to understand these episodes, it is necessary to relate them to the broader social, political, economic, and intellectual contexts of the times in which they prospered and withered. For Livingston, the European Renaissance, the Scientific Revolution, the Enlightenment, Darwinism, imperialism, and the invention of computers were pivotal events that shaped the development of Geography.

This chapter takes as its cue contextualist accounts of the history of the discipline, that is, it assumes that it is wider societal factors more so than drivers internal to Human Geography that have driven the subject to develop as it has over time. As used in this book, the term "modern" refers to that period from the fifteenth century onward when, from its cradle in Europe, "the West" as a distinctive civilization first appeared and began its climb to the summit of world history. This watershed in human history was also a watershed in the history of Geography. Without the rise of the West it is possible that the discipline of Geography would never have been born at all; certainly it is inconceivable that the subject would have taken the form it

now does. And in an important sense, the story of the faltering of the West in the twentieth and twenty-first centuries has determined the trajectory taken by Human Geography too.

It is therefore useful to divide the emergence of Geography into three phases, which we will term here the premodern era (before the West, when civilizations tackled geographical questions without the aid of a formal discipline called Geography), the modern era (when the West emerged as a dominant civilization and Geography became established as a professional academic subject), and the postmodern era (when confidence that "West is best" ebbed and faith was lost in the capacity of Human Geography to render the world intelligible). Furthermore, the modern era itself can be further subdivided into the early modern period, the modern period, and the late modern period (see Figure 2.1), reflecting the rise, reign, and faltering of Human Geography as a professional academic discipline. Whilst the meaning, precise dates, and relative significance of these eras and periods is a matter of ongoing debate, this framework does permit a basic grasp of key moments in the subject's development.

Human Geography in the Premodern Era

Arguably, geographical understanding in one form or another pervaded all prior civilizations. But it was Greek scholars and thereafter scholars from the **Greco-Roman world** who first conceived the idea of "Geography" and who achieved the most impressive breakthroughs in geographical understanding. Greek scholarship recognized few disciplinary boundaries and did not consider Geography per se to be a separate branch of knowledge. Problems of a geographical character emerged only in the context of the wider puzzles that occupied Greek society. These problems tended to center upon the shape, size, and physics of planet earth, and the map-making techniques needed to depict its landmasses (see Zoom-in Box 2.1).

Following the collapse of the Roman Empire, premodern Geography progressed rather more slowly. Concern with the wider world lessened and former Greco-Roman societies became more inward-looking. It is for this reason that the middle ages (circa the fifth century to the fifteenth century CE) is often taken to be one of the darkest periods in the intellectual history of Europe. Nevertheless, religious rivalries between, in particular, the Christian West and Islamic East did generate some important geographical breakthroughs. Christian missions and crusades created new understandings of lands beyond Europe and in particular territories in what is now called the Middle East. Meanwhile, Islamic missions and Islamic cartography created better understanding of the West from the perspective of populations living in the East.

The middle ages came to an end in the fifteenth century, the moment when Western civilization entered the historical arena. From an unpromising and unlikely start, a number of European countries began what was to be a steep ascent to the summit of world history. For over 500 years now these countries have dominated global affairs. Leading the pack were territories which incorporate countries we now identify as Portugal, Austria, Belgium, France, Germany, Italy, the Netherlands, Spain, Russia, and the United Kingdom. As European migrants fled to the New

Principal eras and periods		Indicative dates	Key concerns of (Human) Geography during these eras/periods.
Premodern era		Early civilizations, Greco-Roman civilization (circa 600 BCE to 600 CE), Middle Ages (fifth to fifteenth centuries CE).	The search for basic knowledge concerning the size, shape, and physics of planet earth. The "discovery" of and accumulation of knowledge concerning "foreign" regions of the world. The development of rudimentary cartography.
Modern era	Early modern period	From the Age of Discovery (fifteenth century CE) to Ritter's *Erkunde* (early 1800s CE) and Von Humboldt's *Kosmos* (mid-1800s CE).	The European "discovery" of the remaining unknown regions of the world and the accumulation of scientific knowledge concerning these regions. The development of modern cartography. The first attempts to define Geography as a distinctive science predicated upon the integration and synthesis of both environmental and social data pouring into Europe from explorations.
	Modern period	Establishment of Geography as a formal university discipline in 1874 and the reign of Environmental Determinism from 1874 to the 1920s.	Geography succeeded in establishing itself as an autonomous discipline with the European university system and spread quickly to universities throughout the world. Geography cohered strongly around the big idea that environmental influences shape the development of human culture in powerful ways. Geography was favored by governments on account of the role it might play in the European colonial adventure.
	Late modern period	From the rise of Regional Geography in the 1920s to the rise of skepticism in the mid- to late 1980s.	With the demise of Environmental Determinism as the big idea Geography used to make sense of the uneven inhabitation of the face of the earth, human geographers pondered on the existence of an alternative big idea. Culture as a superorganism, Regional Geography, Spatial Science, Marxist Geography, and Humanistic Geography are offered as contenders.
Postmodern era		From the late 1980s to the present: the end of the search for a big idea?	Today, there is widespread skepticism that human geographers will ever unearth one big idea that will be capable of making sense of the world. The key question now is, how can human geography continue to serve as a purposeful discipline when there is no shared agreement on the way the world works? Whilst human geographers have answered this question in many ways, Postmodern Geography has emerged as an important new direction for Human Geography. Concomitantly, the rise of an era of Big Data is heralding the dawn of a new kind of Human Geography predicated upon letting the world speak for itself.

Figure 2.1 A brief history of Human Geography.

Zoom-in Box 2.1:   Key Geographers in the Greco-Roman Period

Although in no way representative of the entire tradition, a sense of Greco-Roman Geography can be gleaned from the work of a number of its more famous alumni:

Eratosthenes (circa 275–195 BCE): Eratosthenes was a native of Cyrene, modern-day Libya, then part of the Greek empire. He is commonly credited with introducing the word "Geography" into the Greek language. Eratosthenes was the first person to create a system of latitude and longitude, and using this system he ventured a speculative map of the world. He was the first person to calculate the circumference of the earth. He also pioneered understanding of the tilt of the Earth's axis and was first to estimate the distance between earth and the sun.

Strabo (circa 60 BCE–24 CE): Strabo was born in Pontus, modern-day Turkey, then under the control of the Roman Empire. Strabo's major work *Geographica* represented a summation of Greco-Roman knowledge of the world at that time. Strabo drew the first detailed map of Europe. He described the character of different regions. He attempted to explain differences between people he regarded as civilized and those he considered more barbaric with reference to the effects of the physical environment on human culture.

Ptolemy (circa 90–168 CE): Ptolemy was a citizen of the Roman Empire who lived in Egypt. He pioneered new techniques in the field of **cartography**. In his famous manuscript *Geographia*, Ptolemy developed a system through which the earth, as a three-dimensional sphere, could be reproduced on a map which was two dimensional. This task is now referred to as **map projection**. Ptolemy devised a fresh system of latitude and longitude. He used this new grid to draw a speculative two-dimensional map of the world. He then populated this map with content derived from gazetteers written by early explorers and travel writers.

World, they spread Europe's influence, and within a short period of time the United States, Canada, Australia, and New Zealand were to emerge as Western powers too. Meanwhile, from the eighteenth century, Japan began its Datsu-A Ron ("leaving of Asia" or "Good-bye Asia") and became Asia's leading evangelist of Western ways. These developments were to radically transform society's thirst for particular kinds of geographical knowledge. A new era for Geography beckoned.

Human Geography in the Modern Era

The European Enlightenment effectively gave life to the formal discipline of Geography. In the modern era Human Geography became, in its ideals and its mission, a quintessential European branch of knowledge. The early modern period begins in the fifteenth century with the Age of European exploration and Age of

Reason, and ends in the mid-1800s with the influential works of German scholars Alexander von Humboldt and Carl Ritter. The modern period begins in Prussia in 1874 with the establishment of Geography as a university subject, incorporates the Age of European Empires, and ends in the 1920s with Geography parading itself as a beacon of European Enlightenment ideals, and an indispensable partner in the building of European empires. The late modern period begins with early twentieth-century questioning of Geography's identity and purpose, and ends in the late 1980s when confidence in the discipline's mission and trajectory reaches a new low. It was arguably only during this final period that Physical and Human Geography separated into distinctive camps.

Early modern period

With the rise of the West came the Age of European exploration, when first Portuguese and then later other European pioneers, seafarers, and adventures began to develop new navigation skills, traverse the world, and "discover" and explore the lands of Latin America, Africa, Asia, Oceania, and the poles. In 1418, the Portuguese explorer Prince Henry the Navigator established the world's first geographical research center, the *Escola de Sagres*, at Lagos in Portugal. Successive waves of Portuguese explorers, and later explorers from other European countries, were inducted in the science of exploration. Safe and reliable passageways to other parts of the world became established. Major explorations were conducted. The lands of Latin America, Asia, Africa, the Arctic, the Antarctic, and Oceania were "discovered" by Europeans and mapped.

European exploration marked a dramatic broadening of the European mind. Of course, the newly discovered lands and their peoples were experienced as exotic by European explorers and these pioneers captured and recounted their encounters with indigenous peoples and natives in ways which fascinated and intrigued the European public. The knowledge collected during expeditions was fed back to eager and excited European populations in part through the establishment of new national geographical societies. But as with all travel writing the tales regaled by explorers contained only a kernel of truth. With hindsight these societies' depictions of the world often said more about the Europeans who were doing the looking than it did about the "foreign" cultures that were being looked at.

The early modern period reached its zenith with the works of the founding fathers of modern Geography, the German scholars Alexander von Humboldt (1769–1859) and Carl Ritter (1779–1859). Both men recognized that 400 years of European exploration had produced a gigantic corpus of knowledge concerning the character of different world regions. This knowledge was scattered in the form of published lecture manuscripts, scientific books, geographical gazetteers, travel writer guidebooks, scientific log books, artist sketches, field diaries, and oral histories. Nineteenth-century Europe was literally drowning in data and this deluge of information was overwhelming. This data needed to be collated, archived, interpreted, digested, and put to effective use.

Von Humboldt and Ritter looked at the disciplines that already existed in the **natural sciences**, **social sciences**, and **humanities**. They argued that whilst each of these subjects explained something about the Physical and Human Geography of the earth, none had the capacity to bring all the data together and to make sense of the result. What was missing was a method to understand how natural

processes (soils, climates, landscapes, vegetation) and social processes (society, politics, culture, the economy) functioned together as an integrated system. In von Humboldt's major work *Kosmos*, published in five volumes between 1845 and 1862, and likewise Ritter's definitive work *Die Erdkunde*, published in 19 volumes between 1816–1859, Geography was to serve as the integrating discipline; synthesizing the strengths of all subjects, specialism's, fields, disciplines, and schools within the natural sciences, the social sciences, and the humanities to describe and explain variations in physical environments and human activity over the face of the planet. Geography was conceived as the science of the earth in relation to *both* nature and the history of humankind.

Von Humboldt and Ritter called for professional Geography to be formally enshrined as a distinctive new university subject and they were to get their wish sooner than they expected.

Modern period

European exploration exposed the existence of different natural ecosystems and human cultures and laid down a challenge: why so?

Of course, for most of human history human beings attributed differentiation across the face of planet earth to the maker of the earth: God. It was God who had created the earth and it was God who had decreed that some parts of the earth would be warm whilst others were cold, some parts wet whilst others dry, some parts populated whilst others empty, some cultures civilized whilst others primitive, some people black whilst others white. It was God who had punished some peoples with an earthquake or a famine and rewarded others with benign climatic conditions and bountiful harvests. Organized religion and cults both nurtured and benefited from such beliefs and played a significant role in infantilizing and mystifying the human mind. The human mind was too feeble to make sense of God's will and simply had to accept that the world just was.

With the European Enlightenment of the sixteenth century came a new faith in the power of human reason to make sense of the workings of the world. This was to be the Age of Reason. Human beings needed to reclaim their sovereign intellect from irrational cultish, religious, and superstitious forces. Hitherto thought to have been the handiwork of God, attention was now given to the role of more earthly laws in the creation of different natural environments and human cultures across the surface of the earth. If not a product of divine inspiration then what was causing these variations? The world had an order to it – it was structured according to discernible laws and it was the job of science to establish the truth. Once science had figured out how the world worked it could intervene to build the world anew. Human beings need no longer be enslaved by the will of God; they could play God.

By the nineteenth century the division of knowledge into the camps of the natural sciences, social sciences, and humanities had become established. Through time subdivisions within these broad categories also emerged:

- Within the natural sciences a set of disciplines were either newly established or more formally developed, including mathematics, biology, chemistry, physics, astronomy, and botany.

- Likewise, within the social sciences, branches of knowledge began to fragment further into such specialisms as sociology, law, psychology, linguistics, economics, political science, and anthropology.
- Similarly, the concept of the humanities was further subdivided into, among other subjects, languages, literature, history, music, poetry, classical studies, performing art, art history, philosophy, and archaeology.

But no discipline existed that was capable of making sense of why natural environments varied so much and why human cultures and societies developed in such different ways in different regions of the world. Von Humboldt and Ritter's call for a discipline that integrated insights from the natural sciences, social sciences, and humanities was accepted as the key to the solution. Geography was deemed a necessary addition to the university curriculum. Within a few decades Geography had become a fixture in leading universities throughout Europe and from there it spread to the rest of the world (See Zoom-in Box 2.2).

Pioneered by German geographer Friedrich Ratzel in his two-volume *Anthropogeographie*, published in 1882 and 1891, and propagated in the United States by his student Ellen Churchill Semple in her book *Influences of Geographic Environment: On the Basis of Ratzel's System of Anthropo-Geography*, published in 1911, the role of the physical environment in molding human culture in different regions came to the fore as the defining feature of the geographical approach. People in deserts, tropical rainforests, temperate lands, and in Polar Regions lived as they lived because the environment imposed limitations on what was possible. The natural environment increasingly came to be seen as a determinant of the uneven development of human culture and society over space. Climate, soils, landforms, vegetation, and geology all combined to determine not only skin color, it also produced a mosaic of human types, cultures, and civilizations. In the same way it determined vegetation type, pedigree, and quality, so too the quality of the natural environment determined the type, pedigree, and quality of the people. This new explanatory framework came to be labeled Environmental Determinism.

That Geography offered a fresh way to address one of the most perplexing questions facing humankind in the nineteenth century, however, was only part of the reason European (and then other) governments looked upon it favorably. Soon after the European Age of Discovery began, European countries began to claim political **sovereignty** over, settled, and governed over vast tracks of land in Latin America, Africa, Asia, Oceania, and the Polar Regions. By the early twentieth century most of the earth's surface had been or was currently governed by Europe.

It is no accident that Geography prospered during the Age of European Empire. Indeed, it could be argued that Human Geography was made possible only because of Europe's colonization and settlement of vast territories in Latin America, Asia, and Africa in particular. Human geographers were active stakeholders in the European colonial endeavor and provided a vital resource for would-be colonizers. Human geographers provided governments who were busy building empires overseas with maps of seafaring routes and of other lands, including their soils, mineral resources, forests, climates, crops, topography, cultural patterns, transport routes, disease regimes, and so on. Human geographers

Zoom-in Box 2.2:   On the Origins and Dispersal
of Geography

The book *All Possible Worlds: A History of Geographical Ideas* was first published in 1972 by US geographer Preston E James and updated in a fourth edition by the Association of American Geographers archivist Geoffrey J Martin in 2005 (Martin and James, 2005). This book presents a full account of the emergence of Geography from antiquity to the present, and traces the origins and diffusion of the discipline as a full and independent subject within the university system, beginning with its establishment as an autonomous university subject in Prussia in 1874.

Led by Prussian geographers such as Friedrich Ratzel (1844–1904), Ferdinand von Richthofen (1833–1905), Albrecht Penck (1858–1945), and Alfred Hettner (1859–1941), Geography became established first in German universities in Munich, Bonn, Tübingen, Göttingen, Cologne, Leipzig, and Berlin. Through the pioneering efforts of Paul Vidal de la Blache (1845–1918) in Paris, Halford Mackinder (1861–1947) in Oxford, Pyotr Seminov Tyan-Shanski (1827–1914) in St Petersburg and Moscow, and William Morris Davis (1850–1934) at Harvard in Boston, Geography then developed throughout France, Great Britain, Russia, and the United States.

In a cascading effect:

- Prussian/German Geography was then to influence the emergence of professional Geography in Sweden, Norway, Finland, Denmark, the Netherlands, Switzerland, and Austria;
- French Geography in turn informed the institutionalization of the discipline in Belgium, Italy, Spain, Portugal, Latin American countries (especially Brazil), and French-speaking Canada;
- British influence stretched Geography into Australia and New Zealand, English-speaking Canada, India, Pakistan, Egypt, Africa, and the West Indies;
- finally, Soviet Geography prompted and conditioned the emergence of the discipline in Poland, Hungary, Czechoslovakia, Romania, Bulgaria, Yugoslavia, and East Germany.

Martin and James argue that as an official university subject Geography is firmly of European parentage and that Geography only spread to other countries because of Europe's various historical dealings and associations with those countries.

assisted European colonizers to find, settle, subdue, and exploit colonies with rich bounties. Cartography became a science dedicated toward improving colonial planning, conquest, and administration.

More importantly, Geography's overarching explanatory framework – Environmental Determinism – became used and abused to justify European annexation of vast lands in Latin America, Asia, Africa, Oceania, and the Polar Regions.

Environmental Determinism provided the intellectual basis for what came to be labeled "**scientific racism**" – the use and abuse of "science" to assert that some cultures were innately more advanced, civilized, intelligent, organized, creative, and noble than others. Populations that lived in more hospitable environments, the temperate lands of Europe for instance, developed better intellects and more civilized cultures. In contrast, populations that resided in harsher environments, like tropical or desert environments, lagged behind in their mental faculties and led more barbaric and primitive existences. Not only was it legitimate for Europe to colonize lesser-developed parts of the world, it was its divine duty to do so. Blessed with higher levels of culture, Europe had a moral obligation to help progress members of the human species of lesser stature.

In the 1990s and 2000s a number of influential texts emerged insisting that Human Geography was a quintessential Western academic subject and existed only because the knowledge it produced once served powerful European and Western imperial interests. Books such as Livingston's (1993) *The Geographical Tradition: Episodes in the History of a Contested Tradition,* Godlewska and Smith's (1994) *Geography and Empire,* Edney's (1997) *Mapping an Empire: The Geographical Construction of British India, 1765–1843,* Driver's (1999) *Geography Militant: Cultures of Exploration in the Age of Empire,* Wither's (2001) *Geography, Science and National Identity: Scotland since 1520,* Gregory's (2004) *The Colonial Present: Afghanistan, Palestine, Iraq,* Bell's (2005) *Geography and Imperialism 1820 to 1940,* Rothenburg's (2007) *Presenting America's World: Strategies of Innocence in National Geographic Magazine 1888–1945,* and Benton's (2009) *A Search for Sovereignty: Law and Geography in European Empires, 1400–1900* among others all served to ignite interest in Human Geography's controversial past.

Late modern period

In the late modern period, confidence in the power of human reason to figure out the laws that governed nature and society began to ebb. Human reason it turned out was not as dependable as first considered. Great historical experiments conducted in the name of human reason often resulted in disastrous outcomes. Europe considered itself to be the cradle of the Enlightenment and yet it was Europe, and more broadly the West, that had presided over exploitative empires, World War I and World War II, oppressive totalitarian political regimes, the Great Depression of the 1930s, the atom bomb, abuses of psychiatry, and environmental destruction. Western civilization, which was hitherto seen as impregnable and invincible, now began to look less certain and dominant. Perhaps the West did not have all the answers after all.

Mirroring declining faith in the European Age of Reason, European scholars began to lose confidence in the explanatory frameworks they used to make sense of the world and its workings. Questioning was in and Geography's explanatory framework was not to be exempted.

By the 1920s and 1930s, Environmental Determinism was starting to fall out of favor. More than any other species, the human species had creative and intellectual faculties. Human beings were not particularly bound by environmental constraints. Indeed, the development of technology meant that the environment was becoming less relevant as a cause of geographical variations in human activities between

places. Cities could be built in deserts, in tropical rainforests, on mountain tops, and in Polar Regions, with all the amenities one might need to live a charmed existence. If human beings occupied planet earth differently in different places, something other than the natural environment had to be responsible for these differences.

Without now relying upon the physical environment to explain everything, human geographers attempted to find other explanatory frameworks through which variations in societies and cultures from one place to another might be understood. As the twentieth century unfolded, a number of rival contenders to replace Environmental Determinism emerged. It was at this time that Human Geography and Physical Geography began to separate and go their different ways.

In 1918, French geographer Vidal de la Blache published his book *Principles of Human Geography* in which the idea of environmental possibilism was popularized (see also Zoom-in Box 2.3 for a discussion of parallel developments in the United States). The physical environment did not determine all that occurred in an area but it did constrain what human beings were able to do in that area. But ultimately human culture trumped nature. The environment provided the clay but human ingenuity was free to mold this clay how it chose. For de la Blache, variations from place to place reflected these interactions between culture and nature. Over time, regions came to take on a unique personality or to support particular *genres de vie* (ways of life). Through fieldwork in his native France, de la Blache claimed to identify a mosaic of *pays* (pockets of culture which were unique to each local environment).

At the same time as some human geographers were taking an interest in interactions between culture and nature, others were becoming more interested in the development of systematic branches of the discipline. Instead of becoming an expert in a particular area or region, human geographers, it was argued, would be better advised to develop expertise in particular topics, such as past societies, population trends, how economies work, how cities function, how social groups live, how culture is practiced, how poor areas might develop, the extent to which the environment might support the human species, how politics operates, human health, the plight of rural areas, and so on. Geography ought to consist of systematic branches, such as Historical Geography, Population Geography, Economic Geography, Urban Geography, Social Geography, Cultural Geography, Development Geography, Environmental Geography, Political Geography, Health Geography, Rural Geography, and so on. These systematic branches might then be applied to particular regions to establish how their general principles manifest themselves in particular places.

Initially, both sets of geographers worked cooperatively. A branch of Geography titled Regional Geography was the product. Perhaps the clearest statement outlining the purposes of Regional Geography was that provided by US geographer Richard Hartshorne in his 1939 *The Nature of Geography* (Hartshorne, 1939). Hartshorne reiterated that the objective of Geography was to describe "areal differentiation across the surface of the earth." This differentiation should first be mapped and then explained. Here systematic branches of the discipline could be useful. Geographers with expertise in history, populations, industry, cities, societies, cultures, development processes, environmental systems, politics, health, and the countryside could work with specialists in particular regions and together they could explain why

Zoom-in Box 2.3: Carl O Sauer's (1925)
The Morphology of Landscape

In his famous 1925 essay "The Morphology of Landscape," US geographer and leader of the Berkeley School of Geography Carl Sauer set out to define the field of Geography. According to Sauer, Geography was best thought of as the study of the cultural landscape (Sauer, 1925).

In 1925, the doctrine of Environmental Determinism prevailed in Human Geography. Human culture was considered to be a product of the natural environment. Coastal regions gave birth to coastal cultures, tropical regions tropical cultures, mountainous regions mountainous cultures, desert regions desert cultures, and so on.

Sauer rejected the idea that human culture was shaped principally by the natural environment. He puzzled over the different cultures that existed either side of the United States–Mexican border in Southern California. The physical environment immediately north and south of the border was identical – in both cases semidesert – and therefore nature could not explain why distinctive American and Mexican cultures had emerged in such close proximity. Culture had to be behaving independently of the environment.

Sauer believed that culture could be conceived of as a superorganic entity. Cultures were real existing entities in and of themselves and were guided by their own internal laws and workings. Sauer dismissed the idea that conscious actions by individuals and/or social groups were responsible for the emergence, maintenance, and withering of cultures. Cultures may form from gatherings of individuals but as people fuse together a group dynamic emerges and it is this dynamic which guides the trajectory of the collective. The whole is greater than the sum of the individual parts.

Sauer called upon geographers to place primary attention upon the material deposits which particular cultural groups impress on the landscape. Although not determined by nature, cultures fashioned the natural environments they were located in and etched onto them human imprints. Sauer's famous maxim was that "culture is the agent, nature is the medium, the cultural landscape is the result." It was the job of Human Geography to map these remnants and material deposits.

From the 1920s to his death in 1975, Sauer mapped cultural landscapes in the mid-West of the United States and those created from European interactions with native cultures in the United States, the Caribbean, Mexico, and Latin America. Every human modification of the natural environment was of interest, from field patterns to irrigation channels, spiritual centers to burial grounds, castles to ruins, buildings to barns, and roads to canals. All the while discussion focused upon how and why cultures left in their wake such landscapes.

specific regions were unique and different from the rest. Regional geographers, then, sought to combine regional expertise with systematic branches of the discipline to explain the idiosyncratic features of different areas.

But through time some systematic branches of the discipline came to believe that the processes and mechanisms they were studying were general and not unique to each place. Regional geographers were wrong to assume that each region was distinctive. Regional geographers were presiding over a Geography that was unscientific. Geography too ought to be a science; a science of space. In the 1950s and 1960s, and pioneered by geographers from the University of Washington in Seattle, Geography became a spatial science. Spatial scientists believed that there was a science to the arrangement of human activities across the earth's surface. A set of universal laws determined, for instance, land use patterns within the city, the hierarchy of settlement sizes in any country, the distribution of crop types over fields, the location of industries, and the volume of migration between settlements. These laws were as fixed as the laws of gravity and held in all regions. Differences in the imprint of different societies in the landscape were only apparent and not real; they embodied only 'local noise' or variations around a common mean.

But this turn to spatial science itself generated two counterreactions. The first reaction rallied against the notion that human activity was organized according to a set of laws and that human beings could be studied in the same way as natural scientists studied the laws of nature. A branch of Geography titled Humanistic Geography emerged which argued that Human Geography ought to engage with the humanities more so than the natural sciences. Humanistic geographers sought to redefine the purpose of Geography. Instead of studying variations in human activity from place to place, Humanistic geographers became interested in human attachments to places and environments. Humans are complex beings; they have complicated psychologies, they have feelings and emotions, they attach meanings to things, and they can be conscious in their dealings with the world. According to humanistic geographers, Human Geography is best thought of as the study of the ways in which the existential, emotional, and psychological makeup of human beings leads them to make and experience different environments and places in different ways.

The second reaction accepted that there exist processes that organize human activities over space in ways that are coherent and predictable, but placed emphases upon society's relationship with space rather than with laws which determine spatial patterns. A branch of Geography called Structural Geography emerged, which argued that Human Geography ought to engage with the social sciences more so than the natural sciences. The key to understanding the spatial organization of society was to study the ways in which social, political, and economic structures created spatial patterns and processes. Structural Geography was pioneered most successfully by Marxist geographers. Marxist Geography believes that the **mode of production** that exists in each society determines the geographical layout of these societies. Societies with different political, social, and economic institutions produce different Human Geographies. Marxist geographers are particularly interested in the geographies that the capitalist mode of production creates, including urbanization, transport systems, regional variations in development, poverty, migration, and so on.

In its search for a new explanatory framework and clearer sense of mission, identity, and purpose, ironically Human Geography lost much of its coherence and began to fragment. Human geographers disagreed as to whether Regional Geography, Spatial Science, Humanistic Geography, or Structural Geography provided the best route forward. In their 2013 book *Geography and Geographers: Anglo-American Human Geography Since 1945*, British geographers Ron J Johnston and James D Sidaway (2013) describe the late modern period as a time when Human Geography witnessed splintering, schisms, skirmishes, and factionalism like never before. There existed no shared agreement as to what Human Geography was, what human geographers do, and why human geographers do what they do. Virtue was made of pluralism in the discipline; according to some it was healthy to foster different ways of looking at the world. But many human geographers feared that the discipline had lost its sense of unity and purpose and was in danger of coming apart at the seams. And by the late 1980s those fears were to reach their zenith.

Human Geography in the Postmodern Era

For over a century now a growing number of voices have sought to claim that Western civilization has passed its peak and is now in terminal decline. The audibility of these voices has risen to a crescendo in the last 40 years. The fall of the great European empires throughout the twentieth century is taken to be the clearest evidence that the West is no longer best. Europe no longer governs Latin America, Asia, and Africa from afar. The global oil crisis of 1973 marked an abrupt end to the 30 glory years of capitalism (1940s to 1970s) that followed World War II. Lurching from one economic crisis to another, the West seems unable to figure a way to create sustainable economic growth, address environmental challenges, ameliorate poverty, and so on. Moreover, from the 1970s onward, in terms of virtually every measurement of prosperity and development, the West stopped pulling ahead of the rest and the gap between the West and rest began to narrow. The twenty-first century, it is said, will see the final demise of the West and the emergence of new global superpowers and a new world order.

Accordingly, confidence in the West and its ways of making sense of the world has ebbed to an all-time low. With the faltering of the West, doubt in the power of human reason to understand and dominate over the natural and social worlds has reached its apogee. Many claim that the modern era (with all its certainties, truths, bold visions, and big stories) is now giving way to a postmodern era (marked by uncertainty, doubt, rejection of grand stories about how the world works, and hesitancy). A child of the West, it is not surprising that Human Geography too has lost its sense of mission. From the late 1980s, a less certain and more questioning Human Geography can be said to have entered this new postmodern era. There have emerged two responses: first, the development of a Postmodern Human Geography, and second, the rise of a new approach to explanation within Human Geography enabled by Big Data.

Postmodern Human Geography

Postmodern Human Geography approaches the explanatory frameworks that modern Geography birthed with a degree of incredulity. It would simplify matters greatly were it possible to find a single overarching explanation for the varied ways in which

human beings have inhabited the face of the earth. But experience instructs us to approach all explanatory frameworks with caution and distrust. The explanatory traditions Geography has invented to make sense of the world have invariably proved to be wrong if not downright dangerous. With each generation has come a revolution in geographical thought; ways of understanding the world, which were once believed to have figured it all out, are dispensed with and trust placed in an entirely fresh approach. These revolutions eventually become wearisome. Faith is lost in the very possibility of finding an approach that is more than a passing fad. It becomes more sensible to conclude that no single explanatory framework will suffice.

But Postmodern Geography itself has been met with fierce opposition. A number of important questions are now being asked. Should we give up on the ideals of modern Geography so readily? What is so wrong with looking at the world through a Western lens? Is the world really that chaotic? Is Postmodern Geography not tantamount to throwing in the towel? Does not a sense of paralysis automatically follow? Surely not all explanatory frameworks deserve an equal hearing? Is everyone's version of what the world looks like equally valid? These questions continue to be debated by human geographers, and how to do Geography in the postmodern era remains an unresolved question.

One response has been to encourage human geographers to become more aware of the ideologically loaded positions from which they seek to make sense of the world and to encourage human geographical accounts of the world to be written from ideological positions hitherto ignored or silenced. Indeed, one of the objectives of Postmodern Human Geography has been to put the pen in the hands of "other communities" who historically have had little opportunity to explain how the world looks from their position. This turn to Human Geography by and for others has bequeathed a whole number of alternative human geographical traditions, including Postcolonial Geography, Feminist Geography, Queer Geography, Children's Geography, and Geographies of Disability. These alternative Human Geographies are providing exciting new directions for Human Geography but they remain in their infancy. They are pointing to the importance of understanding that many worlds exist depending upon the vantage point from which one is looking. And they are unsettling mainstream Human Geography by questioning its ethnocentrism and showing it to be a more skewed, biased, and provincial way of understanding the world than purists might like to believe.

Postmodern Human Geography often claims that it is concerned with *relational Human Geographies*. That is, it insists that every perspective on the world is a perspective from somewhere. It is never a neutral way seeing or a view from nowhere. Instead of lamenting this fact, human geographers ought to celebrate it. They ought to be constantly conscious that they are always and everywhere looking at the world relative to the position that they currently occupy (given their age, gender, sexuality, location, ethnicity, and social class). We might use the ideas of decentering or denaturalizing ways of seeing to capture what is at stake here. To decenter is to continuously think about how the world is experienced and understood by other people. To denaturalize is to recognize just how strange our ways of thinking are to other people – no matter how natural and given they seem to us. Relational Human Geographies are Human Geographies that recognize that no starting point provides the optimum point of entry from which the world should be viewed; each looking point is equally

valid. Relational Human Geography concerns itself with the multiple versions of reality that exist, relative to the vantage point of the viewer. It celebrates, as opposed to decrying, the belief that existing human geographical ways of looking are in fact rather exceptional and not at all innocent or objective.

Human Geography and Big Data

We live today in a world of Big Data. At precisely the same moment that postmodern human geographers are concluding that the world is ultimately unknowable, Big Data is radically changing the ability of human geographers to make sense of the world and its workings. Like postmodern human geographers, human geographers who embrace Big Data cast suspicion on all master narratives or big ideas or grand theories that seek to apprehend the world and its workings. It is not wise to attempt to render the world legible by fabricating an overarching explanatory framework. These frameworks are inevitably figments of the imagination. In contrast to postmodern human geographers, however, human geographers who use Big Data argue that it remains possible to understand the world as it actually is; every inch, every second. We might live in a period when faith has been lost in the capacity of human reason. But fortunately, human reason is no longer required. There is no need to figure out how the world works when the world can speak for itself. Big Data makes it possible to represent the world, in all its detail, exactly as it is, without bias.

Human geographers are no strangers to large data sets. In the past they have made much use of huge data sets collected, for example, through remote sensing, by weather stations, and via national census. However, given the costs and difficulties of generating, processing, manipulating, analyzing, and representing large volumes of data, hitherto big data sets were collected only periodically and were mined only partially. But an era of rapid change is now upon us. Technology has revolutionized the ways in which data can be collected, archived, scrutinized, stored, and visualized. There exists an avalanche or deluge of data. Big Data comprises data sets which are huge in *volume*, consisting of terabytes or petabytes of data, and rapid in *velocity*, being produced in real time. Instead of collecting samples from a population it is now possible to track the whole of a population under investigation (n = all). This data can easily be indexed and therefore linked to other data sets. Small data sets can be integrated and scaled up into big data sets. Big Data can then be held indefinitely in cloud-based servers (see Kitchin, 2014).

But there exists a key hurdle. Data is of no use if it cannot be analyzed, digested, and put to use. The challenge of analyzing Big Data is coping with its sheer abundance and ubiquity, exhaustive coverage, and relentless production. Until recently the analytical tools needed to crunch and render intelligible massive data sets were limited. To assist in this, Geographical Information Systems (GIS) have been devised. GIS provides tools which permit spatial data to be collected, stored, archived, manipulated, analyzed, and presented. They have certainly aided human geographers as they have sought to better handle Big Data. But the kinds of analyses that have been possible have been limited by the GIS software adopted. It is only possible to do what the software allows one to do. GIS analytical tools have proved rigid and inflexible; their usage has assisted human geographers to mine spatial data sets but the kinds of interrogations they have made possible have been restrictive.

Today the emerging field of Geographical Information Science (GIScience), or Geocomputation, is radically expanding what is possible (see Longley *et al.*, 2011). The term Geocomputation was invented by British geographer Stan Openshaw in 1996. It represents a marriage between Geography, Statistical Science, and Computing Science, and allows human geographers to make full use of Big Data sets by enabling an infinite range of research questions to be posed and pursued. Skilled in computer programming, Geocomputation scholars write complex coded algorithms which scan and detect patterns in even the most complex of spatial data sets. Literally hundreds of different algorithms can be run simultaneously on a data set to determine the patterns that exist in the data. Spatial statistics can then be used to establish the extent to which the patterns that have been unearthed are significant. Once patterns have been established it is then possible to model the data. Modeling helps human geographers to better understand the factors that might be arranging human activity unevenly over space and time. It allows human geographers to predict and forecast trends. And it allows human geographers to predict what might happen if this or that policy is followed or this or that intervention is made in the world.

Does Big Data effectively resolve human geographers' reticence to use big ideas to render the world intelligible? It would be a mistake to rush to such a conclusion. Big Data undoubtedly provides Human Geography with a new relevance and usefulness. But it is constantly necessary to ask, relevant and useful to whom? Arguably, far from enabling human geographers to know the world like never before, Big Data continues to enable human geographers to know only those worlds that powerful groups deem worthy of mapping and probing. There is a risk that Human Geography is being reconfigured as a technocratic subject – a problem-solving subject – less interested in explaining why human activity varies across the surface of the earth and more interested in solving problems that powerful stakeholders and paymasters consider worthy of scrutiny.

Whilst the data that is available to human geographers today is certainly bigger than at any point in human history, it is far from exhaustive. We remain some way off mapping every inch of the world at every second of the day. Choices are still being made about what data should be collected and why. It is often the powerful in society who are able to produce, store, interrogate, and visualize Big Data. Big Data is being produced, archived, analyzed, and represented only selectively and therefore some perspectives on the world are being consciously and unconsciously prioritized over others. Big Data and Geocomputation are enabling human geographers to produce knowledge that has clear planning, management, and commercial value. Big Data can help transport planners enhance the efficiency of public transport and provide users with up-to-date information on waiting times; help police to track the location of suspects at any moment in time; help mail transit companies track goods and establish interruptions in the flow of goods; help retailers procure and distribute produce more precisely; help airline companies manage their fleet and crew more effectively, and so on. Much of this seems benign. But some human geographers are pondering the extent to which they wish to put their analytical competencies to the service of those who are exploiting Big Data for ends that are questionable on ethical and political grounds. Is it the job of geographers, for example, to help oppressive police forces enforce martial law, or militarily dominant countries to target smart bombs on specific locations

in enemy territories, or large retail stores to enhance their profits, or oil companies to find the best place to practice **fracking**, or companies like to Google, Yahoo, Microsoft, Twitter, Facebook, LinkedIn, and Baidu to analyze information on browsing habits, or even spy agencies to keep watch on their citizens?

It is important, then, not to be seduced by the claim that Big Data enables the whole world to speak for itself. Big Data rarely (I would argue never) provides Human Geography with a view from nowhere. The world is still rendered knowable only from the perspective of those most able to pay.

Conclusion

Geography has a long and complex premodern history, coming of age properly in the Greco-Roman period. But the subject as we know it today was effectively forged only in the modern era in conjunction with the rise of Western civilization from the fifteenth century. For much of the past 500 years, Geography has been essentially a European branch of knowledge, reflecting European ways of making sense of the world. During the modern period, Human Geography developed a variety of explanatory frameworks through which to make sense of variations in human inhabitation of the surface of the earth. But in the absence of an agreed overarching framework, the discipline fragmented and a sense of mission was lost. As the West has faltered, a postmodern future has beckoned. Human geographers have become aware of the limits of the big stories that the West – and by implication they – have used to render the world legible. The era of the grand idea and the search for powerful explanatory frameworks to render the world understandable, it seems, is over. Postmodern Human Geography calls for greater attention to be paid to Human Geography's partisan origins in Western civilization. Its mission is to provide communities who rarely get to explain how the world looks from their vantage point with a voice. Concomitantly, and enabled by the Big Data revolution and developments in Geocomputation, there has arisen a new interest in Human Geography in using new techniques of data capture, storage, analyses, manipulation, and visualisation to let the world simply speak for itself. In reality, however, Big Data does not mean the end of big ideas. Only elites who are able to sponsor the collection, archiving, storage, manipulation, analyses, and visualization of Big Data are benefiting from the data revolution. Big Data, therefore, is yielding insights into only those worlds that powerful stakeholders want mapped and tracked.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:
1) There exist at least two ways to tell the story of the history of Human Geography: an internalist story and a contextualist story. This chapter adopts the latter. The rise of Western civilization was a pivotal moment in the emergence of Geography and thereafter Human Geography. Accordingly, three

phases can be identified in the historical development of Geography: a pre-modern era (before the West), a modern era (when the West rose, peaked, and degenerated), and a postmodern era (when the West has shown signs of malaise and possible collapse).

2) In the premodern era (before the fifteenth century), it was Greco-Roman scholars who advanced the cause of Geography most. Greco-Roman scholars were most interested in the shape, size, and physics of planet earth, and the cartographic techniques needed to depict its landmasses.

3) From the fifteenth century, Western civilization climbed to the summit of world history. With the rise of the West came a revolution in intellectual life. The European Enlightenment marked the beginning of the modern era. The modern era stretched from the fifteenth century to the late twentieth century. During the modern era, Human Geography became in effect a European subject. Its fortunes fluctuated as the fortunes of the West waxed and waned. In the early modern period, from the fifteenth century to the mid-1800s, it was German scholars Alexander von Humboldt and Carl Ritter who advanced the cause of Geography most. In the modern period, from 1874, Geography became a university subject and cohered around the idea of Environmental Determinism. The late modern period, from the early twentieth century, witnessed a period of intense debate about Geography's identity, purpose, and ends.

4) In parallel with the faltering of the West as the world's leading civilization, in the postmodern era Human Geography has entered a period of crisis. It now doubts its ability to fashion an overarching explanatory framework through which sense might be made of the world. Postmodern Human Geography calls for greater attention to be paid to Human Geography's partisan origins in the scholarship of white, Western, able-bodied, heterosexual males. It cautions students to avoid consciously or unconsciously supporting uncritically the highly pervasive myth that Human Geography provides a view from nowhere. Ironically, at the same moment Big Data and Geocomputation are announcing the arrival of a new era in Geography: the Big Idea is no longer needed as the world can be represented exactly as it is.

Chapter Essay Questions

a) Identify some of the key thinkers who have shaped the history of Geography and describe and comment upon the contributions these thinkers have made.

b) During the modern period, the discipline of Geography was for all intents and purposes a European discipline. Discuss.
And/or
Outline and comment upon the ways in which Environmental Determinism sought to explain variations in human culture from one place to another.

c) Postmodern Human Geography approaches the explanatory frameworks that modern Geography invented with a degree of incredulity. Discuss.

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Guidance for Further Reading

Important statements charting the intertwining and embroilment of Human Geography in the rise of the West from the fifteenth century are provided in:

Harvey D (1984) "On the history and present condition of geography: an historical material manifesto." *Professional Geographer* 36.1: 1–11.

Livingston D (1993) *The Geographical Tradition: Episodes in the History of a Contested Tradition* (Blackwell, Oxford).

An excellent history of Human Geography which traces its origins back to antiquity and examines geographical traditions around the world is provided in:

Martin G J and James P A (2005) *All Possible Worlds: A History of Geographical Ideas* (4th edition) (Oxford University Press, New York).

The most popular and accessible history of the Anglo-American geographical tradition remains:

Johnston R and Sidaway J (2013) *Geography and Geographers: Anglo-North American Human Geography since 1945* (7th edition) (Routledge, London).

Other valuable recent histories of Human Geography are provided by:

Cresswell T (2013) *Geographic Thought: A Critical Introduction* (Wiley-Blackwell, Oxford).

Nayak A and Jeffreys A (2011) *Geographical Thought: An Introduction to Key Ideas in Human Geography* (Routledge, London).

A good introduction to the complicity of Geography in the European colonial adventure can be found in:

Godlewska A and Smith N (eds.) (1994) *Geography and Empire* (Blackwell, Oxford).

A personal history of Geography which recounts key episodes in the subject's history from the perspective of one of the discipline's luminaries who lived through these episodes can be found in:

Cox K (2014) *Making Human Geography* (The Guilford Press, New York).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 3

Watersheds in Human History: Humanity's Triumph over Nature?

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:

1) reflect upon the idea that human history is the history of how one species emerged from, struggled with, secured victories over, and now to a certain extent lives free from limitations imposed by the natural environment;

2) describe and comment upon Darwin's theory of evolution through natural selection and specifically how this theory explains the origins of the human species;

3) map and date the early migrations of humans from their common ancestral home in Central and Eastern Africa, migrations which over time led to the colonization by humans of the entire planet;

4) list key trends in the development of human culture, and locate and account for the times and places in which settled agriculture was first discovered and established;

5) identify the principal civilizations that have risen and fallen in world history, and compare and contrast environmental and societal explanations as to why civilizations succeed and fail;

6) describe and comment upon the idea that the West emerged as a leading civilization principally because it enjoyed a favorable environmental history and that it is possible to date the rise of the West to as early as the tenth century BCE.

Introduction

Arguably, the rise, reign, and faltering of Western civilization has been the single most significant event to have occurred in world history in the past 500 years. But human history pre-dates the ascendance of the West and it is important to remind ourselves that many prior developments in human culture and civilization were needed to make the story of the West possible. This chapter will provide a brief introduction to four principal watersheds which marked human history prior to the rise of the West: the origins of the human species, first migrations and the peopling of the planet, the development of human culture and birth of settled agriculture, and the rise and fall of civilizations. It will conclude with a reflection upon Jared Diamond's claim that the deep origins of the West's ascendance and dominance lie in the head start Europe secured following the Neolithic Revolution. According to Diamond, the rise of the West can be dated not, as it is commonly supposed, to Europe in the fifteenth century CE, but to the first agricultural hearth in Mesopotamia as long ago as the tenth century BCE.

When telling the incredible story of how human beings gradually made planet earth their home, it is undoubtedly tempting to marvel at the many achievements of the human race. Although emerging from the animal world as a dominant species only recently and whilst for much of its history ravaged by natural hazards, the human race has steadily imposed itself on planet earth and liberated itself from nature's most binding constraints. Certainly, for much of its history the human race merely eked out an often precarious existence by foraging for fruits and nuts in a very limited number of more hospitable environments. But by innovating new technologies human beings worked to exert control over the natural environment. Humans have learned to exploit nature's abundant resources to the full. They have incubated themselves from many of nature's harshest extremes. As the human race has become less preoccupied with mere survival, human culture has prospered and many important and exalted civilizations have emerged.

Whilst such an account speaks to an essential truth it also risks encouraging an exaggerated sense of the capacities of the human species. Accordingly, the

extent to which this story might be said to be **anthropocentric** will be the subject of the conclusion to the chapter.

First Watershed: The Origins of the Human Species

The HMS *Beagle* set sail from Plymouth, England, on December 27, 1831. Following a circumnavigation of the globe which incorporated visits to the Canary Islands, South America (and famously the Galapagos Islands), Australia, New Zealand, South Africa, and the Azores, it returned to Falmouth, England, on October 2, 1836. On board was English naturalist Charles Robert Darwin. Darwin's mission was to observe and collect samples of fossils, flora, and fauna encountered en route. This voyage was to change Darwin's life and, in turn, Darwin was to revolutionize scientific and religious thought.

By 1838 Darwin had devised the central tenets of his theory of evolution through natural selection. For Darwin, all species display a tendency to propagate too many members for the given environment they occupy. This creates a competition for survival. Natural variation in member traits equips some members of the species to prosper in certain environments better than others and these constituencies survive and endure, passing on their competitive advantages to their offspring. The fittest survive and the less well-adapted drift to extinction. Through time the cumulative effect of this process is that species evolve along a set trajectory; genetic lines of descent are determined by the continuous sifting and sorting of the strong from the weak and only some gene pools are permitted to survive over the long haul. Constantly battling for survival, these survivors themselves are in constant interaction with the natural environment and mutate endlessly as they attempt to gain the upper hand.

It was not until 1859, however, that Darwin published his theory in his famous book *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (Darwin, 1859). Whilst in part a consequence of his laudable quest to garner sufficient evidence to put this theory beyond doubt, Darwin's reticence to rush to publication stemmed principally from his awareness of the meaning of his theory for Christianity and Biblical teachings. Contrary to the account of the origin of the human species contained in the Book of Genesis, if all species evolved through natural selection from a primitive ancestor then this had to be true of the human species too. Whilst triggering much furore, Darwin's *On the Origin of Species* in fact carefully avoided specific consideration of the lineage of the human species, merely noting that "the theory of natural selection might shed light on the origin of man [sic] and his history." It was not until 1871, when Darwin published his later book *The Descent of Man, and Selection in Relation to Sex* (see Zoom-in Box 3.1), that he worked his theory to its logical conclusion. The human species had developed from a lower life form, now understood to be early primates, and probably for Darwin, this evolutionary process had African origins.

Darwin's theory of evolution continues to stir debate and polarize opinion. Indeed, if anything, scientific and technological advances, such as those embodied in the mapping of the **human gene**, would appear to have reinvigorated a new round of arguments between so called "evolutionists" (who advocate evolution through natural selection) and "creationists" (who see in evolution the hidden hand of a higher

Zoom-in Box 3.1:   Charles R Darwin's (1871)
The Descent of Man, and Selection in Relation to Sex

Darwin identified the "sole object" of the book to be a consideration, first, of whether humans, like other species, were descended from the animal world, second, if so, how humans evolved to reach their current stage of development, and finally, what significance might be attached to racial differences.

The book was published in two parts:

Part One tackled the question of whether the human species was so distinctive in bodily structure, mental prowess, emotional capacity, and moral reasoning that the claim that humans could have evolved from lower life forms could be rendered intellectually untenable. Darwin argued that the human species in fact was not as exceptional as might be surmised and that all human faculties could be shown to exist in some form among higher-order mammals. The most civilized human qualities could be interpreted as social instincts birthed at early stages in the evolutionary cycle to assist in the battle for survival. In spite of its implications for Christian beliefs, the claim that human beings derived from primates, probably of African origin, was scientifically true. For Darwin, racial differences were cosmetic and all races could be shown to derive from a single source.

Part Two of the book tackled the question of sexual selection. According to Darwin, alas the pivotal idea of natural selection alone could not account for certain evolutionary trends. Darwin confessed to feeling nausea at the sight of peacock feathers; what evolutionary purpose do colorful feathers serve? It is here that Darwin turned to the idea of sexual selection. Sexual selection differed from natural selection in that the struggle was not for survival but for the right to find a mate and to reproduce. Animals evolved biologically in part so that they might maximize their chances of attracting partners and propagating the species of which they are members. The concept of sexual selection was better able than that of natural selection to explain some evolutionary traits.

Darwin recognized the dangers of applying his theory to the human species, dangers well founded in the light of the subsequent **Eugenics** movement, which advocated racial purity, believed that some races were superior to others, and promoted the pursuit of a master race. Weaker species of human beings should not be allowed to bear offspring as the result would be a degenerate community of human beings. For Darwin, the search for a community of perfect human beings was an ill-conceived and dangerous one. Darwin argued that whilst it might buck evolutionary trends, society had a responsibility to protect and defend the reproductive rights of all communities, irrespective of their physical and mental capacities.

3,600 MBP
first evidence of life

4,500 MBP
earth formed

65 MBP
primates first
appeared

7 MBP
hominins first
appeared

through successive mutations

200,000 BP
modern humans emerged

Homo sapiens journey

130,000–115,000 BP
first moved from africa

165,000–130,000 BP
moved within Africa

90,000–85,000 BP
a second migrant stream
left Africa via the Red Sea

85,000–65,000 BP
moved across Asia

45,000 BP
populated Australasia

25,000–20,000 BP
reached the Bering land mass

40,000 BP
settled in Southern Europe

12,500 BP
arrived at South America

10,000–8,000 BP
finally reached Northern America,
Europe, and Asia

Neolithic Revolution

11,000 BP
emergence of agriculture in Mesopotamia

9,000–7,000 BP
reached Southeast Asia

5,800 BP
first six civilizations

to 3,000 BP

12,000–7,000 BP
Neolithic Revolution

9,000 BP
at Yellow and Yantze Rivers

5,000–3,000 BP
introduced to
Eastern North
America

Sumer 5,800 BP, Egypt 5,150 BP,
Indus valley 4,500 BP, Shang
China 4,500 BP, Meso America
3,200 BP, and Peru 3,500 BP

Figure 3.1　Timeline of world and human history.

being, God). Notwithstanding continuing controversy, expanded archaeological investigation, the introduction of new techniques for dating fossils (skeletons, skulls, and bone fragments), and the rise of genetic science and **DNA mapping**, all combine to suggest the following (see Figure 3.1): the earth formed approximately 4,500 million years before present (MYBP); first evidence of life can be traced to 3,600 MYBP; primates first appeared just under 65 MYBP; the species **hominin** first diverged from the chimpanzee family circa 7 MYBP; and through successive mutations modern humans emerged in the form of homo sapiens around 200,000 years ago. If this timeline is expressed in terms of a 24-hour period with the first second announcing the formation of the earth, primates would emerge only at 21 minutes to midnight, hominins just over two minutes to midnight, and homo sapiens a mere four seconds before midnight.

Second Watershed: First Migrations and the Peopling of the Planet

There remains debate over where human life first originated and when and how homo sapiens learned to move across and dwell in a range of different environments thereby populating the entire planet. The two most popular theories begin with the proposition that hominins first arose as a distinctive species in Central and Eastern Africa.

The Multiregional Continuity Model suggests that from this point of origin, from as early as 2 MYBP, earlier hominin mutants managed to migrate and to populate new regions, for instance **homo ergaster** in Africa, **homo erectus** in Asia, and **homo neanderthalensis** in Europe. These early hominins survived and modern humans emerged independently from these separate lineages. *The Recent African Origin Model*, in contrast, posits that early migrations from Africa were ultimately fruitless with primitive hominin species gradually ebbing to extinction. The homo sapiens conquest of the world began only 100,000 years ago from a relatively small population (to emphasize how small, scientists often speak of all humans deriving ultimately from a single common mother dwelling in this group, often given the title "Mitochondrial Eve") and from a specific point of origin in Central and Eastern Africa (modern-day Ethiopia). These later migrations replaced the degenerate and decaying early hominin communities.

Advances in population genetics suggest that, in fact, *The Recent African Origin Model* holds the greatest promise (see Zoom-in Box 3.2). In 2003, British geneticist Stephen Oppenheimer proposed perhaps the most detailed map yet of the earliest migrations through which homo sapiens colonized the world. The timing and scale, waxing and waning of population migration into and out of certain world regions was affected by climate change; at different times it became more possible to breach natural barriers whilst at other times the environment proved too inhospitable to traverse and to inhabit certain territories (Oppenheimer, 2003a). Starting from Eastern Africa, around 165,000 to 130,000 BP, homo sapiens moved first within Africa to the Cape of Good Hope, the Congo Basin, and the Ivory Coast. During a period of climate change, which created a more hospitable Saharan Desert, between 130,000 and 115,000 BP modern humans first left Africa through modern-day Egypt, only to perish in the Levant at approximately 90,000 BP during a period of climate cooling. Between 90,000

Zoom-in Box 3.2:   The Explosion of Public Interest
in Population Genetics and Human Migration

Genetic analyses of mitochondrial DNA (providing information on the maternal lineage of us all) and Y chromosomes (providing information on the paternal lineage of men) has allowed particular migration pathways in human history to be tracked. An explosion in public interest in population genetics and human migration has followed.

This surge began in the early 2000s with the publication of a rash of best-selling books, for instance: British population geneticist Bryan Sykes's (2002) *The Seven Daughters of Eve: The Science That Reveals Our Genetic Ancestry*, US population geneticist Spencer Wells's (2002) *The Journey of Man: A Genetic Odyssey* (broadcast also as a documentary on PBS/National Geographic), US educational journalist Steven Olson's (2002) *Mapping Human History: Genes, Race, and Our Common Origins*, British geneticist Stephen Oppenheimer's (2003b) *The Real Eve: Modern Man's Journey Out of Africa* (broadcast also as a documentary on the Discovery Channel), British anatomist Alice Roberts's *The Incredible Human Journey* (2009) and *Evolution: The Human Story* (2011) (both broadcast also as documentaries on BBC) and "A genetic atlas of human admixture history," published by a British-based team of geneticists and historians (Hellenthal *et al.*, 2014)

Spencer Wells in particular has remained in the public eye as Explorer in Residence at the United States National Geographic Society with responsibility for the Human Genographic Project. This project is seeking to assemble from around the world the largest volume of DNA samples ever collected and to use this unique data archive to facilitate a more detailed mapping of the earliest migrations of the human species.

Whilst these authors have succeeded in bringing the fruits of DNA analyses to the attention of the wider public, it is important that care is taken when reading and viewing their works. By simplifying, filtering, and communicating the results of complex genetic analyses, the popular media has at times used and abused DNA analyses and the story of the origins and dispersal of certain populations groupings to fuel sensationalist stories about both racial purity and racial hybridity.

and 85,000 BP a further migrant stream left Africa by crossing the mouth of the Red Sea. All non-African populations today can be traced to this community. Between 85,000 and 65,000 BP these pioneers moved across Asia, traversing India, Southern China, Southeast Asia, and finally Australasia. By 45,000 BP Australia was substantially populated. Climate warming circa 50,000 BP and the development of a more hospitable climate in northern regions of the world finally allowed northwest migration to Europe and a variety of northeast migrations through continental Asia. By 40,000 BP modern humans had settled in Southern Europe and by 25,000 to 22,000 BP they had reached the Bering land mass connecting Asia with the Americas. A variety of successful and unsuccessful migrant routes brought migrant streams down both the
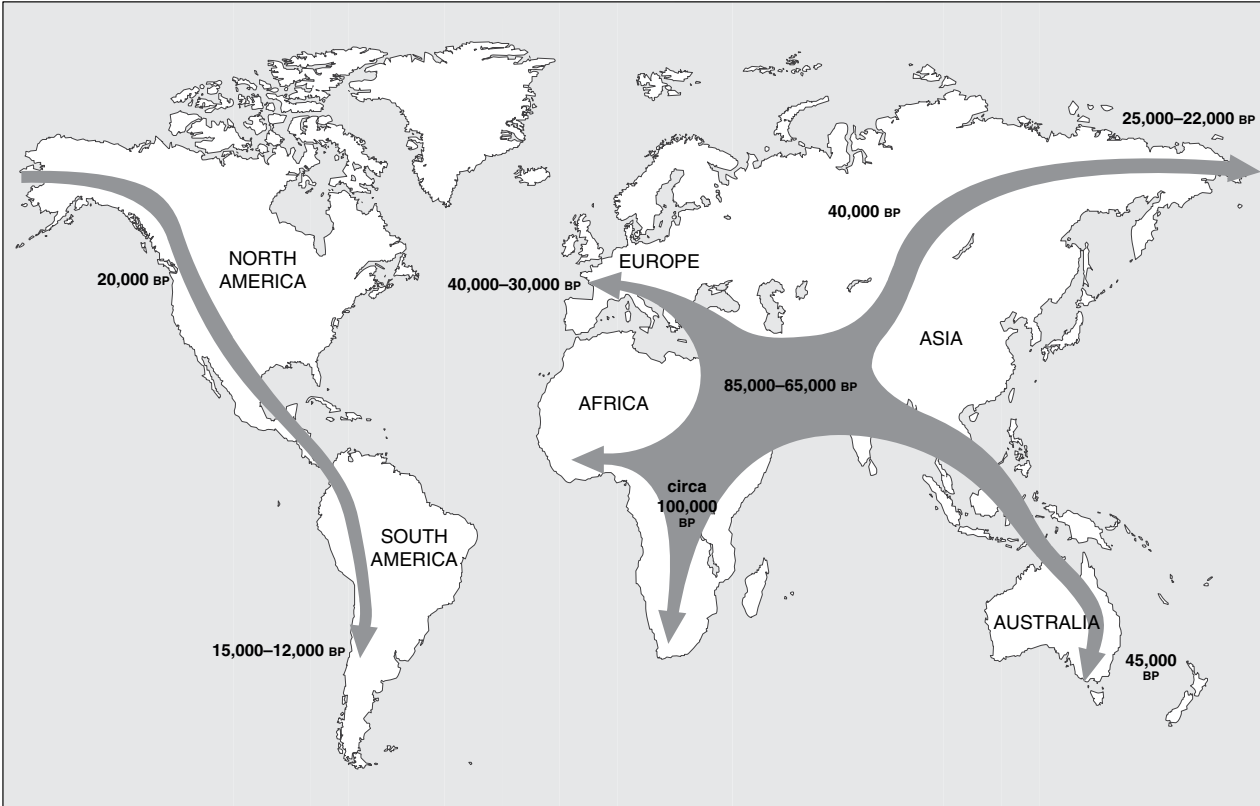
Map 3.1   The first migrations: from Africa to the four corners of the world.

West and East Coasts of the Americas and by 12,500 BP they arrived at the southern tip of South America. Finally, the period from 10,000 to 8,000 BP witnessed the penetration of homo sapiens into the colder environments of North America, Northern Europe and Scandinavia, and Northern Asia (see Map 3.1).

Third Watershed: The Development of Human Culture and Invention of Settled Agriculture

For most of their history humans have survived by adopting a hunter-gatherer mode of subsistence; foraging for food among wild plants and animals. Whilst often thought of as primitive, in fact hunter gatherers were skillful people who learned through bitter experience how to maximize the extraction of food from a given area of land. Hunter-gatherers developed complex social structures built around the idea of the "Band." Bands were groups of people united by kin and numbered no more than 100 people and normally fewer than 30 people. For the most part they practiced nomadism, traveling to avoid depleting food supplies to the point of exhaustion in any one place. Bands required extensive land areas to survive – in areas of abundance Bands required up to seven square miles of land per capita whilst in regions of scarcity up to 500 square miles of land per capita was needed. Survival was dependent upon capturing wild game, fishing, and gathering plants and insects. Hunter-gatherers relied upon temporary huts, tents, lean-tos made of plant materials or animal skin, and caves for shelter.

Steadily mastering their environment, through time humans learned how to move beyond hunter-gatherer modes of subsistence. Some 10,000 to 5,000 years BCE, humans began to pioneer settled agricultural hearths, and by 4,000 to 2,000 years BCE the first civilizations began to appear. A variety of typologies have been proposed to characterize these developments in human culture. For some, it is appropriate to speak of the passage from the savage state to nomadism, agriculture, and civilization. For others, the movement from the Stone Age (with a further subdivision into Palaeolithic, Mesolithic, and Neolithic) to the Bronze Age and, finally, the Iron Age provides a better description. Others again identify a development in the pattern of culture in terms of a chronological progression from Lithic to Archaic, to Formative, to Classic, and finally to Post-Classic. Finally, yet other scholars prefer the sequence to be depicted in terms of the titles of savagery, barbarism, and civilization (see Zoom-in Box 3.3).

Evidently the Neolithic Revolution (Morgan's stage 4 and beyond), the period when the human race discovered how to domesticate plants and animals and to practice settled agriculture, marks a watershed in human history. The Neolithic Revolution occurred simultaneously only in a specific number of locations – agricultural hearths – and at a specific moment in human history (between 10,000 and 5,000 BCE). US agronomist J R Harlan (1971) offers a centers and non-centers theory of the origins of agriculture and its dispersal. Centers were locations where agriculture first developed whilst non-centers were secondary hearths whose existence relied upon the displacement of innovations from primary locations. For Harlan distances between centers and non-centers could be as much as 5,000 and 10,000 km. Harlan identified three centers

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Zoom-in Box 3.3:   Lewis H Morgan's Seven Stages
of Human Evolution

In his book *Ancient Society; or, Researches in the Lines of Human Progress from Savagery through Barbarism to Civilization*, published in 1877, US anthropologist Lewis H Morgan used the features of means of subsistence, forms of government, language (verbal and written), religion, house life and architecture, family form and function, and property entitlements to identify seven specific stages in human evolution – what he terms ethnical periods:

1   Lower Status of Savagery: from the emergence of the human race, through the reliance on foraging for fruits and nuts, to the invention of fishing and the use of fire. The dominant family form was the **Consanguine family** and human communication occurred principally through gestures.
2   Middle Status of Savagery: from the discovery of fire to the invention of the bow and arrow. The **Punaluan family** form was now dominant and humans communicated through monosyllabic languages.
3   Upper Status of Savagery: from the invention of the bow and arrow to the invention of pottery, a key indicator of moving beyond savagery. The **Syndyasmian family** type was now preeminent and the first syllabic languages were emerging. Social stratification emerged and religion was based on worship of the elements.
4   Lower Status of Barbarism: from the manufacture of pottery, through the domestication of animals and the cultivation of maize and plants by irrigation, to the use of adobe-brick and stone in house building. The **tribal confederacy** now emerged as the dominant form of government.
5   Middle Status of Barbarism: from the domestication of animals to the smelting of iron ore. Agriculture was enhanced by new techniques of irrigation. Communal tenement housing in defensive sites (for example forts) emerged.
6   Upper Status of Barbarism: from the manufacture of iron to the invention of the phonetic alphabet, and the use of writing in literary composition, a key indicator of moving beyond barbarism. The **Monogamian family** now predominated, and the ideas of individual property, public life, poetry, and mythology emerged. Communities preferred to dwell in walled cities.
7   Status of Civilization: the period of the phonetic alphabet and the production of literary records; divided itself into *Ancient*, *Medieval*, and *Modern* civilizations dependent upon their degree of sophistication.

Each ethnical period had a dominant pattern of inventions, discoveries, and institutions. Any single region could only occupy one ethnical stage at any point in time. Movement through each stage constituted human progress.

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where agriculture first developed (see Map 3.2); a Near East center with an African non-center; a Northern China center with a Southeast Asia and South Pacific non-center; and a Mesoamerican center with a South American non-center. According to Harlan, centers and non-centers interacted with one another and it was not necessarily the case that all crops or agricultural innovations were
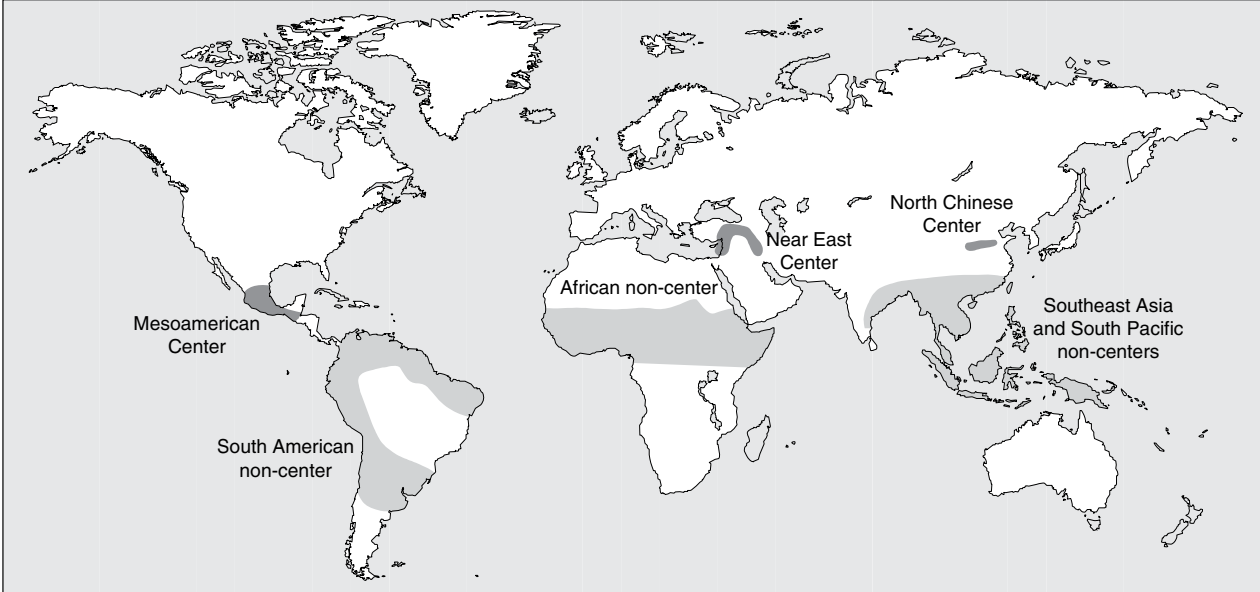
Map 3.2 Harlan's mapping of the early agricultural centers and non-centers. Source: Harlan, 1971. Reprinted by permission of AAAS.

birthed in centers. Through time, non-centers led some innovations and transferred insights back to the center.

Meanwhile, Australian archaeologist Peter Bellwood (2004) has used the origins and diffusion of languages to better map the complex routes that agricultural dispersal took from the first agricultural hearths (see Map 3.3). According to Bellwood, agriculture began around 11,000 BP in the Near East Fertile Crescent of Mesopotamia; it appeared in the Yellow and Yangtze River basins around 9,000 BP, and between 9,000 and 7,000 BP it surfaced in Southeast Asia reaching as far as the New Guinean highlands. Around 6,000 to 5,000 BP, agriculture was practiced in West Africa, Central Mexico, and the Peruvian Andes, and between 5,000 and 3,000 BP it was first introduced into Eastern North America. Bellwood claims that farming spread from these hearths primarily because farmers migrated and took their knowledge with them to new locations. But how might one reconstruct geographies of migration that unfolded so many years ago? Bellwood's innovation was to note that migration patterns can be tracked by following the geographical diffusion of languages. He used the origins and dispersals of major language families such as Indo-European, Austronesian, Sino-Tibetan, Niger-Congo, and Uto-Aztecan to propose the pathways through which agriculture spread. Bellwood also made use of recent advances in genetic science to support his view that language diffusion was driven by migration and that the geographical dispersal of languages provides a useful proxy for the geographical dispersal of agriculture.

Why humans discovered agriculture at all – and why they did so in such a small number of places, apparently independently and simultaneously – remains a hotly disputed topic (see Zoom-in Box 3.4). Initially, an "oases theory" was proposed, which held that the earth had become warmer and drier during this period and that, forced to live in a small number of hospitable places and in close proximity to wild animals, human beings were stimulated and motivated to bring nature under control simply to survive. But more recent evidence suggests that the earth became a more habitable rather than less habitable place in the years leading up to the Neolithic Revolution. Indeed, according to some commentators, the stabilization throughout the world of a more conducive climate was decisive; if the period from 22,000 to 13,500 BP was marked by global cooling, a frozen planet, glacial advance, and erratic swings in climate, the **Holocene** period (from 12,000 BP to the present day) has been characterized by warmer, wetter, and more stable conditions, especially in temperate and tropical regions. But climate only enabled human beings to discover agriculture; it did not trigger this discovery. And given that the climate of many areas improved, it remains a mystery as to why settled agriculture was pioneered in such a few select locations.

For some scholars, human progress alone is a sufficient explanation; agriculture is more technologically advanced than foraging and it was inevitable that as humans evolved they would achieve increased control over their environment. But human beings dwelled on planet earth for many tens of thousands of years before the advent of agriculture and it is unclear why they did not achieve the breakthrough much earlier. Moreover, there is little reason to believe that human beings who lived in the first agricultural hearths were any more biologically and genetically "evolved" than human beings who lived elsewhere. For other scholars, theories of human stress are more appropriate; population growth in specific places brought new pressures to
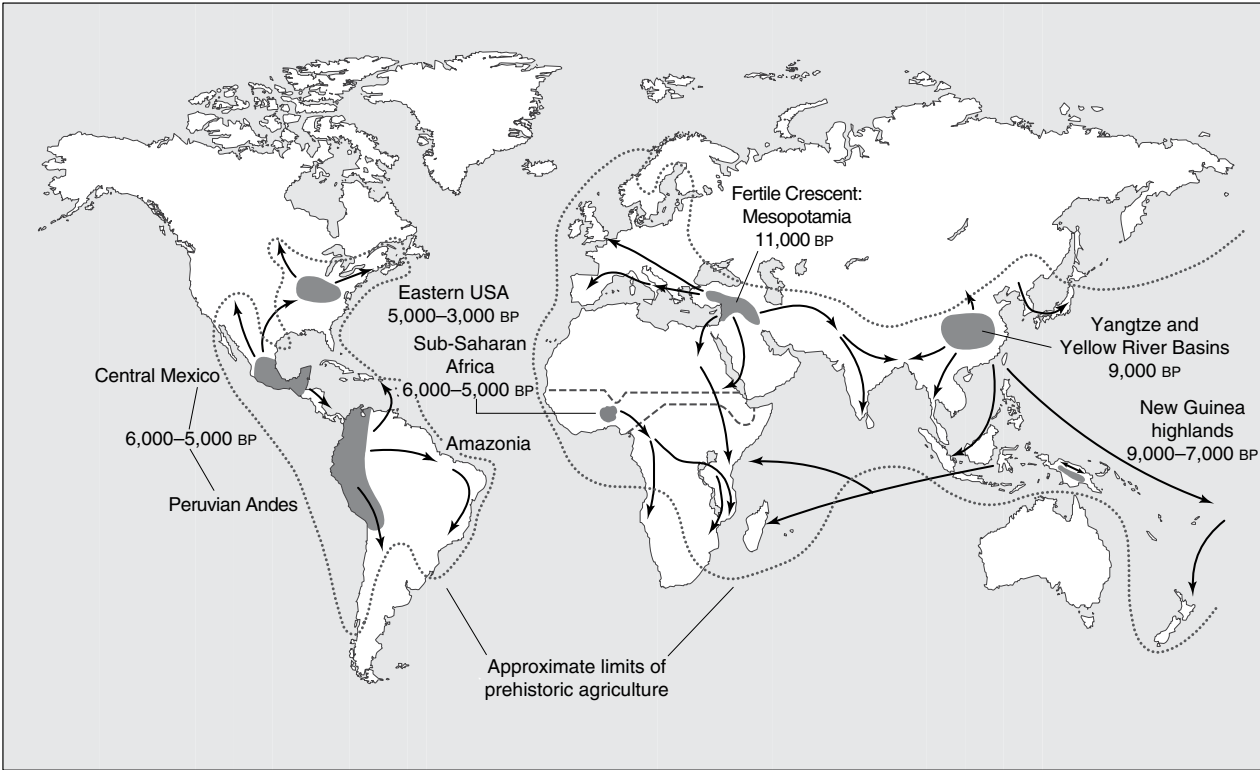
Map 3.3 Bellwood's mapping of the origins and diffusion of agriculture. Source: Bellwood, 2004.

Text within the map image:

Fertile Crescent: Mesopotamia 11,000 BP

Eastern USA 5,000–3,000 BP

Sub-Saharan Africa 6,000–5,000 BP

Central Mexico

6,000–5,000 BP

Peruvian Andes

Amazonia

Yangtze and Yellow River Basins 9,000 BP

New Guinea highlands 9,000–7,000 BP

Approximate limits of prehistoric agriculture

Zoom-in Box 3.4:   Carl O Sauer's (1952) *Agricultural Origins and Dispersal*

Where did the Neolithic Revolution first begin and how did it spread from these early hearths?

In addressing this question, for a long time scholars relied on the speculations of US geographer Carl Sauer. Sauer's manuscript on the origins and dispersal of agriculture was based upon the famous Bowman Lectures he delivered to the Association of American Geographers in New York city in 1952. Without the benefit of the archaeological, cultural, and genetic evidence that has since become available, Sauer used a number of basic assumptions to provide a reasoned guess as to where settled agriculture was first invented. Although some of Sauer's speculations remain relevant today others proved in the end to be inaccurate.

Sauer attempted to solve the riddle of where settled agriculture was first born by formulating six key assumptions:

- agriculture could only have developed in areas of agricultural surplus where communities could experiment without fear of catastrophic consequences if they failed;
- biodiversity was a prerequisite since a wide gene pool was required to crossbreed species;
- because flood defenses were limited agriculture could not develop in large river basins;
- areas of forestry would be preferred to grasslands as primitive technology made grasslands harder to till and cultivate;
- communities had to possess a number of skill sets which, whilst they might have derived from other needs, were of direct advantage in agriculture;
- agriculture could only have been invented by populations who were already sedentary or who were inclined to cede their nomadic lifestyles.

On the basis of these premises he created four maps which he offered as a speculative hypothesis on the origins and dispersal of agriculture. The first and third maps traced the first agricultural hearth to the "old world" and to Southeast Asia and outlined the vectors through which this hearth permeated into other regions of Asia, Europe, and Africa. The second map speculated on the origins of agriculture in the New World, focusing upon the Andes and Southern Mexico as the core hearth with offshoots into the United States and the Amazon basin. The final map presented Sauer's view of the global extent of agriculture in 1500 CE.

Sauer remains famous for his method or approach to tackling the question of the roots and routes of early agriculture, his use of reasoning and powers of deduction to address problems of significant human interest, his preparedness to use maps to propose bold and speculative hypotheses, and his courage to venture conjectures notwithstanding the limited evidence that was available.

those places and repeatedly led communities to the point of starvation. Necessity proved to be the mother of invention. But this explanation fails to account for why population growth might have occurred in particular places during this period in the first instance. Religious theories, meanwhile, propose that the growth of complex ceremonial practices was pivotal; food and animal sacrifice became part of religious rituals and new attitudes to food production were required. But again, why did religion suddenly develop in different centers across the world all at the same time, and were religions really confined only to a few locations? Theories of power likewise suggest that as societies developed, elites aspired to displays of authority and that hosting large feasts became an important sign of power. Food was required as it became a proxy for status and esteem. Theories of power, though, fail to explain why displays of power in and through food became venerated only in a few select locations and only at a particular moment in history.

Fourth Watershed: The Rise and Fall of Civilizations

Great civilizations in world history

Since the Neolithic Revolution human history has witnessed the rise and fall of many civilizations. Of course, the idea of "civilization" is a slippery one and there exists no agreed definition of what might constitute a civilization. Studies of past civilizations tend to benchmark these civilizations according to how sophisticated their technologies were, how developed their languages were, and the presence and functions of their cities. This arrangement of civilizations according to how enlightened or backward they were continues today. Some authors substitute the word civilization for society and vice versa. But rarely do civilizations limit themselves to the boundaries set by **nation states** or city states; civilizations more often stretch over larger geographical territories. They incorporate a wide range of societies who share an overarching common characteristic or set of characteristics. Some believe that new civilizations most often stem from a new spiritual movement which forms into a religion and gives expression to a new world view. Others again argue that civilizations are organized around pillars and institutions which determine how people prefer to be governed (politics) and how they organize work (division of labor and economy).

Perhaps the most ambitious and most influential study of the rise and fall of civilizations ever to have been produced was that undertaken by British historian Arnold J Toynbee. Published in 12 volumes between 1934 and 1961, Toynbee's *A Study of History* sought to chart the rise and fall of all the principal civilizations ever to have visited the human stage. Toynbee's study of human history led him to identify the existence of 19 past civilizations, most of them related as parent or offspring to one or more of the others: namely the Western, the Orthodox, the Iranic, the Arabic, the Hindu, the Far Eastern, the Hellenic, the Syriac, the Indic, the Sinic, the Minoan, the Sumeric, the Hittite, the Babylonic, the Eygptaic, the Andean, the Mexic, the Yucatec, and the Mayan civilizations (Plate 3.1). Later he was to suggest a unification of the Iranic and the Arabic into a united Islamic civilization, and a division of Orthodox Christian civilization into an Orthodox-Byzantine and an Orthodox-Russian civilization. In addition, he identified five

Plate 3.1   Teotihuacan, Mexico (In 450 CE perhaps the largest city in the world). Source: ©
Angelo Hornak/Corbis.

additional "arrested civilizations": Polynesian, Eskimo, Nomadic, Ottoman, and
Spartan. Toynbee argued that already by 1940, 16 civilizations had disappeared
leaving only five surviving: Western Christian, Orthodox Christian, Islamic, Hindu,
and Far Eastern civilization.

More recently, in 2011 the United States National Geographic Society attempted
to map important empires in world history in its book *Great Empires: An Illustrated
Atlas* (National Geographic, 2012). This Atlas divided world empires into three
categories, dependent upon the era in which they reigned: the Ancient World, the
Middle Ages, and Modern Empires. Whilst arguing that it is possible to identify as
many as 150 great empires in world history, the *National Geographic Magazine*
focused upon only 31 empires which it considered to be especially noteworthy.
The Ancient World (2600 BCE–500 CE) incorporated empires in Greece, Carthage,
and Rome; and India and China. The Middle Ages (500–1500 CE), meanwhile,
included empires in the Byzantium and the Arab World; medieval Asia and the
Khmer, Mongols, and Ming; the Christian and Muslim dynasties of medieval
Europe and Africa; and the Native American empires of the Toltec, Aztec, and
Inca. Finally, Modern Empires (1500–1900 CE) focused on the Spanish-American
and British empires and the Imperial Tribes of North America; the Ottoman and
Asante's empires in the Mediterranean and Africa; and the Mughals, Qing, and
Romanovs in the East.

Why do civilizations rise and fall?

Environmental explanations emphasize the continuing importance of the natural environment in the sifting and sorting of winning and losing civilizations. Civilizations that dwell in more hospitable environments over the long run prosper when compared with counterparts that inhabit more extreme environments and/or environments of poorer quality (see Zoom-in Box 3.5). It is perhaps unsurprising, then, that a relationship exists between the geography of the early agricultural hearths and the distribution of the first civilizations.

In his book *The First Civilisations: The Archaeology of their Origin*s, British archaeologist Glyn Daniels (1968) used the criteria of towns with more than 5,000 inhabitants, the invention of writing, and the existence of ceremonial centers to identify the first six civilizations as Sumer (beginning as early as 5,800 BP), Egypt (from 5,150 BP, the Indus valley from 4,500 BP), Shang China (from 4,500 BP), Meso America (from 3,200 BP starting with the Olmecs), and Peru (from 3,500 BP starting with the Chavín culture) (see Map 3.4). These are all regions of the world that enjoyed a head start in the Neolithic Revolution; they grew as civilizations because food supplies permitted them to aspire to more than mere survival. Daniels sought to examine the claim that civilizations first emerged in one center and then became trafficked to other centers through migration and the diffusion of ideas. He argued that, in fact, archaeological research led to the conclusion that each civilization was founded separately and flourished independently according to its own dynamic and tempo.

If nature can make civilizations it can also break civilizations. In his book *Collapse: How Societies Chose to Fail or Survive* US evolutionary biologist and geographer Jared Diamond (2005) calls for more attention to be given to the role of environmental factors in the collapse of societies:

- First, societies can fail because they have destroyed or lost vital natural resources; natural habitats have being raided, wild food sources have been depleted, biodiversity has been reduced, and soils have been leeched, bleached, and eroded.
- Second, societies can collapse because they come up against a number of environmental ceilings which prove difficult to raise: energy resources are mined to scarcity, demand for water resources exceeds supply, and exploitation of the earth's photosynthetic capacity approaches its peak.
- Third, societies can decline because human beings have polluted the environment through the mismanagement of toxic chemicals, the release of atmospheric gases, and the haphazard introduction of alien species into ecosystems.
- Finally, societies can falter because population growth and expanded consumption places unsustainable pressure on the available resource base.

Diamond illustrates the importance of these environmental threats in the collapse of past societies including that on Easter Island, the Polynesians of Pitcairn and Henderson Islands, the Anasazi in North America, the Mayans in Central America, and the Greenland Norse. He also applies his framework to examine the role of environmental threats in present-day Rwanda, Haiti, China, and Australia.

It is often assumed, nevertheless, that as human beings learned to master planet earth so too they loosened the shackles imposed upon them by nature and lessened
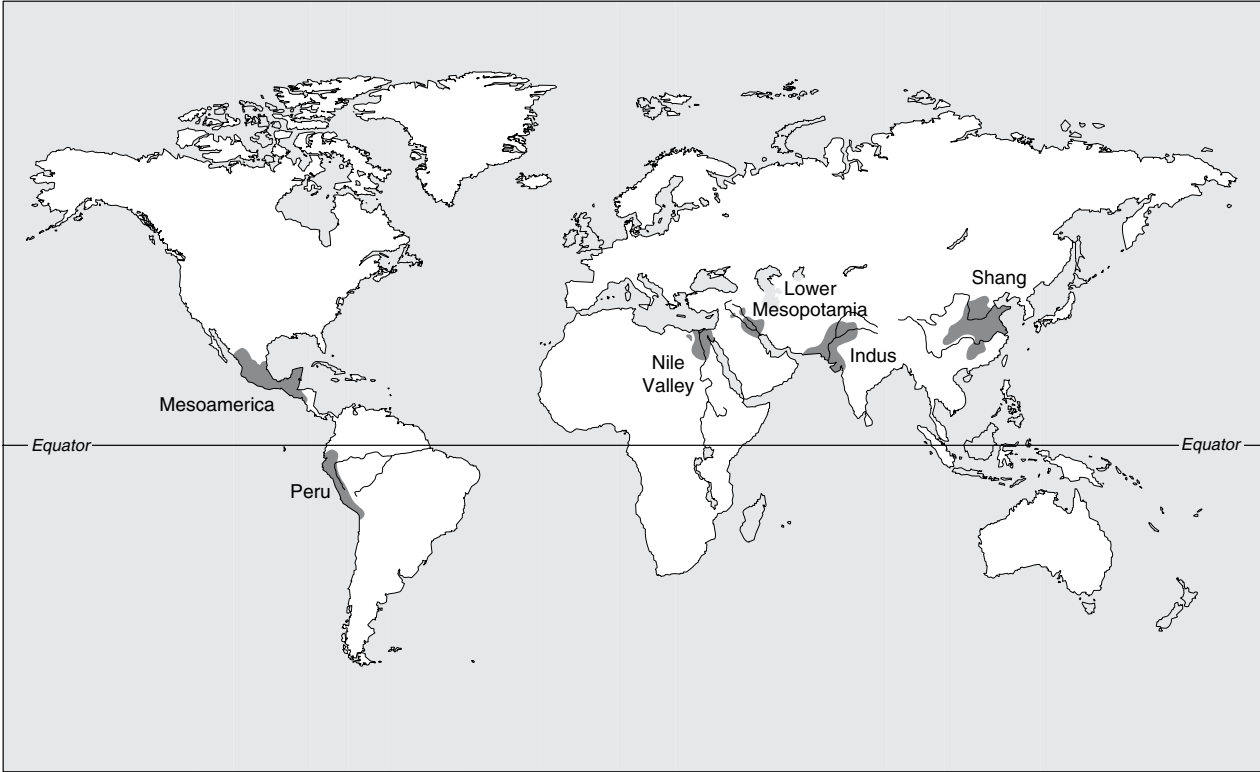
Map 3.4 Agricultural hearths and the first civilizations. Source: Daniels, 1968.

Zoom-in Box 3.5:   The Role of the River Nile in the Rise of Ancient Egyptian Civilization

It is commonly believed that Ancient Egyptian civilization came to fruition around 3150 BCE when its Upper and Lower societies were unified under the political control of the first Pharaoh or ruler of all Egypt (see Map 3.5). Egyptian civilization developed through three Kingdoms punctuated by three Intermediate Periods of instability, incorporating in all 30 Egyptian dynasties.

Following an Early Dynastic Period (3150–2686 BCE), an Old Kingdom was born (2686–2181 BCE), followed by the first Intermediate Period (2181–2055 BCE), the rise of a Middle Kingdom (2055–1650 BCE), a second Intermediate Period (1650–1550 BCE), the rebirth of a New Kingdom (1550–1069 BCE), a descent into a third Intermediate Period (1069–664 BCE), and finally a Late Period (664–332 BCE). From the third Intermediate Period onward Egypt fell prey to a sequence of foreign invaders, and whilst retaining a degree of coherence under the rule of the Ancient Greek Ptolemaic dynasty (305–30 BCE), with the arrival of the Roman **Empire** in 30 BCE, 3,000 years of Egyptian civilization was ended.

It is impossible to overestimate the role of the physical environment in the rise of Ancient Egypt. Progressively, throughout the Holocene, Northeastern Africa was transformed from grassland into an arid desert relieved only by the waters of the River Nile. Blocked off from the world by desert, the people of this region turned to the Nile for survival and progressively a common culture along the banks of the river cohered (Plate 3.2). The economy, religion, and politics of this culture was shaped by the river:

- Although surrounded by desert, prone to regular flooding, the Nile deposited onto its alluvial fan rich black soils which were fertile.
- During times of flood the Nile provided sufficient water for irrigation during times of drought.
- The Nile provided a reliable source of water for humans and domesticated animals.
- The Nile provided fish for eating and thus was an important source of protein.
- The Nile allowed trade to proceed between the north and south of Egypt and beyond.
- The Nile was viewed as a gift from God and its rhythms inspired and informed religious thought.

With secure food supplies, Pharaohs could devote more resources to exploiting minerals, developing writing, conducting trade, developing science and theology, and creating new bureaucracies, all of which increased the power of Ancient Egypt. The ancient Egyptian civilization bequeathed to the world new building techniques embodied in the great pyramids, temples, and obelisks; early mathematical equations; new forms of medicine; water management and irrigation; glass making; literature; and art.

(Continued)

Box 3.5 (*Continued*)
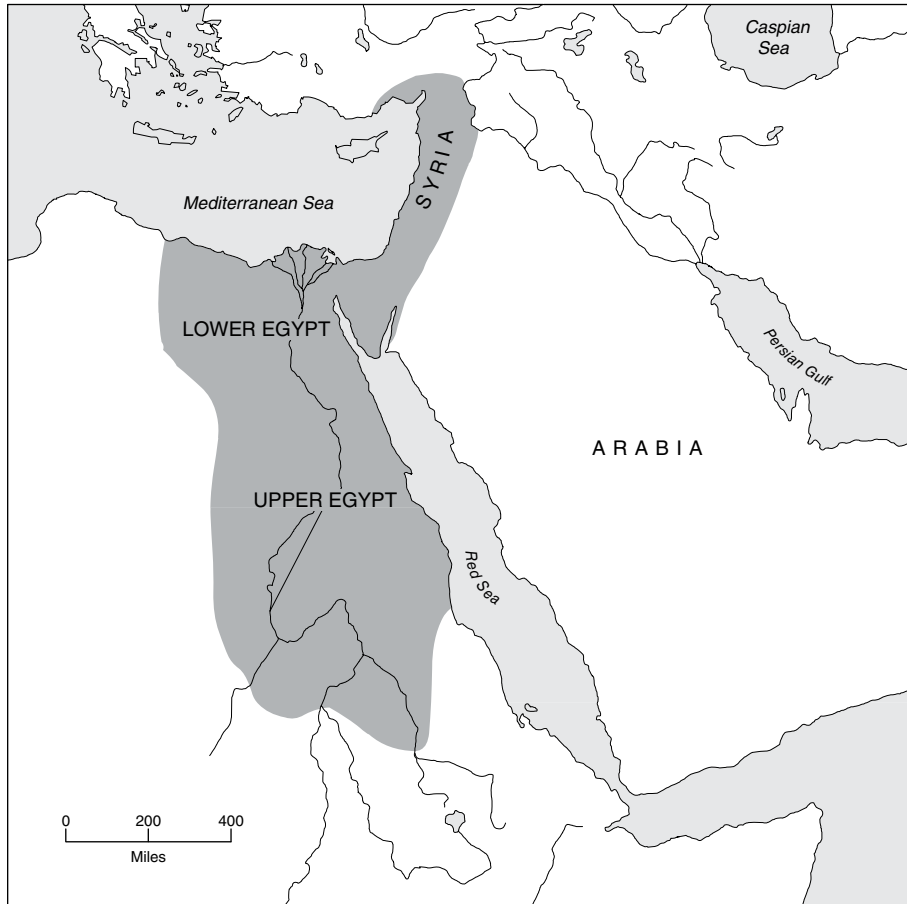
Map 3.5 Ancient Egypt and the Nile.

Plate 3.2 Floodplains along the River Nile, Egypt. Source: © Dave Bartruff/Corbis.

the importance of the environment as a determinant of the location and success of civilizations. Some scholars seek to explain the rise and fall of civilizations principally in terms of the *social* organization of these civilizations. Those civilizations that organize themselves effectively take off, whilst those that do not, falter, irrespective of the natural environment in which they dwell.

Toynbee's own theory of the rise and fall of civilizations provides a good example. This theory is predicated upon Toynbee's concept of the "creative minority." Civilizations emerge when a community is forced to solve a problem that threatens its existence but which does not overwhelm it. This problem is solved by a creative minority within the community who establish a pattern of life which is then copied by the majority and thereby comes to structure the community. There are no inherent reasons why civilizations are predestined to fail. Provided the creative minority continues to function, the civilization will continue to exist. Creative minorities, however, often falter and, instead of leading communities, become parasites. Recognizing that they are being exploited, the majority – what Toynbee calls the "internal proletariat" – stop copying the minority. Meanwhile, the "external proletariat," populations who lie beyond the civilization but who are also exploited by the creative minority, sense weakness and they revolt. Creative minorities can impose their authority by force through what Toynbee calls a "universal state": a body governing forcibly across an area. But the fate of the civilization is by that stage sealed. For Toynbee, civilizations commit suicide and are rarely murdered.

Since Toynbee a number of other important works have followed suit in arguing that it is internal social advantages and flaws within civilizations themselves that lead to their rise and collapse. US anthropologist and historian Joseph Tainter's (1988) book *The Collapse of Complex Societies* argues that societies fail largely because they are unable to sustain the complex bureaucracies they invent to govern themselves. According to Tainter, as societies address and overcome the problems they encounter, they creep incrementally toward greater levels of complexity. To sustain this complexity they require "energy subsidies," defined as resources procured from elsewhere in the system, which generate the capacity necessary to diagnose and address new problems (learning to be more efficient and/or unearthing new resources). Because energy subsidies are usually limited and finite, societies eventually struggle to create sufficient capacity to sustain their complex administrations; fresh problems then go unaddressed. As these problems accumulate they start to attack the key institutions that are keeping societies afloat and collapse results. Tainter notes that, whilst it might seem counterintuitive, often the best solution available to societies under stress is to simplify. Tainter applies his argument to the collapse of the Western Roman Empire, the Maya civilization, and the Chaco culture.

Environmental History and the Rise of the West from the Tenth Century BCE

Environmental history and the history of watersheds in the development of human culture are not only of historical interest. In the book *Guns, Germs and Steel: A Short History of Everybody for the Last 13,000 Years* US anthropologist and geographer Jared Diamond (1997) offers an environmental history explanation for the rise of Europe as the dominant imperial power of the past 500 years. Diamond's claim is

that whilst the West is often thought to have begun its climb to the summit of world history from the fifteenth century CE, in fact its deepest origins lie in the Neolithic Revolution and the head start from which Europe benefited from the time of the first farmers. For Diamond the West has been thousands of years in the making and it is not inaccurate to say that the ascendance of the West can be traced as far back as even the tenth century BCE.

Diamond begins with the question, why was it that Europe and not other continents broke from the pack and became a global superpower? Why was it that Europe colonized Africa, Asia, Australasia, and the Americas and not the other way around? Immediately, he rules out any suggestion that Europe succeeded because white Europeans were an innately superior race. He then turns to sociological explanations for the rise of the West. Certainly, Europe witnessed profound social, political, cultural, and economic change in the fifteenth century CE and gained advantages over the rest in terms of competition, science, property rights, medicine, consumerism, and work ethic. Diamond acknowledges the role of these factors but argues they are at best proximate determinants of Europe's success. They still raise the question, why did these factors coalesce in Europe and not elsewhere? What stimulated and enabled social, political, cultural, and economic change? A deeper explanation is required. Diamond centers his attention on the rich and fertile bounty that the natural environment afforded **Eurasia** (the supercontinent combining the landmasses of Europe, the Middle East, North Africa, and Asia) at the start of the Neolithic Revolution. The rise of Europe as a global superpower has deep origins in the environmental history of Eurasia and can be traced ultimately to Eurasians' uniquely successful encounter with the origins of agriculture.

According to Diamond, in the year 10,000 BCE there was very little difference in the development of different continents; hunter-gatherer societies dominated all regions. For this reason Diamond refers to all history prior to 10,000 BCE as merely "a limp to the starting line." As we have seen, however, the Neolithic Revolution brought food production first to some areas and then only later to others, and flourished more fully in some locations than in others. The uneven geography of the Neolithic Revolution created a pattern of differential development and progress. Through time this pattern consolidated itself and the gap between the more advanced civilizations and the less advanced backwaters steadily widened.

Eurasia, and in particular the Fertile Crescent of Mesopotamia, was among the first to discover food production. Its Neolithic Revolution was enhanced by the abundant and rich diversity of wild plants and animals it hosted that were capable of domestication. The Fertile Crescent domesticated local plants earlier and domesticated a greater variety of species of plant than any other continent; this region founded eight crops of global significance: cereals (emmer wheat, einkorn wheat, and barley); pulses (lentil, pea, chickpea, and bitter vetch), and the fiber crop flax. Globally, of the 148 "big wild herbivorous mammals" who present themselves as candidates for domestication only 14 in the end have been domesticated. The only region to house a large number of these mammals was Eurasia; Eurasia, in fact, was home to 13 of the 14 **domesticable species**, including the principal five: sheep, goats, cows, pigs, and horses.

Eurasia's early and comparatively successful encounter with the Neolithic Revolution generated developments which cumulatively tipped the balance in favor of Eurasians, including Europeans: microbes, writing, weapons, and centralized political organization:

- First, the large quantity of domesticated mammals in Eurasia proved an effective breeding ground for new infectious diseases. European peoples developed immunity to these microbes over time. But as part of their mission to colonize large parts of Latin America, Asia, and Africa, European explorers and colonizers brought with them to far-flung colonies microbes and pathogens to which indigenous natives had no prior exposure. The infectious diseases that arrived with European colonists and imperialists were certainly more virulent than those that prevailed in the colonies. And so this lethal freight resulted in massacre. Germs became a more effective weapon than guns in subduing the indigenous population.
- Second, freed from the immediate demands of survival, societies with food surpluses began to invent alphabets and writing systems. Writing furnished these societies with a sophisticated means of recording, storing, and transmitting knowledge, both from distant lands and from ancient wisdom. Writing allowed complex colonial endeavors to be administered and coordinated.
- Third, freed from the land, populations living in regions of food surplus could now develop complex divisions of labor and new skills. This facilitated the development of new technologies, including military technologies, which provided Europeans with a decisive edge in warfare.
- Finally, agricultural surpluses facilitated the development of larger and more complex societies and more sophisticated and capable centralized political institutions. This provided Europeans with exceptional command and control capability.

For Diamond, then, it was the Neolithic Revolution that put Eurasians on a long trajectory in many ways destined to end in Europe's global supremacy.

But why did Western Europe subsequently outperform the rest of Eurasia? Critically, the diffusion of agriculture was also rapid throughout Eurasia on account of its West–East axes; since regions in this continental block shared similar latitude and were not separated by any formidable physical barriers, diffusion was easier than in say the Americas or in Africa. Whilst agriculture first developed in the Fertile Crescent of Mesopotamia, it quickly spread to Western Europe. On arrival and over time, it combined with a number of additional comparative advantages to render Western Europe the most promising of all of Eurasia's regions. Of these other advantages perhaps the most important was Europe's political fragmentation. In contrast to other regions, and in particular China, where political authority was controlled by geographically expansive and monolithic all-powerful political dynasties, Europe was characterized by a number of comparatively weak and warring monarchies. In these conditions competition between political and economic organizations for access to and control over scarce resources prospered and spurred the development of **capitalism**.

Many admire the originality of and breadth of knowledge displayed in Diamond's environmental history explanation for the rise of the West. But his account has been

criticized for placing too much emphasis upon environmental factors in the deep past. Some scholars prefer to explain the rise of the West in terms of more recent social, political, cultural, and economic factors and refuse to see these factors as merely piggybacking on favorable environmental conditions inherited from the past. Diamond is said to downplay to too great an extent such factors as Western culture, the transformation from feudalism to capitalism in Europe, and the rise of nation states and the rapacious global empires these states built.

Conclusion

In an important sense, human history is the history of how one species emerged from, struggled with, secured victories over, and now to a certain extent lives free from limitations imposed by the natural environment.

The species hominin emerged and secured its status in the natural order only following a long process of evolution through natural selection. Recent developments in population genetics and migration suggest that all modern humans can be traced to a common ancestor in Central and Eastern Africa. From this location, modern humans began the long process of migration over the past 100,000 years and steadily colonized the entire planet. The timing and scale, waxing and waning of population migration into and out of certain world regions was affected by climate change; at different times it became more possible to breach natural barriers whilst at other times the environment proved too inhospitable for certain territories to be navigated through or inhabited. Surviving as hunter-gatherers for much of this time, significant developments in human culture and civilization occurred only over the past 12,000 years, beginning with the Neolithic Revolution and featuring the rise and fall of different world civilizations. Successive civilizations nevertheless have pioneered technological innovations and allowed humanity to gain the upper hand over nature. With the emergence of the West, and the dazzling new technologies now at our disposal, humanity's triumph over nature is today complete.

But notwithstanding the many achievements of the human species, there exists today a significant debate concerning the extraordinary impact of humanity on the life of planet earth. With the rise of the West as the world's leading civilization have come political, cultural, economic, and social developments that have left in their wake fundamental and irreversible changes in the workings of the earth's ecosystems. The concept of the **Anthropocene** has been coined to capture the extent to which the human species is now, literally, the dominant earth-shaping force. We are living today through a new geological period; the 12,000-year-old Holocene period is giving way to a new era, the Anthropocene, in which all of nature has been thoroughly re-engineered by humanity and exists now only in a socially modified form. During this period, it is supposed, humanity's triumph over nature will be shown to be an illusion, comprising only a series of pyrrhic victories. Whilst species do go extinct through normal processes of evolution, today we live in a period in which species extinction rates are 100–1,000 times the background rate. Indeed, some scientists believe that we are now living in the midst of the sixth mass extinction event in the earth's history and that our fate will be every bit as disastrous as that which befell the

dinosaurs. It might not be that far-fetched, then, to conclude that the next major watershed in human history will be humanity's struggle to avoid the mass extinction of species it relies upon, and indeed, perhaps even itself. But this is to get ahead of ourselves. Before returning to the question of the existence and consequences of such a phenomenon as the Anthropocene, it is necessary to first chart the rise, reign, and faltering of the West as an event of world historical significance.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) Whilst human beings have used their intellects and creative faculties to invent technologies which have permitted them to exert a degree of control over the natural environment, it would be anthropocentric to presume that humans are now masters over nature. According to some, in the process of plundering and polluting planet earth for their own ends, human beings have so modified nature that we now live in a new geological time period – the Anthropocene. The Anthropocene might well be a period in which the capacity of the planet to tolerate the human species reaches its limits and when planetary ecosystems finally collapse.

2) The human species emerged and secured its status in the natural order only following a long process (over at least 3,600 million years) of evolution through natural selection. Recent developments in population genetics suggest that all modern humans first appeared some 200,000 years ago and can be traced to a common ancestor in Central and Eastern Africa.

3) From this location, modern humans began the long process of migration around 100,000 BCE and across the next 90,000 years learned how to traverse and dwell in all of the world's environments, steadily colonizing the entire planet. By 10,000 BCE human beings inhabited all the main regions of the world.

4) Surviving as hunter-gatherers for much of this time, significant developments in human culture and civilization occurred only over the past 12,000 years. The Neolithic Revolution (the domestication of plants and animals) marked a key moment in people's capacities to exert control over the physical environment. Why the Neolithic Revolution began when it did and where it did remains the subject of debate.

5) In the past 6,000 years, human history has been marked by the rise and fall of different civilizations. British historian Arnold J Toynbee has identified as many as 19 historically significant past civilizations. There exist both environmental and social explanations for the rise and fall of civilizations.

6) Jared Diamond's environmental explanation proposes that the rise of Western civilization has deep roots in the environmental history of Eurasia, and in particular that supercontinent's bounty-filled Neolithic Revolution. According to Diamond, the rise of the West can be dated not to the fifteenth century CE but to as early as the tenth century BCE.

Chapter Essay Questions

a) Provide a synopsis of the origins and dispersal of the human species across the planet.
b) The first agricultural hearths and early civilizations appeared at a specific moment in human history and only in a selective number of locations. Discuss.
c) Describe and comment upon *natural environmental* and *societal* explanations for the rise and fall of civilizations.
   And/or
   Outline and comment on Jared Diamond's claim that the emergence of the West as a leading world civilization, which is commonly dated to the fifteenth century CE, in fact has much deeper roots in the favorable natural environmental conditions enjoyed by Eurasia at the time of the Neolithic Revolution.

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Toynbee A (1934–1961) *A Study of History*. 12 vols. (Oxford University Press, Oxford).

Wells S (2002) *The Journey of Man: A Genetic Odyssey* (Princeton University Press, Princeton).

Guidance for Further Reading

For excellent and accessible accounts of the origins and dispersal of the human species around the planet:

Olson S (2002) *Mapping Human History: Genes, Race, And Our Common Origins* (Houghton Mifflin Harcourt, New York).

Oppenheimer S (2003) *Out of Eden: The Peopling of the World* (Constable and Robinson, London).

Roberts A (2009) *The Incredible Human Journey* (Bloomsbury, London).

Roberts A (2011) *Evolution: The Human Story* (DK/Penguin, London).

Sauer C O (1952) *Agricultural Origins and Dispersal* (The American Geographical Society, New York).

Sykes B (2002) *The Seven Daughters Of Eve: The Science That Reveals Our Genetic Ancestry* (Norton, New York).

Wells S (2002) *The Journey of Man: A Genetic Odyssey* (Princeton University Press, Princeton).

Whilst the search goes on for the exact origins of agriculture, and the patterns which marked its early dispersal, important insights can be found in:

Bellwood P (2004) *First Farmers: The Origins of Agricultural Societies* (Wiley-Blackwell, Oxford).

For insights into the great civilizations in human history see:

National Geographic (2012) *Great Empires: An Illustrated Atlas* (National Geographic Society, Washington).

For an account of the importance of the natural environment in the rise and fall of civilizations see:

Diamond J (1997) *Guns, Germs and Steel: A Short History of Everybody for the Last 13,000 Years* (Norton, New York).

Diamond J (2005) *Collapse: How Societies Chose to Fail or Survive* (Penguin, New York).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 4

An Unequal but Changing World: Geographies of the World Capitalist Economy

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:

1) with reference to the United Nations Development Programme's (UNDP) Human Development Index (HDI), document the claim that our world is an unequal world but one that is in throes of a degree of rebalancing;

2) define the Old International Division of Labor (OIDL); describe and comment upon the idea that the West succeeded because its capitalist economic system preyed upon, plundered, and exploited the resources, labor, and markets of other regions of the world;

3) identify the conditions that gave rise to the 30 glory years of capitalism (1945–1975) and explain why core countries in the world economy were plunged into crises in the 1970s;

4) define the New International Division of Labor (NIDL); differentiate Fordist and post-Fordist approaches to industrial production; explain why both are considered to be solutions to the crises in profitability firms encountered in the 1970s;

5) reflect upon the extent to which the restructuring of the capitalist world that has been taking place since the 1970s has either consolidated the preeminence of core countries in the global economy or resulted in a rebalancing of the global economy in favor of the semi-periphery and periphery; illustrate your case by making reference to emerging economic spaces such as world cities, high-technology clusters, and the Tiger economies in Southeast Asia;

6) consider the prospects for countries in the Global South that have been targeted by the Millennium Development Goals (MDGs).

Introduction

The rise and reign of the West from (at least) the fifteenth century has left in its wake a grossly unequal and socially differentiated world. For nearly five centuries countries in the **Global North** have industrialized, developed, and accumulated vast riches. During the same period countries in the **Global South** have been left to languish in poverty and underdevelopment. This structure of inequality has proved to be resistant to change. But according to some, over the past 40 years there has occurred a dethroning of the West and a certain degree of rebalancing in favor of the underdeveloped world. Lagging economies are slowly beginning to catch up with core advanced economies. Of course, the majority of humankind still lives in both absolute and relative poverty, and an unacceptable proportion continue to dwell in a state of chronic **precarity** and destitution. But some countries in the Global South – in particular the "Tiger economies" (Hong Kong, South Korea, Taiwan, and Singapore) and "Cub economies" (Thailand, Malaysia, Philippines) of Southeast Asia and, of course, the **Brici** countries (Brazil, Russia, India, China, and Indonesia) – are now tracking a course of development and in some cases are challenging and even eclipsing their neighbors in the Global North.

Whilst our unequal but changing world has complex roots, undoubtedly its aetiology can be traced in part to the rise of the European-led world capitalist economy from the fifteenth century and the mutation and evolution of the global capitalist economy, especially following the global economic crises that occurred in the mid-1970s. The purpose of this chapter will be to reveal the ways in which the emergence of capitalism conspired to create uneven geographical development across the surface of the earth and to reflect upon the extent to which the contemporary global economy is showing signs that it is now ready to move beyond ingrained patterns of inequality inherited from the past.

An Unequal but Changing World

The emergence and mutation of the world capitalist economy from the fifteenth century has deposited in its wake an unequal world but one which is in the throes of a degree of change. The United Nations Development Programme's (UNDP) **Human Development Index (HDI)** provides one mechanism for mapping this inheritance and tracking its metamorphoses. Devised in 1990, the HDI measures levels of development for each UN member state (and for a variety of world regions) on the basis of three indicators: (i) a long and healthy life (life expectancy at birth); (ii) an Education Index (mean years of schooling and expected years of schooling); and (iii) a decent standard of living (**Gross National Income (GNI)** per capita in **Purchasing Power Parities (PPP)** (US$)). HDI scores range from a maximum of 1 (most developed) to a minimum of 0 (least developed). Countries are normally aggregated into one of four quartiles: Very High Development Score, High Development Score, Medium Development Score, and Low Development Score.

Map 4.1 shows HDI scores for 2012 as outlined in the *Human Development Report 2013* (UNDP, 2013a). It is clear that by and large it is Western countries (principally Europe, North America, Japan, Australia, and New Zealand) that continue to enjoy the greatest levels of development. Meanwhile, large parts of Latin America (including Argentina and Brazil), the former USSR, the Maghreb, and the Middle East are characterized by either very high or high levels of development. Medium levels of development are to be found largely in parts of Latin America, the Middle East, and Asia (including India and China) and to a lesser extent Africa. Finally, Sub-Saharan Africa remains for the most part the least developed region on earth and suffers from the lowest levels of development.

Whilst history continues to imprint itself on the present with real force it is also true that many countries in the developing world are making strides and that the gap between the Global South and the Global North is narrowing. Of course, one should not exaggerate the extent of the rebalancing that is going on; our world remains a deeply unfair and divided world. You are advised to approach the claim that the gap between the haves and the have nots is closing with a healthy degree of suspicion. This claim needs to be constantly interrogated and tested. Nevertheless, a central conclusion reached in the *Human Development Report 2013* is that the Global South is rising, and in some cases rising extraordinarily quickly. Figure 4.1 compares countries' HDI scores in 2012 to those of 1990. All but two countries

Map 4.1 UNDP Human Development Index 2012. Source: UNDP. Creative Commons Attribution 3.0 IGO.

More than 40 countries of the South had greater gains on the HDI
between 1990 and 2012 than would have been predicted from their
previous performance on the HDI

HDI, 2012
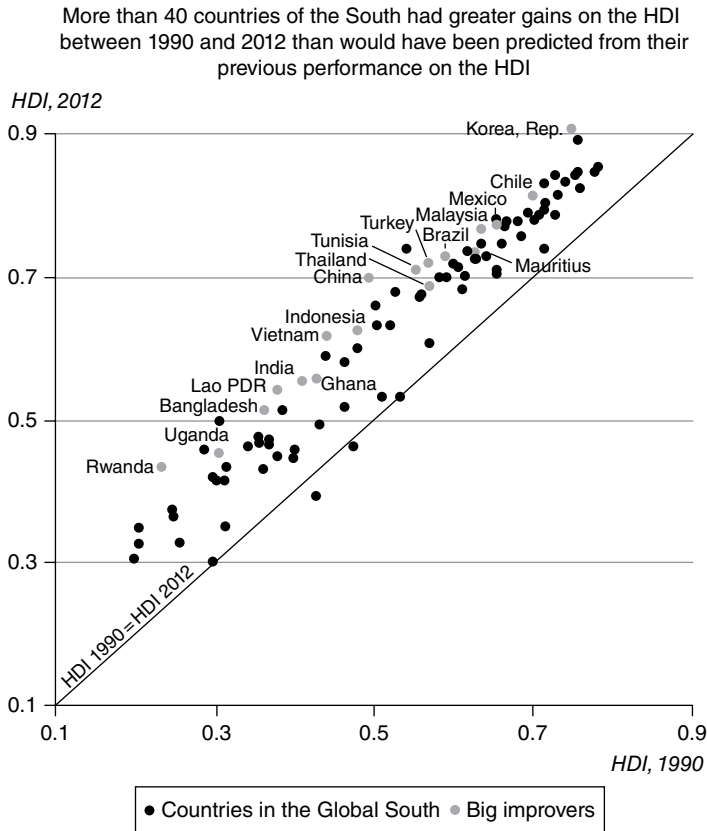
Figure 4.1 United Nations Development Programme HDI scores: improvements in the Global South (1990–2012). Source: UNDP. Creative Commons Attribution 3.0 IGO.

(Zimbabwe and Lesotho) scored better in 2012 than they did in 1990. More importantly, 40 countries from the Global South witnessed dramatic improvements in their fortunes.

The Old International Division of Labor (OIDL): Wallerstein's World-Systems Analysis

How might one account for the unequal world in which we live today? This question has begotten a range of responses. Here we simply note that there are some who believe that "West is simply best." The West broke from the pack as it alone discovered how to build cultural, economic, and political institutions that spur growth and development. It is the job of the rest of the world to copy the West. Those that go the way of the West will enjoy the same results. The mantra for these evangelists of the West is: *First in the West, then in the rest.* Those who are unable or unwilling to mimic the West will continue to languish in poverty and backwardness (Zoom-in Box 4.1).

Zoom-in Box 4.1:   Walt Whitman Rostow (1960) *The Stages of Economic Growth: A Non-Communist Manifesto*

Walt Whitman Rostow was a US political scientist who served as a national security advisor to US presidents John F Kennedy and Lyndon B Johnson. He was an ardent supporter of US military intervention in Southeast Asia, including in Vietnam and Cambodia. He believed that such intervention was necessary to hold back the tide of socialism and **communism**. In 1960, Rostow published a book titled *The Stages of Economic Growth: A Non-Communist Manifesto* (Rostow, 1960). This book sought to offer a coherent alternative development path to underdeveloped countries who were flirting with non-capitalist models of development.

   According to Rostow, all non-Western countries should follow the same sequence of development that Western countries marched through. There was only one pathway to modernization; the West had trodden this pathway and had demonstrated its success (see Figure 4.2). Beginning as Stage 1, "Traditional societies," (subsistence economies based upon labor-intensive agriculture and trading goods through barter), non-Western countries were required to move sequentially through Stage 2, "Preconditions for take-off," (when agricultural production becomes more capital intensive, extractive (mining) industries are developed, savings start to be accrued, and banking systems developed); Stage 3, "Take-off," (when savings are reinvested to fuel industrialization, banking systems are further developed, specialized industries and sectors appear, and employment in agriculture declines); Stage 4, "Drive to maturity," (when a virtuous cycle emerges incorporating investment, industrial production, profits, savings, and reinvestment, and industries become more technology intensive and specialized); and Stage 5, "Age of high mass consumption," (when manufacturing becomes technology-led, goods are mass-produced, workers move from industry into the service sector, and society becomes fixated with luxury, consumption, and self-actualization).

   Rostow believed that countries could best progress through these stages if they participated in a liberal, free-trading, open, and competitive global economy. According to Rostow the continual reinvestment of savings accrued in sovereign wealth funds to support better performing sectors of the economy was pivotal to progress. The quantity of the national product that needed to be reinvested increased as countries modernized. In this way countries were masters of their own destiny; through the strategic reinvestment of savings they were capable of fueling their own growth and development. For Rostow, this was how the West succeeded, and the West's course of development provided a universal solution for all. Follow the formula and development would automatically occur.

(Continued)

Box 4.1   (*Continued*)

Figure 4.2   Rostow's model of development. Source: Rostow, 1960. Used by permission of Cambridge University Press.
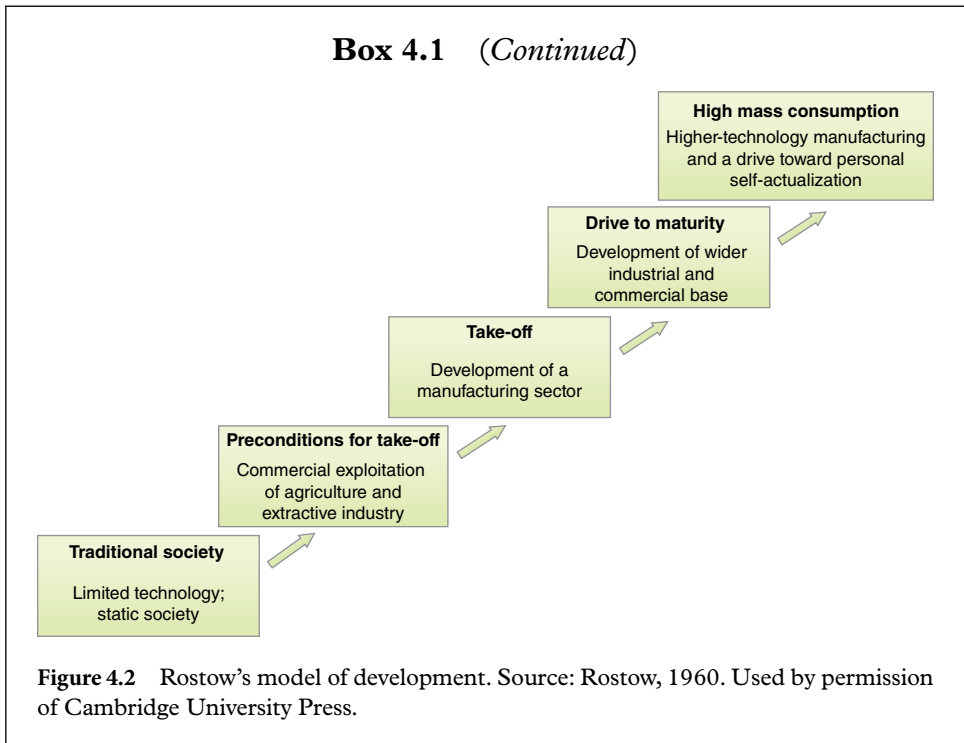
According to more critical scholars, however, this school of thought fails to grasp the fact that the West rose largely at the expense of the rest. Countries in the Global South were forced to suffer impoverishment, oppression, and exploitation so that countries in the Global North might enjoy abundance, wealth, and prosperity. Uneven geographical development then arises because winners can only win if there are losers and these losers lose systematically. The mantra of critical scholars is: *Because in the West, not in the rest.*

US sociologist Immanuel Wallerstein's has provided a cogent rendition of this more critical approach (Wallerstein, 1974, 1980, 1988). According to Wallerstein, there have existed three types of economic system in the history of the human species. *Mini systems* were the predominant economic systems in pre-agricultural societies. Small in scale and culturally homogeneous, these systems were self-contained and largely based upon the principle of subsistence. *World empires* were the predominant economic systems in the period from the earliest civilizations to the fifteenth century. They arose when leading civilizations rose to govern over culturally and geographically heterogeneous societies. These civilizations worked to incorporate other societies into an overarching and coordinated division of labor. World empires ruled over large regions of the globe, the Roman Empire being the iconic example. Finally, a single *world economy* has dominated from the fifteenth century. World regions have been drawn into a single division of labor and a single economic system based upon a globally integrated network of production, circulation, and consumption.

Wallerstein's primary focus was upon the third economic system, the world economy. According to Wallerstein, around 1450 a fundamental shift occurred in the social structure of Europe. **Feudalism**, the dominant social structure prior to 1450, began to suffer from a number of debilitating failings and limitations and steadily gave way to a new capitalist order. This transition created a European capitalist system. But this system was inherently predatory and expansive. It needed to exploit the resources of other world regions to function. Steadily the European capitalist economy junked, swept away, appropriated, and absorbed into its fold other prior mini systems and world empires. A European-led global capitalist economy emerged. Europe was to be the primary beneficiary. Europe prospered only because other world regions submitted, by choice or through coercion and compulsion, to its directives. Our unequal world is at root an outcome of this history.

According to Wallerstein, the European-led global capitalist economy never developed into a world empire but this political failure was to be an integral part of its successful march to the four corners of the earth. Certainly, European nation states established global empires during this period and these empires played a central role in the building of the European-led global capitalist economy. Nevertheless, each country presided over its own empire and no single European-wide or pan-European imperial power emerged. The European-led world capitalist economy was never dominated by one single government and Europe's many empires were birthed, grew, nested, matured, and perished inside this wider world economic system. Unencumbered by the crippling and expensive bureaucracies that often marked world empires, the European capitalist system, because of its lack of a single political center, remained nimble and flexible and able to conquer the world more efficiently and rapidly.

Wallerstein used the ideas of the **value chain** and the **division of labor** to explain the geographical consequences of the rise of the European-led global capital economy**.** The concept of the value chain is used to capture the stages that need to be passed through if a good is to be available to a customer, from the extraction of materials from the earth to the manufacturing of the good and its transportation to the market. At each stage in this sequence or chain more value is added to the good. Stages that add significant value tend to rely on high technology and are referred to as high-value-added stages. Stages that are necessary but add little value are normally labor-intensive, use little technology and are referred to as low-added-value stages. When industries merge or acquire other industries on the same level of the value chain as themselves, this might be referred to as horizontal integration. When industries merge with or acquire other industries upstream or downstream of their own level on the value chain, this might be referred to as vertical integration. For regions to be incorporated into an economic system they need to contribute to the aggregate product that is traded and consumed within that system, that is, to play a role in the division of labor. Regions that perform high-value-added functions tend to be prosperous. Regions that perform low-valued-added functions tend to be comparatively underdeveloped.

According to Wallerstein, the rise of the European-led global capitalist economy brought with it four types of global region, each playing a specific role in the global division of labor: core peripheral, semi-peripheral, and external. This system has come to be labeled the **Old International Division of Labor (OIDL)**. Whilst it is

Zoom-in Box 4.2:   The OIDL: The Case of Rubber

According to World-Systems Analysis and the idea of the OIDL, regions of the world can be clearly distinguished according to the role their industries play in the value chain. Regions with high-value-added activities are high-technology regions and are prosperous. These regions are core regions in the world capitalist economy. Regions with low-value-added activities are low-technology regions and are relatively more impoverished. These regions are peripheral regions in the world capitalist economy. Regions that have moved up the value chain but have not quite reached the top, or that have fallen from grace but not yet reached the bottom, can be referred to as middle-income or semi-peripheral regions in the world capitalist economy.

Consider the case of the production of the tires used in the manufacturing of automobiles. Historically, tires were produced using natural rubber tapped directly by cutting into the bark of rubber trees. Three processes were involved in their production. In Stage 1 natural rubber was extracted from rubber trees and, through treatment using water and acid, converted into milky white latex. This stage is a low-value-added stage. In Stage 2 this latex was then subjected to more sophisticated treatments, during which chemicals were added and heating and cooling processes applied to toughen up the latex. This stage is a high-value-added stage. In Stage 3 this fortified and treated latex then became molded into tires. These tires would then be sold on to car manufacturers. This stage is a high-value-added stage.

This division of labor was very clearly etched unevenly onto the face of the earth. The natural rubber used to produce tires was tapped almost exclusively from a tall softwood tree called *Hevea brasiliensis*. Indigenous to the Brazilian Amazon, this tree was replanted and cultivated by European colonists in the hot and humid tropical regions that they colonized – especially in Asia. For example, in 1876, British explorers and scientists appropriated rubber-tree seeds and experimented with them at the Botanical Gardens in London. Through trial and error, they pioneered more sophisticated rubber trees and despatched these seeds to colonies in Asia such as Malaysia, Ceylon (modern-day Sri Lanka), and Singapore. Densely packed rubber plantations proved immensely profitable. To this day, Stage 1 processes – the extraction of latex from rubber trees – remain concentrated in Thailand, Indonesia, Malaysia, India, Vietnam, China, Sri Lanka, and Cambodia. These regions perform low-value-added activities in the global economy and in the past have been peripheral regions in the global economy.

Meanwhile, Stages 2 and 3, which require higher levels of technology, remain concentrated in the Global North. For instance, the top 10 tire manufacturers in the world are Michelin (based in France), Goodyear (United States), Continental (Germany), Pirelli (Italy), Sumitomo Rubber Industries (Japan), Yokohama Rubber (Japan), Hankook Tire (South Korea), Cooper Tire & Rubber (United States), and Cheng Shin Rubber (Taiwan). These regions are high-valued-added regions in the global economy and remain economic cores. Efforts have been made by some peripheral regions to attract

investment from core regions or to build higher-valued-added indigenous industry themselves (vertically integrate up the value chain). At most this has helped some peripheral regions become middle-income, semi-peripheral regions in the global economy.

Following World War II, the production of synthetic rubber from petrochemical compounds (oil, shale, coal, even natural gas) became more important. The acquisition by Japan of former European colonies in Asia brought shortages of rubber to the allied Western forces. The United States was forced to pioneer new forms of synthetic rubber. Today synthetic rubber production remains a relative high-valued-added and high-technology activity and the industry is centered in the United States, Europe, and Russia. Whilst natural rubber remains a significant natural resource, synthetic rubber is now more widely used. The consequence is that efforts by semi-peripheral countries to climb the value chain and to become higher-technology regions, making latex into usable rubber and even making tires for the global economy, are facing stiffer challenges. This example shows how, with its high technology and innovative capacities, core regions can consolidate their dominance of global industries, frustrating the development of peripheral and semi-peripheral regions.

difficult, it has been possible for some regions to move between these categories (Zoom-in Box 4.2):

- Core regions, of which Europe (in particular France, England, and the Netherlands) was preeminent, enjoyed command and control authority over the world economy. Deploying their more advanced technologies, these regions transitioned first to more capitalist, intensive agricultural economies, and then to industrial regions and manufacturing hearths. Core regions exploited the raw materials of peripheral areas and sold manufactured goods back to these areas, and through this unequal relationship accumulated wealth and riches.
- Subordinated and marginalized by the core, peripheral regions were marked by low technology, labor-intensive agriculture, and primary and extractive industries. Their role was to supply the core and the semi-periphery with cheap raw materials and labor.
- Semi-peripheral regions lay between these two extremes and included former core regions that had fallen from prosperity (like Spain and Portugal) and former peripheral nations on the rise (such as China, India, Brazil, and Mexico). Semi-peripheral regions were often exploited by core regions but in turn themselves exploited truly peripheral regions.
- Finally, a number of external areas managed to steer clear of the European world capitalist economy (such as Russia) and continued to exist as separate world empires.

The implication of Wallerstein's work for analyses like Rostow's is clear: the Western model of development cannot be copied by other civilizations for to do so these

civilizations would need to build empires themselves, and possibly subordinate Europe and the United States. Not only would such a goal be morally reprehensible, in the nuclear world of today it would also be impossible. The implication of Wallerstein's work for the future of the West is equally clear. The degree to which the West will continue to be at the heart of the global capitalist economy depends upon its ongoing capacity to subordinate and appropriate resources from other world regions. No longer benefiting from global empires to oversee this extraction of resources and wealth from elsewhere, the West needs to rely upon a number of **neo-colonial** strategies. That other regions are no longer prepared to accept the existing global economic order, and are themselves seeking to change this order, suggests that a fractious and uncertain future beckons.

Crises in the Core: The 1970s as a Turning Point in World History?

For most of the twentieth century, up until the late 1960s and early 1970s, Western "core" countries continued to pull ahead of the rest. The economic growth of these countries was driven by new developments in industrial production processes and systems and the emergence, from 1945 to 1975, of social partnerships which promoted a virtuous relationship between firms, workers, and governments. In the 1970s, however, the Western capitalist system entered a period of crises from which it has yet to recover. The result has been a reworking of the OIDL and the emergence of new geographies of production.

From the 1880s onward, and guided by US mechanical engineer Frederick Taylor, there emerged in the Western world a tradition of applied scholarship called **Scientific Management**. Scientific Management placed under scrutiny the working practices of industries and factories with a view to making those practices more reliable, efficient, and productive. It was in this climate that US industrialist Henry Ford began to examine critically the methods through which automobiles were being produced. Ford was convinced that the prevailing approach to car production, which involved craftspeople undertaking a range of tasks, was inefficient and could be improved. He scrutinized how workers were being deployed and concluded that by simply applying labor more efficiently and effectively it ought to be possible to produce more vehicles per person per year.

Ford established a car production plant in Detroit, Michigan, and in this plant pioneered two notable innovations. He recognized that it was costly and inefficient for a single craftsperson to be involved in various stages of a production process. A division of labor ought to be introduced in which that production process was broken down into its component parts and workers dedicated their labor only to finite and discrete tasks. Of course, this strategy had the potential to be deskilling, monotonous, and dehumanizing for the worker. But it did allow far more work to be accomplished per worker in a given period of time. In addition, Ford recognized that time was being lost as workers moved around factories completing this or that task. It was better, he concluded, if tasks were made mobile and presented to stationary workers rather than workers circulating from one part of the factory to another. Accordingly, Ford introduced into his factory flow lines or assembly lines.

Plate 4.1   Henry Ford with a Model T (1921). Source: © Bettmann/CORBIS.

The result of these changes was an epochal increase in worker productivity and the advent of the mass production of automobiles. Ford produced his first mass-produced Model T car in 1908 and went on to build a world-class automobile manufacturing company which persists to this day (Plate 4.1).

Ford recognized that the sustainability of his firm was dependent upon worker loyalty and the existence of a market for his cars. He solved both in part by offering workers pay increases in line with improvements in productivity. This had the benefit of persuading workers that the monotony of undertaking largely unskilled tasks and being pinned to an assembly line was worthwhile. Employees had a direct stake in improving productivity. Wages improved as productivity increased. Mind-numbingly dreary though the work was, application and endeavor were sufficiently rewarded and standards of living were improving. Moreover, improving salaries enabled many of Ford's workers to purchase one of his cars themselves. Higher wages meant greater purchasing power and greater purchasing power meant more business for Ford.

Ford's approach to production came to be copied by manufacturers in many industries, in the United States and subsequently throughout the industrial world. By World War II, Fordist mass production was assumed to hold the key to economic growth and prosperity. But Ford's interest in building employee loyalty, securing peaceable labor relations, and ensuring the existence of a market for mass-produced goods presented a challenge to governments. Firms could not solve this problem by themselves; a structural solution across the entire economy was needed. In searching for such a solution many governments turned to the ideas of British economist John Maynard Keynes. Inspired by Keynes's theory of demand-led economic growth, they entered into social partnerships with Fordist firms and labor and trade union movements. Collective agreements were forged. Workers would receive pay

rises pegged to productivity improvements. The higher the productivity of the labor force the greater the remuneration. Also, governments established welfare states. Through general taxation workers would be provided with **social protection** (such as unemployment benefit and pensions) and items of **collective consumption**, such as health care, education, and housing. Productivity increases would guarantee better protection and more services.

This marriage between the political system and the economy came to be known as the **Fordist-Keynesian compromise**. Between 1945 and 1975 it led to historically unrivaled economic growth, prosperity, and improved standards of living throughout the Western world. This period is now referred to as the 30 glory years of capitalism. But by the mid-1970s the Fordist-Keynesian compromise began to come unstuck. In part, problems were caused by a number of external shocks to the capitalist world, including a series of wars and oil crises. But in fact, by the late 1960s and the early 1970s, the system itself was in crisis (Harvey, 1989).

Scientific Management and **Fordism** had squeezed out of production processes and systems all of the productivity gains that were possible. Annual increases in production across the economy began to wane and the law of diminishing returns set in. But social partnerships remained strong and the labor movement continued to demand more wages and governments more taxation. Having enjoyed 30 years of expansion, neither were minded to enter into a new relationship with the capitalist economy. There were to be no new deals between firms, workers, and governments. It proved politically impossible to curb demands for wage inflation and continuous expansion of welfare states. Firms simply had to subsidize both. With costs increasing as before but productivity increases stalling and output stabilizing, firms found themselves unable to maintain their profit margins and their rate of profit decreased. Thrashing to reverse this squeeze upon their profitability and capacity to pay dividends to shareholders, they conspired to plunge the entire system into crisis.

As firms have strived to restore profitability, a war has been waged on organized labor movements and welfare states, both of which have found themselves weakened and disempowered. According to British-born and US-resident Marxist geographer David Harvey (2005) a new era of **neoliberal capitalism** has developed in which capitalist firms have freed themselves from "burdens" imposed upon them during the Fordist-Keynesian period. To be competitive in the global economy firms need to be entrepreneurial, lean, mean, and flexible. For this to happen, workers, it is argued, need to offer their labor at cheaper rates and be prepared to accept flexible terms and conditions. It also requires, it is contended, that governments reduce taxation and downsize welfare states. But neoliberal capitalism has created a volatile and unstable world and has yet to discover a formula as successful as the Fordist-Keynesian compromise. The law of the jungle has set in; in the struggle for survival only the leanest and meanest will make it. And so it is unlikely that neoliberal capitalism will ever birth 30 glory years of peaceable capitalist growth in the twenty-first century.

Meanwhile, having lived through half a century of improving living standards and expanding government expenditure, both organized labor movements and welfare states have found it difficult to accept the collapse of social partnerships and attacks on wage increases, social entitlements, and public services. According

to David Harvey (2010), they have sought to weather the vagaries and vicissitudes of neoliberal capitalism by borrowing from financial institutions and entering into debt. Expectations of continuous rises in standards of living were met only through borrowing and indebtedness. Keen to raise capital to lend to this growing market of borrowers, financial institutions have borrowed from other financial institutions, creating in turn a deeply interconnected global financial system. But the debt being accumulated is vast and servicing it is going to be a challenge. In 2007, financial institutions woke up to the realization of just how vulnerable they were to debt default. A global meltdown of the financial system resulted, in turn bringing the global economy to its knees.

Two Responses to Crises in the Core

In an effort to restore and maintain profitability, capitalist firms have devised a variety of strategies, many of which have carved out some interesting new economic geographies. The OIDL has proved stubborn and ingrained, and many believe that the restructuring that has occurred has failed (thus far at least) to radically challenge the organization of the world economy around a core, a semi-periphery, and a periphery. Indeed, some processes would appear to be consolidating the power of the core. But some important global shifts are taking place, providing new opportunities for countries in the semi-periphery and the periphery to develop. The rise of a **New International Division of Labor (NIDL)** and the emergence of **post-Fordism** and innovative regional clusters are cases in hand.

The New International Division of Labor (NIDL)

Toward the late 1970s and early 1980s, scholars began to notice the development of a New International Division of Labor (NIDL). The NIDL, it was asserted, was systematically reworking the geography of the world economy laid down by the OIDL. Whilst the OIDL conceived of the world in terms of the role of different regions in value chains, the NIDL conceived of the world in terms of which bit of firms regions are most able to attract.

In her 1984 book *Spatial Divisions of Labour: Social Structures and the Geography of Production* British Marxist geographer Doreen Massey sought to investigate changes which were then occurring in the geography of industrial production across the United Kingdom. Massey recognized that many companies were exploiting their Fordist division of labor by developing **spatial divisions of labor**. Production systems were so fragmented that it was now possible for companies to physically separate the various tasks they were engaged in. These tasks could then be located in regions of the country that had the cheapest wage rates for any given skill level. Companies needed to keep their headquarter functions in large cities like London; although labor was costly, these cities were home to pools of high-quality graduates, white-collared professionals, and senior managers. But research and development functions and high-technology tasks could be delegated to areas such as Cambridge, Oxford, and Bristol where there existed pools of technical and professional workers.

Labor cost less in these regions than it did in London. Finally, companies could locate their low-technology activities and assembly and packaging functions to areas such as the Northeast of England, South Wales, or the central belt of Scotland. These regions had pools of unskilled and unemployed workers which could be exploited. By adopting spatial divisions of labor, firms could drive down their labor costs and maximize profitability.

Whilst Massey's focus was upon spatial divisions of labor within a single country, already by the early 1980s it was becoming clear that firms were stretching their spatial divisions of labor across the entire globe in a bid to exploit variable wage rates. In their 1980 book *The New International Division of Labour: Structural Unemployment in Industrialised Countries and Industrialisation in Developing Countries* German political economists Folker Fröbel, Jürgen Heinrichs, and Otto Kreye argued that German firms were now building a New International Division of Labor (NIDL). Whilst company headquarter functions were being left behind in German cities, research and development and high-technology functions were being relocated to regions of the world with cheaper but still technically proficient pools of labor, whilst low-technology manufacturing and assembly functions were being located amongst the world's poor.

Fröbel, Heinrichs, and Kreye argued that this trend was being driven by four factors. First, the profit squeeze of the 1970s had stimulated German companies to search for ways of reducing labor costs and readied them to scour the world in search of the right workers at the lowest cost. Second, Fordism had run so deep in German companies that their divisions of labor were highly fragmented. It was entirely possible to physically separate bits of a company and to relocate those bits to locations around the world. Third, developments in telecommunications (then computer, phone, and fax technologies) and air travel made it possible for headquarters to manage branch plants from a distance. Finally, the modernization of agriculture in the developing world had triggered mass migration from rural areas to third world cities and had created in these cities a vast army of desperate and powerless workers. These workers were ripe for super-exploitation, could be paid very little, and could easily be replaced if they found themselves injured, ill, or simply exhausted.

The post-Fordist economy

In their 1984 book *The Second Industrial Divide: Possibilities for Prosperity* US political economists Michael Piore and Charles Sabel set out to examine why some firms seemed to have thrived and prospered throughout the 1970s and early 1980s whilst others struggled to survive. Their eye was drawn to a region in Italy called the "Third Italy." Whilst Italy is normally thought to comprise a rich North and poor South, in fact a third region exists in the Northeast of the country. The Third Italy is centered upon the administrative region of Emilia Romagna and its capital city of Bologna. This region had a significant volume of small enterprises that were extraordinarily innovative and entrepreneurial. These firms differentiated themselves from Fordist factories which mass-produced standardized goods for the global market. Their speciality was to produce small batches of fashionable goods for differentiated and niche markets. When tastes shifted in these niche

markets these firms were flexible and nimble enough to adjust their production processes and product ranges.

Piore and Sabel believed that the Third Italy contained lessons for the entire world economy. The world no longer needed large-batch production of mass-produced and standardized goods. Instead it needed firms that were capable of catering to the whims of an ever more complex and changing market place. Fordist production systems were too inflexible and rigid. What was needed was a revolution in the ways in which firms operated. Flexible specialism was required; firms needed to be able to adjust their systems and products at a moment's notice. They needed to be capable of producing small batch runs of specialized, trend- and fashion-led, customized products.

Increasingly post-Fordist manufacturing practices are being preferred over their Fordist counterparts. Post-Fordist firms are characterized by their flexibility. Part-time, casual, and temporary workers are preferred over full-time and permanent employees. Workers are hired only as and when they are needed. Moreover, companies are increasingly subcontracting core duties to other companies thereby freeing themselves from obligations to workers (tax payments, pension rights, holiday entitlements, health and safety insurance, and so on). Marketing (producing products based upon market research) is now preferred over advertisement (simply selling products better). Marketing teams now work directly with research and development offices and engineers to ensure that customer needs drive manufacturing processes and not vice versa. Meanwhile, fixed assembly lines have been replaced with robotic technology which can be reprogrammed to perform different tasks as manufacturing processes change to accommodate consumer trends. Moreover, traditional Just-in-Case supply systems (where firms would order and stock a vast inventory of supplies based upon predictable future production targets) have been replaced by Just-in-Time supply systems (where supplies are delivered to the production process only as and when needed).

Whilst Fordist production strategies gave birth to a NIDL, post-Fordist production systems are presumed to result in geographical clustering of flexible firms in high-technology industrial hearths in core economies. Firms that have scattered their functions to various locations around the world have seen merit in vertical reintegration and the consolidation of activity in particular locations. Increasingly, the geographical clustering of firms is being recognized to confer onto post-Fordist firms a decisive competitive advantage. As early as 1890, British economist Alfred Marshall coined the term "industrial districts" (for Marshall, Lancashire and Sheffield were cases in point) to refer to these pioneering regions of innovation. Piore and Sabel concluded that industrial districts comprising specialist agglomerations of small firms with high levels of flexibility and innovation would increasingly win out over traditional, rigid, and stale Fordist manufacturing heartlands. According to US business scholar Michael E Porter (2000), clusters can be thought of as geographical concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field. For Porter, clusters that have grown organically have proved that geographic concentration lowers costs, increases productivity, and accelerates innovation. It is the duty of governments and development agencies to birth clusters where none exist, to incubate and upscale small fledgling

clusters that are only starting out in life, and to support and fortify clusters that are already active and work well.

Three Emerging Economic Spaces: Consolidating the Core or Rebalancing in Favor of the Semi-periphery and Periphery?

World cities

US urban planner John Friedmann (1986) was the first scholar to propose the world city thesis. Friedmann argued that the contemporary character of Western cities cannot be understood outside the latest period of restructuring of the capitalist economy. More specifically, the fundamental process implicated in the shaping of contemporary urban fortunes is the globalization of capital. The globalization of capital refers not only to the relocation by **transnational corporations (TNCs)** of low-value-added manufacturing to low-wage regions, but to all forms of international expansion of production capacity, service functions, and now finance capital and portfolio investment. Having a variety of consequences for cities at different tiers in the urban hierarchy, one of the most visible impacts of this process has been the formation of world cities or global cities – key decision-making centers from which international capital flows are controlled.

US sociologist Saskia Sassen (2001, 2012) has sought to advance the world city thesis through the development of the concept of "global command capability." In preparing this concept, Sassen has attempted to provide insights into why multinational headquarters are clustering around a small number of key cities. As firms operate on an increasingly international scale, they encounter a number of new management problems. These problems introduce new difficulties which often cannot be handled inside the firm. They include: holding and trading in a number of currencies whose value is subject to the whims of the financial markets; operating in different legal and accounting contexts; marketing in different cultural contexts; recruiting skilled laborers in foreign labor markets; and developing information technology facilities to enable global coordination. The practice of global command, therefore, is fraught with difficulties. When these problems become too complex for the firm, tasks become externalized and international-oriented producer service firms are hired. Support is sought from information and communications technology (ICT) consultants, language training firms, marketing and PR companies, recruitment agencies and executive search specialists, international legal experts, academics and political analysts, accountancy firms, and management consultants (Boyle *et al.*, 1996).

To the extent that an army of international-oriented producer service firms operate in any city, they can be said to furnish multinational headquarters with a capability to manage internationally. But only a few cities have sufficient concentrations of these support services. A geography of international-oriented producer services exists and, therefore, so too does the global command and control infrastructure available to firms vary over space. For this reason, the geography of the tools through which global command capability is made possible becomes an important factor in determining the geography of company headquarters. Given

this, it is not surprising to find that only a small number of world cities exist and that these cities house most of the headquarter functions of the largest TNCs and therefore function as key command and control nerve centers in the new world economy (Zoom-in Box 4.3).

Zoom-in Box 4.3:   Where Are World Cities?

Global management consultants AT Kearney and the Chicago Council on Urban Affairs have produced a Global Cities Index. This index ranks leading cities across the world across five domains (each carrying a different weight) and 25 measures:

Business activity: headquarters of major global corporations; locations of top business services firms; the value of capital markets; the number of international conferences held; and the flow of goods through ports and airports (weighting: 30%).

Human capital (a city's ability to attract talent): size of foreign-born population; quality of universities; number of international schools; international student population; and number of residents with university degrees (weighting: 30%).

Information exchange (how well news and information circulates within and outside the city): accessibility to major TV news channels; internet presence; number of international news bureaus; level of censorship; and broadband subscriber rate (weighting: 15%).

Cultural experience (number and diversity of cultural attractions): number of major sporting events a city hosts; number of museums, performing-arts venues, and diverse culinary establishments; number of international travelers; and number of sister-city [sic] relationships (weighting: 15%).

Political engagement (how a city influences global policy dialogue): number of embassies and consulates; number of major think tanks, international organizations and local institutions with international reach that reside in the city; and the number of political conferences a city hosts (weighting: 10%).

According to the 2014 Global Cities Index (AT Kearney and the Chicago Council on Urban Affairs, 2014), New York, London, Paris, and Tokyo remain the most significant command and control nodes in the global economy (see Figure 4.3). Other major cities in North America, Europe, and Australia remain powerful decision-making centers for global capital. Reflecting Asia's growing importance in the global economy, however, Asian cities are growing in influence, led by, among others, Hong Kong, Seoul, Singapore, Beijing, and Shanghai. Indian cities such as Kolkata, New Delhi, Bangalore, and Mumbai are also starting to assert themselves. Within Latin America, Buenos Aires, Mexico City, and the Brazilian cities of São Paulo and Rio de Janeiro are important world cities.

(Continued)

Box 4.3   (*Continued*)

2014	2012	2010	2008	City	Value
1	1	1	1	New York	61.7
2	2	2	2	London	58.1
3	3	4	3	Paris	52.3
4	4	3	4	Tokyo	47.2
5	5	5	5	Hong Kong	41.3
6	6	7	6	Los Angeles	38.0
7	7	6	8	Chicago	36.8
8	14	15	12	Beijing	35.1
9	11	8	7	Singapore	34.3
10	10	13	11	Washington	33.4
11	9	11	13	Brussels	32.9
12	8	10	9	Seoul	32.6
13	16	14	10	Toronto	32.4
14	12	9	16	Sydney	32.3
15	18	17	14	Madrid	31.8
16	13	18	18	Vienna	30.3
17	19	25	19	Moscow	29.5
18	21	21	20	Shanghai	29.4
19	20	16	17	Berlin	29.4
20	22	22	33	Buenos Aires	28.9
21	15	19	29	Boston	28.6
22	17	12	15	San Francisco	27.2
23	23	20	21	Frankfurt	26.7
24	24	26	NA	Barcelona	26.7
25	32	NA	NA	Melbourne	26.7
26	26	29	23	Amsterdam	26.3
27	29	27	27	Dubai	26.3
28	37	41	28	Istanbul	26.0
29	36	34	32	Miami	25.5
30	30	31	NA	Montreal	25.4
31	25	24	26	Zurich	25.4
32	28	28	30	Rome	24.1
33	27	23	24	Stockholm	23.5
34	33	35	31	São Paulo	23.4
35	34	30	25	Mexico City	23.0
36	39	40	37	Atlanta	22.7
37	31	33	35	Munich	22.4
38	38	38	NA	Houston	22.3
39	35	32	NA	Geneva	21.7
40	40	39	34	Taipei	21.3
41	45	46	49	Mumbai	20.9
42	43	36	22	Bangkok	20.7
43	42	37	36	Copenhagen	20.6
44	41	42	39	Milan	20.0
45	44	44	44	Dublin	18.1
46	NA	NA	NA	Budapest	17.5
47	NA	NA	NA	Prague	17.5
48	NA	NA	NA	Vancouver	17.5
49	50	43	38	Cairo	17.5
50	NA	NA	NA	Dallas	17.4
51	54	53	48	Jakarta	17.2
52	55	54	43	Bogotá	16.4
53	49	48	40	Kuala Lumpur	16.3
54	46	50	42	Tel Aviv	15.9
55	47	47	45	Osaka	15.8
56	53	49	47	Rio de Janeiro	15.6
57	48	45	41	New Delhi	15.2
58	NA	NA	NA	Santiago	14.7
59	52	52	50	Johannesburg	14.2
60	NA	NA	NA	Warsaw	13.6
61	NA	NA	NA	Lima	13.6
62	NA	NA	NA	Abu Dhabi	13.3
63	51	51	46	Manila	12.7
64	NA	NA	NA	Doha	12.4
65	NA	NA	NA	Riyadh	11.5
66	60	57	52	Guangzhou	11.0
67	57	55	51	Caracas	10.9
68	56	56	NA	Nairobi	10.5
69	58	58	58	Bangalore	10.2
70	61	61	55	Ho Chi Minh City	8.9
71	NA	NA	NA	Cape Town	8.9
72	NA	NA	NA	Chennai	7.6
73	65	62	54	Shenzhen	7.2
74	59	59	53	Lagos	7.2
75	63	64	56	Dhaka	7.1
76	62	60	57	Karachi	6.9
77	NA	NA	NA	Manama	6.8
78	NA	NA	NA	Casablanca	6.3
79	64	63	60	Kolkata	6.0
80	NA	NA	NA	Addis Ababa	5.7
81	NA	NA	NA	Tunis	5.3
82	NA	NA	NA	Lahore	4.8
83	NA	NA	NA	Kinshasa	4.7
84	66	65	59	Chongqing	3.8

Legend:
- Business activity
- Human capital
- Information exchange
- Cultural experience
- Political engagement

Figure 4.3   The Global Cities Index, 2014. Source: AT Kearney and Chicago Council on Urban Affairs. Used by permission.

High-technology clusters

Perhaps the most famous example of a post-Fordist high-technology industrial district or innovative regional cluster is Silicon Valley in California (Plate 4.2). Located in the San Francisco Bay area, Silicon Valley is a high-technology cluster or industrial district which has grown on the back of this region's preeminent role in pioneering the production of silicon wafers, otherwise known as microchips or semiconductors. The semiconductor industry is a pivotal industry because microchips are the foundation for the entire electronics industry. Virtually every electronic good that is now manufactured, from televisions to computers, mobile phones to fridges, game consoles to radios, and washing machines to electric heaters, depends upon a silicon chip to operate. From the 1960s there emerged in the Santa Clara Valley a business ecosystem which nurtured the development of semiconductor innovation and production. This ecosystem included world-class research-led universities such as Stanford University, privately funded research labs, semiconductor companies, and venture capital firms. As more semiconductor producers located in the area, a cluster developed breeding in turn an atmosphere of innovation, learning, competition, and entrepreneurship.

Silicon Valley has become the gold standard. Whilst many aspiring clusters seek to mimic Silicon Valley, in truth few are able to live up to the billing (see Zoom-in Box 4.4). Creating and managing clusters is fraught with challenges and it is not easy to artificially re-engineer economic geographies so as to force or to will a cluster into existence. To date, the more successful attempts to build clusters or industrial districts have tended to be located in the Global North. Important industrial districts in the Global North include "Toyota City" in Aichi, near Nagoya, Japan; the Boston biotechnology cluster; Technopolis Innovation Park in Delft, the Netherlands;

Plate 4.2   San Jose, Silicon Valley, California. Source: © Proehl Studios/Corbis.

Hsinchu Science Park, Hsinchu City, Taiwan; the Micro-Nano Technologies cluster in Grenoble, France; Aerospace Valley in Toulouse, France; Kista Science City, near Stockholm, Sweden; Silicon Fen in Cambridge, UK; and the Albany Tech Valley, in New York State, which specializes in nanotechnology.

But some high-technology clusters have also grown in the Global South. Often, though, these clusters have been transplanted into homelands by skilled migrants who have deigned to care for their countries of origin from afar. US political scientist Annalee Saxenian's (2006) book *The New Argonauts: Regional Advantage in the Global Economy* has proved seminal in foregrounding the role of migration, brain circulation, and business networks in transferring technology and entrepreneurship from Silicon Valley to emerging regions in China, India, Taiwan, Israel, and more recently Armenia. According to Saxenian, migrant engineers and entrepreneurs from the Global South who are now based in Silicon Valley are transferring knowledge, technology, and capital to homelands. Countries without a substantial indigenous high-technology base are benefiting from these spillover effects and are now assuming new roles in the global technology sector. The case of the rise of the high-technology ICT hub in Bangalore, India, is a case in point.

The Tiger economies of Southeast Asia

The label "Tiger economies" has been applied to South Korea, Taiwan, Hong Kong, and Singapore. As late as the 1960s, these four economies languished in the periphery of the OIDL. Across the past 50 years, however, they have witnessed a dramatic transformation, passing into the semi-periphery and then on into the core (Yeung, 2014). Today, they rank amongst the richest economies in the world. In their wake has arisen the Southeast Asian "Cubs" of Malaysia, Thailand, the Philippines, and Indonesia. More recently, the emergence of Vietnam, Myanmar, and of course, China has confirmed that Southeast Asia can no longer be regarded simply as a peripheral region in an OIDL. Why have these economies managed to become so successful? The answer is that they have been successful both in attracting (increasingly high-value-added) foreign direct investment (FDI) from core countries and in birthing companies of their own which have grown to become world-class TNCs with operations across the globe.

A former entrepôt on the edge of the British Empire, Singapore's rise to prominence has been particularly striking. Whilst in 1960 Singapore had a GDP per capita of US$320, today its GDP per capita amounts to US$64,000, making it the sixth richest country in the world. Singapore's growth has been driven by its capacity to attract TNC investment and to pursue a strategy of export-oriented industrialization. Development has been overseen by the People's Action Party (PAP), which has enjoyed uninterrupted rule since 1959, and the Singaporean Economic Development Board (EDB), which has led the city state's integration into the global economy. Having secured independence from Britain (1963) and then Malaysia (1965), the PAP and EDB first built infrastructure to entice TNCs to set up branch plants and established a global network of inward investment offices to woo potential investors. Sequentially it has positioned itself as a magnet for FDI in labor-intensive low-technology manufacturing and assembly functions (in the 1960s and 1970s), as a leading destination for higher-value-added, capital-intensive, TNC investment in

Zoom-in Box 4.4: Skolkovo (Innograd): Russia's Silicon Valley?

As the world's most famous hub for technological innovation, Silicon Valley, located in the Santa Clara Valley and centered upon the city of San Jose in California, is the envy of the world. Many countries have sought to copy and clone Silicon Valley and today there exists a variety of rival "Silicon Valleys," "Silicon Glens," "Silicon Canals," "Silicon Docks," "Silicon Beaches," "Silicon Corridors," and "Silicon Oases," to name but a few. None have managed to match the original Silicon Valley.

Perhaps the most ambitious attempt to replicate Silicon Valley today can be witnessed in ongoing efforts by Russia to build a "Skolkovo Innovation Center" from scratch on a Greenfield site located in the suburbs of Moscow (some 40 minutes by rail from the center of the city). Skolkovo is a flagship project of the Russian government. This project is being overseen by a not-for-profit company called the Skolkovo Foundation. This foundation is seeking to bring together a number of stakeholders to build a world-class technology ecosystem (see Figure 4.4). These include higher education institutions (centered upon The Skolkovo Institute of Science and Technology – Skoltech), start-up Russian technology companies, the research and development functions of larger Russian and global technology companies, a technology park, and venture capitalists. The focus is upon fortifying five key technology sectors: Information and Communications Technology, Energy Efficient Technologies, Nuclear Technologies, Biomedical Technologies, and Space Technologies and Communication.

Skoltech is a private research-led university which was opened in 2011. Partnering with other Russian universities and the Massachusetts Institute of Technology (MIT) in Boston, its mission is to train graduate-level students (Masters and PhD programs are offered in the areas of Information Science and Technology, Energy Science and Technology, Biomedical Science and Technology, Space Science and Technology, and Civilian Nuclear Science and Technology) to undertake fundamental research (the university will eventually house 15 Centers for Research, Education, and Innovation (CREIs)), and to commodify and commercialize scientific breakthroughs with market potential (driven by the Skoltech Center for Entrepreneurship and Innovation (CEI)).

Whilst the project is still in its infancy, already it is providing support to over 1,000 Russian technology companies (most of them small start-up companies) and has attracted research and development functions from 30 large TNCs including Cisco, Nokia, Intel, Siemens, Microsoft, IBM, and Johnson and Johnson. Eventually, the intention is to build Skolkovo into a city (Innograd) with around 21,000 residents. These early achievements notwithstanding, the extent to which Skolkovo will ever become a rival to Silicon Valley remains an open question. Given the political clout and finances that have been plowed into the project, if Skolkovo fails it is unlikely other regions with less political will and fewer resources will ever be able to clone Silicon Valley.

(Continued)

Box 4.4 *(Continued)*

Figure 4.4 In search of Silicon Valley: the Skolkovo business ecosystem. Source: Skoltech.
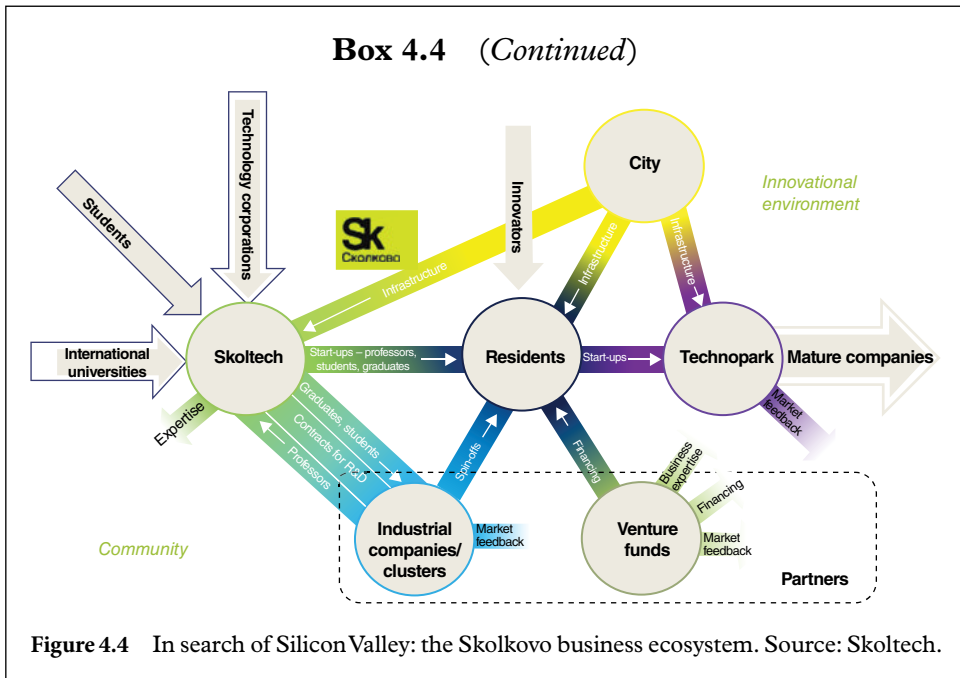
manufacturing (in the 1980s) and research and development (in the 1990s), and finally as a world city or global command and control hub for the world's leading financial services companies and TNCs (from 2000).

But prospecting for TNC investment has not been the only strategy adopted. In South Korea, greater emphasis has been placed upon import substitution (imposing tariffs on imports from foreign companies) and protecting and nurturing local and domestic firms. The so called "miracle on the Han River" followed. In 1962, South Korea had a GDP per capita of US$103 but today it enjoys a GDP per capita of US$32,000 (making it the 30th-richest country in the world). Guided strongly by the South Korean state, local South Korean firms have grown to become corporate giants and have developed truly global operations which themselves stretch to the four corners of the earth. The term Chaebol has been applied to these South Korean TNCs. Chaebols are family-controlled conglomerates (they produce products in a range of economic sectors including shipbuilding, automobiles, electronic goods, tourism, mining, and military produce) which have grown to become global TNCs but which remain controlled by family dynasties. Examples include Hyundai, Samsung, and the LG group. The ongoing capacity of state technocrats to prod and poke Chaebols in certain directions is dependent fundamentally upon the close social ties that bind state officials and leaders of these conglomerates.

Chinese-born and Singaporean-resident geographer Henry Yeung has attributed the success of the Southeast Asian Tigers in part to the work of highly authoritarian state technocrats who have pursued a strategy of export-oriented industrialization (Yeung 2014). Operating a form of command capitalism, these technocrats have sought to embrace a developmental model that has had at its heart a strong role for the state in building up indigenous industry into global corporations and attracting

FDI. Whilst Developmental States have driven the rise of the Tiger economies, it was a happy coincidence that they were pursuing aggressive growth strategies at precisely the same moment that TNCs in core regions were carving out a NIDL and relocating branch plants throughout the world. The Tigers proved to be especially attractive to TNCs from the core who were looking to invest overseas. In the early stages (1960s and 1970s), they offered exceptionally low labor costs. Latterly they have become lucrative markets in themselves. They also enjoyed a favorable colonial history (being former British and Japanese colonies), which bequeathed them useful start-up infrastructure such as large ports, railway systems, roads, hospitals, and education institutions. In the early stages, the Tigers also had lax environmental restrictions which proved attractive to so-called "dirty industries" from the Global North. Located at the interface between the West and the Communist world (China and Russia), they also carried a degree of geopolitical significance for the West. The Tigers received significant development assistance from, among others, the United States as the West sought to keep them onside.

But growth has not been without its problems. Critics argue that Developmental States are overly authoritarian, and even draconian, and have too much of a say in the everyday lives of citizens. Others suggest that the Tiger economies are encountering a number of labor, housing, and transport bottlenecks and that their growth is unsustainable into the future. The environmental pollution that has accompanied growth has also been a source of worry for some. Others lament in particular Singapore's reliance on FDI and worry about its limited base of indigenous start-up companies and capacity to commercialize and globalize technological breakthroughs whose origins are more local. At the other extreme, critics argue that South Korea's Chaebols have become "too big to fail" and that the country has become vulnerable to the changing fortunes of a limited number of conglomerates. Meanwhile, in the cases of Singapore and Hong Kong in particular, immigration has been required to sustain the labor force. Whilst both present themselves as cosmopolitan centers, there is in fact reason to be concerned about the growing problem of racism and the divides that exist between incomers and indigenous peoples.

The Future of the Ultra-periphery: The UNDP Millennium Development Goals

Notwithstanding the capacity of some peripheral areas to integrate into the global economy, there remain significant areas in the Global South that continue to languish in the ultra-periphery of the global economy. But these areas are not going entirely unsupported. Established in 1965, the United Nations Development Programme (UNDP) strives to create improved standards of living and quality of life throughout the world, but specifically in the Global South. In 2000, at the UNDP Millennium Summit in New York, UN member states agreed to pursue eight specific **Millennium Development Goals (MDGs)**. These goals are designed to transform the plight of the world's poor. A further 18 targets (and 48 indicators or measures of progress) were also agreed. These goals were to be achieved by 2015 (Zoom-in Box 4.5). Today, 193 countries and at least 23 international organizations are actively working to ensure the success of the MDGs.

Zoom-in Box 4.5:   The United Nations Development Programme (UNDP) Millennium Development Goals 2000–2015

The goals and targets comprise:

Goal 1   *Eradicate extreme poverty and hunger*
Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day.
Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger.

Goal 2   *Achieve universal primary education*
Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

Goal 3   *Promote gender equality and empower women*
Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.

Goal 4   *Reduce child mortality*
Target 5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate.

Goal 5   *Improve maternal health*
Target 6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality rate.

Goal 6   *Combat HIV/AIDS, malaria, and other diseases*
Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS.
Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.

Goal 7   *Ensure environmental sustainability*
Target 9. Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.
Target 10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.
Target 11. Have achieved by 2020 a significant improvement in the lives of at least 100 million slum dwellers.

Goal 8   *Develop a global partnership for development*
Target 12. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system (includes a commitment to good governance, development, and poverty reduction both nationally and internationally).

Target 13. Address the special needs of the Least Developed Countries (includes tariff- and quota-free access for Least Developed Countries' exports, enhanced program of debt relief for heavily indebted poor countries (HIPCs), and cancelation of official bilateral debt, and more generous official development assistance for countries committed to poverty reduction).

Target 14. Address the special needs of landlocked developing countries and small island developing states.

Target 15. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.

Target 16. In cooperation with developing countries, develop and implement strategies for decent and productive work for youth.

Target 17. In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

Target 18. In cooperation with the private sector, make available the benefits of new technologies, especially information and communications technologies.

Considerable progress has been made toward meeting many of these goals and targets. According to the *Millennium Development Goals Report 2013* (UNDP, 2013b):

- The proportion of people living in extreme poverty has been halved.
- The target to halve the proportion of people suffering from hunger is within reach.
- Over 2 billion people have gained access to improved sources of drinking water.
- Significant strides have been made in the battle to contain malaria and tuberculosis.
- Debt forgiveness and improvements in the terms of trade are enabling developing countries to better compete.

But much work lies ahead. The *Millennium Development Goals Report 2013* also notes that:

- Environmental sustainability is under severe threat, particularly from activities undertaken in the most developed countries and in rapidly developing countries, and specifically with respect to climate change.
- Over 2.5 billion people still lack access to proper sanitation facilities.
- Mortality among the very young (less than one year) in the poorest countries remains a significant problem.
- Most maternal deaths are preventable, and progress in this area needs to be scaled up if targets are to be met.

- Access to antiretroviral therapy and knowledge about HIV prevention must expand.
- Too many children are still denied primary education.
- There is less aid money overall, with the poorest countries most adversely affected.

Moreover, progress with respect to each of the eight MDGs has been uneven, varying from region to region, country to country, and between social groups (by age, gender, ethnicity, sexuality, disability, and so on). Accelerated action will be needed if the MDGs are to be fully met by the close of 2015. As a consequence, plans are now afoot to revise, refresh, renew, and galvanize the international community's resolve to continue to pursue the MDGs beyond the 2015 deadline.

Conclusion

Our world is marked by uneven geographical development but it is a restless world in which inherited patterns of uneven development (established by the Old International Division of Labor (OIDL) and comprising core, semi-peripheral, and peripheral regions) are being reworked and revised. The crisis of the global capitalist system which has been working its course since the 1970s has created a new era of neoliberal capitalism which has carved out a New International Division of Labor (NIDL) and resulted in revolutionary changes in industrial production systems and the rise of a post-Fordist economy. Amidst the restructuring that is taking place, a range of complex new economic spaces are emerging, reshuffling relationships between core, semi-peripheral, and peripheral regions. Examples include world cities, high-technology industrial clusters, and emerging Tiger economies. The extent to which poorer countries in the Global South are catching up with rich countries in the Global North remains, however, a matter of debate. According to some, a rebalancing of sorts is now underway.

It is certainly fair to conclude that neoliberal capitalism has not solved the crisis in the capitalist system. Indeed, the global economic recession that has devastated the global economy since 2007 indicates the extent to which neoliberal capitalism is a poor political and economic system, destined to create further crisis. Moreover, both neoliberal capitalism and the post-2007 crisis have served to consolidate the wealth of the capitalist class and restore to these richest people in society a heightened degree of class power. The motif of the richest would appear to be, "never let a good crisis go to waste." This has been to the detriment of poor people both in the Global North and in much of the Global South. For all the rebalancing that is taking place, we might take note of a recent study conducted by Oxfam (2014) which concludes that: almost 50% of the world's wealth is owned by just 1% of the population; the bottom 50% of the world's population owns the same as the richest 85 people in the world; seven out of 10 people live in countries where income inequality between the rich and the poor has increased in the last 30 years; and the richest 1% increased their share of national income in 24 out of 26 countries from 1980 to 2012.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) Our world is an unequal but changing world. The degree to which poorer countries in the Global South are catching up with rich countries in the Global North remains a matter of debate.

2) Our unequal world was formed by the rise from the fifteenth century of a European-led world capitalist economy which gave birth to an Old International Division of Labor (OIDL) comprising core regions, semi-peripheral regions, and peripheral regions.

3) Whilst the Fordist-Keynesian compromise led to 30 glory years of capitalist growth (1945–1975) in the core, this compromise failed in the 1970s, plunging the capitalist world into a crisis from which it is still to recover. A period of neoliberal capitalism has emerged. As the global economic crisis that has burdened the world since 2007 testifies, it is doubtful if neoliberal capitalism will be able to deliver sustained economic growth over time.

4) Faced with a profit squeeze in the 1970s, capitalist firms have created both a New International Division of Labor (NIDL) and a set of new flexible production practices which can be termed post-Fordist.

5) The restructuring of the capitalist world that has been taking place since the 1970s has both consolidated the power of core economies and created (limited) opportunities for countries in the semi-periphery and periphery to become better integrated into the global economy. The re-concentration of economic activities (in the core) and dispersal of these activities (from the core) can be witnessed in the complex economic spaces that are emerging. World cities, high-technology industrial districts and regional clusters, and the Tiger economies in Southeast Asia are cases in point.

6) The Millennium Development Goals (MDGs) have targeted underdevelopment in ultra-peripheral countries in the Global South. The MDGs have ameliorated a degree of suffering but there remains much work to do. Poverty, precarity, and vulnerability continue to blight the lives of the greater majority of humankind.

Chapter Essay Questions

a) Our world is an unequal world but one that is currently witnessing a degree of rebalancing in favor of semi-peripheral and peripheral economies. Discuss.

b) Explain what is meant by both the Old International Division of Labor (OIDL) and the New International Division of Labor (NIDL). In what ways and to what extent has the NIDL restructured the geography of the world economy?

c) The "Third Italy" provides a template which other regions ought to copy. Discuss.

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Wallerstein I (1988) *The Second Era of Great Expansion of the Capitalist World Economy, 1730 to 1840s* (Academic Press, San Diego).

Yeung H (2014) "Governing the market in a globalizing era: Developmental states, global production networks and inter-firm dynamics in East Asia." *Review of International Political Economy* 21: 70–101.

Guidance for Further Reading

World-Systems Analysis was first pioneered by Immanuel Wallerstein:

Wallerstein I (1974) *The Modern World System: Capitalist Agriculture and the Origins of the European World Economy* (Academic Press, London).

Wallerstein I (1980) *Mercantilism and the Consolidation of the European World Economy, 1600–1750* (Academic Press, New York).

Wallerstein I (1988) *The Second Era of Great Expansion of the Capitalist World Economy, 1730 to 1840s* (Academic Press, San Diego).

The following three books written by David Harvey provide an excellent overview of the Fordist-Keynesian compromise, the 30 glory years of capitalism, the 1970s crises in capitalism, and the rise of neoliberal capitalism:

Harvey D (1989) *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Wiley-Blackwell, Oxford).

Harvey D (2005) *A Brief History of Neoliberalism* (Oxford University Press, Oxford).

Harvey D (2010) *The Enigma of Capital: And the Crises of Capitalism* (Oxford University Press, Oxford).

Original introductions to the ideas of the spatial division of labor and the New International Division of Labor (NIDL) are provided in:

Fröbel F, Heinrichs J, and Kreye O (1980) *The New International Division of Labour: Structural Unemployment in Industrialised Countries and Industrialisation in Developing Countries* (Cambridge University Press, Cambridge).

Massey D (1984) *Spatial Divisions of Labour: Social Structures and the Geography of Production* (Methuen, London).

The growing importance of post-Fordist production systems was first charted by:

Piore M J and Sabel C F (1984) *The Second Industrial Divide: Possibilities for Prosperity* (Basic Books, New York).

The best introduction to world cities remains:

Sassen S (2001) *The Global City: New York, London, and Tokyo* (2nd edition) (Princeton University Press, Princeton).

Excellent introductions to Economic Geography are provided in:

Coe N M, Kelly P F, and Yeung H W C (2013) *Economic Geography: A Contemporary Introduction* (Wiley Blackwell, Oxford).

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UNDP (2013) *World Development Report 2013* (UNDP, New York).

An up-to-date assessment of the successes and failures of the Millennium Development Goals (MDGs) can be found in:

UNDP (2013) *Millennium Development Goals Report 2013* (UNDP, New York).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 5

The Rise and Fall of Great Powers: Nation States, Empires, and Geopolitics

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:

1) recognize that the ideas of the sovereign state, nations, and nation states are recent inventions, conjured and given life first in Europe between the middle of the seventeenth century and the end of the nineteenth century;

2) define "multilevel governance"; explain why some commentators believe that the era of the nation state is coming to an end and that a new future based upon multilevel governance now beckons;

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3) describe and comment upon Europe's colonization and decolonization of Latin America, Asia, and Africa from the seventeenth century; comment upon the political legacy of European colonization of Africa;
4) identify the ideological conflict that underpinned the Cold War, discuss the geopolitical struggles that emerged during the Cold War, and document the political legacy of the collapse of the USSR in 1991;
5) describe and comment upon the idea that world politics is now structured around a clash of civilizations.

Introduction

Human beings are territorial creatures that dwell within particular places and imagine themselves to enjoy certain rights over what happens within those places. Indeed, by occupying particular areas over a certain time period they come to view these areas as belonging to them and believe that it is their right to defend their turf should it be invaded or annexed by others. Political geographers are interested in how human **territoriality** leads to political claims by groups of people to ownership over sections of the earth's surface (Storey, 2012). They are interested in the mosaic of political units or **polities** that result and the borders and boundaries that are devised to broker peace between competing powers making rival claims over **space**. They are also concerned with the rapacious appetite of some polities to expand their horizons and bring under their purvey territories already settled and claimed by other polities. The wars and conflicts that result represent the apogee of this process.

The purpose of this chapter is to examine the ways in which the rise of the West from the fifteenth century transformed first the structure of the polities that existed in Europe and thereafter the ways in which European **nation states**, through their imperial activities, structured the political geography of the rest of the world.

The Political Geography of Rule

The ideas of the sovereign state, nations, and nation states

We tend to take the political map of the world that presents itself today as a given. The world is divided into political units called countries. Unless the international community sees fit to intervene, the rulers of these countries enjoy sovereign authority to command as they please. It seems that it has been this way forever. But it has to be remembered that the idea of the sovereign nation state is of recent origin. Indeed, it is an idea that was first pioneered in Europe and one which both contributed to and, in turn, benefited from the rise of the West from the fifteenth century.

In Europe in the medieval period the concept of the sovereign nation state would have appeared a strange one. No single authority presided over any particular territory. Instead, territories were administered by a range of overlapping governing

regimes, including emperors, the papacy, kings and queens, feudal knights, barons and baronesses, counts and countesses, dukes and duchesses, and so on. Increasingly, this arrangement created conflict and tension. Polities made competing claims over space, and quarrels, spats, and wars became the norm. In the seventeenth century the most important of these conflicts came to a head. Warring parties agreed to resolve their differences through diplomacy and negotiation. The Peace of Westphalia (Germany) was signed in 1648 and Europe's landmass was effectively divided into discrete parcels and allocated to particular polities. The idea of the sovereign nation state was born. But how was the map of Europe to be carved up? Who had a legitimate claim to sovereign self-rule? How were borders to be decided?

Increasingly, the idea that there existed nations and that these nations deserved to be self-governing (to be nation states) came to dominate thinking. But how did the substantive entities we now recognize as *nations* materialize? Challenging a tendency to reify nations – to ascribe to them some natural and matter-of-fact ontological existence – there is now a growing body of scholarship that conceives of "nations" as relatively recent **social construction**s that grew out of conditions prevalent from the seventeenth century. Far from being natural or organic entities that have existed from the dawn of time, "nations" are best conceived as "invented" or "imagined communities."

According to Indian-born and British- and US-resident Cultural Studies specialist Homi Bhabha (1990), nations are best thought of as "narratives." These narratives imagine that there exist groupings of people who have journeyed through a single history and who today survive as a culturally homogeneous collective. Narratives of the nation often date the birth of the nation in the deep past. They revel in the great achievements of the collective. Tales testifying to past military, scientific, economic, political, and moral triumphs abound. Meanwhile, the misdeeds visited upon members of the nation by neighbors near and far are lamented. These harrowing encounters, however, fail to break the spirit of the collective and only deepen members' resolve and fortitude. In *Imagined Communities*, Chinese-born and British- and US-resident International Studies specialist Benedict Anderson (1983) likewise calls nations "imagined communities." Across their lives, members of any particular nation will encounter only a tiny fraction of all those assumed to be part of the nation. And yet, in spite of not having met the majority of their fellow citizens they somehow manage to convince themselves that they share a similar cultural outlook with the whole collective. In effect they feel an irrational affinity with perfect strangers!

Of course, to say that nations are relatively recent inventions that exist only in the realms of the imagination is not to deny that the stories upon which many nations are built have substantial truth. But it is to say that the past is invariably more complex than stories by the nation and about the nation allude to and that the only way nations can exist and secure legitimacy is if they conjure tales which simplify and sanitize the real past. Indeed, central to many invented traditions are selective forms of amnesia; nations often deliberately omit and revise aspects of their past to establish their credibility. Inspired by the truism, "in order for people to control how they define themselves in the present, it is necessary for them to control how they define the past," nations present to themselves and to the world only edited versions of the past (see Zoom-in Box 5.1).

Zoom-in Box 5.1:   The Invented Traditions of the Irish Nation

Although the Irish nation likes to think of itself as a nation that has existed as long as time itself, in fact it is a relatively recent creation. The most potent narratives of the Irish nation were those created by Ireland's cultural nationalist movements. Cultural nationalism played an integral part in Ireland leaving the British **Empire** and becoming a Free state in 1921, and finally a full Republic in name in 1937 and in title in 1948.

Ireland's first experience of cultural nationalism begins with the largely Protestant antiquarians of the mid-eighteenth century, progresses through the activities of the Royal Irish Academy, and ends with the work of the Society of United Irishmen, the *Belfast Journal*, and the *Northern Star* in the late eighteenth and early nineteenth centuries. This was followed by a second campaign, which began with the activities of scholars and poets in the 1830s, was championed by the *Dublin Penny Journal* and the *Dublin University Magazine*, and exploded into the consciousness of the mass public with the work of the Young Ireland group of journalists and their publication *The Nation* in the 1840s. The final phase of cultural nationalism began with the activity of poets and folklorists in the 1880s, which influenced the Gaelic League and Irish Literary Theatre, and developed through journals like the *United Irishmen*, *The Leader*, and the *United Irish Peasant* (Boyle, 2011).

The Irish state was founded upon five key narrative traditions (Boyle, 2011). These narratives were propagated in the oral tradition, and through folklore, literature, journalism, poetry, theater, film, music, monuments, street and place naming, cultural festivals, religious devotions (for the most part Roman Catholic), sport (through the Gaelic Athletic Association, or GAA), political cartoons, and so on:

Narratives of origin – comprising myths of ethnogenesis, homeland and foundation myths, and myths of descent. These recall the arrival onto the island of Ireland of the Goidelic Celts (the Gaels) between 500 and 300 BCE, the legitimacy of the land claims made by the Gaels over their new homeland, the foundation of Gaelic society as a distinct polity, and the continuous and harmonious descent of the Gaels over the first millennium. They include the heroics of such legendary figures as Cú Chulainn, Fionn mac Cumhaill and the Fianna, and Kathleen Ni Houlihan. The Irish nation is founded properly circa 500 CE when St Patrick converted the population to Christianity.

Narratives of a golden age – which seek to recall the greatest achievements of Gaelic society at its pinnacle before (subsequent) foreign intervention. Invariably, these tend to focus upon the period from the sixth to the eighth century CE when Ireland became a European center of religious and secular learning, and a leading guardian of European civilization.

Narratives of British colonization – myths that track British involvement in Ireland, representing the British as driven by imperial greed, capable of acts of evil and at times cowardly aggression in pursuit of cultural and economic

(Continued)

Box 5.1   (*Continued*)

supremacy, and immune from any appreciation of the rights of other peoples. British rule is invariably traced back to the landing of Strongbow in 1169 CE and thus occupation is represented as occurring over an 800-year period. Among the more popular tales are the defeat of King James II by William of Orange III in 1690, Oliver Cromwell's brutal suppression of Irish Catholics, the instigation of the Penal Laws in 1703, the oppression of the United Irishmen and the Act of Union 1801 (which subsumed Ireland under direct British rule), the Anglo-Irish War of 1918–1921, the partition of the country into Northern Ireland (British controlled) and Southern Ireland (Irish controlled) in 1922, and the systematic discrimination against Catholics in the former throughout the twentieth century.

Narratives of the Irish diaspora – which record the ways in which the British repression of Ireland proved to be midwife to massive out-migration, peaking in the period 1845 to around 1920, and to the formation of one of the world's largest diasporic communities (estimated today to be around 70 million in strength). These myths record the flight from religious and political persecution, and the poverty and general economic retardation of Ireland

Plate 5.1   The Great Irish Famine (1847–1851) Memorial IFSC, Dublin, Ireland. Source: Mark Boyle.

that resulted from British misrule. The Great Irish Famine of 1848 to 1851 is taken to be the chief exemplar (Plate 5.1).

Narratives of rebellion and uprising – which seek to portray the stoic suffering the Irish have endured under British colonization and colonial rule, the heroic acts of resistance and rebellion they have put up to this rule, and the assertion that Ireland's Gaelic past will never be extinguished and that British rule in Northern Ireland will eventually be broken leading to a United Ireland. Among the most celebrated events are the rise of the United Irishmen and the republicanism of Wolfe Tone in the 1790s, Daniel O'Connell and the Catholic emancipation movement, the Young Ireland movement in the 1840s, the Fenian Rising of 1867, Charles Stewart Parnell and the Land League, the Easter Rebellion in 1916, the War of Independence, the establishment of the Free State in 1921, Éamon de Valera's new Republican constitution of 1937 and the formal establishment of the Irish Republic in 1948, the civil rights movement of the 1960s in Northern Ireland, and the Republican struggle in Northern Ireland from the early 1970s.

Of course, not all nations have statehood and not all states are built around the idea of a unified nation. Perhaps it is for this reason that nation and nation state building remains an ongoing project today. First, the legacy of the European colonial adventure in Africa, Asia, and Latin America continues to reverberate, in terms of the trials and tribulations of still vulnerable fledgling new nation states, nations who emerged from **decolonization** stateless, and states established with scant regard to the prior geography of complex tribal groups. Second, the collapse of the Soviet Union has resulted in, at times, volatile ethnic factionalism and in the creation of post-Soviet states in Central and Eastern Europe. Third, recent US foreign policy has created or is striving to create nation building in, among other places, Afghanistan and Iraq. Finally, secessionist and independence movements continue to assert their right to self-determination in places such as the Balkans, Scotland, Ukraine, Quebec, Sri Lanka, and Palestine.

The demise of the nation state and rise of a new era of multilevel governance

Given that it is merely a recent invention and has not been around since time itself, we might reasonably expect that at some point in the future the nation state too will be eclipsed by newer polities or ways of governing the world. Future generations might well look back on the idea of the nation state as something of a quaint oddity. According to some, the sovereign nation state is in fact already in the throes of great change and even today the contours of a new political system are emerging. The nation state is currently being "hollowed out" and a new era of **multilevel governance** is appearing. We are witnessing, they say, a reversal back to a medieval system of governance based upon a series of overlapping and sliding layers of authority.

What might be driving such a shift? The power of the world economy over weakened and vulnerable nation states means that these states are becoming ever

more toothless and impotent when confronted by gigantic, bruising, and bullying global corporations. Many nation states are feeling helpless and hapless, unable to shape events which are unfolding at larger **scales** and over which they have little control. Accordingly, nation states are ceding power to bigger political entities operating at larger geographical scales. Continental or even global political institutions, it is contended, have more muscle and command over global processes and can shape these processes more effectively. Equally, whilst nation states are often too small to tackle the big forces at work in the world today, they are often too large to address the everyday concerns of people. Accordingly, there has been a surge in interest in many countries in devolving more powers from central states down to existing and newly created regional and local authorities. The expectation is that, insofar as they operate at finer geographical scales, these organizations ought to know more intimately the challenges facing particular localities and be able to customize solutions accordingly.

Nation states, then, are increasingly turning to global political institutions such as the United Nations, the International Monetary Fund (IMF), the World Bank, and the World Health Organization (WHO) to solve their problems. Moreover, they are increasingly clubbing together into supranational regional alliances, trading blocs, economic communities, and even political unions. These supranational political entities are assuming many shapes, sizes, and functions. Perhaps the European Union is the foremost example of a continental-wide political union in the world today, knitting together as it does no fewer than 28 individual member states into ever more binding social, economic, environmental, cultural, and political agreements (see Map 5.1). Of the many other regional supranational alliances now forming, perhaps Nafta (North American Free Trade Agreement), Asean (Association of Southeast Asian Nations), and Mercosur (Mercado Común del Cono Sur – Southern Cone Common Market) are the largest and most significant. By forming into political unions, individual nation states become more powerful actors in the world. But some regret the degree to which nation states are ceding sovereignty to bigger institutions and thereby losing their right to self-determination.

On the other hand, in order to sharpen and refine their capacity to solve more subregional and local problems, nation states are, through both choice and coercion, ceding ever more authority to smaller political units within their borders. Of course, some states remain highly centralized (such as Greece and Ireland). Other states are already federal states (such as Australia, Canada, the United States, India, and Germany), that is, they already enshrine within their constitutions the rights of subnational, regional, and even municipal authorities to govern autonomously in certain policy areas. In yet other states, central governments have already ceded power (but not **sovereignty**) to regions (such as the United Kingdom and Spain). In all three cases, and to different degrees, pressure is mounting to devolve further power and executive functions to local and regional institutions. Stronger local and regional actors, it is asserted, are better able to tackle the challenges that face localities. Bringing power closer to the people will promote the finding of local solutions to local problems. In some cases it even appears that subnational separatist movements are growing so strong that the future of centralized and unitary nation states is at risk (see Map 5.2). Whether

Sweden
Finland
Estonia
Latvia
Lithuania
Denmark
United Kingdom
Ireland
Netherlands
Belgium
Germany
Poland
Luxembourg
Czech Republic
Slovakia
France
Austria
Hungary
Slovenia
Croatia
Romania
Portugal
Spain
Italy
Bulgaria
Greece
Malta
Cyprus

Key facts:

Founded: 1952
Member states (2014): 28 states
Population: 508 million
Applicant/candidate countries: Serbia, Bosnia and Herzegovina, Montenegro, Kosovo, Macedonia, Albania, Iceland, Turkey

Function: Began as a customs union, developed as a common market, progressed to an economic and monetary union, and now stands on the threshold of becoming a full-blown political union.

Map 5.1   The European Union.

devolution strengthens local and regional democracy, though, remains an open question. In many cases, regional and local authorities have been created by central states and are financed and governed directly by central states. They are orchestrated and constrained by central states and lack power to determine the trajectory of local and regional communities.

So we might say, then, that the nation state may well end up enjoying only a short lifespan when set into historical context. Notwithstanding the brevity of its existence, however, there can be no doubt that it has lived a colorful and

Map 5.2   Autonomous regions in Spain and demands for further separatism.

consequential life. Perhaps more than any other type of polity that has ever visited the historical stage, the nation state has reworked relationships between all peoples occupying planet earth, sometimes creating peaceable relations, more often triggering tensions, frictions, conflicts, and even wars. The remainder of this chapter, then, will track the adventurous travails and controversial biography of the nation state from the fifteenth century. It will reveal the ways in which the earliest nation states (the West's nation states) have played a key role in shaping relationships between peoples of the West and those who live beyond the West. And it will examine the ways in which attempts by the West to rule the rest from afar have played a fundamental role in shaping the polities that have emerged in non-Western societies.

Geopolitics and International Relations

The rise and fall of European empires

Whilst all the time jostling for control of lands in Europe held by their European neighbors, from the middle of the fifteenth century European nation states steadily turned their attention to the colonization and annexation of lands further afield. Colonization and control of territory, especially lands rich in resources and endowed with a number of strategic advantages, came to be viewed as essential if European nation states were to prosper and avoid being outflanked by near neighbors (see Zoom-in Box 5.2). Following a period of expedition and exploration, successive waves of colonization steadily brought vast areas of the world under the control of European powers. Among the countries of Europe to establish empires were Portugal, Spain, the Netherlands, France, the United Kingdom, Russia, Sweden, Germany, Belgium, Denmark, Italy, and Norway.

The phasing of the European colonial adventure is complex and defies simple description. We might note though that Portugal and Spain were first to embark on sustained imperial conquest, that the Netherlands too subsequently emerged as a leading pioneer, and that by the start of the twentieth century France and especially the United Kingdom presided over the largest empires on earth. In part reflecting this sequence, the lands of the Americas, and in particular Latin America, were first to be colonized, from the middle of the sixteenth century, and first to secure independence. Whilst Europe had secured a toehold in coastal Africa it was not until the turn of the twentieth century that European powers dared to venture into the interior of the continent and to colonize it in a substantial way. Last to be colonized, African territories were among the last to be decolonized. Colonization of Asia remained an ongoing process from the sixteenth century and both annexation and decolonization occurred at different periods in different regions of that continent.

It was Portugal and Spain who were first to establish global empires. The Iberian origins of the European imperial adventure are not surprising. It was largely thanks to navigational and seafaring techniques pioneered by both nations that European voyages of discovery and exploration were made possible in the first instance. Portugal's early empire extended into Latin America, Asia, and Africa. Amongst its first and

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Zoom-in Box 5.2:   Halford J Mackinder's Heartland Thesis

What geopolitical advantages did European colonialists think would be conferred by the annexation of territories around the globe? Clearly the answer to this question varies over time, between different colonizing countries, and according to the territory being targeted for colonization. One interesting example of the geopolitical mind-set of the colonist can be found in the work of British geographer Halford Mackinder (Kearns, 2009).

At the Royal Geographical Society in London, in 1904, Mackinder delivered a lecture titled "The Geographical Pivot of History," during which he outlined

(Continued)

Box 5.2   (*Continued*)

his famous Heartland thesis. This was followed with a fuller exposition of the Heartland thesis in 1919 in his book *Democratic Ideals and Reality: A Study in the Politics of Reconstruction*.

Mackinder conceived of the earth's surface as being organized into a number of broad regions (see Map 5.3). At the center was the World-Island. Incorporating Europe, Asia, and Africa, the World-Island was the world's most heavily populated, geographically expansive, richest, and powerful region. It was further divided between the pivot area (the heartland stretching from the Volga to the Yangtze and from the Himalayas to the Arctic), the inner or marginal crescent (from Europe through North Africa to Southern Asia and Southeast Asia) and the outer islands of Britain and Japan. The further one moved from the heartland the more one ventured into the "lands of the outer or insular crescent," which for Mackinder centered upon the continents of North America, South America, and Australia.

Mackinder believed that any country that controlled the World-Island also controlled over half of the world's known resources. To control the World-Island it was necessary, in turn, to control the heartland. For geographical reasons it had proved difficult for any country to dominate the heartland historically. Polar conditions to the north, desert conditions to the south, and lack of communication routes from east to west militated against comprehensive colonization of the region. Whilst the region was governed substantially by the Russian Empire, Mackinder believed that it was possible that a European power or a power from Asia (China or Japan) might attempt to seize the pivot area. He warned the British government that Britain could not afford to lose the heartland to another power if it wished to continue to be the most dominant country on earth. For Mackinder, "Who rules East Europe commands the Heartland; who rules the Heartland commands the World-Island; who rules the World-Island controls the world." But he feared Britain might be ill equipped; being a seafaring island nation it lacked the expertise and experience to wage land wars and to govern over vast land masses.

Mackinder's thesis was heavily studied by, and proved influential in shaping the thinking of, political strategists in countries as far and wide as Japan, China, Russia, Germany, Britain, and the United States. Perhaps the greatest test of the validity of the thesis came during the Cold War period from 1945 to 1989. In spite of Russian dominance of the pivot area, the Soviet Union was unable to compete over time with the United States and Europe and from the 1970s onward began to fail as a global superpower and to crumble. For some this indicates that Mackinder was wrong to assume that control of the heartland inevitably led to control of the World-Island and therefore the world. For others, however, it merely proved Mackinder's point that ownership by a single power of the pivot area would only confer competitive advantage to that power if it had the ability to use the resources of region wisely. Based upon Communist ideals, Russia had created a type of society that was singularly unable to make the most of its natural advantage.
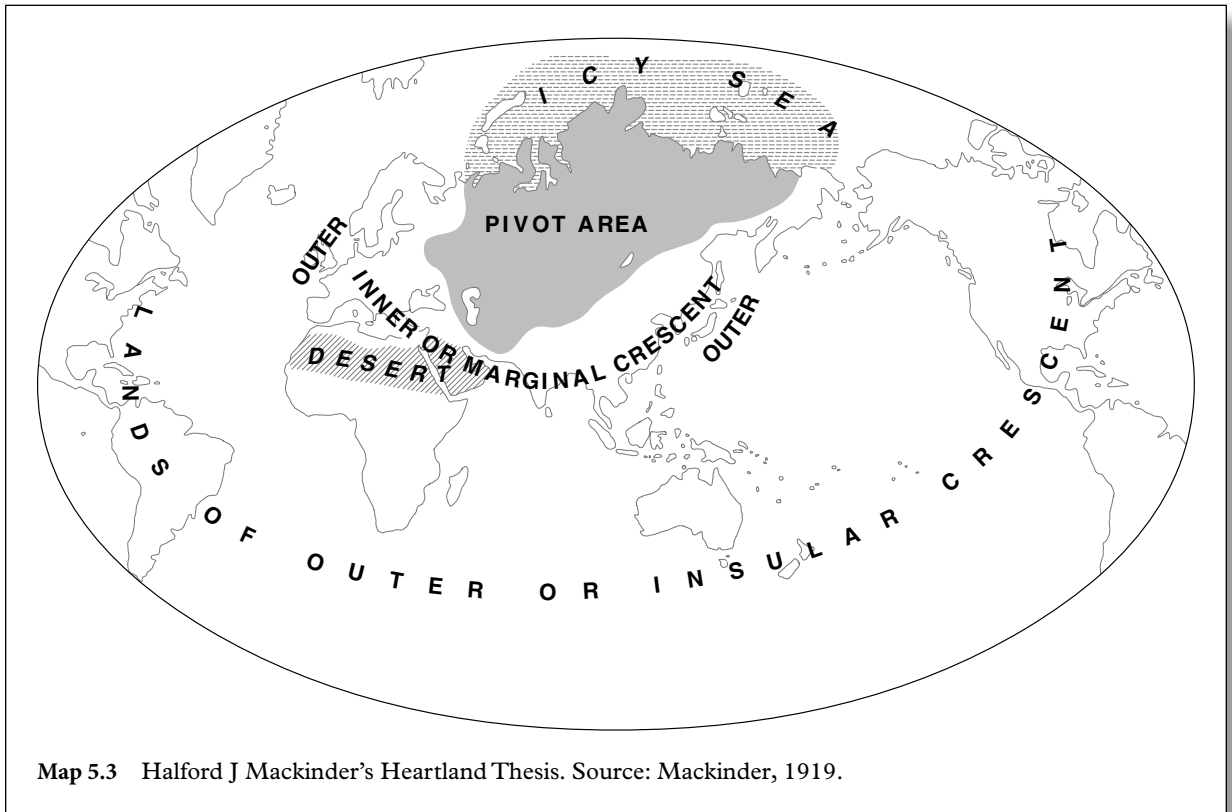
Map 5.3   Halford J Mackinder's Heartland Thesis. Source: Mackinder, 1919.

principal acquisitions were Mozambique (which came under Portuguese control from 1498 until 1975 when it secured independence), Brazil (colonized in 1500 and held until 1822), Goa (1510–1946), Angola (1575–1975), and East Timor (1769–1975).

The Spanish Empire too stretched into the four corners of the world but its principal focus was Central and Southern America. Spain organized its colonial administration around four Viceroyalties (see Map 5.4). The first to be established, the Viceroyalty of New Spain (1535–1821) had Ciudad de México (Mexico City) as its capital, and covered what is known today as the southern United States (California,

Map 5.4   Viceroyalties of Spain at the peak of the Spanish Empire.

Florida), Mexico, the Spanish West Indies (including Cuba, Haiti, Jamaica, Trinidad) and the Spanish East Indies (the Philippines and Taiwan). The Viceroyalty of Peru (1542–1824) was governed from Lima, and included present-day Peru, Chile, Colombia, Panama, Ecuador, Bolivia, Paraguay, Uruguay, Argentina, Venezuela, and parts of Brazil. The Viceroyalty of New Granada was established later (1717–1819) and from its capital city of Bogotá it governed over present-day Colombia, Ecuador, Panama, and Venezuela. Spain's final Viceroyalty, the Viceroyalty of Río de la Plata (1776–1810) had as its base Buenos Aires and ruled over present-day Argentina, Bolivia, Paraguay, and Uruguay.

Having itself served as a colony of Spain, the Netherlands gained effective independence in 1581 and became Europe's next great imperial power. Throughout the 1600s Holland became the world's principal seafaring power. It established two companies, the Dutch East India and Dutch West India companies, and together these companies expanded the reach of the Dutch state throughout the world. By the mid-seventeenth century, the Netherlands was the most powerful country on earth. Its colonies included the Eastern seaboard of the present-day United States (New York and New Jersey, which it held from 1614 to 1664), Guyana (1616–1815), Suriname (1664–1975), Ghana (1598–1872), South Africa (1652–1806), Sri Lanka (1640–1796), Indonesia (1603–1945), and Taiwan (1624–1662).

Whilst Spain, Portugal, and the Netherlands remained global superpowers, their empires were to be eclipsed by those held by other European countries, especially France and Britain. France became one of the first European countries to substantially colonize parts of present-day North America. The Viceroyalty of New France (held from 1534 to 1763) was commanded from Quebec and at its height included parts of Canada (including Newfoundland, the Hudson Bay, the Great Lakes, and Quebec), and parts of the present-day United States (a belt extending through the present-day Midwest and reaching as far south as Texas and Louisiana). In Asia, France's colonies included Indochina (present-day Laos, Thailand, and Vietnam, which it held from 1887 to 1954). Meanwhile, France also colonized large sections of North and West Africa (including present-day Niger (1890–1960), the Ivory Coast (1840–1960), Chad (1900–1960), Cameroon (1916–1960), Algeria (1830–1962), and Tunisia (1881–1856). It also brought Madagascar (1896–1960) under its control.

Notwithstanding the expansion of the French Empire, by the turn of the twentieth century it was the United Kingdom that presided over the largest empire in the world (see Map 5.5). In 1922 nearly 460 million people belonged to the British Empire (approximately 20% of the entire population of the world at that time) and Britain claimed ownership over nearly 25% of the entire surface of the earth. Britain began its rapacious march around the world following the Act of Union 1707, which brought England, Scotland, Wales, and Ireland together under one rule. Throughout the eighteenth century it sought to colonize North America and acquired land in the present-day United States and Canada. Following the American War of Independence (1775–1782) in which 13 of Britain's colonies broke free to form the United States, Britain consolidated its holdings in British North America (this covered much of present-day Canada and this entity existed in changing forms between 1783 and 1907). Principal British colonies in the Caribbean included Barbados (1624–1966), Jamaica (1655–1962), and Trinidad and Tobago (1762–1962). In Africa the British incorporated Uganda (1890–1962), Nigeria (1900–1960), Kenya (1920–1963), and Egypt (1801–1922). In the

Map 5.5   Extent of the British Empire at its peak.

Middle East they annexed Palestine (1920–1948) and Aden (1839–1967). In Asia they acquired Afghanistan (1839–1919), Burma (1824–1948), India (1612–1947), Malaya (1824–1963), and Pakistan (1612–1947). Meanwhile, British settlers established the colonies of Australia (1788–1942) and New Zealand (1769–1947).

The European colonial (mis)adventure in Africa

In spite of its geographical proximity to Europe, and notwithstanding settlement in its coastal regions, Africa was the last continent to be substantially colonized by European nations. Among others, early Scottish, English, German, and French explorers such as James Bruce (1730–1794), Mungo Park (1771–1806), René-Auguste Caillié (1799–1838), Heinrich Barth (1821–1865), Samuel Baker (1821–1893), Richard Burton (1821–1890), John Hanning Speke (1827–1864), David Livingstone (1813–1873), Henry Morton Stanley (1841–1904), Carl Peters (1856–1918), and Mary Kingsley (1862–1900) had all painted a picture of a barbarous and dangerous interior, dominated by fierce and harsh environments and lethal tropical diseases. "Deepest darkest Africa" was perceived to provide a formidable obstacle for would-be colonizers.

All of this was to change in a short period of time (compare Map 5.6a and Map 5.6b). Between 1870 and 1914, European states effectively carved up Africa between them, imposing new political boundaries upon a continent hitherto marked by complex tribal units and other types of polities. Recognizing the folly of fighting amongst themselves for the spoils of Africa, European leaders met at the so-called Berlin Conference of 1884–1885 (also known as the Congo Conference) to agree a framework through which the colonization of the continent might proceed more peaceably. Within a few decades almost all of Africa was subsumed under European rule – the exceptions being Liberia (territory reclaimed by former African American slaves) and Ethiopia (which had fought off Italian imperial advances). Britain and France, and to a lesser extent Germany, Spain, Italy, Belgium, and Portugal, were now effectively ruling Africa from afar. Anglo-Irish historian Thomas Pakenham (1991) famously described this period as "the scramble for Africa." Others have later described it as "the mad scramble for Africa."

European powers used four principal strategies to govern over Africa:

- *Private companies*: Particularly at the onset of the European colonial (mis) adventure, some European nations chartered private companies to run their colonies. These companies took full responsibility for financing and administering colonies. Examples include the British East Africa Company (which colonized Kenya on Britain's behalf) and the British South Africa Company (led by British imperialist John Cecil Rhodes, which colonized present-day Malawi, Zambia, and Zimbabwe). These companies generated disappointing returns for investors and provoked hostility from indigenous populations. By 1924, they were wound down and replaced with other forms of rule.
- *Direct rule*: Pioneered by France, Belgium, Germany, and Portugal, the strategy of direct rule consisted of European governments establishing colonial administrations, normally based in the largest city in the colony, and using these administrations to impose their will directly on colonized populations. This

Map 5.6a   Political geography of Africa before European colonization. Source: data from Murdock, 1959, and Fage, 1978.

model normally refused to countenance dialogue and collaboration with African populations on the basis that these populations were inferior and lacked European standard organizational and technical skills.

- *Indirect rule*: Indirect rule was the preferred strategy of the United Kingdom. It comprised identifying local indigenous leaders and enlisting them in the governance of the country. Whilst more cooperative on the surface, by inviting local power brokers to collude in the European colonial experiment this model might also be considered more Machiavellian. Often it meant rule through indigenous elites as opposed to rule in collaboration with native populations.
- *Settler rule*: Settler rule was rule by European migrants who settled in colonies in number and who governed these colonies by themselves and for themselves. Settlers moved to colonies in search of fame and fortune and used and abused their privileged positions to suppress the indigenous population and to extract
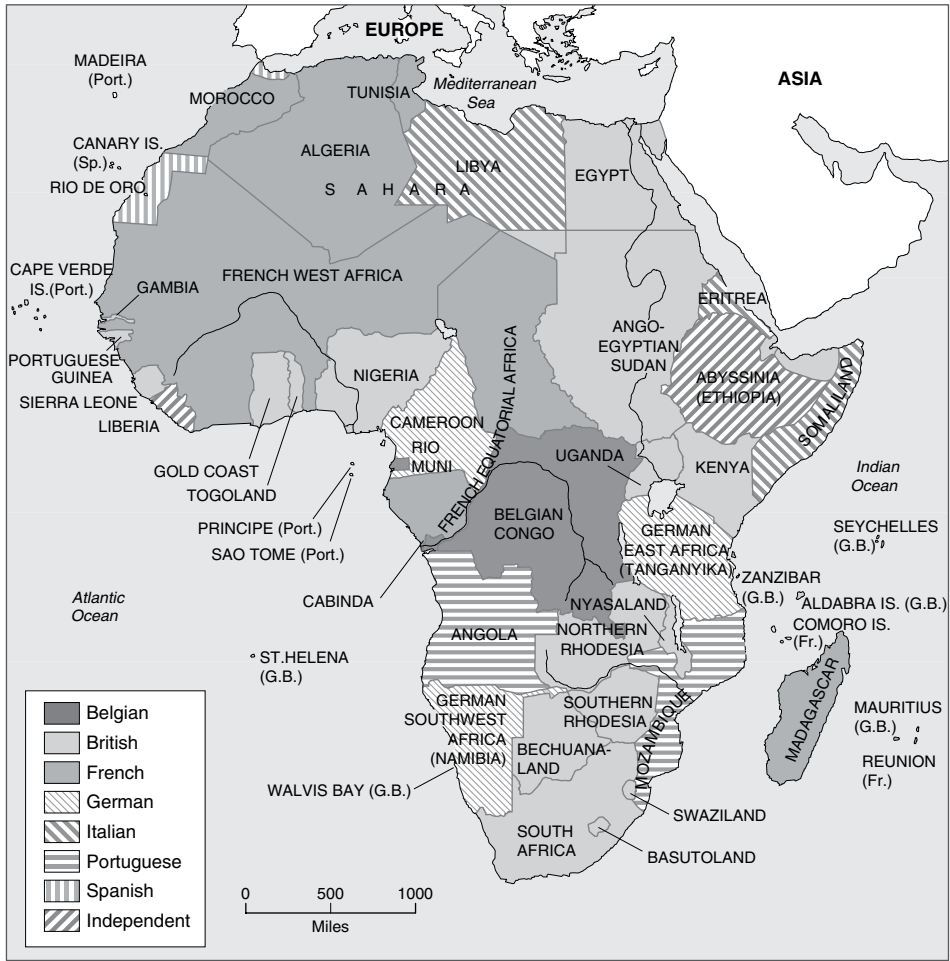
Map 5.6b   Africa, 1914: political geography of Africa after the European scramble for the continent. Source: data from Murdock, 1959, and Fage, 1978.

benefits from colonial lands for themselves. Settlers from the Netherlands, France, Britain, Germany, and Portugal practiced settler rule in countries such as present-day South Africa, Zimbabwe, Zambia, Angola, Mozambique, Namibia, Kenya, Algeria, Australia, and New Zealand.

Because **colonialism** was administered differently throughout Africa the impacts of colonialism also varied from place to place. Whilst opinion today generally holds that colonialism was morally indefensible and largely detrimental to development on the African continent, there remains considerable debate over the exact social, economic, and political consequences of European rule. Critics point to the economic exploitation of the natural resources found in the colonies and the enforced impoverishment of local economies, the political fascism of some colonial states, the damage European plantations inflicted on local ecosystems, the suppression of traditional cultures, the spreading of lethal "European" infectious disease and mass epidemics,

and the social fragmentation of communities and families wrought by colonial labor markets. Those more sympathetic to the civilizing mission of European colonialism suggest, in contrast, that it left in its wake better education systems, improved health care, and better technologies, infrastructure, and political capacity.

The rapidity of European colonization of Africa was matched by the rapidity of European withdrawal and decolonization. Opposition in Africa to European colonization existed from the outset. Even during the period of the "mad scramble" for the continent, indigenous populations in some parts of Africa (in particular Zimbabwe, Ethiopia, Libya, Isandlwana (present-day South Africa), Ghana, Tanganyika, and those commanded by the warrior Samori Ture from his base in present-day Guinea) sought to resist European aggression. These rebellions were largely futile. Forced to accept the reality of being ruled from afar, African resistance then took the form of demands for equality of opportunity, religious freedom, and labor rights. Europe's grip on Africa, however, began to weaken only after World War II. Having enlisted and fought for a European parent country during the war, many Africans returned home with a renewed expectation that they too deserved to be free from oppression. Throughout the 1940s and 1950s mass anticolonial and nationalist movements swelled throughout the continent. European imperial powers were forced to reflect upon the morality and realpolitik of their imperial (mis)adventures, both in Africa and elsewhere. In response, some European powers ceded their colonies relatively peaceably (Italy and the United Kingdom, for instance). In other cases, independence was won only after violent struggles (in French, Belgian, and Portuguese colonies in particular).

Decolonization of Africa began first in Libya (1951) and Egypt (1952). In 1960 an additional 14 countries gained independence. By 1966, only six African countries remained under European control: Angola, Guinea Bissau and Cape Verde, and Mozambique (Portuguese colonies), Namibia (which remained under the rule of colonial settlers in South Africa), South Africa (principally ruled by Dutch settlers), and Zimbabwe (British-ruled). Five of these were settler colonies, governed directly by migrant settlers from the European parent country. Settlers had a lot to lose and clung onto their riches. Nationalist leaders in these countries initially sought to secure improved constitutional rights (such as the right to vote) through peaceable means. In time they came to agitate for outright freedom from Europe and for the right of self-determination. Whilst settler governments sought to quell insurrection, often in violent ways, all six settler colonies were to secure their independence in time (see Map 5.7).

Whilst welcomed, decolonization created a sense of political instability in former African colonies. This instability derived in part from the contrived countries and artificial borders that colonists left behind. The political map of Africa today is an imposition by Europe and pays scant attention to precolonial indigenous polities and to the complex ethnic and linguistic communities that prevailed prior to colonization. The consequence is that some newly created states contain many complex groupings whilst other complex groupings remain stateless. In this context, African countries have found it challenging to build properly functioning political institutions that practice good governance. In many cases, despotic regimes have emerged taking the form of corrupt socialist dictatorships and/or right-wing family dictatorships.
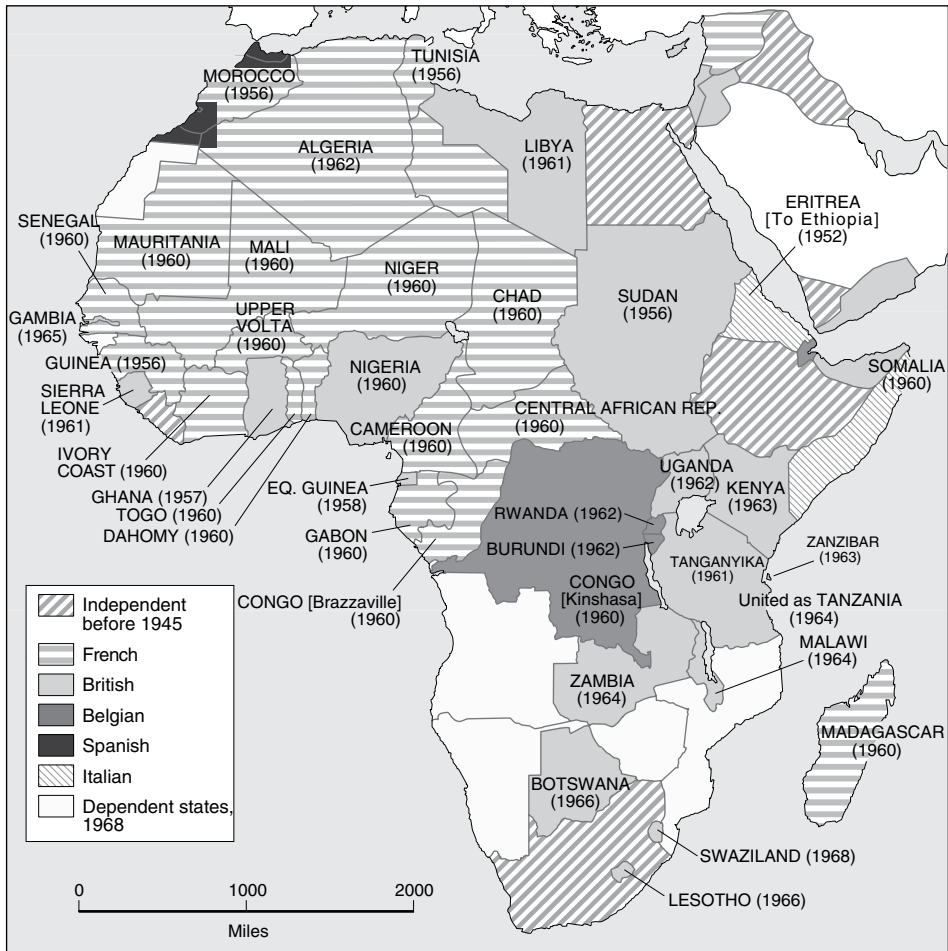
Map 5.7   The decolonization of Africa. Source: data from Murdock, 1959, and Fage, 1978.

These regimes have on occasions presided over the violent political suppression of their opponents, genocide, mass refugee movements, famines, and civil wars.

The ongoing political legacy of European decolonization of Africa can be witnessed in the so-called **Arab Spring**. The Arab Spring refers to a series of popular uprisings and revolutionary wars seeking to replace postcolonial despotic regimes (initially in Arab states in North Africa but then Arab states elsewhere) with regimes more reflective of the will of the people. It began in Tunisia in 2010, and has swept across Egypt, Libya, Yemen, Bahrain, and Syria. It has also reverberated in Algeria, Sudan, Morocco, Iraq, Jordan, and Kuwait. Egypt, of course, has witnessed two revolutions; the first in 2011, which ousted dictator Hosni Mubarak and which led to the election of Mohamed Morsi and the Muslim Brotherhood, and the second in 2013 when a coup d'état led by the military swept Morsi from power. Meanwhile, civil war continues to rage in Syria as forces of insurrection attempt to topple the dictatorship of Bashar al-Assad and end Ba'ath Party rule. The aetiology of the Arab Spring is

clearly complex. Moreover, precisely what will come of the Arab Spring remains unclear. Perhaps strong democracies might emerge. Perhaps states more sympathetic to Islamic causes might develop. Perhaps regimes more aligned with Western interests might be the outcome. What is clear is that a decolonization has failed to bequeath to Africa and elsewhere a settled political geography and that the process of building nation states in former colonies is continuing to run its course.

The Cold War

After World War II, as European decolonization proceeded, world politics came to be structured around an ideological conflict between the Western world, led by the now dominant United States, and the Communist world, led by the Soviet Union (the Union of Soviet Socialist Republics, or USSR). The Bolshevik revolution in Russia (1917) had given birth to a Communist state which the Bolsheviks claimed was built around principles first articulated by German philosopher Karl Marx. The Bolsheviks viewed **capitalism** as an iniquitous and unjust political system and were bent on sweeping their alternative ideology across the world. Russia, of course, had already shown itself to be an imperial power and was not afraid to assert its will by violent means if necessary. At the close of World War II, the Soviet Empire had grown to include, largely by coercion and compulsion, the countries of Eastern Europe. In contrast, the United States was bent on promoting a world in which liberal capitalist democracies prospered. The United States viewed the USSR's revolutionary agenda and imperial tendencies with suspicion. The greater the territory ceded to the USSR the more dangerous **communism** was to the United States' interests. As they jostled for supremacy, these two superpowers, both with nuclear capabilities, sponsored a dangerous bipolar world. Other countries were called upon to take sides and many found it difficult to maintain their neutrality. For the most part, an uneasy peace prevailed, albeit one pervaded with simmering menace and threats and counterthreats. This was referred to as the **Cold War**. But geopolitical tensions did on occasions spill over into actual military exchanges between the United States and the USSR, and even into devastating "surrogate" wars fought between friends and foes of these superpowers and orchestrated by them (see Zoom-in Box 5.3).

By the late 1970s, it was becoming obvious that the USSR was an empire on the brink of collapse. The Communist model, or at least the model of communism developed by the Soviet Union, had proved undemocratic, oppressive, inefficient, and unsustainable. As the USSR struggled to maintain its economic and military strength it came to recognize that it could no longer finance a standoff with the United States and the West more generally. The West it seemed had won the Cold War. Its political and economic institutions had proved superior. One by one, more and more countries began to go the way of the West (see Zoom-in Box 5.4).

Sensing the weakness of the Russian Empire, toward the late 1980s a number of nations subsumed within the Russian fold began to plot a new course. By 1989, many states had secured liberation, and by 1991, the USSR was officially wound down. With the collapse of the Soviet Empire came a transformation in the political

map of Eastern Europe and Asia (Smith, 1999; see also Map 5.9). The state of Russia (the Russian Federation) was created. In Eastern Europe six new (or revived) countries were formed: Estonia, Latvia, Lithuania, Belarus, Ukraine, and Moldova. In Asia eight new (or newly created) countries emerged: Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan, Georgia, Armenia, and Azerbaijan. A number

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Zoom-in Box 5.3: The Vietnam/Indochina War (1955–1975)

The Vietnam War (1955–1975) captures well the kinds of geopolitical struggles that developed during the Cold War period.

The roots of US military intervention in Vietnam, Cambodia, and Laos lie in the rise and fall of the French colonial adventure in Indochina. In 1954, following a protracted war between France and its allies and the Soviet- and Chinese-backed Vietnam national independence movement led by Ho Chi Minh (the Viet Minh), France granted Independence to Vietnam, Cambodia, and Laos. Recognizing political differences between North Vietnam and South Vietnam, the Geneva conference of 1954 divided Vietnam at the 17th parallel (see Map 5.8). North Vietnam, renamed the Democratic Republic of Vietnam, was to be governed by the Viet Minh from Hanoi; South Vietnam, renamed simply the State of Vietnam, was to be governed by the pro-Western Ngo Dinh Diem from Saigon. Reunification was to come following national elections in 1956. These elections were never held.

The Vietnam War emerged out of this vacuum. The Vietnam People's Army (the North Vietnamese army), in partnership with the Viet Cong (National Liberation Front, a South Vietnamese guerrilla force directed by the North) and Communist allies (particularly the Soviet Union, China, North Korea, and Cuba), fought for a unified Vietnam under Communist rule. These groups viewed partition as a neo-colonial strategy pursued by the West against the Indochina region. Meanwhile, the South Vietnamese army, in collaboration with Western allies (in particular the United States, but also Australia, Japan, Thailand, and the Philippines), fought for an independent South Vietnam organized around liberal capitalist and democratic principles. These groups viewed partition as at once a necessary defense of a minority population and an essential brake on the global march of communism.

The Vietnam War ran its course between 1955 and 1975, inflicting as it unfolded collateral damage on both Cambodia and Laos. It is estimated that between 800,000 and 3.1 million Vietnamese soldiers and civilians perished, between 200,000 and 300,000 Cambodians died, between 20,000 and 200,000 Laotians were killed, and nearly 60,000 members of the United States military died in battle. Faced with the horror of such a loss of life, and unable to defeat enemy combatants with brute military force, enthusiasm for the war waned in the United States. By 1973, US military personnel withdrew from the conflict; by 1975, the Vietnam People's Army gained control of Saigon; and in 1976, a unified Socialist Republic of Vietnam was declared.

(Continued)

Box 5.3   (*Continued*)

Map 5.8   The political geography of Indochina circa 1956.

of other Eastern bloc countries secured full autonomy over their affairs: Poland, East Germany, Czechoslovakia, Romania, Bulgaria, Hungary, Albania, and Yugoslavia. Thereafter, East Germany reunited with West Germany and Czechoslovakia separated into the Czech Republic and Slovakia. Meanwhile,

1 Estonia	12 Montenegro
2 Latvia	13 Albania
3 Lithuania	14 Macedonia
4 East Germany	15 Bulgaria
5 Czech Republic	16 Moldova
6 Slovakia	17 Georgia
7 Hungary	18 Armenia
8 Slovenia	19 Azerbaijan
9 Croatia	20 Tajikistan
10 Bosnia	21 Kyrgyzstan
11 Serbia	

Map 5.9   The political geography of the USSR and its satellite states.

Yugoslavia fell into a civil war and from this war there emerged the countries of Serbia, Slovenia, Croatia, Bosnia, Montenegro, Macedonia, and Kosovo. All the while, separatist movements in Moldova, Abkhazia, and South Ossetia continue to lobby for independence.

Whilst many believe that the story of the Cold War has now run its course, recent developments in Ukraine suggest that tensions between the West and Russia remain. In November 2013, the Ukrainian president, Viktor Yanukovych, indicated that he planned to align Ukraine less with the European Union and more with Russia. Pro-European Ukrainians feared a return to the Russian fold of before, and a wave of violent demonstrations and protests followed. Attempts by Yanukovych to suppress opposition left nearly 100 protestors dead. Against the backdrop of growing outrage, Yanukovych was forced to flee the capital city Kiev for Moscow. Encouraged by the Russian president, Vladimir Putin, the pro-Russian region of Crimea and Sevastopol in Southeast Ukraine responded by declaring independence from Kiev and signed a treaty of accession into the Russian Federation. Meanwhile, other

heavily armed pro-Russian militia in eastern and southern regions, and in particular in the cities of Donetsk and Lugansk, have organized to accomplish similar ends. In May 2014, fresh elections were held and the pro-European Petro Poroshenko was elected president. Whilst Poroshenko has promised to respect the rights of Russian peoples in Ukraine, he has vowed to safeguard the sovereignty and territorial integrity of the whole of the country. The bitterness of the Cold War, it seems, continues to reverberate in today's world, and it is not beyond the bounds of possibility that Western relations with Russia will re-emerge as a significant battleground in the twenty-first century.

Zoom-in Box 5.4:   Where on Earth is the West Today? The OECD World as a Proxy for the West

As the West has expanded its influence across the world and many countries have embraced Western ways, it is pertinent to ask, where is the West today? This question has no easy answer. It is difficult to draw a clear boundary between the Western world and the non-Western world because some countries are only partially Western.

Perhaps the best guide is to refer to the membership base of the Organisation for Economic Co-operation and Development (OECD). Established in 1948 to oversee the US-backed Marshall Plan for the reconstruction of war-torn Europe, today the OECD exists to help countries better cooperate so as to enhance their economic growth. From its base in Paris the OECD has grown to incorporate 34 member countries (see Map 5.10). These countries are, for the most part, rich countries in the Global North, but countries like Mexico, Chile, Slovenia, Turkey, and Estonia are also full members of the OECD. In addition, the OECD is currently processing Russia's application for membership.

Being sufficiently "Western" is a key criterion for membership of the OECD. According to the OECD's *A Strategy for Enlargement and Outreach* (OECD, 2004), compliance in three specific areas is a prerequisite:

- Candidates must actively support the idea of the open market economy.
- Candidates must support the idea of pluralist liberal democracy and mass enfranchisement.
- Candidates must show respect for human rights.

In addition to the 34 existing members, we might also note that the OECD has a program of enhanced engagement with non-members Brazil, China, India, Indonesia, and South Africa. These countries fail to meet membership requirements but are so important to the global economy that the OECD feels it important to engage them in formal conversations.

Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, South Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States

Map 5.10   Member states of the OECD.

The clash of civilizations?

If optimists believed that the demise of the USSR marked the beginning of a new era of unrivaled supremacy for the West and world peace and stability they were to be quickly disappointed.

In 1993, US political scientist Samuel P Huntington published a now famous article titled "The Clash of Civilizations" in the journal *Foreign Affairs*. Emboldened by reaction to this article, Huntington then followed this up with a full-length book in 1996 titled *The Clash of Civilizations and the Remaking of World Order* (Huntington, 1996). Huntington sought to draw attention to the shape of future global conflicts in the post–Cold War era. Huntington's contention was that, if in the Cold War era conflict was most likely to occur between the Western free world and the Communist bloc around questions of ideology and economy, it was now most likely between the world's major civilizations and religions, which were (re)emerging with new potency. Huntington identified eight (re)emerging civilizations, with a possible ninth: Western, Latin American, Islamic, Sinic, Hindu, Orthodox, Buddhist, and Japanese, and the possible ninth, African. For Huntington the **hegemony** of the Christian West would be most threatened by the Sinic Civilization (spurred on by Chinese economic growth), Islam (fueled by a youthful population bulge/age structure), and Latin American civilizations (with Mexican and other migrants transforming the culture of cities like Los Angeles).

According to the Clash of Civilizations thesis, religion now plays a significant role in international relations. Our world is a world constantly at risk from conflicts and disputes caused, aggravated, or symbolized by tensions within and between the prophetic religions of Middle Eastern origin – Judaism, Christianity, and Islam; the wisdom religions of Chinese origin – Confucianism and Daoism; the mystical religions of Indian origin – Hinduism and Buddhism; and the older ethnic or indigenous religions, which still resonate particularly in Australia and Africa (see Map 5.11). As growing intolerance between religions comes to serve as a significant threat to world peace and security, it is crucial to hold to account the leadership of all the principal religions and to scrutinize their respective contributions to the making of war and peace. Intercultural and interfaith dialogue will be crucial if a more peaceable world is to be secured in future (Boyle, 2010),

Huntington's thesis has been viewed by some as prophetic of subsequent events. Huntington offered a way to understand wars such as the one that followed the break-up of Yugoslavia, those in Chechnya, Burma, and Israel and Palestine (Plate 5.2), and that between India and Pakistan. And the attacks on the Twin Towers in New York on September 11, 2001, and the events that followed were taken by many to be proof that Huntington's view of the world was correct. But close examination of recent and current wars suggests that conflicts most often occur within civilizations and not between civilizations. According to Scottish-born and US-resident historian Niall Ferguson, it is more accurate to speak today about the "crash of civilizations" (through internal feuding) than the clash of civilization (Ferguson, 2011).

Moreover, according to Palestinian-born and US-resident activist and literary scholar Edward Said (2001) Huntington's Clash of Civilizations thesis is best thought of as a component part of the clash of ignorance that now marks popular
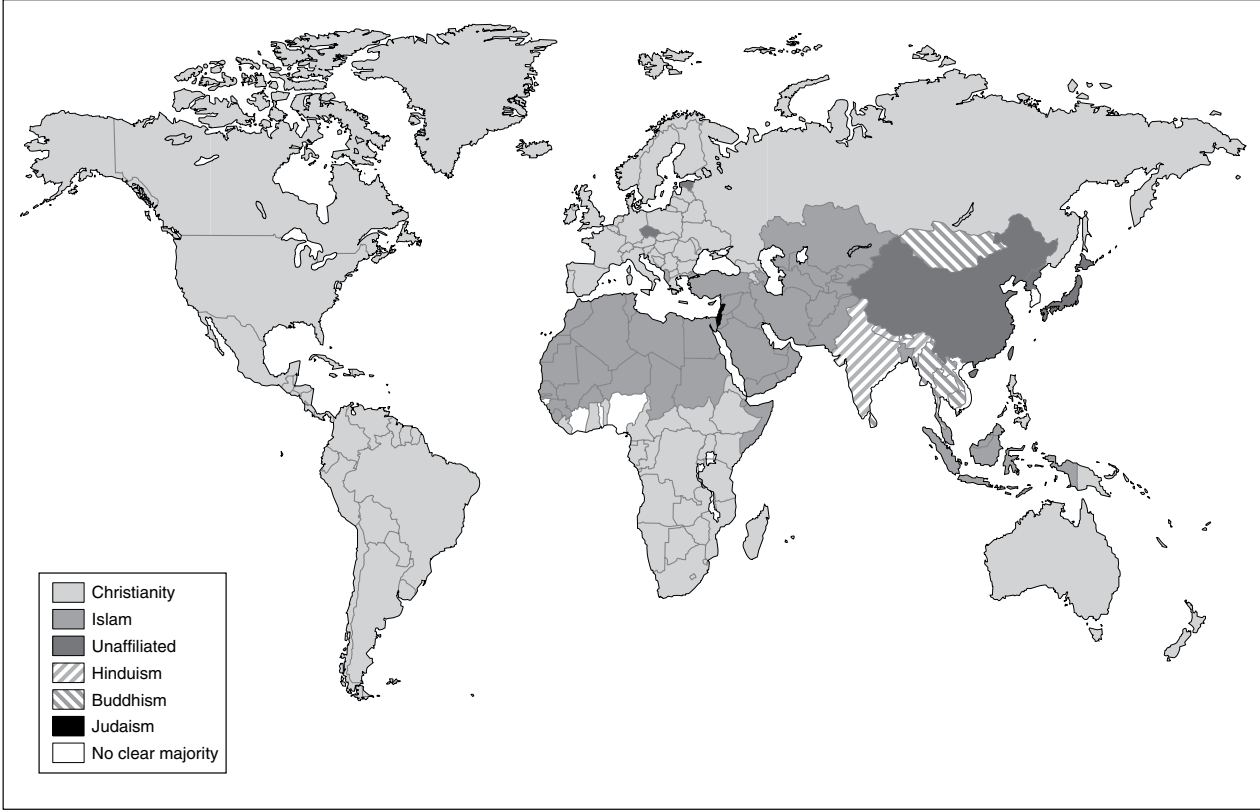
Map 5.11   The world's principal religions. Source: Pew Research Center's Forum on Religion and Public Life.

Plate 5.2   The Israeli-Palestinian interface: peace wall or apartheid? Source: © DARREN WHITESIDE/Reuters/Corbis.

understandings of contemporary international relations. The Clash of Civilizations, he argues, is a gimmick which panders to unwarranted and irrational fear and insecurity in the United States and furnishes terrorists throughout the Islamic world with a warped justification for heinous crimes:

> The basic paradigm of West versus the Rest (the cold war opposition reformulated) has persisted, often insidiously and implicitly, in discussion since the terrible events of September 11. The carefully planned and horrendous, pathologically motivated suicide attack and mass slaughter by a small group of deranged militants has been turned into proof of Huntington's thesis. Instead of seeing it for what it is – the capture of big ideas (I use the word loosely) by a tiny band of crazed fanatics for criminal purposes. … These are tense times, but it is better to think in terms of powerful and powerless communities, the secular politics of reason and ignorance, and universal principles of justice and injustice, than to wander off in search of vast abstractions that may give momentary satisfaction but little self-knowledge or informed analysis. "The Clash of Civilizations" thesis is a gimmick like "The War of the Worlds," better for reinforcing defensive self-pride than for critical understanding of the bewildering interdependence of our time. (Said, 2001)

Within the discipline of Geography there now exists a vibrant debate regarding the extent to which the United States is functioning today as an imperial power. According to British-born and US-resident Marxist geographer David Harvey and British-born and Canadian-resident political and historical geographer Derek Gregory, the United States is indeed using ideas such as the clash of civilizations to justify imperial-like interventions across the world: in places such as Iraq, Afghanistan, Palestine; in locations in

Zoom-in Box 5.5:   Policing the World – The Politics
of the International Criminal Court (ICC)

Responsibility for prosecuting political and military leaders charged with serious abuse of office is increasingly falling upon International War Crimes Tribunals (IWCTs). The origins of these tribunals can be traced to the World War II Nuremberg Trials (1945–1946) and Tokyo War Crimes Tribunal (1946). During the Cold War period the concept of the IWCT was effectively rendered impotent (neither the United States nor Russia trusted international law), but it gathered a new impetus as the Cold War came to an end. The time-limited United Nations Tribunal on Yugoslavia (UNTY, initiated in 1993) announced a new era for IWCT, as did the time-limited United Nations Tribunal on Rwanda (UNTR, initiated in 1994), and the series of time-limited hybrid international/national criminal courts created in Sierra Leone, Cambodia, East Timor, Kosovo, and Bosnia instated between 1999 and 2001. The Rome Statute of the International Criminal Court (2002) and inauguration of the permanent International Criminal Court (ICC) in The Hague stand as the apogee of the project. Already, the ICC has opened prosecutions against political and military leaders in Africa, in particular, in the Democratic Republic of the Congo, Uganda, the Central African Republic, Darfur, Sudan, the Republic of Kenya, the Libyan Arab Jamahiriya, the Republic of Côte d'Ivoire, and Mali.

Notwithstanding the progress toward consensus that has been achieved to date, it remains the case that only 122 countries have signed and ratified the Rome Statute; 31 countries have signed the Statute but not yet ratified it; and 41 countries have not even signed the Statute. Given the status and range of countries that have not signed or ratified the Statute, it is clear that withdrawal or estrangement from the process has many and complex political, economic, technical, ideological, and cultural motives and causes.

Detractors from the West, and in particular supporters of the United States and Israel, have cast doubt on the ability of international law to prosecute guilty parties effectively. International law ought to be able to cleanse the world of violent dictatorships and regimes that nurture terrorism. In reality, it is being viewed by lawbreakers as a further weapon to use against the West. Invoking the concept of "lawfare" (the (ab)use of law as a weapon of war) these critics argue that unsavory regimes routinely exploit international law with impunity, ensnaring lawyers in fruitless, endless, and spurious exchanges, in a bid to delay, avoid, and frustrate justice. In response to the perceived ineptness of international law, there has emerged recently what might be referred to as an "ethical turn" within the international legal community and a resurgence in interest in the idea of the "just war." It can be moral, it is now argued, to prosecute some wars even if these wars are forbidden by international law. In some cases, to fail to act is a greater evil. Certainly, this mode of justification has been used to defend military interventions in such places as Kosovo, Afghanistan, and Iraq. And it is tempting Western powers to intervene in the Arab Spring.

(Continued)

Box 5.5   (*Continued*)

Meanwhile, the field of Critical Legal Studies (CLS), and in particular a branch of this field which has been titled Third World Approaches to International Law (TWAIL), has sought to develop the counterclaim that international law is in fact a priori a profoundly European project and remains geared toward undergirding Western hegemony. The TWAIL literature contends that the genesis and mutation over time of international law has been inextricably wound up with the rise, reign, and faltering of the West from the fifteenth century on. The West's climb to the summit of world history would be unthinkable without international law. The European imperial adventure in Latin America, Asia, and Africa, not to mention the Polar Regions, would not have been possible without the global pretensions of European law. Meanwhile, the West continues to rely on international law to serve its ongoing imperial, neo-colonial, and hegemonic projects. And so critics conclude that the ICC simply connotes the use by the West of the "rule of law" to enable "rule through law."

Which one of these propositions are you most drawn to and why? Either way, if neither powerful Western states nor emerging non-Western states are prepared to sign up to the ICC what hope is there that international law might be able to de-escalate and defuse tensions between the West and the Rest?

which the Arab Spring has sprung; and in resource-rich and strategically important countries in Latin America and Asia. There is, indeed, such a thing as an American Empire at work in the world today. Meanwhile, for British-born and US-resident political geographer John Agnew, whilst not an empire per se, the United States is at least attempting to rule from afar by supporting friendly regimes inside countries of interest (Gregory, 2004; Harvey, 2004; Agnew, 2005). For Agnew, the United States is seeking to build "soft power" (co-opting friendly regimes around the world) as opposed to "hard power" (colonizing other countries by military threats and force). But according to others, the United States has a moral obligation to use its power to police the world. If it is an imperial power, it is a benign one and one which is much more preferable and agreeable than the alternatives that are on offer.

More generally, for almost 100 years now, the international community has sought to create a global judicial system capable of calling to account rogue political and military leaders who stand accused of committing crimes of aggression, crimes against peace, war crimes, crimes against humanity, and genocide. Whilst not without some success, this mission has proved fractious, contentious, and, at least to this point, incomplete. Critics suggest that international law is de facto law built by and for Western interests. Western leaders think nothing of calling for leaders from non-Western countries to be held accountable whilst refusing to countenance the possibility that their own military adventures may be ethically and legally dubious. Many non-Western powers have therefore refused to recognize international legal institutions and laws. Interestingly, the result has also been that some Western powers have also refused to be party to any project that seeks to build international legal frameworks that might limit their ability to police the world properly, at least as they see it (see

Zoom-in Box 5.5). The capacity of international law, then, to resolve or to temper any clash of civilizations in an objective way that is acceptable to all seems remote.

Conclusion

The nation state has enjoyed a relatively short but eventful life. Were it not for the rise of sovereign nation states in Europe from the sixteenth century onward, it is likely that the political map of the world we take for granted today would be significantly different. Through colonization and then later decolonization, Europe's nation states carved new political geographies – new polities and political boundaries – onto the lands of Latin America, Asia, and Africa. Their decolonization of these continents, in turn, has created a volatile political legacy which continues to work itself through today. Across the twentieth century, the United States emerged as the most important superpower in the West and it too has actively forged the political map of the world. The United States promoted and defended the interests of the West during the Cold War era. Today the United States is front and center in the West's response to a more complex world which some understand to be a product of an emerging clash of civilizations. The extent to which the United States has served and continues to serve as an imperial power remains an open question. We might wonder, however, whether the sun is now setting on the idea of the nation state. Today fundamental changes in the political geography of the earth's surface would seem to be at play. The era of the sovereign nation state may be coming to an end, to be replaced by a new generation of multilevel governance. Perhaps the twenty-first century will see a return to medieval polities (albeit in new guises) in which there will exist no single sovereign power but only sliding layers of authority, each vying to rule over this or that strip of the earth's surface.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) As a distinctive type of polity, the nation state has enjoyed a very short but very colorful existence. Although often given ontological status – that is, treated as if it has always existed – the ideas of the sovereign state, nations, and nation states are recent inventions, given first life in Europe between the middle of the seventeenth century and the end of the nineteenth century. Nations are best thought of as "narratives" (stories about a community) and "imagined communities" (communities in which perfect strangers somehow feel an affinity to one another) built around "invented traditions" (selective, sanitized, and edited histories). The term "multilevel governance" is used to refer to the idea that the sovereign nation state is being replaced today by political entities operating at large scales (supranational organizations) and smaller scales (local and regional authorities). Supporters of this idea argue that the nation state is now too small to exert influence over global processes and too large to deal with people's everyday concerns.

2) From the sixteenth century, European nation states began the process of building empires and, at different speeds and through different means, colonized

Latin America, Asia, and Africa, Oceania, and the Polar Regions. Although the process of decolonization began in the eighteenth century (especially in Latin America) it was only in the twentieth century that most colonized states secured independence. European decolonization bequeathed to these continents a volatile set of polities which remain contested and in transformation to this day.

3) The Cold War is a term used to describe the bipolar world that emerged at the end of World War II (1945). The United States and the USSR emerged as contending nuclear superpowers, the former supporting a vision of a world built around liberal democratic and capitalist principles, the latter promoting the idea that Communist societies represent the future for humankind. Geopolitical tensions between the United States and the West more generally and the USSR and pro-Communist countries on occasions spilled over into war. By 1991, the USSR had collapsed and the bipolar standoff eased. The political map of Eastern Europe and Central Asia has since been transformed. It is perhaps premature, however, to think that the West has made lasting peace with Russia.

4) According to Samuel Huntington, global politics today is structured around a "Clash of Civilizations" in which religions are playing a crucial role – as both harbingers of conflict and advocates of peace. Critics suggest that the clash of civilizations theory is a gimmick which panders to extremists and militants in both the Western and the non-Western world, furnishing them with an excuse to see the world in terms of "them and us." Moreover, since many conflicts today are between countries that are supposedly part of a single civilization, it makes more sense to speak of the crashing of civilizations. The capacity of the West (and in particular the United States) to serve as the world's police force is compromised by the claim that the West remains an imperial and hegemonic force in world affairs. Meanwhile, there exists no universally accepted international court to arbitrate upon conflicts within and between the West and the Rest.

Chapter Essay Questions

a) Outline what is meant by multilevel governance. Discuss the claim that we are currently entering a period in which sovereign nation states will be replaced by multilevel governance.

b) Either
   Describe the ways in which European colonization and decolonization of Latin America, Asia, and Africa transformed the political geographies of these continents.
   Or
   Describe and explain the structure of global politics that existed at the time of the Cold War.

c) Write a critical essay exploring the idea that world politics today is structured around a clash of civilizations at the heart of which sits religious discord.

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Storey D (2012) *Territories: The Claiming of Space* (2nd edition) (Routledge, London).

Guidance for Further Reading

An excellent introduction to the ways in which human geographers use the idea of territoriality can be found in:

Storey D (2012) *Territories: The Claiming of Space* (2nd edition) (Routledge, London).

Good general introductions to Political Geography can be found in:

Agnew J A (2013) *Geopolitics: Re-visioning World Politics* (Routledge, London).

Agnew J A and Muscarà L (2012) *Making Political Geography* (2nd edition) (Rowman & Littlefield Publishers, Maryland).

Gallaher C, Dahlman C T, Gilmartin M, Mountz A, and Shirlow P (2009) *Key Concepts in Political Geography* (Sage, London).

Painter J and Jeffrey A (2009) *Political Geography: An Introduction to Space and Power* (2nd edition) (Sage, London).

The claims that nations are simply stories which call together imagined communities are articulated clearly in:

Anderson B (1983) *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (revised edition) (Verso, London).

A valuable introduction to the ideas and enduring legacy of Halford J Mackinder is provided in:

Kearns G (2009) *Geopolitics and Empire: The Legacy of Halford Mackinder* (Oxford University Press, Oxford).

Key texts examining the role of the United States in the current world order are:

Agnew J (2005) *Hegemony: The New Shape of Global Power* (Temple University Press, Philadelphia).

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Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 6

The West in the Cultural Landscape: On Civilized Spaces and Unruly Places

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:
1) provide a brief history of the rise of Western culture and identify the central tenets of Western culture;
2) outline and comment upon the claim that the West's central cultural institutions lie behind its ascent to the summit of world history; document

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and comment upon the claim that the West is currently faltering because it has allowed these cultural institutions to crumble;

3) outline the ways in which cultural geographers might approach the study of culture and describe and reflect upon the ways in which "new Cultural Geography" approaches the study of Western culture;

4) document and illustrate the ways in which the West has sought to project its superiority onto the cultural landscape by crafting civilized spaces and distinguishing these spaces from unruly places;

5) identify, illustrate, and comment upon the culture wars that have broken out over the West's imaginary spaces of utopia;

6) identify, illustrate, and comment upon the culture wars that have broken out over the West's superimposition of its identikit spaces onto traditional places;

7) identify, illustrate, and comment upon the culture wars which have broken out over the West's depiction of "foreign" colonies as primitive, barbaric, backward, and medieval.

Introduction

When asked what he thought of the idea of Western civilization, India's great leader Mahatma Gandhi famously declared, "I think it would be a good idea"!

Evangelists of the West like to tell their own story about the contributions of Western culture to the world. Western culture, they hold, is humankind's crowning achievement; superior in every way to all past and present world cultures. It was the destiny of the West to become the preeminent civilization in the world. A time lag existed between Western culture and other cultures. Civilized, advanced, technologically sophisticated, rational, and scientific, Western culture was millennia ahead of other cultures, which remained by comparison primitive, savage, barbaric, and backward. It was the moral duty of the West to share its culture with the world by persuasion, coercion, and, if necessary, compulsion. The West was entitled to sweep away, destroy, erase, and neuter alternative cultures with impunity. According to supporters of the West, it was the responsibility of non-Western cultures to awaken from the medieval stupor they were mired in and to begin the task of catching up by opening themselves to Westernization.

But not everyone has been seduced by this account. With specific reference to the cultural landscape, the purpose of this chapter is to examine the culture wars that have broken out over the myth that "West is best."

Culture in the Rise of the West

A brief introduction to Western culture

Although its roots are traceable to Greco-Roman civilization and the **Judeo-Christian** tradition, and although it was influenced by the fruits of the Islamic enlightenment from the ninth century to the thirteenth century CE and the Chinese

enlightenment from the tenth century to the twelfth century CE, the rise of the West announced a moment of great awakening from centuries of intellectual slumber. Superstitions, legends, folk cultures, quasi-religions, and supernatural cults had piled up so as to confuse and mystify the human mind. According to evangelists of the West, the genius of Western culture was that it recognized that human beings had become enslaved, oppressed, and infantilized by these false and irrational belief systems. The human mind needed to free itself from such debris, clutter, and ignorance. The power of human reason alone – and not blind faith in tradition or in lazy and untested beliefs – needed to be prioritized.

The greatest minds in Europe became convinced that both the natural world and the social world were systematically arranged into regular patterns. This order reflected physical and social processes and was not, as had been believed up to that point, the work of the divine hand of God. Human reason could figure out the physical and social laws that governed the natural environment and the operation of society. By developing powerful explanatory frameworks that laid bare the workings of the world, humans no longer needed to be passive recipients of judgments handed down by an almighty creator and could control their own fate.

The West's intellectual revolution was manifest at the time of the European Renaissance (fifteenth to seventeenth centuries), found encouragement in the Protestant Reformation (sixteenth century), and came of age with the European Enlightenment (seventeenth century onward).

The Renaissance was a period of great learning and creativity in Europe. Europeans sought to recover and consider anew the wisdom, literature, art, architecture, and culture of ancient and, in particular, classical civilizations, which had been buried and neglected during the medieval period. Finding life first in Florence and Venice, in Italy, and trending next through cities in the Netherlands like Amsterdam, Rotterdam, and The Hague, the Renaissance was to invigorate cultural life throughout the whole of Europe. It was followed by the Protestant Reformation, a moment of schism within Christianity. Reformers lamented the financial, sexual, and political abuses and indulgences of the then dominant Roman Catholic Church. The Catholic Church deprived people of an authentic relationship with God. Reformers believed that Christians needed to be liberated from the vices of earthly Catholicism, so that they might build their own personal relationships with God, guided by their own intellect and the Bible alone.

The European Enlightenment from the seventeenth century built upon the intellectual creativity of the Renaissance and the new intellectual freedoms secured by the Protestant Reformation and called for a new culture to be built which championed the power of human reason alone. In a famous essay titled "What is Enlightenment," published in 1784, German Philosopher Immanuel Kant noted:

> The Enlightenment is man's [sic] leaving his self-caused immaturity. Immaturity is the incapacity to use one's intelligence without the guidance of another. Such immaturity is self-caused if it is not caused by lack of intelligence, but by lack of determination and courage to use one's intelligence without being guided by another. Sapere Aude! Have the courage to use your own intelligence! is therefore the motto of the enlightenment. (Kant, 1784: 2)

According to German sociologist and philosopher Jurgen Habermas, the work of the European Enlightenment was to search for and to establish universal truths in the spheres of science, morality, and aesthetics (Habermas, 1985):

- *Science*: Truth had to be more than prejudice parading itself as fact. Using human reason, human beings could cut through irrational and false belief systems and lay bare the truth about the processes that created the world.
- *Morality*: Judgments as to what was right and wrong had to be based upon more solid ground than individual conscience or religious dogma. Through human reason human beings could arrive at a universal set of morals and ethics.
- *Aesthetics*: Beauty had to be more than mere beauty in the eye of the beholder. By using human reason, human beings could arrive at a universal consensus on the aesthetic value of art, music, poetry, literature, sculpture, the human body, natural landscapes, and so on.

Once science had figured out how the world worked, morality had established how the world ought to work, and aesthetics had gleaned insights into to how the world should look, it was then possible to build a better world. It was the duty, then, of the intellectual to harness human reason to build what English philosopher Thomas More in 1516 labeled "**Utopia**," and thereafter to maximize human happiness.

Ferguson's "cultural" explanation for the rise of the West

Evangelists of the West believe that the steady emergence and blossoming of Western culture announced a decisive new moment in human history. Some even argue that it was developments in culture that lay behind the West's ascendance. The rise of the West as an economic and political force was made possible only because Western culture enabled the peoples of Europe to harness human reason like never before and to build new institutions around which the perfect society might be built. Western culture was rational, scientific, objective, and analytical. It believed in laws and, in particular, in its capacity to unearth the laws that shape natural worlds and societies. It placed confidence in the ability of enlightened human beings to use reason to build new and better worlds. It was at root Western culture that enabled Western nations to build successful social, economic, and political institutions. The latter would not have been possible without the former.

The argument that culture played a pivotal role in the rise of the West is as old as the West itself. And it is one that persists to this day. In his book *Civilization: The West and the Rest*, Scottish born and US resident historian Niall Ferguson (2011: 8) argues that the "rise of Western civilization is the single most important historical phenomenon of the second half of the second millennium after Christ." And yet, had it been possible to conduct a survey of likely future global superpowers around 1500, Europe, then a geographically remote and comparatively impoverished "miserable backwater," would not have featured as a credible contender. In fact, perhaps the Ming dynasty in China would have presented itself as the most likely candidate. Ferguson asks, why against the odds was it that the West emerged from the pack and colonized Africa, Asia, Latin America, Oceania, and the Polar Regions, and not vice versa?

According to Ferguson it was the West's distinctive cultural institutions that collectively furnished it with a decisive competitive advantage (Ferguson, 2011). Unlike in other cultures, where the human intellect remained infantilized and mystified by irrational belief systems, in Western culture human beings were alert to the power of their own minds and the freedom they had to determine their own futures. Ferguson is quick to note that his book should not be pigeonholed with other "self-satisfied classics" that "boast about the triumph of the West" or celebrate uncritically the merits of Western culture. He acknowledges that the West is Janus-faced – that is, it brought with it great harm as well as good. Nevertheless, his preferred explanation for the West's success champions the head start that culture afforded this civilization and that enabled it to think rigorously and scientifically about the principles around which successful polities, economies, and societies might be built. Borrowing language from youth culture, Ferguson argues that the West used the power of human reason to develop "six killer apps" which it alone "downloaded":

Competition: In contrast to other regions, and in particular China where political authority was controlled by a series of geographically expansive and monolithic all-powerful political dynasties, Europe was characterized by a number of comparatively weak and warring monarchies. In these conditions, competition between political and economic organizations for access to and control over scarce resources prospered and spurred the development of **capitalism**.

Science: The European Enlightenment ushered in a new era of science, announced a new confidence in the capacity of human beings to master the natural environment, and facilitated the development of new technologies, not least industrial and military technologies. It was significant that all the major discoveries in mathematics, astronomy, physics, chemistry, and biology in the 1600s occurred in Europe.

Property rights: Europe pioneered a new era of private property rights, and erected legal institutions and representative democracies to patrol and uphold these rights. With the rule of law safeguarding private property, capitalist businesses could expand with a new level of confidence and certitude.

Medicine: The major breakthroughs in medicine and public health that occurred in the 1800s and 1900s all happened in Europe and the United States. The development of medicine and public health initiatives greatly expanded life expectancies, which had a number of direct and indirect impacts on Europe's rise; the development of expertise in tropical medicine, for instance, fortified European armies and facilitated European colonial expansion.

Consumerism: In Europe, the development of cultural tastes, fashions, and fads created in its wake a consumer-oriented society, which in turn generated massive new markets, fueled innovations in technologies of mass production, and stimulated further industrial development. The clothing industry played a leading role in the initial rise of this new consumer society, but quickly shopping for exotic fruits and vegetables, spices, and jewelry caught up.

Work ethic: Christianity, and in particular Protestantism, played a significant role as the cultural backdrop within which Europe rose; orienting European populations toward the moral virtues of privation, application, diligence, and responsibility. In ways both deliberate and serendipitous, Europe's Christian and Protestant

heritage deposited in its wake a culture that saw moral virtue in work, effort, and saving, and which, as a consequence, was well disposed to the principles of capitalism and economic growth.

For Ferguson, the West's recipe for success remains unrivaled. Why then, he muses, is the West losing ground to the rest and faltering today? The West it seems has been overcome by a number of cultural pathologies. Apathy, confusion, hesitancy, doubt, and relativism (the belief that all ideas are of equal value) have all replaced confidence and faith in the capacity of human beings to master their own destiny. Successive attempts to shape the world have ended with mixed results. Instead of celebrating its successes the West has become fixated with its failures. It has lost confidence in its ability to understand the laws through which the social and natural worlds work, and, worse, has begun to doubt that there existed any such laws in the first instance. Western culture has suffered from the delusion that the world is ordered and can be made to order; it is now reeling from the sense that, all along, the world would have been better characterized in terms of anarchy and chaos. The big stories that the West has used to make sense of the world (such as those stories it holds dear concerning competition, science, property rights, medicine, consumerism, and the work ethic) now seem less compelling.

Ferguson concludes that the West might be being dethroned in the twenty-first century (by, for example, China) not because other civilizations are proving superior, but because it is less good at being the West than other rival civilizations. It is other civilizations that now serve as the guardians and protectors of Western institutions. Whilst the West continued to stride ahead of the rest until as late as the 1970s, after this period many civilizations succeeded in more effectively "downloading" the West's six killer apps. As a consequence of its loss of monopoly over its killer apps, the gap between the West and the Rest has narrowed. Ferguson calls for a rekindling of interest in the institutions that made the West great. For this to happen there needs to be a revival of interest in Western culture. A new confidence is needed in the capacity of human reason to repair and build anew the institutions that create growth and that have proved to be successful. Today's younger generation need to become more aware of the central institutions that propelled the West to the forefront, and of the place of the West in world history. The enlightenment needs once again to come to the fore.

In 2012, Ferguson chose to make the decline of the West the focus of his series of BBC Radio Reith Lectures, which were subsequently published in his book *The Great Degeneration: How Institutions Decay and Economies Die* (Ferguson, 2012). Ferguson again points to indicators that the West is crumbling: recessionary economic conditions, unserviceable debt, aging populations requiring unaffordable care, a decline in civility and morality, a rise in antisocial behavior, and so on. In this book, Ferguson now contends that the root cause of these ailments lies in the West's failure to tend to and to maintain four central pillars which brought it success in the first instance: representative government, the free market, the rule of law, and civil society. Through cultural malaise and complacency, these pillars or institutions have degenerated and crumbled:

Democracy: Government borrowing is limiting possible options for future generations who will be left to pick up our bill. Elections cease to be meaningful when choices are constrained by obligations inherited from the past.

Free market: Free markets are being burdened by overly complex rules and regulations. Free trade is impaired and warped by unnecessary and unhelpful bureaucratic tariffs and restrictions.

The rule of law: Instead of being a means to an end (a framework to support societies), the rule of law has become an end in itself (a kind of self-serving cottage industry). Stakeholders in the legal profession, symbolized most cogently by lawyers themselves, are now crowding out the operation of the rule of law as it was initially intended.

Civil society: Welfare states were established to ensure that the needs of people in dire circumstances were met. They now give blanket protection to those who prefer to be idle. Welfare states have allowed a significant population to shelter from taking personal responsibility for their welfare and well-being, and encouraged people to become dependent, and not active, citizens.

Cultural Geography and the Study of Western Culture

New Cultural Geography and the myth that West is best

How might human geographers approach the study of Western culture? To address this question it is first necessary to examine how human geographers approach the study of culture itself.

Although ultimately overly simplistic, it is customary to distinguish between two traditions of Cultural Geography: that which was championed by the Berkeley School of Geography in California from the 1920s; and new Cultural Geography, which was pioneered by a number of US and British human geographers from the 1980s onward. Whilst traditional Cultural Geography treated culture as a "**super-organism**" and focused upon the "**cultural landscape**," new Cultural Geography has explored the concept that culture is a **social construction** which both is formed from and plays a role in sustaining and/or interrupting power relations and wider social, political, and economic processes.

According to the Berkeley School, cultures are best thought of as superorganic entities. Superorganic concepts of culture treat cultures as:

- guided by their own internal laws and workings and beyond the control of any particular individual or social group; people are passive bearers of culture, not creators of culture;
- homogeneous groupings; everyone belonging to a culture shares a common world view, has a similar set of traits, and conforms to a singular set of values;
- causal agents in their own right, working to make the world alongside social, political, and economic processes.

Cultures have a life of their own. They are born, grow, live, and die according to their own lifecycle. Human geographers should not try to explain this lifecycle. Instead, working alongside anthropologists and archaeologists, they should simply attempt to map traces of culture on the earth's surface – their material deposits and etchings onto the landscape.

In many ways, Niall Ferguson's account of the emergence of the West treats Western culture as a superorganism. The rise, reign, and faltering of the West as a social, political, and economic entity can be explained with reference to the birth, adult life, and death of Western culture. Western culture somehow emerged from the amalgamation of a myriad of prior cultures. No individual or social group consciously willed it into existence or deliberately crafted its emergence. Once in the world it has done a tremendous amount of work, building new social, political, and economic institutions, in the pursuit of tomorrow's ideal world. It has left its imprint on the face of the earth in the form of cultural landscapes, which, as we will see, are ordered, rational, planned, and sanitized. But for reasons internal to itself, it is currently committing suicide. The West has lost confidence in the certainties that hitherto underpinned its culture. Its boldness and assertiveness have given way to a sense of apathy, procrastination, and self-doubt. Western culture is suffering a degree of psychosis. It is riddled with anxiety, stress, depression, anomie, melancholia, and other hysterical conditions. There is now a blurring of the boundaries around what is right or wrong, true or false, and beautiful or ugly. And as its culture ebbs, the central pillars of Western culture are crumbling, at least in the West itself.

From the 1980s, many came to believe that for Cultural Geography to prosper it needed to move away from its concerns with traditional anthropology and archaeology and to begin a conversation with cultural studies, sociology, economics, and political science. In his classic critique of "the superorganic in American cultural geography," in 1980 US geographer James S Duncan criticized the Berkeley School for failing to understand that people are not just passive bearers of all-powerful cultures which mysteriously hypnotize them and over which they have no control (Duncan, 1980). Moreover, cultures don't just spring to life and endure in a vacuum. Cultures are, in fact, actively made by social groups embroiled in power relations at particular moments in particular places and to serve particular ends. A new Cultural Geography was needed that placed at its heart the origins and functions of culture in society. Cultures were formed in the context of power relationships and wider social, political, and economic contexts. Cultures were embroiled and entangled in social relationships, defining how one social group should relate to another.

Central to the new Cultural Geography are the ideas of the *social construction of cultural practices* and the *social construction of ideas about culture*.

In his 1989 book *Maps of Meaning: Introduction to Cultural Geography*, British cultural geographer Peter Jackson captured and defined for a new generation the idea that culture is a social construction. Jackson called upon cultural geographers to pay more attention to the ways in which culture plays a role in shaping power relationships and social inequalities, for example, on the bases of class, race, sexuality, gender, age, disability, and so on. For Jackson, cultures work in the same way as ideologies do. Elite or dominant groups construct and police the dominant culture to maintain their position of power – or as he puts it, to preserve their **hegemony**. They act as if their way of seeing the world is true, a given. It is the job of subcultures and countercultures to challenge the dominant culture and to provide new ways of seeing reality. **Cultural politics** or **culture wars** emerge when competing understandings of reality grate up against one another.

For Jackson, the objective of Cultural Geography is to examine and to challenge the ways in which dominant groups (for example, white, middle-class, heterosexual,

able-bodied men living in the developed world) attempt to produce and normalize particular images of their cultures to retain their dominance.

Whilst sympathetic to Jackson's call for a new Cultural Geography, US cultural geographer Don Mitchell has cautioned cultural geographers not to treat culture as something that actually exists. In his 2000 book *Cultural Geography: A Critical Introduction,* Mitchell in fact went as far as to say "there is no such thing as culture." Instead he argues there is only the "idea of culture."

The idea of culture is used in a multiplicity of ways by different people at different times. For instance, culture variously refers to: the dominant ways of life and institutions around which societies are built; a set of traits, habits, and customs that develop around particular activities such as workplaces, professions, hobbies, and interests; the level of civilization, sophistication, and refinement of a society; a set of artistic practices including painting, theater, literature, poetry, film-making, sculpting, and so on; communities who are not part of mainstream society. According to Mitchell, the idea of culture itself should be studied in relation to power relations and wider social, economic, and political processes. For instance, dominant groups often use and abuse the idea of culture to control and define "others" and thereby secure their own power base. Instead of treating these meanings literally, that is, assuming that they refer to something that actually exists in the real world, it is more useful, Mitchell argues, to examine how the concept is used by powerful groups in particular settings and toward specific ends.

For Mitchell, then, Cultural Geography should be less concerned with studying cultures per se and more concerned with the social construction of the idea of culture; its deployment to serve specific interests in particular social, economic, and political contexts.

Inspired by the idea that society is culturally constructed and that ideas about cultures are as powerful as cultures themselves, cultural geographers are interested in how the West seeks to represent, imagine, depict, and project its superiority. They are less interested in testing the veracity of the story that "West is best" and are more interested in probing into who invented this story, who put it into the world, what work it does in the world, who benefits from it, and how it survives and prospers over time. At once a product of self-delusion and wilful propaganda, it was cultural representations of Western omnipotence that allowed Western political and economic elites to sell the colonization, subordination, and exploitation of other lands as inevitable, benevolent, and gracious. Moreover, as British political and cultural geographer Alastair Bonnett has shown, cultural representations, images, and projections of Western supremacy continue to exist because they accomplish important work in the world for powerful Western (and sometimes non-Western) social, economic, and political elites (Bonnett, 2004).

There remains a lot at stake in the ongoing preservation of the myth that West is best. Who controls this myth controls the future of the West as a global economic and political power. It is for this reason that cultural geographers are interested the precarious existence of images of Western supremacy. They note that whilst some alternative cultures have been seduced by the story of the West, other countercultures have been less easily impressed. They have challenged the story the West tells about its contributions to human history and have provided a revised account that includes, alongside moments of glory, misdeeds, failures, and misadventures. They have resisted eradication and questioned their labeling as inferior. They have sought to reclaim the value of alternative cultures. Cultural geographers, then, are centrally concerned with the culture wars that have broken out over the myth that "West is best."

The West in the cultural landscape

Although treating culture as a social construction and not as a superorganism, cultural geographers remain fundamentally interested in expressions of culture in the landscape. And undoubtedly the West has sought to project its power in and through the cultural landscape. A central feature of Western society is its preference for rational, ordered, and civilized spaces over anarchic, chaotic, and unruly places. Western society has persistently sought to view the world from what has been referred to as the helicopter view – that is, to get up above and outside and to look down upon at the earth with an all-seeing eye. Undoubtedly, the West's preference to view from the sky stems from the desire of Western elites to control and engineer **space** for their own ends (see Zoom-in Box 6.1). In so doing the West has shown a remarkable insensitivity to the local, unique, and idiosyncratic qualities of particular places. For the West, place is a ragged and irritating impediment to progress. The West has attempted to annihilate place by cloning spaces it considers to be ideal and creating identikit worlds everywhere.

Civilizing Missions and Culture Wars: Civilized Spaces and Unruly Places

Cultural geographers begin from the premise that there is nothing innocent or benign about Western culture's belief in its own omnipotence and destiny to dominate. The widespread propagation of this belief has played a significant role in enabling and justifying the West's march to the four corners of the world – ostensibly in the name of progress but also in search of profit and power. But the myth that "West is best" has not gone unchallenged. Western culture has been forced to confront a number of countercultures. In these encounters the West has provoked a number of culture wars; fierce struggles over how the West – and non-Western places – might be represented, depicted, and imagined. In the remainder of this chapter attention will be afforded to three culture wars which have broken out over the West's representation of its cultural landscapes as civilized and its depiction of non-Western cultural landscapes as unruly: the utopian and dystopian worlds conjured up in the Western imagination, the West's preference for identikit spaces over traditional places, and the West's demonization of foreign cultures in its colonies.

Spaces of utopia and dystopia in the Western imagination

At the heart of Western culture has been the search for the perfect world, "Utopia." But, of course, the idea of utopia is an elusive one. Across the past 500 years, a confusion of controversial and contradictory utopias have been concocted in the minds of, among others, Christians, esoteric secret cults, Enlightenment rationalists, libertine hedonists, socialist reformers, radical Marxists, Eugenicists, and Victorianists (see Figure 6.1). Each have laid claim to different images of what paradise on this earth might look like. Whilst utopian dreams have pervaded popular culture most have existed only in the imagination and have remained mere aspirational fantasies. Only a tiny subset has ever been pursued in reality. This is perhaps fortunate as many of those that have been pursued in the real world have proved dangerous and disastrous.

Zoom-in Box 6.1:   The West in the Cultural Landscape: Three Path-Breaking Books

British cultural and historical geographer Denis E Cosgrove's 1984 book *Social Formation and Symbolic Landscape*, British feminist geographer Gillian Rose's 1993 book *Feminism and Geography: The Limits of Geographical Knowledge*, and British-born and Canadian-resident political, historical, and cultural geographer Derek Gregory's 1994 book *Geographical Imaginations* provide path-breaking insights into the West's innate cultural tendency to view the landscape from above and outside – the helicopter view. Each argues that landscape is a "way of seeing" which emerged only with the rise of European capitalism, European states, and European **patriarchal society** and which has worked principally to consolidate the dominance of elite and powerful groups in society.

The myth that West is best finds expression in the landscape. We might say that as part of its mission to demonstrate its supremacy the West has sought to civilize the landscape. Prior to the rise of the West, the cultural landscape was riddled with debris, clutter, mess, anarchic land use, and loose ends and was disorganized and sloppy. The West sought to bring such unruly places to heel and began to impose onto the landscape the order, organization, grids, patterns, and shapes it perceived necessary to build its ideal or perfect worlds. The West gave over the surface of the earth to professionalized spatial architects, building surveyors, politicians, investors, bureaucrats, planners, and engineers.

Landscape, for Cosgrove, was a way of seeing the world that was ideologically loaded; it was a product of the ascendance of the West and the social, political, and economic changes the rise of the West ushered in. Specifically, the idea of landscape emerged first during the Italian (Venetian) and Dutch Renaissances as colonists, merchants, and industrialists commissioned paintings to venerate their status and holdings. Cosgrove had a particular interest in Italian architect Andrea Palladio (1508–1580) and his projection of Western power on the landscape of Venice. Representations of landscapes served to undergird the idea that landowners were all-powerful, commanding over vast territories and subduing and ordering nature (Plate 6.1). As political and economic elites in France, Prussia, and the United Kingdom accumulated vast riches from their colonial adventures they too began to sponsor the idea of landscape as a peculiar and useful perspective.

Rose's contribution was to extend Cosgrove's argument by noting that gender too played an important role in the emergence of landscape as a way of seeing. Purveying the landscape from a perch from afar was a male-centered practice; it constituted a masculinist "gaze." It was not an accident that landowners and political and economic aristocrats were also by and large men. These men enjoyed puffing their chests out and viewing in a self-satisfied way the land they owned and commanded. Landscape paintings portraying

(Continued)

Box 6.1　(*Continued*)

Plate 6.1　A Palladian landscape in Venice, Italy. Source: © G.E. Kidder Smith/CORBIS.

their property affirmed to the world their superiority over serfs and landless laborers. According to Rose, women were rarely included in landscape frames and when they were they were depicted as sexualized mistresses beholden to the landowner. Meanwhile, landscape paintings were often organized so as to depict heroic men striving to bring a fertile but unruly Mother Nature under control. In any case, landscape as a perspective was inconsistent with feminine ways of experiencing the world. Women invariably preferred getting off the helicopter and were more comfortable seeing themselves in and of the world than detached and above the world.

In his 1994 book *Geographical Imaginations*, Gregory argued that human geographers ought to have as their central concern what he termed the current hyperextension into, and superimposition onto, people's everyday places and lifeworlds of the abstract grids and geometries imprinted on the earth's surface by Western capitalism and the Western states. Put more simply, if viewed from a height, Western landscapes do appear to be more planned, ordered, and systematically laid out, but this is simply because private corporate capital and property owners, government officials, and politicians rendered them thus. According to Gregory (1994: 401), cloned spaces take one of two forms:

The commodification of space – whereby private ownership of land results in the etching onto the face of the earth of capitalist circuits of production,

circulation, and consumption. Examples would include the industrial parks, airports, suburban landscapes, and out-of-town shopping malls that now adorn virtually every major city. Hotel chains like the Hilton, Radisson, Sheraton, Best Western, Ibis, and Marriott pride themselves on creating identikit layouts – the lobby of any one feels and looks the same no matter where in the world it is located. Some refer to this standardization of space as the McDonaldization of the world (after the McDonald's burger chain).

The bureaucratization of space – whereby Western states claim authority over spaces and inscribe their will onto space in the form of highly regulated and planned public infrastructure and administrative systems. An example would be the sprawling public housing estates that quickly become destitute "sink estates" and which brutalize residents to the extent that they cannot humanize their own living environments creatively. The spaces of hospitals, schools, and prisons provide other examples. These often monotonous and homogenized spaces are designed by states to perform certain tasks, and citizens are expected to use and navigate through them in ways that submit to state-defined rules.

The nemesis of Western utopian hope is dystopian foreboding. Within Western popular culture there has emerged a vibrant and colorful tradition which has speculated on the **dystopian** underbelly of some of these utopian dreams (Baeten, 2002). Dystopian anxieties have variously mulled over the ways in which utopian projects may go awry and lead to: totalitarian and fascist regimes; racism and oppression and the search for a master race; military industrial complexes capable of creating nuclear and biological weapons that could destroy the planet; unethical biotechnologies, the genetic manipulation of human DNA, and human cloning; libertine societies plagued by sexually transmitted diseases, sexualized violence and deviance; pollution and the destruction of essential habitats and ecosystems; evil esoteric cults ruling the world in secret; and anarchy, crime, violence, fear, and vice.

Dystopian anxieties have proved fodder for science fiction novels, futuristic films, and comic books in particular. Throughout the twentieth century, a number of "cult" fictional books have explored the tension between utopian and dystopian imaginaries. English novelists Aldous Huxley's (1932) *Brave New World*, and George Orwell's *Nineteen Eighty-Four* (1949) are perhaps the most famous. Both present a bleak and terror-filled future for humanity, in which utopian experiments go awry and create in their wake totalitarian governments and brutal repression. American science fiction writer Ray Bradbury's *Fahrenheit 451* (1953) likewise paints the gruesome picture of a society in which books are banned because they are reckoned to be the ultimate roots of human misery. A culture of enforced ignorance is the result. Also in this tradition is English novelist Anthony Burgess's *A Clockwork Orange* (1962), which paints the picture of a society in which the youth practice ultraviolence without fear or restraint. In film, *Blade Runner* (1982) is perhaps the most

Utopian constellation	Utopian dream – In search of the ideal society: building paradise on this earth
The West's earliest utopian visions developed at the start of the sixteenth century CE in the context of the Renaissance and the Reformation.	The malpractices, indulgences, and abuses of the Roman Catholic Church threatened to corrupt European culture. Against the background of the Renaissance and the Reformation, visions for a new type of Christian society emerged. This constellation begins with English political philosopher Thomas More's 1516 *Utopia*, a fictional account of an imaginary island in the New World ruminating on how an ideal society might organize its affairs.
The Pansophists of the seventeenth century CE harnessing ancient and modern wisdom to build a perfect world.	To build paradise on this earth Pansophists believed it necessary to draw insights from modern science and the wisdom accumulated by ancient civilizations (including knowledge of alchemy, magic, and mysticism). Incorporated in this constellation is English political philosopher Francis Bacon's fiction tale of *New Atlantis,* an imaginary island called Bensalem discovered by accident by European sailors lost in the Pacific Ocean off the coast of Peru.
The Republican and humanist visions starting in the late eighteenth century CE and peaking in the nineteenth century CE.	This constellation gathers together the multiple utopian visions that supported political revolution in Europe, including the overthrowing of privileged monarchies and the formation of new republics. Progress through human reason alone becomes preeminent. The worth of each and every human being is affirmed. This constellation includes the utopian visions of Swiss Philosopher Jean-Jacques Rousseau. Rousseau's 1762 book *The Social Contract* promoted the idea that only republican political systems are capable of respecting the fundamental dignity of all human beings. Rousseau's ideas were to inform and fuel the French revolution (1789–1799).
The utopias of the Libertines from the mid-eighteenth century CE.	Here utopian visions were predicated upon sexual freedom, hedonistic lifestyles, and the pursuit of desire, free from moral and religious constraints. The lewd and debauched writings of French aristocrat the Marquis de Sade, including his deeply shocking and controversial fictional book *The 120 Days of Sodom, or the School of Libertinism*, published in 1785, illustrate this constellation.
Late eighteenth century and nineteenth century CE, socialist utopians, paternal capitalism, and the search for more progressive industrial factories.	Utopian thinkers in this tradition lamented the inhumane treatment of working men, women, and children, and believed that a better society and economy needed to be built to counter the wounds inflicted upon human dignity by industrial capitalism. The work of Welsh social reformer Robert Owen in transforming working conditions in mills at New Lanark in Scotland from 1799 illustrates the pursuit of perfection espoused by these socialist utopians.
The radical revolutionary utopian tradition, commencing in the mid-nineteenth century CE with the ideas of Karl Marx, which holds that building a new utopia requires the building of an entirely new society.	This tradition of utopian thought begins with the publication by German political philosophers Karl Marx and Frederick Engels, in 1848, of *The Communist Manifesto,* a call to action to overthrow the capitalist system and establish in its place a communist utopia. The capitalist system had led to war, greed, exploitation, poverty, inequality, and misery. Human happiness could only be achieved by a revolutionary change in the prevailing political and economic system. A fairer society was needed, guided by the principle "from each according to their ability, to each according to their need."
The dying embers and twilight of Western interest in building utopian futures in the late nineteenth century and twentieth century CE.	Exemplifying this tradition are the utopian movements that sprang from English naturalist Charles Darwin's theory of evolution through natural selection. Eugenicists believed that by controlling and manipulating human reproductive capacities a perfect society could be created, free from disease and infirmity, and driven by the best the human intellect had to offer. Another example is the Victorian utopias which sought to build healthier and better planned cities, with proper sanitation and access to clean water, green spaces, fresh air, and public amenities.

Figure 6.1   The Manuels' seven constellations of utopian thought. Source: Compiled from Manuel and Manuel, 1979.

iconic dystopian movie ever. Set in Los Angeles in 2019, *Blade Runner* tells the story of genetically modified robots (called replicants) who look human but who serve the interests of a global conglomerate in "off world colonies." When some return to earth, the possibility that technology might assume a life of its own becomes a real one. Dystopian imagery also pervades the superhero comic book genre, including and in particular, the Batman series (Zoom-in Box 6.2)

The era of Western utopianism is not over. In the twenty-first century perhaps "techno-utopianism" and the idea of the "smart city" will come to capture the

Zoom-in Box 6.2:   Gotham City – A Powerful Image of Dystopia

At the start of the twentieth century, American cities were in the throes of great expansion, carrying as they grew the hopes and aspirations of teeming masses of immigrants. Skyscrapers adorned the skyline of many cities, beckoning migrants to come join a modern society on the march to greatness.

The DC Comics Batman series began in 1939. From as early as 1940, Gotham city was identified as the city Batman lived in and was destined to save. Although the Batman series has presented a number of histories of Gotham City, many have taken Gotham to be an exaggerated representation of any standard twentieth-century city in the United States.

Whilst the character, atmosphere, architecture, and mood of Gotham vary from series to series, the city can be thought of as a powerful image of dystopia. Batman writer and editor Dennis O'Neil states, "Batman's Gotham City is Manhattan below Fourteenth Street at eleven minutes past midnight on the coldest night in November." Gotham City plays on anxieties that hold that American cities have become cesspits of vice and fear, notwithstanding their utopian beginnings.

Often depicted only in the light of a full moon, Gotham is a dark and murky city, overwhelmed by gargoyles and graveyards, gothic architecture and bombastic, gargantuan angular buildings, and drowning in vermin and crime. Personified most in the grotesque figure of the Joker, it is a city in which law and order has broken down and in which gangsters, lunatics, and violent psychopaths reign. No human law and order enforcement agency can arrest the degeneration of the city into anarchy; its only hope is to turn to a superhero with extra-human powers, a Batman, to fight the evil that lurks within.

Of course, the popularity of the Batman comic series has resulted in Gotham City being represented through the medium of film, and more recently Xbox, Wii, DS, and PSP gaming technologies. As it has developed in new formats, the image of Gotham as a dystopian city has mutated.

Among the most famous cinemagraphic depictions was that provided in 1989 by Director Tim Burton, titled simply *Batman* and featuring Michael Keaton, Jack Nicholson, and Kim Basinger. Burton's ambition was to project a look on screen of a city in which "hell had erupted through the streets and kept on going." Architecturally, Gotham City was "New York without a planning commission"; a hideous amalgam of styles. A master of **film noir**, Burton's Gotham City was everywhere dark, sinister, menacing, and shadowy.

In contrast, director Christopher Nolan's more recent Dark Knight trilogy, featuring Christian Bale, Michael Caine, and Morgan Freeman, presents Gotham as a regular and typical city. Fear is generated by the sheer evil of the villains and not by the city itself. In *Batman Begins* (2005) it is Ra's al Ghul and Scarecrow, in *The Dark Knight* (2008) it is Joker and Harvey Dent/Two Face, and finally, in the *Dark Knight Rises* (2012) it is Bane who strikes fear into the heart of the viewer. Nolan's intention is to show that appearances can be deceptive; beneath every city that appears to be perfect on the surface resides a hidden nightmare. Behind every utopia there is a dystopia waiting to pounce.

Western utopian tradition. Human fallibility means that cities routinely operate in sub-optimal ways. But for Italian born and US resident architect and urbanist Carlo Ratti, technology is redefining the ways in which cities can be built and governed (Ratti, 2014). It is no longer necessary to settle for second-class urbanism. It is now possible to place sensors virtually everywhere in cities and for these sensors to capture every detail of the workings of cities. Big Data (the capacity to record, visualize, and store massive amounts of real-time data) and advances in software, artificial intelligence, computer coding, and the creation of complex algorithms mean it is now feasible to know the state of any urban system in real time and to automate core functions, that is, to solve problems without the aid of human intervention. Lights can come on automatically when it is dark and switch off at the break of dawn, buildings can regulate their temperatures according to changing weather patterns, sluice gates can be opened when rivers reach a certain height, garbage can be collected when bins are full and not before, and public transport can be rerouted so as to avoid areas of acute congestion. According to Ratti, "smart cities," "smart transport systems," "smart buildings," "smart hospitals," "smart homes," and so on, have the potential to radically improve the ways in which we live. At the Massachusetts Institute of Technology (MIT) he has established the *Senseable City Lab* which evangelizes to governments around the world the value of using sensors, data centers, code, and automated decision-making systems to transform urban living.

But there are some who question whether, if left under the control of large technology companies and authoritarian state regimes, the idea of the smart city might end in oppression and social control. Whilst noting the power of technology to build improved cities in future, US-born and British-resident commentator on technology Adam Greenfield worries that the idea of the smart city is being hijacked by vested interests and put to sinister uses (Greenfield, 2013). Powerful elites now have at their disposal data sets and analytical tools hitherto unimaginable. They are now better able to police, direct, and control urban populations. This power lends itself to abuse. Greenfield points to the example of Rio de Janeiro's quest to be Latin America's first smart city. Rio's Intelligent Operations Centre (IOC) is the heavily fortified hub or data centre of this project, collecting and analyzing CCTV footage and other information from across the city. Citizens are also invited to record and upload to a central portal photographs and video streams of life in the city as it unfolds in real time. Whilst city officials contend that the IOC is enabling Rio to be managed more efficiently and in a more coordinated way, Greenfield questions whether in fact it is better viewed as a draconian security system that spies on citizens and enforces a particularly nasty kind of law and order. In the vision of the smart city, then, it seems that the utopian and dystopian debate remains alive and well in Western culture.

One-dimensional space: the West's identikit worlds

The capacity of human beings to secure a sense of place is a defining quality of human existence. In *Space and Place: The Perspective of Experience* (Tuan, 1977), Chinese-born and US-resident geographer Yi Fu Tuan draws a distinction between spaces and places. Spaces can be thought of as impersonal and prefabricated built environments, created by engineers, planners, and developers, without a sense of how

humanity might occupy, name, and claim them. Place, by contrast, refers to the meanings human beings attach to places, their senses of belonging to and estrangement from places. **Topophilia,** literally the love of place, can often turn even the most barren, arid, and inhumane environment into something fit for human existence. Spaces become places when human beings give them an identity and personality.

In his book *Place and Placelessness*, Canadian geographer Edward Relph (1976) argues that in Western societies space has steadily triumphed over place. According to Relph, historically each place had its own history, identity, and atmosphere. If blindfolded and parachuted into any particular place, an educated traveler could quickly figure out where they had landed. Increasingly, however, standardized and cloned built environments – whether they take the form of housing estates, working places, shopping malls, or gardens and parks – were being foisted onto each place. People's attachments to places were being severed and their sense of belonging and rootedness upended. For Relph, if this process continued, differences between places would eventually be smoothed over and each and every place would look alike and feel the same.

But space has not yet won out over place. Cloned spaces sever people's long-standing and complex sensual, emotional, and effectual attachments and bonds to places. Whilst some people experience Western spaces as exciting, comforting, and habitable, others experience these same spaces as arid, barren, and alienating. The creeping dominance of space over place has triggered a counterreaction among those who wish to preserve their local traditions, customs, and cultures, and to restore the character, personality, and identity of their places (see Zoom-in Box 6.3). Supporters of space hope that through time communities will learn to inhabit and humanize their new environments. They claim that through local consultation and skillful execution it is possible to build cloned spaces that are still sensitive to and respectful of local idiosyncrasies and identities. Critics, however, insist that gestures such these are hollow. Space remains space, notwithstanding its nod to local contexts and to tradition. No amount of planting new roots in new spaces will ever compensate for the intensely important attachments to traditional places that are being lost today.

The Western frontier and places beyond the pale

The idea that there exists a frontier between the civilized West and the unruly rest is a long-established one in the Western **geographical imagination**. The concept of the Pale was coined by English colonialists in Ireland. It was used to refer to that part of Ireland that was under the control of the English government and which had been settled and civilized. Beyond the Pale there lurked danger. There dwelled a volatile, irrational, uncivilized, and barbaric people. The task of the colonists, of course, was to extend the frontier and expand the Pale. This task required that the brave and the bold ventured into the unknown and brought the unruly to heel. The French referred to colonization then as **mission civilisatrice** (a civilizing mission). Likewise, British poet Rudyard Kipling famously called it "The White Man's burden" in his 1899 poem by that name.

The publication, in 1978, by Palestinian-born and US literary scholar and activist Edward Said, of *Orientalism* marked a watershed in the understanding of the ways

Zoom-in Box 6.3:   The Indians of All Tribes (IAT) Occupation of Alcatraz Island, San Francisco (1969–1971)

European colonization of countries such as the United States, Canada, Australia, and New Zealand was made possible only by the violent dispossession by European peoples of lands held for millennia by indigenous, native, and First Nations peoples. Notwithstanding apologies for the actions of their forbears and gestures toward truth and reconciliation by descendants of European colonizers, many indigenous peoples feel that retribution and compensation for past deeds remains due.

Alcatraz Island, in the San Francisco Bay area, is perhaps best known as home to a Federal Prison (1933–1963), which housed the most dangerous criminals in the United States. The island, however, was also the site of a famous protest by a movement that called itself Indians of All Tribes (IAT). The IAT claimed to represent indigenous peoples who had settled the lands of North America prior to European colonization. Between November 1969 and June 1971, this movement occupied Alcatraz Island bringing their cause to the attention of the world (Plate 6.2).

Plate 6.2   The Indians of All Tribes (AIT) occupation of Alcatraz Island, San Francisco (1969–1971). Source: © Bettmann/CORBIS.

Native American Indian attitudes to land, of course, differed significantly from those of the European settlers. Whilst Europeans believed in private ownership of land and traded land through the open market, Native American Indians believed that, because land was a source of life, it was to be respected, not owned. Land that sustained life was considered to be imbued with spiritual significance. Accordingly, European appropriation of land was considered by First Nations people not only as theft but also as an abhorrent attack on indigenous spirituality.

The Western frontier progressed west on the basis that natives were less than enlightened and that their way of life was so primitive it deserved no recognition. But in the Treaty of Fort Laramie (1868), signed by both the United States government and the Sioux tribes, a degree of recognition of the rights of First Nations peoples was afforded. Any land that had been seized from Native Americans that federal agencies now no longer had use for was to be returned to them. Since the prison had been closed and the island abandoned, activists claimed that they had a right to reclaim ownership of Alcatraz Island.

Their plan was to build a center for Native American Studies, a Native American spiritual center, an ecology center, and an American Indian Museum.

The Unites States government rejected the activists' claims but offered to build an Indian Park on the island if the protestors left peaceably, an offer they rejected. Subsequently, Federal authorities waged a war of attrition on the activists, cutting essential utilities. Following the death on the island of the daughter of a leading activist, the movement lost its energy and finally US Marshalls entered Alcatraz and evicted those protestors who remained.

Although it failed to force the United States government to adhere to the Treaty of Fort Laramie (1868), the Alcatraz Occupation proved to be a pivotal moment in the history of American Indian activism and an inspiration for First Nations people around the world. It raised awareness of the longstanding grievances of Native Americans and reawakened interest in American Indian history, culture, spirituality, and rights.

in which the West sought to cultivate a story about the world that emphasized its superiority over other world cultures; a story which later paved the way for its colonial project.

In the early twentieth century, as the Ottoman Empire fell, European powers began to extend their colonial reach into the Middle East. From 1920 to 1948 the city of Jerusalem was subsumed within the British Mandate for Palestine. Located at the confluence of Judaism, Christianity, and Islam, Jerusalem was a city coveted by many groups. Accordingly, following British **decolonization** and withdrawal from the region in 1948, the United Nations decreed that Jerusalem be governed by an international administration. Ignoring the United Nations agreement, the newly created state of Israel and Jordan fought over and divided the city between them (Israel controlling the West and the New City and Jordan the East and Old Jerusalem).

Following the Six-Day War between Israel, Egypt, Jordan, and Syria, in 1967, Israel captured from Jordan East Jerusalem and its hinterland, the West Bank. Notwithstanding repeated United Nations resolutions, Israel has ever since sought to consolidate its grip over Jerusalem and other Palestinian territories it acquired following the Six-Day War.

Said was born in 1935 in Jerusalem, then still part of the British Empire. He spent his childhood in Jerusalem and Cairo. Although brought up as a Christian, Said was throughout his life a committed secularist and detested all forms of religious fundamentalism. On the basis of past military service, Said's father and then Said himself secured US citizenship and moved to the United States in 1951. He studied English literature and became a Professor of English and Comparative Literature at Columbia University in New York, continuing in that role until his death in 2003. Using this position, he became perhaps the most articulate critic of the state of Israel and supporter of the plight of the Palestinian people and their quest for political self-determination.

Said's most famous scholarly work, *Orientalism*, focused upon the writings, diaries, photographs, paintings, and speeches of nineteenth- and early twentieth-century "Western" scholars, travelers, journalists, and statespeople, with respect to the Arab world (incorporating the Middle East, North Africa, and Asia). Appalled by the simplicity and ignorance displayed by these works, Said argued that throughout this period Western commentators were busy creating images of the Arab world that reflected their own prejudices and biases more than they reflected reality. By inventing a mythical Arab world, or East, the West was in fact presenting to the world what it itself was not and, by implication, what it itself was.

For Said, **Orientalists** were Western commentators who participated in the creation of sweeping generalizations and falsehoods, **Orientalism** was the world view they created, and the **Oriental** was the person subjected to the crude and misleading stereotypes.

The West imagined that the Orient was home to a single coherent and monolithic culture. Orientalism glossed over cultural and national differences and collected together all peoples in the region as if they formed a homogeneous grouping. A feature of Orientalism was its tendency to exoticize and eroticize the Orient and the Oriental, often in ways that demeaned, patronized, and belittled. The Orient was imagined to be a dusky, sultry, and irrational place, home to eccentric, primitive, deranged, and villainous populations. These populations were prepared to succumb to dictators and shied away from harnessing human reason in the service of progress. The Orientalist often imaged the Orient in feminine terms, an object of allure waiting and willing to be directed by the master. The Oriental man was often characterized as being feminine and weak but nevertheless with unpredictable sexual appetites that might threaten white women. Meanwhile, the Oriental woman was considered to be exceptionally beautiful whilst being prepared to be subordinate to, and eager to please, men.

Said recognized the importance of Orientalism in the European colonial adventure. Orientalism served to legitimate Western colonization of North Africa, the Middle East, and Asia by painting the region as vulnerable to domination, in need of direction and a strong master, and capable of being improved by the introduction of human reason, modernization, and progress. Within the British mind, the

Zoom-in Box 6.4:   Frantz Fanon's (1961) *The Wretched of the Earth*

Published in 1961, Martinique-born and French-trained psychiatrist and anti-colonial activist Franz Fanon's *The Wretched of the Earth* effectively became a bible for anticolonial liberation movements.

The Caribbean Island of Martinique was effectively claimed as a French colony in 1815 and to this day remains one of France's overseas departments. Franz Fanon was born in Martinique in 1925. He fled Martinique for France and enlisted in the French army. He served during World War II in Morocco, Algeria, and France itself. He returned to Martinique in 1945 and worked for, and was influenced by, Aimé Césaire, a leading Communist on the island, advocate of Black freedom movements, and ardent critic of French colonization. Fanon subsequently returned to France, where he studied Medicine and Psychiatry and qualified as a psychiatrist in 1951.

Between 1953 and 1957, Fanon served at the Blida-Joinville psychiatric hospital in Algeria, then also a French colony. Based upon his experiences with patients, both French and Algerian, Fanon became a supporter of Algerian independence from France, and was a member of the Algerian National Liberation Front (Front de Libération Nationale – FLN). Fearing his fiery and seditious writings and speeches, France disbanded the Blida-Joinville psychiatric hospital in 1957 and deported Fanon. Fanon quickly worked his way back to Tunisia from where he actively supported the FLN.

France was present in Algeria for 124 years before the Algerian nationalist uprising of 1954, and in the ensuing eight-year War of Independence, 250,000 Algerians and 25,000 French soldiers were killed. An ardent supporter of Algerian independence, Fanon wrote *The Wretched of the Earth* in 1961, at a moment when the Algerian War of Independence was reaching its crescendo.

Fanon's focus was upon the ways in which colonizers projected, imaged, depicted, and represented colonized populations as inherently inferior so that they might legitimate acts of criminality and violence toward them. France repressed any conscience it had about plundering Algeria by depicting the Algerian population as illiterate, uncivilized, primitive, and barbaric. There was a development lag between Europe and the rest of the world, and it was a duty of France to spread the message of progress. The Algerian people were subhuman and did not require or deserve the protection of universal human rights, which extended only to the civilized world.

Fanon believed that the treatment of indigenous peoples as less than human was taxing on the mental health of both the colonizer and the colonized. Colonized peoples, and especially peoples with skin colors other than white, were especially vulnerable to internalizing European stereotypes, with two possible consequences: they either displayed psychiatric scars and became ill, or they sought to self-correct by imitating their European "superiors."

(Continued)

Box 6.4   (*Continued*)

Fanon dismissed those who chose this second response (normally local middle-class natives who were given a minimal stake in colonial profits) and coined the term "Black skin, white masks" to underscore the extent of their confusion.

Fanon did not believe in peaceful revolution. He argued that colonized peoples needed to rise up in arms and defeat European oppressors through acts of violence. Fanon's book *The Wretched of the Earth* continues to stand as the most brutal and controversial statement on the *cultural value* of anticolonial violence. Violence was not only needed to oust foreign powers who themselves were committing acts of violence in their attempts to suppress uprising. Violence was also needed to restore the dignity of those hitherto forced to live in fear and burdened with feelings of cowardice.

Fanon concluded with a rally cry to all colonized peoples to reject the idea that they were culturally inferior to white Europeans and needed to imitate their political masters and catch up with them. Following decolonization there should be no building of a new Europe in the Third World. Working together, people of color, from the three continents of Latin America, Asia, and Africa, needed to draw upon their experiences as colonized peoples and build a new world.

British Mandate for Palestine was, for instance, viewed as a legitimate and noble expression of Britain's generosity toward the rest of the world. British colonial expansion didn't enslave, it liberated people from ignorance and accelerated their enlightenment.

Of course, as the twentieth century has elapsed and the Arab world has witnessed decolonization and independence, Said notes that Orientalism no longer has a tight grip on Western imaginings of the East. Nevertheless, it lingers on today in new forms. For some Westerners, the Arab world is imagined as one of a region of oil-producing Arab Sheiks, a nursery ground for Islamic fundamentalism and terrorists, a place dominated by irrational and volatile dictators, and a culture antithetical to modernity. Today, as in the nineteenth and early twentieth centuries, it is important to constantly challenge such glib and erroneous images.

Cultural encounters between Western culture and cultures that persist beyond the reach of the West have also bequeathed a rich tradition of culture wars (Zoom-in Box 6.4). As the West despatched its missionaries and evangelized around the theme that West is best, anticolonial movements in Latin America, Asia, and Africa fastened on the central importance of resisting the creeping influence of Western culture. The goal of these movements was not only to free themselves of their political and economic subordination and servitude to Europe, but also to contest cultural representations of Western culture as more advanced, by a millennium, than their own primitive and medieval cultures. Anticolonialism concerned itself centrally with the recovery of lost cultural heritages and the reaffirmation of the value of pre-colonial traditional cultures.

Conclusion

Evangelists of the West believe that the West's superior culture, and in particular its key cultural institutions, played a significant role in the rise of Western civilization as a global economic and imperial power from the fifteenth century. But the mantra of "West is best" has been met with resistance and has been forced to confront and participate in a number of culture wars in which it has not always triumphed. Cultural geographers are particularly interested in studying the ways in which the West has sought to project its cultural superiority onto the cultural landscape, and the culture wars that have arisen over depictions of some spaces as civilized and other places as unruly. Representations of the West play a crucial role in undergirding the ongoing hegemony of the West in world affairs. Whoever controls the myth that "West is best" in no small way controls the destiny of the West. Provided the West can maintain its illusion of supremacy, it can continue to export its values around the world and consolidate its power. But to the extent that alternative cultures capture their right to represent and depict the West as they see it, the ability of the West to dominate over non-Western societies will be further diminished.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) An amalgam of cultural inheritances and borrowings, Western culture emerged first in Europe around the fifteenth century. Based upon Enlightenment ideals, at the core of Western culture is a profound faith in human reason and the belief that by harnessing human reason alone it is possible to build a perfect world.

2) Evangelists of the West often claim that Western culture lies at the root of the West's climb to the summit of world history. Niall Ferguson's recent "superior civilization" explanation of the success of the West is a case in point.

3) Rejecting the idea that culture is a superorganism, cultural geographers now approach culture as a social construction, inextricably embroiled and ensnared in wider social, political, and economic processes. Cultural Geography concerns itself with the ways in which Western culture's rapacious claim to be the preeminent world culture enabled and justified the expansion of European capitalism and European empires to the four corners of the world. It is also interested in cultural encounters between Western culture and countercultures, and in particular the culture wars over the idea that "West is best" that arise from these encounters. There remains a lot at stake in these culture wars. Whoever controls the myth that West is best controls the future of the West as a global economic and political power.

4) Cultures etch themselves onto the cultural landscape. Western culture has attempted to project its superiority onto the landscape by crafting a series of civilized spaces and distinguishing these from unruly non-Western places. Culture wars over the West's landscapes have followed.

5) Culture wars have emerged over the West's production of imaginary spaces of utopia.
6) Other culture wars have surfaced over the West's superimposition of its identikit spaces onto traditional places and attempts to erase traditional places in the name of progress.
7) Finally, yet other culture wars have arisen over the West's depiction of "foreign" colonies as primitive, barbaric, backward, and medieval.

Chapter Essay Questions

a) What is Western culture?
b) Write an essay titled "The West in the cultural landscape."
c) What is meant by the phrase "culture wars over the myth that 'West is best'"? Illustrate your answer with examples of culture wars over the West's depiction of its spaces as civilized and other civilizations' places as unruly.

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Tuan Y F (1977) *Space and Place: The Perspective of Experience* (University of Minnesota Press, Minneapolis).

Guidance for Further Reading

Superb general introductions into new Cultural Geography are provided in:
Jackson P (1989) *Maps of Meaning: Introduction to Cultural Geography* (Unwin Hyman, London).
Mitchell D (2000) *Cultural Geography: A Critical Introduction* (Blackwell, Oxford).
Shurmer-Smith P and Hannam K (1994) *Worlds of Desire, Realms of Power: A Cultural Geography* (Edward Arnold, London).

Groundbreaking insights into manifestations of the West in the cultural landscape are provided in:
Cosgrove D (1984) *Social Formation and Symbolic Landscape* (London, Croom Helm).
Gregory D (1994) *Geographical Imaginations* (Blackwell, Oxford).
Rose G (1993) *Feminism and Geography: The Limits of Geographical Knowledge* (University of Minnesota Press, Minneapolis).

The mobilization of the "idea of the West" in support of political projects – both for and against the West – is covered well in:
Bonnett A (2004) *The Idea of the West: Culture, Politics, and History* (Palgrave MacMillan, London)

The ideas of "space" and "place" were introduced into Human Geography in:
Relph E C (1976) Place and Placelessness (Pion, Los Angeles).
Tuan Y F (1977) *Space and Place: The Perspective of Experience* (University of Minnesota Press, Minneapolis).

For an excellent introduction to the importance of culture and cultural struggles in the politics of colonialism and anticolonialism see:
Said E W (1978) *Orientalism* (Vintage Books, New York).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/ boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 7

The Modern Rise in World Population from 1750

Chapter Table of Contents

Chapter Learning Objectives

By the end of the chapter you should be able to:
1) describe and explain the origins of the Demographic Transition Model;
2) draw the Demographic Transition Model and describe its key stages;

3) produce a typology of the demographic transitions that have occurred in the past; describe and comment upon forecasts that attempt to predict how demographic transition will run its course in the rest of this century;
4) identify and comment upon the processes and policies that drive changes in mortality as countries pass through demographic transition;
5) identify and comment upon the processes and policies that drive changes in fertility as countries pass through demographic transition;
6) chart China's passage through demographic transition since 1949.

Introduction

For most of its history the population of the human species has remained stationary and when it has grown its growth has been almost infinitesimal (Figure 7.1). Around 70,000 BP no more than an estimated 15,000 human beings lived on earth. As late as 12,000 BP, on the eve of the Neolithic Revolution, no more than an estimated 1 million people existed. Evidently the Neolithic Revolution created a step change in human population growth and by the time of Christ, circa 2,000 BP, the human family had expanded to an estimated 200 million. Growth continued and by 1000 CE an estimated 300 million people inhabited the planet. Whilst the Neolithic Revolution represented a breakthrough in the capacity of the human species to master the environment and swell in numbers, it is clear that something more profound again has occurred with the rise of Western civilization, and in particular from around 1750 CE. The planetary population has grown from an estimated 791 million in 1750, to 1.26 billion in 1850, 3 billion in 1960, 4 billion in 1975, 5 billion in 1987, and 6 billion in 1998. In 2013, the United Nations estimated that the number of human beings alive had breached the historic ceiling of 7 billion in 2011, and would soon surpass
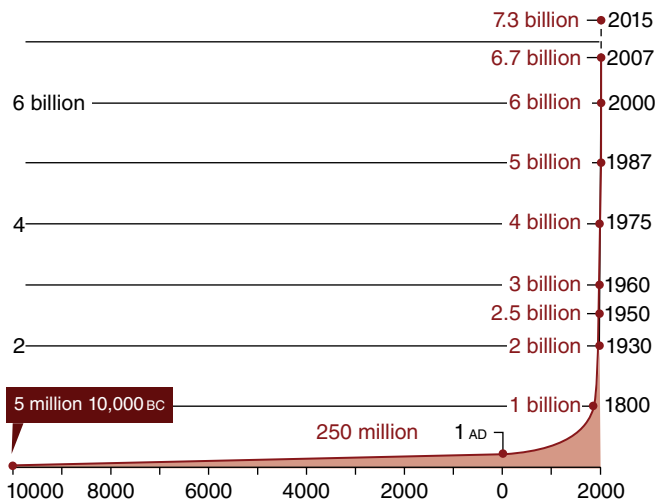
Figure 7.1 World population growth.

7.2 billion in 2014. A pivotal question therefore presents itself: why, given that it existed in a state of homeostatic restraint throughout its long history, did world population suddenly explode in the past 250 years?

This chapter places under scrutiny the claim that the *Demographic Transition Model* provides a powerful answer to this question.

Origins of the Demographic Transition Model

The Demographic Transition Model was first introduced by US demographer Frank Wallace Notestein in 1945. Notestein served as the founding director of the Office of Population Research at Princeton University (a position he held from 1936 to 1959). He was also appointed as the first director of the Population Division of the United Nations (1946–1948). Notestein's interest in demographic transition stemmed from, and in turn informed, his views on the implications of global population growth for both the United States and for the world more generally. His seminal article on demographic transition first appeared in a book edited by US agricultural economist Theodore William Schultz titled *Food for the World* and published in 1945. Notestein feared that advances in medicine and public health might lead to a dramatic decline in mortality levels in the developing world without a corresponding fall in fertility. He promoted the view that the population explosion that would follow would bring dire consequences.

Notestein (1945) argued that as countries industrialized and/or modernized and/or developed and/or urbanized, their populations tended to transition through a regular sequence. Starting with countries that had passed through this sequence and working back, he identified three types of population:

- Populations were in "incipient decline" if their levels of fertility fell below replacement level. Populations in the more advanced Western societies, including those in Europe, the United States, Canada, Australia, and New Zealand, were approaching this stage.
- Populations where death rates were in decline and where birth rates remained high but were in the throes of decline were deemed to be in the "transitional growth" phase. These populations were growing but rates of growth were in decline. Examples of transitional growth countries included the Soviet Union, Japan, and some countries in Latin America.
- Countries with high birth and death rates and whose populations continued to be stable were nevertheless referred to as countries with "high growth" potential; population growth would commence rapidly once health began to improve. Asia, Africa, and parts of Latin America fell into this category.

Notestein was interested in better understanding how and why countries moved through this transition – and whether their passage could be fast-tracked.

Concerned that world population growth had implications for the United States, in 1952 US industrialist and philanthropist John D Rockefeller III established the Population Council, a non-governmental organization (NGO) promoting population control. Notestein was appointed as the first president of the Population Council (1959–1968) and called for all measures to be taken to control and reverse population

growth. He became a leading advocate of state-sponsored, aggressive, and mandatory fertility control programs in developing countries (Zoom-in Box 7.1). At times Notestein appeared to advocate that fertility control projects and methods ought to be foisted onto poorer populations in a coercive and perhaps even compulsory manner. This has led to speculation as to how far he was a supporter of the controversial **Eugenics** movement.

Zoom-in Box 7.1:   Frank W Notestein's (1964) Address to the Ceylon Association for the Advancement of Science on the Subject of Population Growth and Economic Development

On September 22, 1964, as president of the Rockefeller Population Council, Frank W Notestein was invited by the Ceylon Association for the Advancement of Science to deliver, in Colombo, Ceylon (present-day Sri Lanka), a lecture on the topic of "Population growth and economic development."

Notestein began his address by noting that life expectancy in Ceylon had increased dramatically from 30 years of age in 1921 to 70 in 1964. Its crude death rate (CDR, the number of deaths in a given time period per 1,000 of the population) had fallen from 29 per 1,000 in 1921 to 13.5 per 1,000 in 1960. But in 1960, Ceylon's total fertility rate (TFR, the average number of children women in a particular society have over the course of their lives) stood at 5 and its crude birth rate (CBR, the number of births in a given time period per 1,000 of the population) at 37 per 1,000. Driven by natural increase alone, the country's population had grown from 5.3 million in 1931 to 10.2 million in 1961.

Notestein argued that science had now resolved all "ideological" and "religious" disputation as to whether population growth was good or bad for a country; it was bad and had to be stopped. Notestein was optimistic that fertility would be brought under control before population growth heaped further misery on poorer societies. Noting developments in modern contraception and the political will to forcibly reduce fertility in countries such as India, China, Korea, Pakistan, Indonesia, and Singapore, Notestein concluded:

> *For the first time in human history we appear to have methods that are appropriate to meet the needs of the weakly motivated, illiterate, and impoverished elements of the population. Given suitable organisation for the dissemination of information, service, and supplies, there is no reason why all peoples everywhere cannot restrict their childbearing as they see fit. … Uncontrolled population growth need not defeat our best efforts to attain health, education, and freedom from want.* (Notestein, 1983: 360)

Perhaps not surprisingly, Ceylon introduced a number of significant fertility control programs from 1965, and by 2000 its TFR stood at 1.9 and its CBR at 18 per 1,000. Nevertheless, today, with a CDR of 6.5 per 1,000, a TFR of 2.17, and a CBR of 17.2 per 1,000, Sri Lanka's population has continued to grow and amounts now to 21.5 million people.

The question of the implications for humankind of the modern rise in world population from 1750 will be examined in Chapter 8. In the remainder of this chapter attention will fall on how the Demographic Transition Model attempts to explain the phenomenon of population growth.

Stages in the Demographic Transition Model

Figure 7.2 provides a summary overview of the Demographic Transition Model as it is normally depicted today. Through time, as countries modernize and/or industrialize and/or develop and/or urbanize, their populations pass through a sequence of transformations normally captured in four separate stages (but see also Zoom-in Box 7.2):

- Stage 1, the "high stationary period," is marked by high CDRs (fluctuating in response to famines and epidemics), high CBRs (fluctuating in response to fluctuating death rates), and as a consequence, a small and stable population.
- Stage 2, the "early expanding phase," denotes the beginnings of demographic transition; in response to socioeconomic progress, mortality levels fall whilst levels of fertility remain high and population growth begins in earnest.
- In Stage 3, the "late expanding phase," mortality continues to decline, bottoming out at a lower level, but birth rates also now respond to modernization and development and fall, tempering rates of population growth.
- By Stage 4, the "low stationary period," both birth rates and death rates hover around the lower threshold and cancel each other out. Population growth comes to a halt and populations now stabilize.
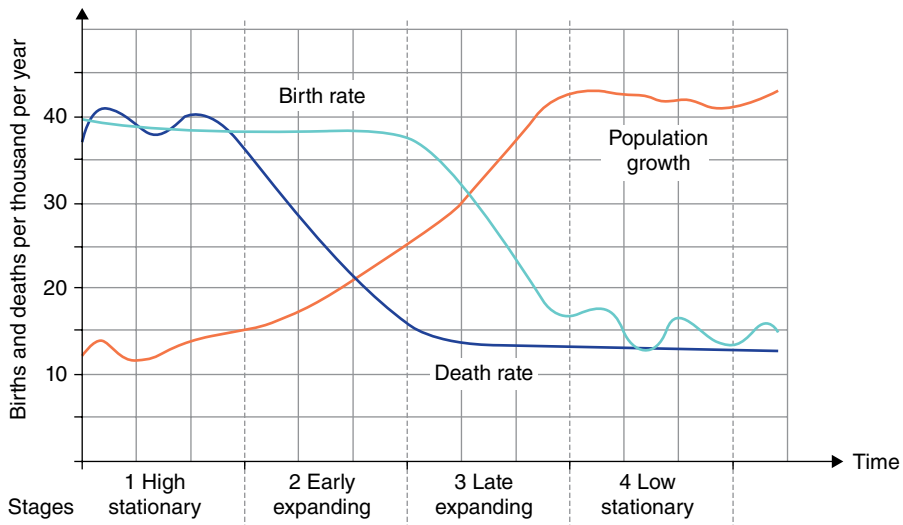
Figure 7.2   The Demographic Transition Model.

Zoom-in Box 7.2:   Tim Dyson on the Drivers of Demographic Transition

It has long been assumed that it is development and/or industrialization and/or modernization and/or **urbanization** that drive countries through demographic transition. In a whole series of ways, the social and economic development of a country affects the health of the population. There is a concomitant general improvement in health, reduction in mortality levels and, latterly, a reduction in fertility levels. The lag time between the two is the time when population growth occurs. This formulation undergirds most versions of the Demographic Transition Model.

But in his book *Population and Development: The Demographic Transition* British demographer Tim Dyson (2010) has introduced fresh thinking into the theory about what triggers demographic transitions and the relationship between population growth and development.

According to Dyson, because the two tend to unfold concurrently, hitherto too much emphasis has been placed upon economic development as the fuel that fires the demographic transition process. In fact, once it gets started, demographic transition largely powers itself through a series of causally connected stages.

Dyson includes in his cause and effect chain the following links: mortality decline, rapid population growth, urbanization, reductions in fertility, and an ageing population structure.

According to Dyson, it is mortality decline that *causes* populations to grow, it is growing populations that *cause* fertility to decline and cities to form, and it is fertility decline that *causes* ageing population structures. In other words, once underway, even if in the absence of further economic advancement and progress, demographic processes themselves push the transition to completion.

It is for this reason that countries are now working through demographic transition irrespective of their levels of development; poor countries will eventually reach Stages 4 and 5 of the transition even if they fail to develop further.

Dyson can be accused of placing too much emphasis upon demographic drivers of change; his view of mortality decline as a domino, which, once toppled, in turn topples all other dominoes arranged in the line, ascribes too much importance to "internal" demographic processes. Demographic processes cannot be separated from their social, political, cultural, and economic determinants to this degree.

But his work is an antidote to those lazy commentaries that pass off demographic transition as somehow vaguely caused by social and economic progress. Dyson forces us to think through why, how, and in what circumstances development might affect death rates, birth rates, population growth, and population structure.

Whilst these four phases form the backbone of the Demographic Transition Model, it has become common to add a fifth phase when populations actually shrink in response to very low birth rates and when such contraction is accelerated by increasing death rates as diseases of obesity and (re)emerging infectious disease claim more lives in affluent societies.

Geography of Demographic Transitions

Demographic transitions in history

In his 1992 book *The Demographic Transition: Stages, Patterns, and Economic Implications* French demographer Jean-Claude Chesnais presented a longitudinal study of the demographic transitions witnessed by 67 countries, across the period 1720–1984. It is clear that some demographic transitions started much later than others; that the speed of passage through demographic transition varies from place to place, and that peak rates of population growth vary from one case to another.

Chesnais argued that, as of the early 1990s, three types of demographic transition could be found in history:

Developed Countries in Europe: These demographic transitions enjoyed peak population growth rates of 2% per year and were very long lasting, taking anything from 75 to 200 years to run their course. Recognizing that there exist changing demographic regimes as one moves from the Northwest to the Southeast of Europe, Chesnais set out further subdivisions within this category:

Nordic Model – a very long transition lasting almost 150 years with maximum population growth occurring in the period 1870–1880: Sweden is the classic example.
Western Model – a long transition of approximately 100 years with population growth peaking around 1900: Germany is the iconic example.
Southern Model – a somewhat long transition running to completion over a period of between 70 and 90 years, with a sustained plateaux of maximum population growth occurring after 1900: Italy and the USSR are the best examples.

Interestingly, Chesnais points out that both France (because of its historically low birth rates) and Ireland (because of the great Irish famine of 1848–1852 and mass emigration) are rogue outliers that defy easy incorporation into these three models.

Less Developed Countries: Countries that remain in the throes of demographic transition. In these countries, transitions started much later, appear to be progressing at an accelerated pace suggesting a passage through transition of between 40 to 80 years, and are dominated by rates of natural increase of between 2 and 4% per annum, which peak across a short 20-year span. Some countries remain in Stage 2 of the transition whilst others have progressed to Stage 3. Because these transitions remain active, it is difficult to be certain as to how they may turn out and therefore how to differentiate them further. But we might usefully note that there are countries

with fairly high rates of growth (from 2 to 2.5% per annum – for Chesnais, India at that time), high rates of growth (from 2.5 to 3% per annum – for Chesnais, Egypt at that time), and very high rates of population growth (3% per annum and above – for Chesnais, Mexico at that time).

Principal countries of immigration: Between the developed countries in Europe and the less developed countries of the world lie an intermediate group of countries which Chesnais calls "principal countries of immigration." These are countries that were primary reception centers for European migrants in the eighteenth, nineteenth, and twentieth centuries. They include the United States, Canada, Australia, New Zealand, Argentina, and Uruguay. Because European emigrants were for the most part young adults, these countries were born with very peculiar population profiles. Their demographic transitions are marked by declines in both death rates and birth rates from the outset; essentially they began demographic transition at stage 3.

Demographic transitions yet to unfold

The modern rise in world population has still to run its course in many regions of the world and the likely final peak global population remains a matter of conjecture. The United Nations Population Division (UNDP) provides authoritative population projections to the year 2050, and more speculative forecasts to the year 2100, and even 2300. Because population projections are especially sensitive to changes in fertility levels, the UNDP paints a variety of scenarios depending upon different fertility forecasts:

- a "constant variant" scenario, assuming fertility levels continue in the future much as they are today;
- a "medium variant" estimate, where TFRs behave as expected;
- "high variant" and "low variant" projections, based upon the assumption that all countries exhibit TFRs of 0.5 of a child above or 0.5 of a child below the medium variant.

According to the United Nations' *World Population Prospects: 2012 Revision* (United Nations Population Division, 2013), world population will continue to grow during the remainder of this century, although the pace of growth may decline after 2050 (Figure 7.3). If birth rates were to remain as they were in the period 2005–2010, remarkably, world population could rise to over 28 billion by 2100. The medium variant projection predicts a growth in world population from 7.2 billion today to 9.6 billion in 2050 and to 10.9 billion by 2100. The high variant scenario predicts a population of 16.6 billion in 2100 whilst the low variant estimate points to a slight contraction in world population to 6.8 billion by 2100.

Of course, population growth in the twenty-first century will occur more rapidly in some regions and not at all in others (Table 7.1). As a consequence, a significant regional redistribution in population is likely. According to the United Nations (United Nations Population Division, 2013) the following developments are likely to occur:

- *Asia* – Asia in 2100 will remain the most populated continent, but its population will peak around 2055 (at circa 5.2 billion) and gradually decline toward the end
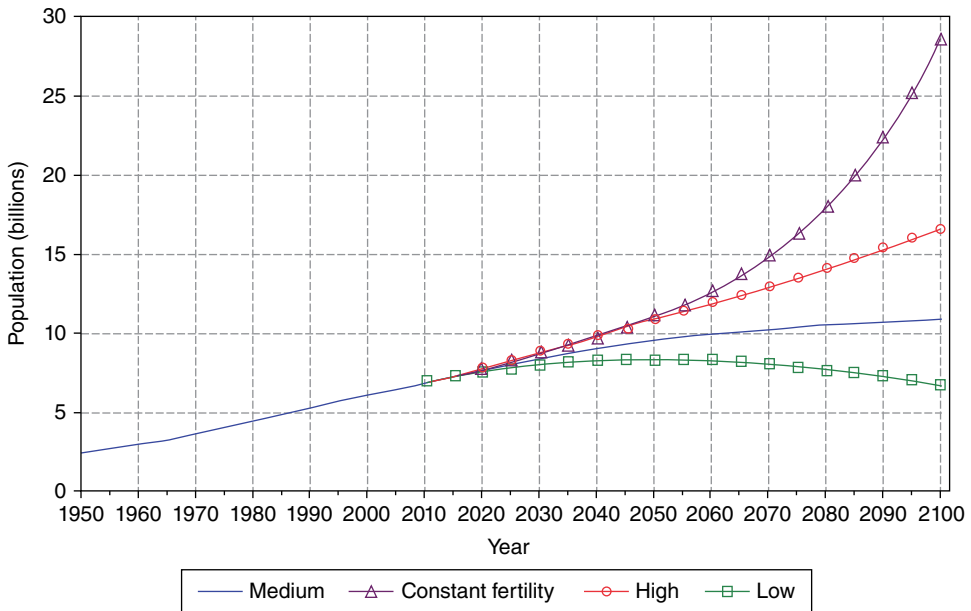
Figure 7.3 Population projections to 2100 by estimate type. Source: United Nations Population Division, 2013. Used by permission of the United Nations.

of the century to 4.7 billion by 2100. By 2100, India, with a population of 1.55 billion, will be the most populated country in the world.

- *Africa* – Perhaps the most significant demographic event of this century will be Africa's sustained population expansion, from 1.1 billion today to 4.2 billion by the end of the century. By 2100, Nigeria (at 913 million) will displace the United States to become the third-largest country in the world.
- *Europe* – The population of Europe will peak around 2020 at 743 million and thereafter decline to 639 million by 2100. By 2100, the Russian Federation (at 101 million) will house Europe's largest population.
- *Latin America and the Caribbean* – The population of Latin America and the Caribbean is projected to reach a maximum around 2065 at 791 million, after which point it will decline to 736 million by 2100. By 2100, Brazil (at 195 million) and Mexico (at 140 million) will be the largest countries in the continent.
- *North America* – The population of North America will rise from 355 million in 2013 to 446 million by 2050 and finally to 527 million in 2100. By 2100, the United States will be the fourth-largest country in the world, with a population of 462 million.
- *Oceania* – The population of Oceania will rise marginally from 38 million in 2013 to 56 million by 2050 and 70 million by 2100. But Oceania will remain the least populated of all continents, with only 0.6% of the world's population.

Table 7.1 Population projections by world region. Source: United Nations Population Division 2013, Tables I1 and I2. Used by permission of the United Nations.

Development group or major area	Population (millions)			Medium variant 2050 population (millions)	Medium variant 2050 % of distribution of world population	Medium variant 2100 population (millions)	Medium variant 2100 % of distribution of world population
	1950	1980	2013				
World	2526	4449	7162	9551	100.0	10854	100.0
More developed regions	813	1083	1253	1303	13.6	1284	11.8
Less developed regions	1713	3366	5909	8248	86.4	9570	88.2
Least developed countries	195	393	898	1810	19.0	2828	27.0
Other less developed countries	1518	2973	5011	6437	67.4	6642	61.2
Africa	229	478	1111	2393	25.1	4185	38.6
Asia	1396	2634	4299	5164	54.1	4712	43.4
Europe	549	695	742	709	7.4	639	5.9
Latin America and the Caribbean	168	364	617	782	8.2	736	6.8
Northern America	172	255	355	446	4.7	513	4.7
Oceania	13	23	38	57	0.6	70	0.6

The Demographic Transition Model and Mortality Decline

Explaining mortality decline

The World Health Organization's International Classification of Disease (ICD) (10th revision, with the 11th revision currently in preparation) provides a recognized categorization of causes of mortality and morbidity. Using the ICD, it is possible to aggregate all disease and ill health into one of three groups. Group 1 comprises infectious, contagious, or communicable diseases, diseases that involve the transfer of a pathogen between organisms and that can be spread within populations. This group includes airborne disease (for example, influenza, bronchitis, tuberculosis), water- and foodborne disease (for example, cholera, typhoid, typhus), and vector-borne disease (for example, malaria transmitted by the female Anopheles mosquito). Group 2 incorporates non-communicable or degenerative disease. Here the body suffers an internal malfunction or breakdown. Included in this group would be cancer, heart disease, and strokes. Finally, Group 3 captures all deaths inflicted by people themselves, including death from suicide, warfare, murder, and accidents.

In the late 1970s, Egyptian physician Abdel Omran (1971) noticed that as countries developed and as their mortality declined, the structure of the principal causes of death and ill health in those countries changed in a systematic way. According to Omran, countries yet to experience development or that were in the early stages of development suffered disproportionately from infectious and communicable disease. These countries resided in the "age of pestilence and famine." As development continued apace, steadily countries learned to conquer and cleanse themselves of the principal infectious diseases, and the burden of illness transferred from communicable to non-communicable disease and to people-made causes of morbidity and mortality. Here, countries passed through an "age of receding" pandemics. Finally, the more developed countries came to purge themselves of infectious disease to the point that degenerative and people-made ill health dominated. The "age of degenerative and people-made illness" prevailed.

Omran proposed that countries progressed through demographic transition only when they learned to master communicable and infectious disease. Rooting his findings within the field of epidemiology (the study of diseases), he introduced to demographic transition theory the parallel idea of epidemiological transition. Data confirms that the basic premises of epidemiological transition theory are sound (see Zoom-in Box 7.3). But how and why do countries move through epidemiological transition?

As countries develop from agricultural societies to industrial ones, and then from industrial societies to advanced high-technology ones, inevitably the health and well-being of their populations change too. Initially, prosperity brings improved standards of living: better housing, clothes, diets, and so on. Steadily, as countries become wealthier they create better welfare systems; education improves, social protection for more vulnerable groups and pensions are introduced, and sewerage and sanitary water supplies are provided. These improvements in material well-being and quality of life lead to stronger bodies and better health outcomes – lower rates of infant mortality, diminished suffering from disease, and greater life expectancy.

In addition, medical science and knowledge in the field of public health is now sufficiently advanced that countries can rid themselves of many diseases, even if their populations are relatively poor. Eventually, standards of living will place a

Zoom-in Box 7.3:   Tracking Movement through Epidemiological Transition Using the DALY Measure

The Disability-Adjusted Life Year (DALY) measure provides one way of tracking the passage of countries through epidemiological transition.

DALYs were first calculated as part of the World Bank's *World Development Report 1993* to assist health planners to prioritize scarce resources by shedding new light on the toll exacted by different diseases and illnesses. Today, the measure is widely used by the World Bank, the World Health Organization, and the United Nations. Until 1993, the burden of disease suffered by any country was measured largely by subtracting the age of death of each citizen from a defined optimum life expectancy and summing to produce an overall figure. The World Bank sought to add to this standard calculation an additional measure of years of life lost even if lived as a consequence of debilitating ill health and impaired quality of life. Disability-adjusted life years (DALYs) are the sum of years of life lost due to premature death (YLLs) and years lived with disability (YLDs). As such, DALYs can be thought of as years of healthy life lost.

Whilst helpful, the DALY measure continues to excite controversy. When possible, the calculation is made using actual data, but often the necessary data are absent and in these circumstances estimates from experts are sought. But experts often disagree over estimates of how debilitating a particular illness might be to live with. Evidently, such assessments gloss over the fact that particular diseases and illnesses might afflict people with different degrees of severity and be weathered by people in different ways. Moreover, there is disagreement over the optimum life expectancy against which loss of healthy life years should be measured. This ceiling varies between organizations and countries, making comparative analyses difficult. In addition, many applications of the measure inflate the value of a year of life lost during the productive period of people's lives (say between 16 and 64) and devalue years of life lost in infanthood and in retirement. Whilst this skew might facilitate the targeting of resources so as to save more productive years of life, clearly the judgment of any one year of anyone's life as more valuable than other years of life is morally disputable.

The Global Burden of Disease: Generating Evidence, Guiding Policy is the latest study to attempt to assess DALY losses across the word (Institute for Health Metrics and Evaluation, 2013). This study was conducted by seven institutions: the Institute for Health Metrics and Evaluation (IHME) as the coordinating center, the University of Queensland School of Population Health, Harvard School of Public Health, the Johns Hopkins Bloomberg School of Public Health, the University of Tokyo, Imperial College London, and the World Health Organization. It estimates premature death and disability caused by 291 diseases and injuries, 1,160 sequelae (direct consequences of disease and injury), and 67 risk factors for 20 age groups and both sexes in

(Continued)

Box 7.3 *(Continued)*

1990, 2005, and 2010. Estimates are provided for 187 countries and 21 world regions.

Figures 7.4a, 7.4b, and 7.4c show the global burden of disease in 1990 and 2010 as measured by DALY losses for the world as a whole, and then for the developing and the developed worlds. With some exceptions (for example the

(a)

Figure 7.4a Change in the Global Burden of Disease (GBD) as measured by DALY losses from 1990 to 2010 for the world. Source: Institute for Health Metrics and Evaluation (IHME). Global Burden of Disease Arrow Diagram. Seattle, WA: IHME, University of Washington, 2013. Available at http://www.healthmetricsandevaluation.org/gbd/visualizations/gbd-arrow-diagram

(b)

Figure 7.4b Change in the Global Burden of Disease (GBD) as measured by DALY losses from 1990 to 2010 for the developing world. Source: Institute for Health Metrics and Evaluation (IHME). Global Burden of Disease Arrow Diagram. Seattle, WA: IHME, University of Washington, 2013. Available at http://www.healthmetricsandevaluation.org/gbd/visualizations/gbd-arrow-diagram

scourge of HIV/AIDS), it confirms the basic premises of epidemiological transition theory: that poorer countries are burdened by communicable diseases more so than richer countries, and that over time all regions of the world are moving steadily from an age of receding pandemics to an age of degenerative and people-made causes of mortality.

(Continued)

Box 7.3   *(Continued)*

(c)

1990	2010
1 Ischemic heart disease	1 Ischemic heart disease
2 Stroke	2 Stroke
3 Low back pain	3 Low back pain
4 Road injury	4 Major depressive disorder
5 Lung cancer	5 Lung cancer
6 Major depressive disorder	6 COPD
7 COPD	7 Other musculoskeletal
8 Self-harm	8 Road injury
9 Other musculoskeletal	9 Diabetes
10 Diabetes	10 Falls
11 Lower respiratory infections	11 Neck pain
12 Neck pain	12 Self-harm
13 Falls	13 Alzheimer's disease
14 Stomach cancer	14 Cirrhosis
15 Congenital anomalies	15 Colorectal cancer
16 Colorectal cancer	16 Lower respiratory infections
17 Anxiety disorders	17 Anxiety disorders
18 Cirrhosis	18 Drug use disorders
19 Alcohol use disorders	19 Alcohol use disorders
20 Breast cancer	20 Breast cancer
24 Drug use disorders	26 Stomach cancer
28 Alzheimer's disease	30 Congenital anomalies

Communicable, maternal, neonatal, and nutritional disorders

Non-communicable disease

Injuries(set as per ms)

1990 and 2010 lists rank disease/illness from most impactful to least impactful

Figure 7.4c   Change in the Global Burden of Disease (GBD) as measured by DALY losses from 1990 to 2010 for the developed world. Source: Institute for Health Metrics and Evaluation (IHME). Global Burden of Disease Arrow Diagram. Seattle, WA: IHME, University of Washington, 2013. Available at http://www.healthmetricsandevaluation.org/gbd/visualizations/gbd-arrow-diagram

ceiling on how much can be wrung out of medical interventions and public health programs alone; whether Western levels of health can be attained by all without Western standards of living is open to debate. But public health initiatives, including education programs that change risky behaviors, the use of insecticide to kill disease vectors, and improved hygiene, can prevent populations from being exposed to illness in the first place. Vaccination and inoculation can ensure that, even if they are exposed to dangerous pathogens, populations will not contract disease. And in the event that disease occurs, medical technology can maximize the chances of survival and promote a return to well-being.

Zoom-in Box 7.4 interrogates how these various processes combined to effect mortality decline in England and Wales from 1750.

Zoom-in Box 7.4:   Thomas McKeown (1976) on the Causes of Mortality Decline in England and Wales from 1750

Medical historian Thomas McKeown (1976) set himself the task of explaining improvements in life expectancy in England and Wales in the period from 1750, the date at which he argues health began to improve.

According to McKeown, England and Wales were two of the first countries to experience improvements in health, falling mortality and morbidity, and passage through epidemiological transition. In 1848–1854, crude death rates stood at 21.8 per 1,000 and infectious diseases such as tuberculosis, bronchitis, influenza, pneumonia, dysentery, diarrhoea, cholera, scarlet fever, and diphtheria accounted for 60% of all deaths. But by 1971, crude death rates had fallen to 5.4 per 1,000 and infectious disease accounted now for only 12% of all deaths. Heart disease, strokes, cancer, violence, congenital defects, and diseases of the nervous system were now the predominant threats.

What were the drivers of this change?

McKeown notes that, because census data in England and Wales was only systematically collected from 1838, it is especially difficult to arrive at a definitive answer.

In the mid-1970s, the prevailing wisdom was that improvements in medicine and the introduction of a system of formal hospital care effectively removed the threat of the principal infectious diseases and were primarily responsible for falling mortality rates. McKeown suspected that this explanation was incorrect. He proposed a method through which the puzzle might best be solved. Sometimes referred to as the Sherlock Holmes method, McKeown's approach was to identify and then rule out possible solutions; any solutions that survived were then plausible contenders.

McKeown first examined the proposition that somehow the virulence of all the principal infectious diseases diminished at the same historical moment, rendering these diseases simultaneously less lethal. McKeown rejects this explanation, finding only that the pathogen responsible for scarlet fever reduced in potency.

Second, McKeown examined the role of medicine and hospital care. Again, he rejected this explanation; most immuno- and chemotherapy treatments were only discovered in the twentieth century after mortality had declined, and hospitals were so primitive and unhygienic they often did more harm than good.

Third, McKeown looked at the effect of public health campaigns – perhaps better housing, education, and sanitation triggered improvements in health. Again, he ruled out the significance of these factors; most of the more prominent public health initiatives occurred in the late nineteenth and early twentieth centuries, long after mortality decline had run its course.

Finally, McKeown scrutinized the effects of the better and richer diets the population enjoyed from the mid-eighteenth century. Improved nutrition clearly fortified the constitution of the human body and enhanced the capacity of the body to fight dangerous pathogens. McKeown concluded that as this

(*Continued*)

Box 7.4   (*Continued*)

proposition was the only one that could not be disproved it ought to be considered the most persuasive of all the explanations.

McKeown's book remains a classic in the field but critics have alleged that it overplays improvements in diet and underplays the effects of important medical breakthroughs and public health improvements. The manufacturing and mass distribution of soap, improvements in education, and the introduction of sewerage and sanitation systems all played a key role.

Policies for improved global health

As countries continue to move through epidemiological transition it would appear that two core challenges remain:

Creating an age of delayed degenerative disease: The world will continue to pass through epidemiological transition and the global burden of disease will increasingly center on degenerative disease and people-made illness. For developed countries, and increasingly also for developing countries, the priority will be to prolong life to its biological maximum by delaying the onset of degenerative disease. Preventative health care, the search for cures for disease such cancer and Alzheimer's, and improved palliative care will become more important. Addressing problems caused by alcoholism, the use of tobacco, and substance abuse will be particular priorities. But the growing epidemic that is obesity, and the medical complications associated with this disease, will restrain the capacity for rich countries to strive for an "age of delayed degenerative disease." In addition, addressing people-made forms of mortality and morbidity will become a more pressing concern. Reducing accidents, and in particular transport-related fatalities and injuries, and tackling suicide will be important areas for policy intervention.

Addressing the problem of (re)emerging infectious disease: For all countries in the world, the problem of (re)emerging infectious disease will become a more pressing concern. Disease such as malaria, dengue fever, HIV/AIDS, tuberculosis, severe acute respiratory syndrome (SARS), and E coli will become more prevalent. Quite why these diseases appear to be (re)emerging is open to debate:

- Perhaps erroneous assumptions that medical science and public health have largely conquered infectious disease have resulted in a degree of complacency.
- Perhaps pharmaceutical companies are concentrating most attention on degenerative diseases because these burden the more developed countries, where most profit is to be made.
- Perhaps through lack of ongoing investment and/or reluctance to use insecticides (because of the environmental harm they can do), campaigns to eradicate pathogens and their breeding grounds are losing the battle.
- Perhaps excessive usage of antibiotics is creating a new family of more potent "superbugs."

- Perhaps vaccination schemes have failed to inoculate populations at sufficiently frequent intervals and immunities to pathogens have lapsed.
- Perhaps rapid socioeconomic and socioecological changes in the developing world (forest clearance, mining, rapid urbanization, etc.) have released dormant viruses from the natural habitats they were trapped in and created a more hospitable environment for their incubation and proliferation.

Whatever the cause, (re)emerging infectious diseases will make it difficult for poor countries to progress beyond the age of receding pandemics, whilst for rich countries these diseases may reverse progress and, in the worst case scenario, move countries back into an "age of (re)emerging communicable disease."

The Demographic Transition Model and Fertility Decline

Explaining fertility decline

How industrialization and/or development and/or modernization and/or urbanization work to temper fertility is not self-evident; the mechanisms involved are far from obvious and vary from one country to another.

Welsh population geographer Huw Jones offers a useful framework through which to think about the factors that determine levels of fertility in any country (see Figure 7.5). According to Jones, the number of births that occur in any country is a reflection of three factors: the amount of sexual intercourse that occurs, the amount of intercourse that results in conception, and the amount of conceptions that result in actual live births. There exist a number of immediate or direct factors that determine all three; Jones calls these the proximate determinants of fertility. But there also exist a number of deep or ultimate or fundamental determinants of fertility; for Jones these
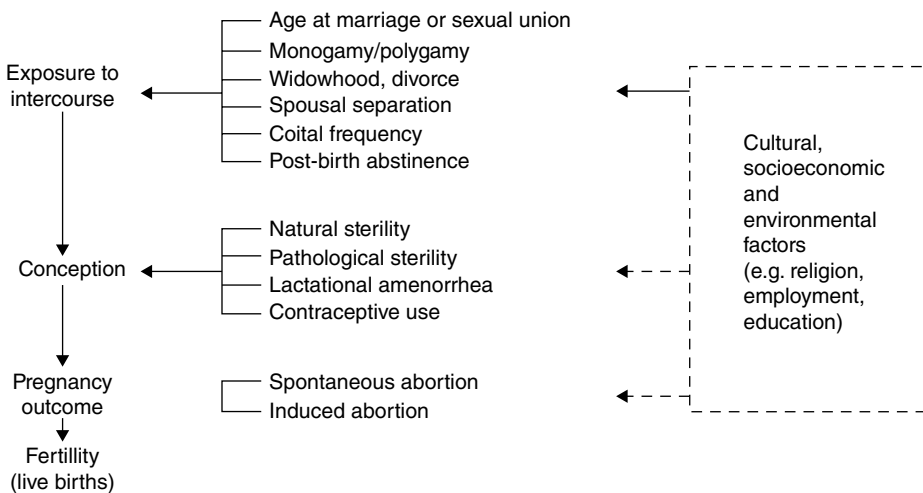
Figure 7.5   Huw Jones on the determinants of fertility. Source: Jones, 1990.

include socioeconomic, cultural, and environmental factors. These fundamental determinants of fertility work through the proximate determinants to shape fertility.

It is easy to see how changes in the proximate determinants of fertility might lead to lower levels of fertility. For example, if the average age of marriage was to increase, through social coercion or legal sanction, even allowing for sexual intercourse outside of marriage, it is likely that the level of sexual intercourse and the number of conceptions in a society would decrease. Moreover, if various forms of contraception were made affordable and accessible in a country, it is likely that more people would avail themselves of these protections and that fewer children would be born than otherwise would be the case. Likewise, if a society were to make abortion freely available and to work to re-narrate the morality of abortion, it is likely that fewer conceptions would result in a pregnancy outcome.

Proximate determinants work, however, only if fundamental determinants create a disposition to restrict births in the first instance. Fundamental determinants that lead to lower levels of fertility might include the following (see also Zoom-in Box 7.5):

- City living – Rural populations tend to have large families as children can be a vital source of labor on farms. Mass migration to cities reduces the number of people working on the land and therefore the number of people who need to have large families for this reason.
- Pensions and social insurance – Increasingly, state organizations take care of people's needs, especially when they are old, unemployed, or sick. People no longer need to have children to help them in times of need.
- Compulsory schooling – Schooling reduces the economic exploitation of young children and introduces new costs for parents (school uniforms and books). Both induce smaller family sizes.
- Education – Education opens people's eyes to career opportunities and increases people's awareness of the existence of and benefits of contraception.
- Changing status of women in society – Greater female participation in the labor market leads to changing views on the role of women in society and diminishes perceptions of women as principally child-bearers.
- Consumption – As the consumption of luxury goods becomes an increasing priority, having fewer mouths to feed means families can dedicate more of the household budget to servicing wants rather than needs.
- Secularism – Some religions promote large family sizes and/or approaches to human sexuality that lead by default to larger family sizes. Modernization often leads to secularism. As religions ebb in their significance, secular attitudes to marriage, child bearing, contraception, and abortion emerge. People are better able to control the size of their families.

Policies for lowering and increasing fertility levels

As countries continue to move through epidemiological transition it would appear that two core challenges remain:

Fertility control projects: According to some commentators, if we were to wait for fertility levels to fall as a natural response to development, we might be waiting

Zoom-in Box 7.5:   John C Caldwell's (1982) *Theory of Fertility Decline*

Australian demographer John C Caldwell's (1982) book *Theory of Fertility Decline* remains one of the most important attempts to explain why fertility levels fall as countries pass through demographic transition.

Summing a lifetime of research conducted on fertility in Africa and Asia, Caldwell argues that households make rationale choices about family size based upon prevailing economic conditions.

Caldwell's theory centers upon the idea of intergenerational wealth flows, defined as net transfers of wealth from parents to children and children to parents that occur throughout a parent's life course. Transfers can comprise money, goods, services, and guarantees. Caldwell argues that it is possible to discern two types of society: primitive or traditional societies where net wealth flows firmly to the advantage of parents, and modern developed societies where net wealth flows predominantly from parents to children. It is not surprising that fertility levels are higher in traditional societies; as children contribute to the wealth of the household, people choose to have as many children as is possible, constrained only by biological limits. A culture of large family sizes emerges. Likewise, we should not be surprised that fertility is low in modern societies as people rationally choose to have fewer or no children, constrained now only by their psychological and emotional need to reproduce and raise children. A culture of reduced family sizes emerges. The shift from high to low fertility, then, is driven by the changing decisions made by households in the context of changes in the direction in which wealth flows between generations.

Caldwell's theory has been criticized for being too "economic": cultural norms and values concerning family size have more complex origins. In addition, the theory gives insufficient attention to the role of wealth transfer from parents to children in primitive societies, and from children to parents in modern societies. Above all else, critics allege that Caldwell provides little empirical evidence in support of his theory. Caldwell acknowledges this but notes the difficulty of obtaining data to test and verify a theory of this sort; detailed and sensitive longitudinal studies that are difficult to undertake would be needed.

a long time; in the interim, population growth might accelerate to unmanageable levels. Fertility levels most often fall only when governments intervene and convince, co-opt, and coerce populations into exercising fertility control. Here attention is paid to state engineering and manipulation of the determinants of fertility. The artificial repression of fertility through fertility control programs means that low birth rates will emerge even in poorer countries with large rural populations and pro-family cultures. But these programs come with significant social and financial costs.
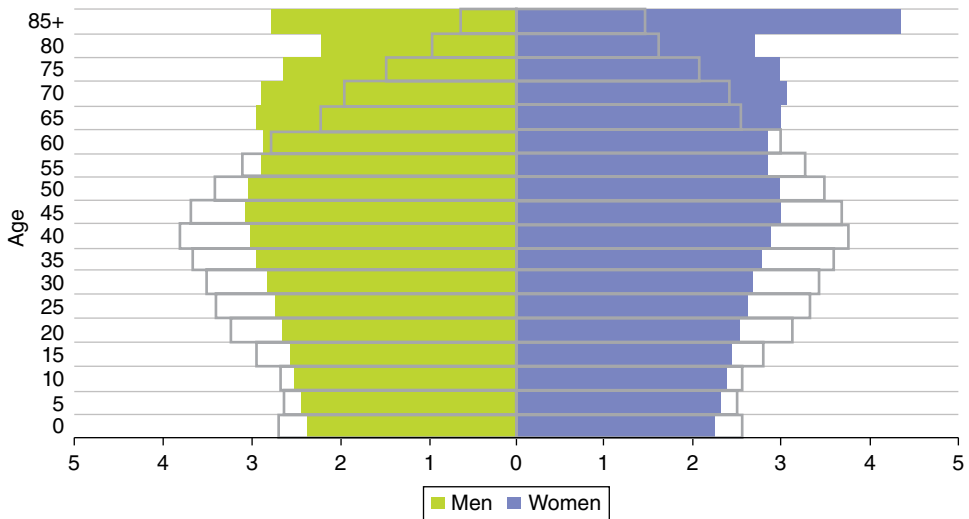
2060 population pyramid shaded. X axis represents % of the total population in that age-sex category.

Figure 7.6   Population pyramids for the EU 27 (2010 and 2060). Source: Eurostat.

Pro-natalist policies: Some countries that have moved through demographic transi-
tion now have below-replacement fertility levels and suffer from both a shrinking
of their populations and an ageing of their population profiles (see Figure 7.6).
Increasingly, a smaller and smaller working population is being asked to pay for
the pensions of a larger and larger pool of retirees. Pension arrangements made
when population profiles were much younger no longer seem tenable. Moreover,
with more people living longer, demand for health care is growing and pressure
on health services is become especially acute.

Faced with the problem of low birth rates, governments have generally responded in
two ways.

Pro-natalist population policies are policies designed to increase birth rates.
Some countries provide financial incentives designed to encourage larger family
sizes: tax breaks, generous child allowances, extended maternity leave, crèche sup-
ports, housing subsidies, access to better schooling for children from large families,
and so on. In other cases, more proactive intervention is undertaken, incorporating
the promotion of the benefits of early marriage and parenthood and the advocacy
of large families as morally virtuous. More aggressive pro-natalist policies incorpo-
rate bans on abortion, restrictions on contraception, and heavy financial penalties
for couples who choose to remain childless.

In addition to, or in place of, pro-natalist policies, some countries have sought
to address the problems created by an ageing society by: raising the age of retire-
ment; placing a new focus on savings, private insurance, life assurance, and pri-
vate pensions; promoting preventative health care, ensuring that the ageing cohort
enjoy a healthier old age; promoting selective immigration to plug skill shortages;
encouraging flexible working arrangements that facilitate a return to work for

stay-at-home parents, up-skilling of the population so that the workforce is capable of generating more wealth per capita; and supporting and leveraging the invaluable work the elderly do in the care sector (for each other and for children and grandchildren).

At one time or another in the recent past, and in one form or another, low birth rate countries like France, Italy, Israel, Hungary, Romania, Singapore, Malaysia, the United States, Japan, Germany, the United Kingdom, and Sweden have embraced one or other of these two policy approaches.

Demographic Transition: The Case of China from 1949

The Communist Party came to power in China in 1949 and has ruled ever since. In 1949, it was possible to locate China in the second stage of demographic transition (see Figure 7.7). Crude death rates in 1949 were 18 per 1,000; by 1963 this figure had fallen to 10 per 1,000 and by 1970 it had fallen again, to 7.6 per 1,000, the level at which it has effectively stabilized. Meanwhile, China's fertility control programs have resulted in one of the fastest declines in fertility ever recorded in history. Measured in 1949 at 37 per 1,000, as late as 1969 China's crude birth rate still stood at 34 per 1,000; by 1979, however, it had fallen to 17.8 per 1,000, and today it registers 12 per 1,000. In the interim period, between the fall in death rates and later fall in fertility rates, natural increase spurred on a rapid growth in the Chinese population from 547 million in 1949 to 1.35 billion today. Today, China is reaching
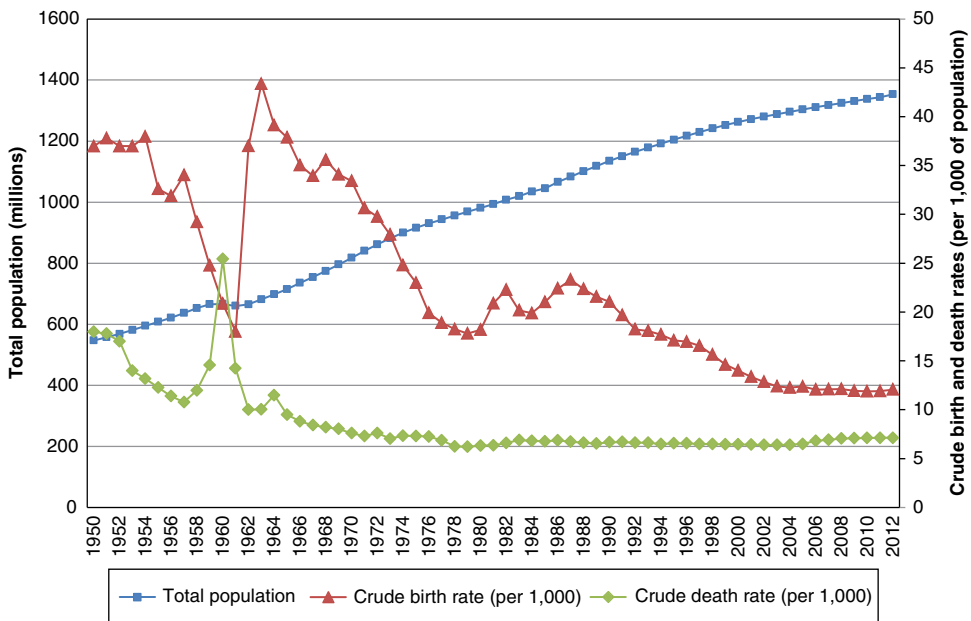
Figure 7.7 China's passage through demographic transition (1949 to present). Source: Chinese Statistical Press, 2013.

the end of Stage 3 of demographic transition, and population growth is easing. Interrupting China's passage through demographic transition is the demographic disaster that unfolded in the period from 1958 to 1962. Here a significant spike to mortality was followed by a significant fall in fertility and then a rebound in fertility to an historical all-time high. This demographic event cut across China's experience of demographic transition and helped to shape it.

Since 1949, attitudes to fertility control in China have changed as political power within the Chinese Communist Party has oscillated between the radical faction (symbolized by the policies of Mao Tse Tung) and the more moderate wing (symbolized by the policies of Deng Xiaoping) (Plate 7.1). Between 1949 and 1969, the political pendulum swung between these two camps. However, since 1970, moderate rule has largely prevailed. Mao Tse Tung was an ardent critic of those who fretted over the implications of China's large and growing population. Mao viewed people more as producers than as consumers; more people meant faster economic growth and development. In his view, those who feared that China's growing population would constrain economic prosperity were guilty of propagating false Western ideas. When Mao and the radicals were in power, fertility control programs were rejected. In contrast, Deng Xiaoping feared China's surging population greatly; people consumed more than they produced and population growth would dilute the effects of economic development and undermine standards of living. When Deng

Plate 7.1   Mao Tse Tung and Deng Xiaoping. Source: © Bettmann/CORBIS.

and the moderates were in power, fertility control programs were promoted, and increasingly vigorously promoted.

Having brought the Communist Party to power in China in 1949, it is unsurprising that Mao Tse Tung and the radicals held the balance of power initially. In 1953, the first census under the Communist Party was collected. The results, published throughout 1954 and 1955, announced that, with a population of over 580 million, China was the most populous country on earth. Initially, this result was met with jubilation. Further reflection on China's crude birth rate of 37 per 1,000 and the challenges that a rapidly expanding population might bring, however, brought a more considered response. In the years 1956 and 1957, Deng Xiaoping and the moderates captured power and under their rule initiatives were taken to curb fertility. Badly conceived, poorly financed, and weakly implemented, this first fertility control scheme was ineffectual. By late 1957, China's CBR still stood at 34 per 1,000.

The years from 1958 to 1962 mark a dark period in China's history. By 1958, Mao Tse Tung had returned to power and, impatient with the progress the country was making, devised an ambitious plan to transition China from an underdeveloped society to a global superpower. According to the radicals, people were China's greatest asset and a dedicated focusing of the country's labor force would thrust China to the forefront. Mao's Great Leap Forward was to be accomplished by taking people off the land (reducing the number of farmers) and putting them to work in small rural industries whilst at the same time scaling up the productivity of those who continued to work in agriculture. The results were disastrous. Rural factories were primitive and the products they churned out were scarcely fit for purpose. Meanwhile, with fewer workers and less dedicated land, agricultural output collapsed and famine and starvation ensued. Mao's Great Leap Forward became China's Great Leap Backward.

For a long time concealed from the world by the Chinese Communist Party, the famine of 1958–1962 represented a calamitous moment in China's demographic history. Between 1958 and 1962, food grain production in China fell from 200 million tons (MT) to 143.5 MT. Given that 90% of the Chinese diet derived from food grain production at that time and that an estimated 10 MT of food grain was required to feed 30 million people, the loss of 60 MT of food grain meant that, by definition, 180 million Chinese were left in a state of chronic food insecurity. The famine resulted in an estimated 30 million excess deaths. Official figures suggest that crude death rates rose to over 25 per 1,000 during this period; unofficial estimates suggest death rates soared to as high as 43 per 1,000. Meanwhile, as a result of its effects on marriage rates, male fertility, and female reproductive capacity, the Chinese famine proved itself to be a major contraceptive, and an irony of Mao's project was that CBRs fell to an artificial low in 1961 of 18 per 1,000.

Quite why Mao thought it possible to redirect a significant percentage of the Chinese population and land surface from agriculture to industry whilst at the same time expanding agricultural output and industrial exports remains a mystery. That he failed to avert the crisis once it commenced continues to be one of the great conundrums of history. Perhaps Mao placed unwarranted confidence and faith in the optimistic forecasts emanating from pioneering and experimental test farms he

had established; perhaps his attention was distracted by the international conflicts he was waging with India and Taiwan; and certainly in 1958–1960 he was ill informed about the scale of the impending disaster by fearful junior cadres. Mao himself was later to blame the Great Leap Backward on an unhappy coincidence of freak natural hazard events (flooding, drought, earthquakes) which beset China at this time. Whilst undoubtedly an aggravating factor, natural hazards in fact tend to be more local in their effects. That famine was geographically distributed across the country would tend to support the view that it was politics and not nature that derailed Mao's great political experiment.

By 1962, Deng and the moderates had regained control of the Chinese Communist Party. China's growing population was once again viewed as a problem, and fertility control was a policy priority. A second fertility control program was launched. This program was presented to the Chinese population as a health promotion campaign designed to improve maternal and infant health. On this occasion, the campaign was better conceived, furnished with more funds, and better rolled out across the country. Its central strategy was to make contraception more widely available and to increase its usage. Notwithstanding the better execution of the strategy, CBRs rose from 18 per 1,000 in 1961 to 43 per 1,000 in 1963. Unwittingly, Deng and the moderates had sought to reduce fertility in the midst of a post-famine baby boom; after the famine the physical reproductive capacity of both males and females improved and marriages that had been postponed during the famine now took place.

In any event, by 1966 Mao Tse Tung and the radicals had returned to power and fertility control was no longer a political objective. Suspecting that China's commitment to Communist ideals was faltering, Mao called for an intensive (re)education of the masses in the merits of Chinese **communism**. Mao gave license to a revolutionary group of younger Communist activists – the Red Guard – to aggressively promote communist principles, and produced a *Little Red Book* outlining the basis of Communist ideals. People suspected of Western leanings or liberal beliefs – including the educated classes – were to be "corrected"; in practice, this often meant victimization, exile, torture, and even murder. During this period preeminent attention was given to politics rather than population, but throughout, Mao's belief in the virtues of a large Chinese population was unwavering. Mao Tse Tung officially declared his Cultural Revolution ended in 1969 but the damage had been done; China was in chaos. Steadily, throughout the 1970s, the moderates sought to regain control of the country. With the death of Mao Tse Tung in 1976 the period of radical control over the Chinese Communist Party was effectively over and from 1978 Deng and the moderates prevailed.

With the moderates on the ascendancy, throughout the 1970s China pursued a vigorous fertility control campaign. For the moderates, China's progress was being hindered by its rapid population growth; any advances that were being achieved were not translating into better standards of living when measured in per capita terms. Given the title *Wan, Xi, Shao* or "Later, Longer, Fewer," this campaign sought to encourage later marriage, longer spacing between births, and fewer births overall. Its central premise was increasing access to and usage of contraception (especially intrauterine devices – IUDs, or the "coil") and abortion. During this period, the power of the Chinese Communist Party to effect change at the grass roots became

evident. Initially, target family sizes were set at two for urban households and three for rural households; by 1977, however, a single target of two for all households was set. First through coercion and then through compulsion, fertility levels were dramatically reduced; crude birth rates came down from 36 per 1,000 in 1968 to 17.8 per 1,000 by 1979.

Notwithstanding the success of the *Wan, Xi, Shao* campaign, by the late 1970s and early 1980s, Deng and the moderates concluded that population growth remained a crippling problem for China and that it was essential that even more drastic measures be taken. Why did China decide to embark upon an even stricter fertility control policy? Two reasons present themselves. First, China recognized that, in spite of the development of its economy from 1949 to 1979, the standard of living of the average person in the country had not improved. Food consumption per capita, literacy levels, and overcrowded housing all remained significant problems. Second, China discovered the power of computer forecasting and now, glimpsing the potential of its population to grow exponentially, became even more alarmed. Computer programmers and software engineers emerged as key lobbyists for more draconian fertility control policies.

China's response was the *One-Child Policy*. China calculated its optimum or ideal population size to be 750 million and set out to restrict fertility so as to reach this target by 2080. China's solution was to introduce a one-child (per family) policy from 1980 to 2000, to gradually relax restrictions to reach a replacement-level 2.1-children (per family) policy from 2000 to 2020, and to maintain a 2.1-children policy from 2020 to 2080. To achieve this outcome the Communist Party introduced a series of economic rewards and penalties. Those who stuck to the policy could expect an increased salary, better access to food, health care, and housing, and other types of prioritizations for their children. In support of the campaign contraception was made available widely. Its usage was mandated. Once again the Communist Party mobilized its nationwide administrative machinery to effect change at the grass roots level. Strong moral pressure and coercion was brought to bear on those who resisted or flouted the policy and through "correction" and "re-education" many opponents were forced to conform.

China has evidently struggled to implement its One-Child Policy effectively. Throughout the 1980s, birth rates in China rose to as high as 23 per 1,000 as a consequence of the so-called echo effect of the post-famine (after the Great Leap Backward) baby boom of the early 1960s – as that generation entered adulthood they too became parents. A surge in fertility resulted. Moreover, China has been unable to implement the policy nationally and has presided over a series of regional policies which vary between and within provinces. One-child policies do exist in some (mainly urban) regions in China, but two-child policies, three-child policies, one-son policies, and no policies at all prevail in other (more rural) regions. Notwithstanding its variable application, however, it is clear that China's coercive fertility control programs have exacted an enormous toll on Chinese society. Many families prefer a son to a daughter and through selective abortion and the murder of infant girls significant gender imbalances now present themselves. As a consequence of these gender imbalances, an estimate 30 million Chinese men are unlikely to find a partner or to marry. China is creating the possibility that it will suffer into the future from old-age dependency with a small cohort of workers looking after an

increasingly bulging retired population. China will also have fewer children going through its schooling system, meaning the redundancy of a proportion of trained teachers. In response to these problems, in late 2013 China finally decided to relax its One-Child Policy. Children whose parents adhered to the policy are now to be permitted to have two children.

China's One-Child Policy has also come under sharp attack from human rights activists and pro-life lobby groups in the West. China has been accused of breaching human rights by dictating people's family size, often in a coercive or compulsory way including via mass state-sponsored abortion and enforced contraception. In their 2005 book *Governing China's Population: From Leninist to Neoliberal Biopolitics,* US anthropologist Susan Greenhalgh and political scientist Edwin Winckler contend that whilst human rights abuses have occurred, perhaps some Western criticisms fail to do justice to the complexity of the approach China has taken. According to Greenhalgh and Winckler (2005), China's approach has been flexible and policies vary within and between provinces. Moreover, whilst the Chinese Communist Party has in the past attempted to restrain fertility through top-down party rule and the brutal enforcement of family planning (the "hard Leninist method"), across the past decade a softer approach has emerged which has sought to encourage citizens to restrict family sizes out of volition so that they might benefit from China's emergence as a global economic powerhouse (a "soft neoliberal approach"). Today the emphasis is upon quality as much as quantity. The idea of self-restraint for personal gain is being promoted alongside the need to make mandatory sacrifices for the good of the collective or for the generations to come. Carrots, it is assumed, work better than sticks.

By 2015, China will have a population of 1.4 billion. Whilst China will not meet its target of 750 million by 2080, the United Nations' medium variant projection does suggest that China's population will stabilize in 2030 at 1.45 billion, will decline to 1.17 billion by 2080, and will fall to 1.085 billion by 2100 (United Nations Population Division, 2013).

Conclusion

The rise of Western civilization began a process of world population growth without parallel in human history. From its epicenter in Europe, this process has steadily fanned out across the globe and there exists no region untouched by it. In 1750, the global population stood at 741 million, today it exceeds 7.2 billion. Whilst this chapter has sought to study the mechanisms that have driven the modern rise in world population in many ways it is the consequences and not the causes of population growth that demand the greatest attention. In this chapter you have seen how the originator of the Demographic Transition Model, US demographer Frank W Notestein, feared greatly the implications of demographic transition. You have also seen the extraordinary lengths China has gone to curb its once swelling population. Given that rapid population growth will continue to unfold across this century in Asia and Africa in particular, it behoves us to consider the extent to which Notestein's fears were well founded. It is to this topic that the next chapter turns.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) The Demographic Transition Model has its origins in the work of US demographer Frank W Notestein. Notestein developed the model to help inform those who feared the impact of global population growth, not least its ramifications for the United States.

2) The Demographic Transition Model suggests that as countries industrialize and develop so too their populations pass through a number of stages; some models recognize only four stages, others five. Recently, British demographer Timothy Dyson has queried the need for countries to industrialize and develop if they are to pass through demographic transition. He argues that populations can now move through demographic transition irrespective of their level of development.

3) French demographer Jean-Claude Chesnais has provided a typology of different passages through demographic transition, noting variations in start dates, durations from start to finish, and peak rates of population growth. The modern rise in world population continues and will abate only around the year 2100. As this century wears on Africa will replace Asia as the epicenter of world population growth.

4) Egyptian physician Abdel Omran's concept of epidemiological transition provides a useful lens through which to examine declining mortality rates. A combination of economic development, improvements in standards of living, medical advances, and public health campaigns have pushed countries through epidemiological transition.

5) Welsh population geographer Huw Jones offers a useful framework through which to think about the determinants of fertility. Fertility levels fall as a lag effect of socioeconomic development and cultural change as these fundamental determinants drive down fertility by recalibrating the workings of a number of proximate determinants of fertility.

6) China's progression through demographic transition from 1949 provides a good example of the ways in which demographic processes are entwined with social, economic, cultural, political, and environmental processes.

Chapter Essay Questions

a) Describe, explain, and comment upon the utility of the Demographic Transition Model when making sense of the rise in world population from 1750.

b) Describe and explain the processes and policies that have driven global trends in *either* mortality *or* fertility since 1750.

c) Outline the key challenges the world will face as the demographic transition runs its course to its final conclusion across the remainder of this century.

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Guidance for Further Reading

Good general introductions to Population Geography include:

Findlay A and Findlay A (2012) *Population and Development in the Third World* (Routledge, London).

Holdsworth C, Finney N, Marshall A, and Norman P (2013) *Population and Society* (Sage, London)

Jones H (1990) *Population Geography* (2nd edition) (Sage, London).

Newbold K B (2010) *Population Geography: Tools and Issues* (Rowman & Littlefield Publishers, Toronto).

For an overview of demographic transition theory see:

Chesnais J C (1992) *The Demographic Transition: Patterns, Stages and Economic Implications: A Longitudinal Study of Sixty-Seven Countries Covering the Period 1720–1984* (Clarendon Press, London).

Dyson Tim (2010) *Population and Development: The Demographic Transition* (Zed Books, London).

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Notestein F W (1945) "Population: The long view." in Schultz, T W (ed.) *Food for the World* (University of Chicago Press, Chicago).

Epidemiological transition theory was first outlined in:

Omran A R (1971) "The epidemiological transition: A theory of the epidemiology of population change." *The Milbank Quarterly* 49: 509–538.

For an excellent historical overview of China's fertility programs from 1949 and an updated account of China's approach to fertility control from 2000 see:

Greenhalgh S (2010) *Cultivating Global Citizens: Population in the Rise of China* (Harvard University Press, Cambridge, Mass.).

Greenhalgh S and Winckler E A (2005) *Governing China's Population: From Leninist to Neoliberal Biopolitics* (Stanford University Press, California).

For the latest global population forecasts to the year 2100 see:

United Nations Population Division (2013) *World Populations Prospects: 2012 Revision. Highlights and Advance Tables* (UN Population Division, New York).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 8

A Planet in Distress? Humanity's War on the Earth

Chapter Table of Contents

Chapter Learning Objectives

By the end of the chapter you should be able to:

1) outline and comment upon the future that neo-Malthusians (population pessimists) forecast if population growth and environmental degradation are not arrested and reversed;

2) describe and comment upon Cornucopian perspectives (those of population optimists), which place confidence in the ability of human beings to continually extend the carrying capacity of the earth;

3) describe and comment upon the views of population neutralists, who believe that institutions, politics, and poverty, and not population growth per se, lie at the heart of the world's principal environmental problems;

4) critically assess, referring to the views of population pessimists, optimists, and neutralists, the claim that climate change and its effects now constitute the single biggest environmental threat facing humankind.

Introduction

Given that the modern rise in world population first began in England and Wales in 1750, it is perhaps not altogether surprising that concerns over the sustainability of population growth first arose there too. In 1798, the English Anglican curate, demographer, and economist Thomas R Malthus published a book titled *An Essay on the Principle of Population as it Affects the Future Improvement of Society* in which he developed the view that whilst food production is capable of expanding at an **arithmetic rate**, population growth tends to occur at a **geometric rate**. The result is that, if left unchecked, in time populations will rise to levels that the planet is unable to support. Malthus' view was that, unless populations could exercise sexual restraint, population growth would inevitably lead to vice (which for Malthus meant "immoral" forms of birth control), and/or misery (war, famine, and disease).

When Malthus wrote his essay the population of England and Wales was about 8.5 million and the population of the planet was around 900 million; the present population of each is 56.1 million and over 7.2 billion, respectively. Whilst the earth is not without its problems, it has enjoyed 250 years of population growth without mass starvation, economic collapse, or a deterioration of human welfare. There might be "vice" and "misery" but it is not on the scale imagined by Malthus and it has not stopped population from surging. Evidently, even though he was writing at the start of the industrial revolution in England and Wales, Malthus failed to appreciate that through technology humankind might be able to avert crises, innovate itself out of trouble, and keep one step ahead of scarcity and environmental blight.

But will Malthus be proved correct in the long run? Has technology merely averted crisis and not eradicated it? Are there limits to technological fixes? Is Malthus not more relevant today than ever before?

Population Pessimists: The Earth's Carrying Capacity, Overshoot, and Collapse

From the 1950s onward there have emerged a number of population pessimists – or **neo-Malthusians** – who believe that it is indeed time to retrieve Malthus from the dustbin of history and consider his warnings anew. Neo-Malthusians believe that people consume more resources than they produce and therefore that, if left unchecked, over time population growth will eventually lead to a depletion of the earth's resources, will breach the earth's **carrying capacity,** and will lead to a collapse of civilization as we know it today. The result will be the breakdown of society, social and political anarchy, and perhaps even mass famine and warfare waged to secure the few scarce resources that continue to exist.

In his 1956 address to the American Petroleum Institute in Texas, titled *Nuclear Energy and Fossil Fuels*, petroleum geologist and geophysicist Marion King Hubbert advanced the theory of "**peak oil**." According to Hubbert, it is possible to forecast the time at which the maximum rate of extraction of oil from a given region will occur. Hubbert used this theory to predict that peak oil would be reached in the United States between the 1960s and 1970s. Although dismissed at the time, by 1970 Hubbert's prediction proved to be true. Hubbert subsequently predicted that

the rate of extraction of oil globally would peak in 1995. This prediction proved to be less accurate but supporters of Hubbert argued that this was only because more oil and gas was now accrued from "unconventional" sources, not least oil shale or light tight oil (LTO), tar sands, and **fracking**. These new supplies have merely delayed the time at which the world will reach peak oil; they have not averted the problem (see Zoom-in Box 8.1).

US marine biologist and conservationist Rachel Carson's book *Silent Spring*, published in 1962, marked another turning point in the rehabilitation of Malthus. Accusing the chemical industry of spreading disinformation, Carson contended that synthetic insecticides such as dichlorodiphenyltrichloroethane (DDT) were poisoning the environment, leading to the indiscriminate death of animals, the creation of a new breed of hardier super-pests, and an increased risk of ecosystem colonization by hostile invasive species. By entering the food chain, these chemicals were also putting human health at risk. *Silent Spring* sparked controversy. Supporters heralded the book as a brave exposé of the irresponsibility of the chemical industry and a wake-up call for those who believed that through technology human beings could endlessly control the natural environment. It has also, however, been criticized for its role in the banning of certain insecticides, a move which has allowed vectors carrying disease such as malaria to prosper and has possibly led to the deaths of millions of people in the developing world.

In 1968, US biologist Paul R Ehrlich and his wife Anne H Ehrlich (who was never credited) published a book titled *The Population Bomb* (Ehrlich, 1968). Later, in 1990, they followed up with a further book, *The Population Explosion* (Ehrlich and Ehrlich, 1990). The *Population Bomb* prophesied that due to rapid population growth the world stood on the brink of a great economic, environmental, and humanitarian disaster. Ehrlich claimed he had come to be aware of the impending threat during an "emotional" and "frightening" "stinking hot night" in Delhi when mobbed by throngs of impoverished people. Population growth was leading to poverty, and imminently the "death rate solution": mass starvation, the mining of scarce environmental resources to exhaustion, and a dying planet. Ehrlich painted three potential scenarios, each of which forecast apocalyptic outcomes in the 1970s and 1980s (each ruminated on mass starvation and threats from global warming, acid rain, nuclear war, unmanageable waste, and new epidemics). Fertility control (compulsory if necessary) was needed immediately. Critics contend that few of these scenarios have actually materialized. Others suggest that it is actually impossible to estimate the maximum number of people the earth might be able to support in the first instance (Zoom-in Box 8.2). Ehrlich later rounded on such critics for confusing his scenarios for actual predictions. In *The Population Explosion* he insisted that, if anything, the *Population Bomb* was too conservative.

Ideas such as "peak oil," "silent spring," and the "population bomb" proved to be midwife to an influential think tank which has championed the cause of Malthus across the past 40 years and prophesied doom if human consumption of the earth's resources is not restrained. In 1968, Italian industrialist Aurelio Peccei and Scottish scientist Alexander King convened a unique brainstorming workshop in Rome to consider the question, is it possible that relentless population and economic growth and consumption will eventually deplete the earth's finite natural resources to levels that threaten the future of humankind? Following the workshop, an independent think tank comprising concerned world citizens with professional expertise and influence from all corners of

Zoom-in Box 8.1: Energy Resources: Hooked on Fossil Fuels?

A natural resource can be defined as a substance occurring in nature that a population perceives to be necessary and useful to its maintenance and well-being at any point in time. Resources can be divided into one of two types. **Renewable resources** are natural resources that can be reproduced faster than society exploits them. In principle, renewable resources exist in such quantities that no amount of population growth, economic growth and growth in human consumption ought to threaten their existence and they ought never to be depleted. **Non-renewable resources**, in contrast, are resources that exist in finite quantities and that are vulnerable to complete exhaustion if not conserved and preserved. Population growth and rising human consumption present a threat to the indefinite existence and availability of these resources.

Energy resources are among the most important resources known to humankind today. Without energy, industry could not function, transport systems would grind to a halt, and households would lack heating, lighting, and cooking facilities. Currently, non-renewable energy resources or fossil fuels provide for 81.6% of the world's energy needs (with oil meeting 31.5% of total demand, coal 28.8%, and natural gas 21.3%). Meanwhile, energy procured from renewable supplies (such as from hydroelectric schemes, biomass used as biofuel (burning crops), wind farms, tidal and wave sources, solar power, geothermal springs, and waste-to-energy initiatives (energy captured by burning waste in incinerators)) meets only 13.3% of global demand. A third category, in principle infinite in supply but differentiated due to the environmental risks it poses, is nuclear energy (from uranium and thorium). Currently nuclear power meets 5.1% of the world's energy needs.

Three problems flow from the world's overreliance upon fossil fuels.

First, these fuels are in short supply and known reserves are shrinking. Whilst new technologies will unlock new fuels such as LTO, permit oil drilling in ultra-deepwater fields, and improve recovery rates in existing oil fields, it is likely that humankind has reached, if not passed, the moment of peak oil. Second, the location of fossil fuels and the places where they are needed differ greatly. Countries that mine oil occupy a position of strength whilst countries that need oil but have insufficient reserves of their own are resigned to a position of vulnerability. Energy insecurity arises when countries fear that their energy needs are at risk from geopolitical spats and tensions. In turn, energy insecurity can result in war and conflict, as vulnerable countries act to ensure that their needs are met. Third, fossil fuel consumption is the biggest source of greenhouse gas emissions and the primary cause of human-induced global warming. Global warming some argue will have catastrophic consequences for humankind.

For all these reasons, unhooking the world from its reliance on fossil fuels presents itself as perhaps the greatest environmental challenge of the twenty-first

(Continued)

Box 8.1   (*Continued*)

century. This task will be far from easy. Whilst the West will continue to consume the greatest amount of energy, growth in demand for energy will come from the developing world, where industries remain founded on fossil fuel energy sources (the so called "coal fired" economies). Meanwhile, the West will embrace greener technologies but only when costs and competitive pressures allow. Whilst technologies to exploit renewable energy will improve, it is questionable whether they will harness enough energy to replace fossil fuels. Meanwhile, people will continue to fear the potential hazards presented by nuclear energy. According to *World Energy Outlook 2014* (International Energy Agency, 2014), it is likely that by 2035 fossil fuels will still provide 75% of the world's energy needs.

Zoom-in Box 8.2:   In Search of the Earth's Carrying Capacity: The Thoughts of US Population Biologist Joel E Cohen

Is it possible to reach scientific consensus on the maximum number of people the earth can sustain?

In his 1995 book *How Many People Can the Earth Support?* US population biologist Joel E Cohen collected and analyzed over 65 estimates of the earth's carrying capacity which have been advanced since Dutchman Antoni van Leeuwenhoek's first calculated the figure at 13.4 billion people in 1769. Estimates made in the past 50 years alone range from less than a billion to over 1,000 billion, with a median low estimate of 7.7 billion and a median high estimate of 12 billion. Confusion has not reduced through time; as late as 1994 five estimates were produced within the space of a year that ranged from less than 3 billion to over 44 billion people.

Why so much variation and uncertainty? According to Cohen, all estimates of the earth's carrying capacity explicitly or implicitly are calculated on the basis of:

- an assumed level of material welfare (standard of living);
- an assumed distribution of material welfare (preparedness to accept the coexistence of degrees of poverty and affluence);
- an assumed technology (capacity to identify and harness resources);
- an assumed set of domestic and international political institutions;
- an assumed set of domestic and international economic arrangements;
- an assumed set of domestic and international demographic arrangements (population distribution and migration);
- an assumed biogeochemical context (resource base);
- an assumed degree of variability of material welfare needs (degree of tolerance of seasonal variations);
- an assumed set of risks from natural hazards and catastrophic events;
- an assumed time span over which a population is to be sustained;
- an assumed set of tastes, values, and fashions.

Because these assumptions require judgments of a political nature to be made, it is not surprising that different forecasters calibrate them in different ways. Cohen's work leads to the conclusion that the search for scientific consensus on the earth's carrying capacity is a futile one; ultimately the question is a political one which is open only for debate, not resolution.

Cohen himself refuses to put an exact number on the earth's carrying capacity. Nevertheless, he does note that if the median high and low estimates of 7 billion and 12.5 billion set boundaries that are in any way meaningful, humankind might indeed be venturing into dangerous territory. Cohen proposes three courses of action: the "bigger pie" solution argues that technology should be used to maximize the production of those resources required to support the human race, the "fewer forks" solution advocates fertility control and population control, and the "better manners" solution advocates the creation of societies that preside over resources and their distribution with greater reverence.

Cohen argues that universal provision of both primary and secondary education is the key to all three; better minds create better technology, educated women better understand the gains to be accrued by regulating their fertility and controlling the size of their family, and educated citizens are more able to call their leaders to account and lobby for better governance. More recently, Cohen has placed attention on the plight of newborn infants whose intellectual development is impaired from the very start of their lives by starvation and malnourishment. For better schooling to be effective learners first need to present themselves as fit and able.

the earth, dedicated toward building long-term solutions to the global challenges that confront humankind, and bearing the title the "Club of Rome," was born.

In 1972, at the behest of the Club of Rome, scientists from the Massachusetts Institute of Technology (MIT) in Boston published a book titled *The Limits to Growth* (Meadows *et al.*, 1972). Selling 12 million copies and published in 37 languages, this book both arrested the attention of the world and defined the environmental agenda for a generation.

The Limits to Growth placed under scrutiny interactions that occur between five key variables: population growth and economic growth, which place pressure on the earth's ecosystems; food and natural resources, which are the key "inputs" humankind needs to survive; and environmental pollution, which threatens the sustainability of ecosystems in the long run. *The Limits to Growth* devised a computer model (World3) to create scenarios of possible futures for humankind, dependent upon the behavior of these five variables. A total of 12 scenarios were created (charting trends between 1900 and 2100). Limits to growth arise when the rate at which non-renewable resources are extracted from the earth leads to an exhaustion of those resources, and when the earth's tolerance of and capacity to absorb the pollutants deposited when these resources are used is exceeded. The earth can be said to be in "overshoot" when critical thresholds have been crossed. If not handled properly, overshoot can lead to societal collapse (see Zoom-in Box 8.3).

Zoom-in Box 8.3:   The Anthropocene and the Sixth Mass Extinction?

Believing that the impact of the human species on the planetary system has reached a tipping point, in the 1980s, Dutch Nobel prize-winning atmospheric chemist Paul Crutzen decreed that we now live in a new geological time period, the Anthropocene (Crutzen, 2002). The Anthropocene is the age of man [sic]. According to Crutzen, from the 1800s onward, and in particular with the invention, in Scotland, by James Watt, of steam power and the European industrial revolution that followed thereafter, human interference in the natural environment has grown to the extent that human beings have become "geological agents," etching onto the earth a stratigraphic record many times more impactful than any other species. First or pristine nature has been so utterly modified that it is no longer possible to draw a distinction between human beings and the natural world; all nature is already human-modified nature (Whitehead, 2014).

A growing number of scientists believe that the Anthropocene will prove to be a catastrophic period for all species, including humans. The extinction of species, of course, is a natural and common event, embroiled in Darwinian evolution through natural selection. Of the 4 billion species estimated to have ever existed on planet earth more than 99% are now extinct. But there have been five great mass extinctions which have proved to be especially disruptive and lethal:

- The Cretaceous–Paleogene extinction event circa 66 MYBP during which 75% of all species then existing became extinct, including dinosaurs.
- The Triassic–Jurassic extinction event circa 200 MYBP during which 70–75% of all species then in existence were forced into extinction, including most of the earth's largest amphibians and reptiles.
- The Permian–Triassic extinction event (the Great Dying) circa 251 MYBP, which rendered extinct 90–96% of all species then in existence, including the majority of all marine species and nearly 70% of all land species.
- The Late Devonian extinction circa 375–350 MYBP, which terminated nearly 70% of all species then present, most of them marine-based.
- The Ordovician–Silurian extinction event circa 450–440 MYBP, which wiped out over 70% of all species then in existence, the majority of which lived in the world's oceans.

With the arrival of the Anthropocene, there is a growing (but controversial) consensus within the scientific community that we are now on the brink of a sixth mass extinction. The trigger will not be, as in the past, drastic changes in climate or showers of meteorites but instead human recklessness. In 1995, British-American biologist Stuart Pimm found that the pre-human rate of extinctions on earth was around one species per year for every million species in existence. Later, Pimm refined this downward to 0.1 species per year for every million species. Today this rate has increased to between 100 and 1,000 species per year for every million species in existence (Pimm *et al.*, 2014).

Historically, rates of extinction have been counterbalanced by the evolution of new species, but in the Anthropocene extinction is occurring so rapidly that evolution cannot keep pace. A sixth mass extinction presents itself as a real possibility.

According to Pimm, human activity is disrupting the "natural" evolution of species in four principal ways. First, population growth, economic development, and urbanization are destroying natural habitats and reducing environments where species normally prosper. For example, it is estimated that around two-thirds of all land-based species live in tropical rainforests and yet vast swathes of forests in Brazil and those in the northern Andes and Ecuador are being cleared. Second, global warming is creating inhospitable environments for species and might in the future push more species to the Polar Regions and to the cooler climates that prevail in mountainous areas. The result will be overcrowding and more aggressive competition for survival. Third, human beings have transported species around the world introducing them to environments hitherto free of these species. Invasive species in turn have threatened and displaced some indigenous species. Finally, overfishing and overharvesting from oceans has depleted some species to the point of extinction.

The concept of the Anthropocene has attracted criticism from those who claim that it ignores the importance of culture and power in shaping human–environment relations. It would be better if social scientists rather than scientists wrote about the Anthropocene. It is societies and their modes of production that determine the extent to which humanity is waging war on planet earth. By speaking vaguely of the human impact on the natural environment scientists obfuscate the real debate. Others have responded to the idea by calling for measures that restore natural ecosystems whenever possible and conserve and protect what nature remains in existence. For Pimm, humanity's greatest weapon is the environmentalist and the concerned citizen. There now needs to be a monitoring of further changes in global biodiversity, a concerted effort to allow first, or pristine, nature to return, and a recognition of the need to create human-modified natures that are more hospitable.

The Limits to Growth proposed that whilst further uncontrolled growth would result in critical environmental thresholds being breached in the twenty-first century and a derailment of growth, with some restraint and within certain limits some further growth was possible. But two decades later, in 1992, an updated book titled *Beyond the Limits* was published in which it was argued that, due to inaction, growth had overshot in a number of critical areas, leading to environmental stresses (Meadows *et al.*, 1992). Remedial action was now required to reverse the damage that had been done and to put society back on a sustainable footing. Further pessimism pervaded the 2004 *Limits to Growth: The 30-Year Update*, which argued that society was now in a dangerous state of overshoot (Meadows *et al.*, 2004). Many of

the predictions of 1972 were now coming true. The opportunity to correct problems had been squandered and nothing less than a revolutionary transformation to sustainable growth was required.

In 2012, at the behest of the Club of Rome, Norwegian management scientist Jorgen Randers (one of the initial authors of *The Limits to Growth*), provided a forecast of what the world might look like in 2052. Randers's book, *A Count-Up to 2052: An Overarching Framework for Action* (Randers, 2012), predicted a more limited population growth and a much earlier population peak (circa 8 billion by 2040) than had been anticipated in many of the original estimates in *The Limits to Growth*. This is because fertility levels are generally lower in urban centers, and rapid **urbanization** means more and more people now live in cities. Randers also predicted that the global economy would grow only very slowly to 2052 and would decline thereafter. This is because many advanced economies will struggle to gain further productivity increases from their workers, poor economies will struggle to take off, more of nations' income will need to be diverted to deal with ecological problems, and population decline will occur in the second half of the century.

Because of this, pressure on the earth's resources would be less acute than hitherto assumed. Randers conceded that fears expressed in *The Limits to Growth* that population growth might lead to mass starvation and famine on the one hand, and catastrophic shortages of raw materials and economic collapse on the other, were now of lesser relevance. But whilst humanity might be able to avert absolute global shortages of food and resources, growing demands for finite food supplies and resources would result in price rises and many of the world's poor would be unable to access sufficient food and resources through the market. Famine and resource shortages would remain a problem for the world's poor.

More significantly, Randers argued that, in spite of hopes to the contrary, there will be no reduction in the usage of fossil fuels and carbon emissions in the foreseeable future and climate change and global warming will emerge as significant burdens. The global temperature will rise by 2 degrees centigrade by 2050, peaking at 2.8 degrees centigrade in 2080. This peak will be sufficient to create "runaway global warming" which in turn will impact adversely upon agriculture, industry, and health, and cause freak weather events. It is Randers's new view, then, that whilst food shortages and resource constraints will emerge as problem only for the world's poor, it will be pollution, and in particular climate change and global warming, that will lead to a painful collapse of the entire global system in the second half of this century.

For Randers, short-term decision making lies at the root of much that is wrong with the world today. Liberal capitalist democracies in particular, for all their other strengths, suffer from short-term planning cycles. Businesses rarely think beyond the next shareholder meeting and at most plan in five-year cycles. Governments, likewise, are bound by electoral cycles and are reluctant to take decisions that are unpopular now, even if these decisions will bear fruit in the long term. As a consequence, the institutions that govern Western societies are not fit to face the momentous global challenges that the contemporary era presents. What is required is a system of global governance that prioritizes long-term planning and helps societies to stay the course as they make changes that will be painful in the short term.

Population Optimists: Population, the Ultimate Resource

Cornucopians, or population optimists, have taken issue with the claim that humanity is approaching the limits of the earth's carrying capacity and is about to overshoot and collapse. Cornucopians believe that human beings produce more than they consume. To the extent that population growth increases global consumption and exerts pressures on natural resources, human beings can always innovate themselves out of trouble by discovering new reserves of non-renewable resources and harnessing renewable resources to a greater extent than they have hitherto. Moreover, to the extent that population growth and increases in global consumption leave in their wake more waste and pollution, human beings can create new technologies to ameliorate the damage being done.

In 1965, Danish economist Ester Boserup published a short book titled *The Conditions of Agricultural Growth: The Economics of Agrarian Change Under Population Pressure* (Boserup, 1965). Boserup's focus was the development of agriculture, particularly in Southeast Asia. Boserup noted the steady intensification of agriculture that has occurred throughout human history. Five phases in this intensification process were recognized according to the length of fallow periods between periods of cultivation: forest fallow or slash and burn (15–20 years of fallow); bush fallow (6–10 years); short fallow (1–2 years); annual cropping (a few months); and multicropping (no fallow). As countries moved from one phase to another they had to invent and apply new technologies and reform their agricultural systems. More importantly, because of the law of diminishing returns, passage from one phase to another required societies to apply more effort for each unit of additional output secured. It is both illogical and prohibitively disruptive for societies to make these changes in circumstances of food surplus. It is only when population growth takes societies to the brink, and when scarcities become evident and risk life and limb, that they act to revolutionize their agricultural practices. Boserup concluded that it is population growth that drives agricultural revolution.

Julian Simon, a US scholar of business administration, published his book *The Ultimate Resource* in 1981 and an update, *The Ultimate Resource 2*, in 1996 (Simon, 1981, 1996). Simon believed that all previous civilizations had fretted over resource constraints and yet had managed to innovate themselves out of trouble. Society today would be no exception. Population growth leads to problems in the short term but it is people – in Simon's terms, "skilled, spirited, and hopeful people" – that will solve these problems and create many benefits aside. Population growth certainly places pressure on scarce resources and raises their price on the market. But price rises spur a search for new supplies, substitute resources, better ways to use existing resources, and techniques for recycling these resources. Population growth in the long run creates more resources than it consumes and leads to cheaper resources. It is for this reason, Simon contends, that natural resources are getting less scarce, food supply is expanding, pollution is decreasing, and life expectancy is expanding.

In 2001, Danish political scientist Bjørn Lomborg brought Cornucopian critiques of *The Limits to Growth* to the attention of the world in his controversial book *The Skeptical Environmentalist: Measuring the Real State of the Earth*. Lomborg's target was the "environmental litany" – the emerging consensus that humankind is super-exploiting and super-polluting the planet and that overshoot and collapse are

imminent. Skeptical about the accuracy of this litany, Lomborg set himself the goal of weighing the evidence and discovering the truth about the current state of the world.

The Skeptical Environmentalist develops four central arguments:

- Forecasts such as those offered in *The Limits to Growth* were simply wrong; technology has ensured that the world has not run out of resources, per capita food availability has increased, life expectancy has expanded, and human welfare has prospered.
- There remains scope to dramatically increase agricultural productivity and per capita food consumption, there will be more forests in the future than ever before, the discovery of unconventional sources of fossil fuels will boost supplies, alternative energy sources will be developed and mainstreamed, mineral resources will be available in abundance, and water shortages will not deteriorate.
- Trends in pollution and pollution control suggest that, if anything, the planet will become less polluted and less toxic through time; there is no reason to expect that air pollution, acid rain, water pollution, and waste will poison planetary ecosystems to the extent that these ecosystems are terminally compromised.
- Apocalyptic warnings of environmental problems yet to come are overblown; problems with the use of insecticides are exaggerated, biodiversity is not declining, and whilst human-induced climate change will occur, global warming does not rank in the list of the world's top problems or policy priorities.

The Skeptical Environmentalist continues to provoke the ire of environmental scientists, who accuse Lomborg of harboring ideological motives, practicing poor science, deliberately courting notoriety, and/or sponsoring complacency and inaction. Certainly, a substantial section of the scientific community believe that the book offers a partial, inaccurate, and at times erroneous reading of contemporary environmental trends, threats, and impacts. Lomborg has continued to defend the work nevertheless and has accused critics of defending and propagating the environmental litany out of self-interest. Lomborg insists that population growth and economic growth have not destroyed the earth's resources nor polluted planetary ecosystems to the point of toxification, that environmental pressures and threats are not as severe as is commonly believed, that what threats do exist can be dealt with in a cost-effective way using emerging technologies, and that humanity faces more pressing challenges than those posed by the environment.

Population Neutralists: Political Ecology, Society, and Nature

Population neutralists believe that population growth is in and of itself neither inherently good nor bad. Relationships between people and the natural environments they occupy are mediated not simply by population pressures but also by social, economic, technological, political, and cultural institutions. Recently, the field of **Political Ecology** has grown to give expression to this observation. According to US political and environmental geographers Paul Robbins, Richard Peet, and Michael Watts, political ecologists concern themselves with the relationships that

exist between society – not population – and nature (Robbins, 2004; Peet, Robbins, and Watts, 2011). They place under scrutiny those economic systems that plunder nature and pollute ecosystems most, the role of social inequalities in determining access to resources and rendering vulnerable people more exposed to pollution and its effects, and the politics of environmental blight (that is, who ought to be held accountable for environmental destruction and for finding solutions).

Political ecologists use the idea of the "metabolic" needs of society to better understand why some societies place more pressure on the earth's resources than others. Some societies are like sloths – they need move only slowly, have low metabolic rates, and do not require much to sustain themselves. However, just like marathon runners, other societies are frantic and frenetic, have large metabolic needs, and are continuously thirsty and hungry.

In his 1984 book *Uneven Development: Nature, Capital, and the Production of Space* Scottish-born and then US-resident Marxist geographer Neil Smith argued that how human beings think about their relationship with the natural environment shifted abruptly following the emergence of Western civilization, and in particular following the European enlightenment and the rise of the European capitalist economy from the fifteenth century. Prior to the rise of the West it was not uncommon for human beings to think of themselves as just one, albeit privileged, species eking out an existence from nature much the same as every other animal. Even as the Neolithic Revolution unfolded and great civilizations brought humankind to new heights, human beings understood that they had to live in harmony with nature as they were part of nature. With the rise of the West has come an era of unprecedented anthropocentricism; some human beings now even consider themselves to be a species apart, capable of dominating over nature and sheltering themselves from most of nature's extremes.

Political ecologists believe that there has existed no society in human history as exploitative of nature as Western society and no social group in human history as burdensome on the earth's resources as the capitalist class (Figure 8.1). European capitalism has relentlessly raided, plundered, reworked, and transformed the earth's ecosystems for its own ends. **Capitalism** has an insatiable need for raw materials and has striven to tame and conquer nature. Capitalism has made it profitable for human beings to realign river basins, genetically modify crops and animals, reclaim polders from the sea, desalinate sea water, dam great rivers, flood irrigation channels in deserts, defend coasts from erosion, mine quarries, clear and plant vast tracts of forest, and so on. According to Belgian-born and British-resident Marxist geographer Erik Swyngedouw, capitalism has tampered with nature to the extent that nature is not what it was; it is difficult to see what remains authentic and what is artificial. Perhaps it is no longer appropriate to even speak of nature per se; capitalism has reworked planetary ecosystems today to the extent that all "nature" exists only in a socially modified form. For Swyngedouw (1999), today it might be more accurate to speak only in terms of "socio-nature." This idea represents a political ecologist reworking of the notion of the "Anthropocene," which is much more attentive to the role of social structures and power relations in the transformation of first or pristine nature than mainstream scientists would be.

But capitalism has generated a world of abundance only for some. Others are forced to lead more precarious lives and are constantly vulnerable to scarcity. Within

Ecological footprint, 2007 (global hectares per capita)
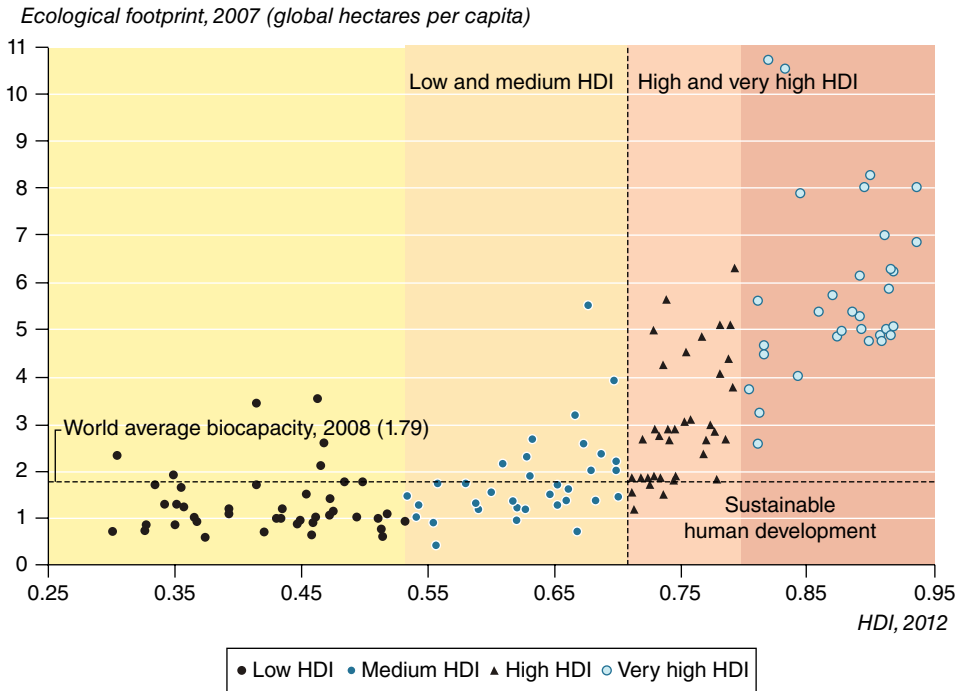
The ecological footprint is the amount of biologically productive land and sea area a human population needs to sustain its current lifestyle and to assimilate its waste (expressed in hectares per capita).

Figure 8.1 The ecological footprint of countries by stage of development. Source: UNDP, 2013. Creative Commons Attribution 3.0 IGO.

capitalist societies, for example, food, water, and resources are produced, circulated, and consumed strictly according to who has the ability to pay, and as a consequence marked inequalities exist. Rich people have the capacity to purchase food, water, and resources in the open market and therefore enjoy a high degree of food, water, and resource security. In contrast, poor people often lack the capacity to pay for food, water, and vital resources in the open market and suffer from food, water, and resource insecurity. It is always possible that political processes both within and between countries might interrupt the flow of food, water, and resources for good or bad, but in normal circumstances the wealthy will live in a world of food, water, and resource surpluses whilst marginalized populations will live in a precarious condition and in fear that chronic scarcity might at any time tip over into starvation and economic collapse (see Zoom-in Box 8.4).

Moreover, in using nature's bounty capitalism has also created and released into the environment pollutants with chemical compositions that are largely foreign to nature. At root, global warming, depletion of the ozone layer, acid rain, and the leaking of poisons when disposing of waste are all threats that exist because of capitalism's relentless plundering of the natural environment. Political ecologists contend that environmental pollution most often affects those who are already most vulnerable. Pollution, of course, emanates most from Western societies but these societies are often more able to address and ameliorate the effects of environmental

Zoom-in Box 8.4:   Gleick and Palaniappan (2010) on
"Peak Water" and Global Inequalities in Access to Freshwater

Already over 1 billion people currently do not have access to clean drinking water, more than 2 billion people do not have access to adequate sanitation, and as many as 5 million people die every year from preventable, waterborne infectious disease. In addition, tensions over the equitable sharing of water resources are aggravating international conflicts between, among others, Sudan, Ethiopia, and Egypt; India and Pakistan; Turkey and Syria; China and Tibet; and Israel and Palestine.

   There is little reason to expect matters to improve.

   In 2010, US water resources scientists Peter H Gleick and Meena Palaniappan argued that population growth, economic development, and global warming have conspired to deplete and/or pollute the world's stock of freshwater resources to the point that it is meaningful to speak in terms of "peak water." Inspired by Hubbert's idea of "peak oil," "peak water" is the point at which the volume of *available* freshwater begins to decline through overuse, contamination, and climate change. According to Gleick, we might be approaching three kinds of peak water:

- peak renewable water (where water is drawn from hydrological systems faster than it is replaced);
- peak non-renewable water (where water is pumped from underground fossil aquifers faster than it is being replaced);
- peak ecological water (where the ecological and economic costs of transporting water from areas of surplus to areas of deficit is too prohibitive to countenance).

But peak water stands as a threat more so to vulnerable poor people than to more affluent populations. Many experts believe that peak water will only be reversed if large-scale water infrastructures (dams, treatment plants, desalination plants) are built in poor countries. Such a program of construction would cost many hundreds of billions of US dollars. Some experts think that only by putting water supplies under the authority of large private companies will the necessary finance be secured. But others argue that private control over water resources will ultimately lead to greater problems for the poor, many of whom may be priced from the market. As pressure on declining water resources intensifies, water shortages are likely to push water prices up, and if controlled by large private corporations, access to sufficient water is likely to become a significant problem for the world's poor.

   Whilst recognizing the need for investment in expensive large-scale infrastructure, Gleick and Palaniappan therefore also advocate the adoption of a parallel set of "soft path" solutions. Here greater attention is given to the practices of those communities who use water. Through bottom-up community initiatives, communities learn how to use water resources more efficiently and sustainably and thereby cut their exposure to water shortages and price hikes. Vulnerable and impoverished communities need to organize themselves better if they are to minimize their precarity and exposure to drought.

Zoom-in Box 8.5:   Capitalism, Class, and Pollution: The Case
of the Garbage Crisis in Delhi

What to do with the garbage that society creates has become a key environmental concern in Indian cities today; the capital Delhi is no exception. The relationship that exists between Delhi's class and caste structure and its waste problem provide insights into the complex ways in which social structures interface with the natural environment and the pollutants that make their way into this environment.

Whilst remaining one of the poorest countries in the world, India has recently embarked upon a course of development which, it is hoped, will generate prosperity for its citizens. Of course, India already has a rigid caste structure. But its integration into the world economy has created opportunities only for a small section of its population. Whilst India has more cash millionaires than most other countries in the world it also has a vast army of impoverished and destitute citizens living beneath the poverty line. This iniquitous development has defined India's relationship with its environment.

The Delhi metropolitan region has grown rapidly from 6.2 million in 1981 to 17.4 million in 2014. Growing consumption has resulted in significant increases in **Municipal Solid Waste (MSW)**, which includes household, industrial, institutional, and end-of-life-vehicle but not construction or hazardous wastes. In 2007, Delhi produced 5,100 tons of MSW per day; today this figure stands at 9,600 tons per day and by 2020 it is projected to double to 18,000 tons per day.

India's growing mountains of waste reflect the changing consumption practices of its middle classes. Key beneficiaries of India's march to industrialization, India's middle classes are buying more and in turn generating more waste. But they are not paying for it to be dealt with properly.

Currently, only an estimated 70–80% of Delhi's MSW is collected, the rest being discarded in illegal sites in every corner of the city. Of the MSW that is collected, over 90% is disposed of in largely uncontrolled landfill sites at the outskirts of the city, the rest is composted. Because these landfill sites lack **leachate** and landfill gas collection systems, contamination of the water table, air pollution, and soil pollution are normal, producing adverse health outcomes for groups forced to live in close proximity.

There exist approximately 150,000 waste pickers in Delhi (0.9% of the population of Delhi) and as many as 2.86 million waste pickers in India (0.23% of the country's population). These waste pickers come from the lowest caste groupings and are often referred to as the untouchables. The sight of entire families of waste pickers, knee-deep in garbage, trawling their way through trash mountains in landfill sites in Delhi, in search of items that might be recovered and used, eaten, or sold, from dawn to dusk, for little more than US$2 or 3 per day, is harrowing. But through scavenging these waste pickers are by default recycling between 20 and 30% of India's waste (Plate 8.1).

Plate 8.1 Waste pickers at the Ghazipur landfill site, Delhi, India. Source: © HARISH TYAGI/epa/Corbis.

Action is needed but care must be taken not to introduce technological solutions without attending to the poverty of India's underclass.

The Waste Management Hierarchy (see Figure 8.2) provides policy makers with a set of preferred options as to how waste might be best managed. The preferred option is to work to prevent and/or minimize the production of waste in the first instance. The waste that is produced ought then to be reused or, if not amenable to reuse, then at least recycled. Waste that cannot be reused or recycled should be incinerated and the energy procured through burning harnessed in the national electricity grid. In circumstances where waste still needs to be disposed of, only landfills that adopt the most advanced technology should be used.

As Indian municipalities attempt to embrace the Waste Management Hierarchy, it is becoming obvious that tensions are emerging with India's army of waste pickers. Plans to privatize waste management in Delhi and to build an incinerator near the Ghazipur landfill site in the city threaten the livelihoods of the waste pickers and in the short term may reduce the amount of recycling that does occur.

Ultimately, the solution is not to defend the right of waste pickers to live a life of squalor and ill health but instead to work to lift waste pickers out of abject poverty. It would seem sensible that Indian cities work to formalize the informal recycling that already takes place in the country, and to harness the skills of those waste pickers who have eked out a living doing precisely this for many years, by providing a liveable wage and improved health and safety training and protection. It is here that India's middle classes need to

(*Continued*)

Box 8.5   (*Continued*)

Most favored option

Least favored option

Prevention

Minimization

Re-use

Recycling

Energy recovery

Disposal

Figure 8.2   The waste management hierarchy.

take responsibility for the role they play in tarnishing the Indian environment by funding waste management schemes that both clean up the city and address the social and economic precarity of the untouchables.

contamination, especially when its consequences come back to haunt them. As less-developed countries embrace capitalist forms of development and begin to industrialize they too are becoming important progenitors of pollutants. But given their weak institutional capacities and their especially impoverished populations, they are more vulnerable to the environmental degradation that pollution brings. Meanwhile, even within countries it is often the weakest and most vulnerable peoples who are left to live with the pollution created by the consumption practices of, and industries owned by, business elites (see Zoom-in Box 8.5).

Political ecologists argue that the concept of **environmental justice** provides for a useful way to think about where the burden of responsibility lies for addressing inequalities in access to resources and for mitigating global pollution. Given that it is the West that has the greatest **ecological footprint** and it is the West that has grown affluent by abusing the environment, Western countries should shoulder most of the responsibility for solving the world's environmental problems. Of course, the ecological footprints created by non-Western societies (and in particular China and oil-rich countries in the Middle East) also merit attention. But the West should avoid pressuring poorer countries in the Global South to embrace greener futures without first considering how the transformations proposed might impact upon their poorest and most vulnerable people. It is the capitalist economic system that needs to change and the West would do well to attend to this enormous challenge first.

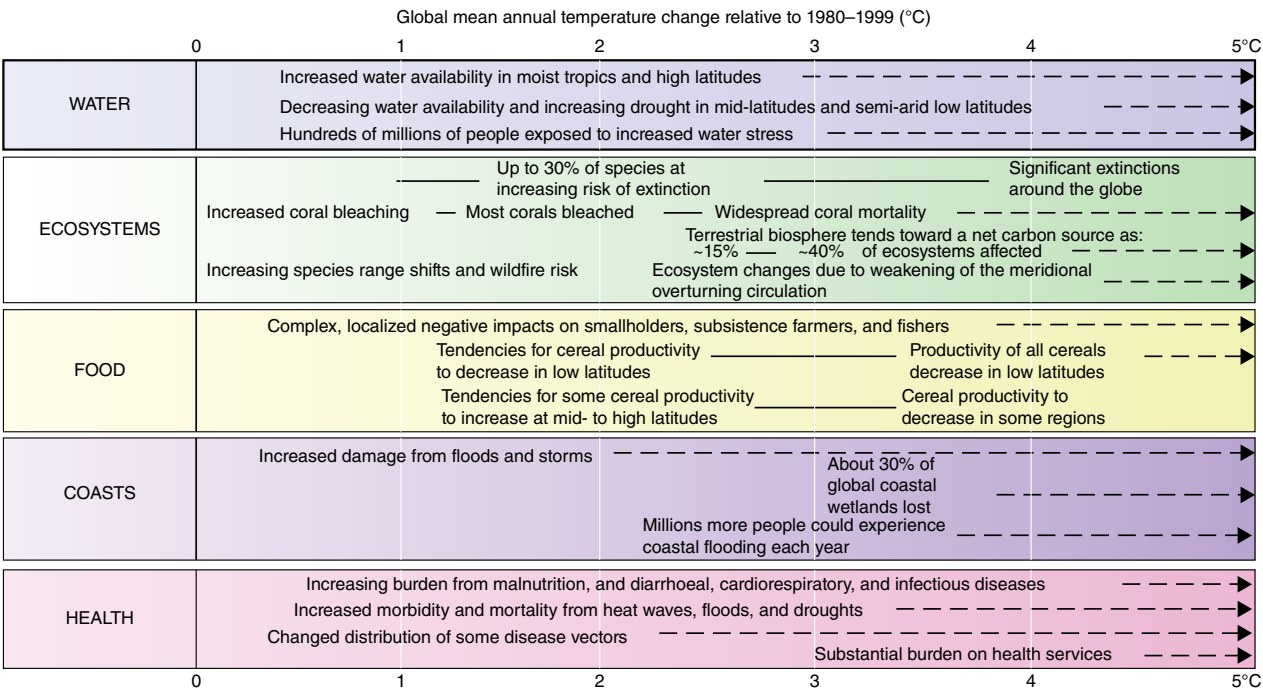## Climate Change: The Battleground for the Twenty-First Century?

In the twenty-first century, it is likely that most debate on humanity's war on planet earth will focus upon climate change and, more specifically, global warming. Whilst temperature at the surface of the earth has fluctuated throughout history in response to natural cycles and processes, there has emerged a concern that human activities are leading to rates of global warming that are without historical precedence. Primarily as a consequence of the excessive use of fossil fuels (oil, gas, and coal) in industrial factories, transport systems, and household heating, for example, carbon emissions, many scientists argue, are polluting the atmosphere, trapping solar radiation and heating the earth's atmosphere, the surface of the earth, and the world's oceans. Climate change, it is supposed, represents humankind's greatest impact on planet earth, and the damage that it is causing threatens in turn to render the planet less inhabitable and perhaps even wholly uninhabitable for the human species. Not surprisingly, population pessimists, optimists, and neutralists have different views on the root causes of climate change, the extent of its effects, and what might be done about it.

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme. It remains the leading authority in the world on all matters related to climate change. Periodically, the IPCC brings together leading scientists throughout the world and publishes state-of-the-art "assessment reports." The IPCC published its first assessment report in 1990, a second assessment report in 1995, a third assessment report in 2001, and a fourth assessment report (AR4) in 2007 (IPPC, 2007). The IPCC's fifth assessment report (AR5) was issued in parts throughout 2013 and 2014.

The IPCC organizes its activities into three areas:

Physical scientific evidence of climate change: In AR5 the IPCC concluded that evidence that the world has become warmer over a short period of time is unequivocal (IPCC, 2013). From 1750, human-induced atmospheric concentrations of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) have increased markedly and now exceed anything that has prevailed in recorded history. Between 1880 and 2012, the temperature at the earth's surface increased by 0.85 degrees. In addition, ocean temperatures have increased, the earth has witnessed widespread melting of snow and ice, and global average sea level has risen between 1901 and 2010 by 0.19 meters. It is very likely that climate change is being driven by human activities and not by natural processes.

The impacts of climate change and strategies for adaptation: In AR5 the IPCC concluded that temperatures will continue to rise throughout the twentieth century. Lower estimates suggest that from a base level set in the period 1980–1990, by 2090–2099 temperatures will rise by between 1.1 and 2.9 degrees centigrade (best estimate of 1.8 degrees centigrade). Upper estimates predict temperature increases of between 2.4 and 6.4 degrees centigrade (best estimate of 4 degrees centigrade) across the same period. The impacts of climate change on water supplies, ecosystems, food availability, coastal regions, and human health will vary dependent upon which scenario transpires and by region of the world (Figure 8.3). Countries need to better prepare for climate change and create strategies of adaptation to cope with change.

Global mean annual temperature change relative to 1980–1999 (°C)

	0	1	2	3	4	5°C

WATER
Increased water availability in moist tropics and high latitudes
Decreasing water availability and increasing drought in mid-latitudes and semi-arid low latitudes
Hundreds of millions of people exposed to increased water stress

ECOSYSTEMS
Up to 30% of species at increasing risk of extinction
Significant extinctions around the globe
Increased coral bleaching — Most corals bleached — Widespread coral mortality
Terrestrial biosphere tends toward a net carbon source as:
~15% —— ~40% of ecosystems affected
Increasing species range shifts and wildfire risk
Ecosystem changes due to weakening of the meridional overturning circulation

FOOD
Complex, localized negative impacts on smallholders, subsistence farmers, and fishers
Tendencies for cereal productivity to decrease in low latitudes
Productivity of all cereals decrease in low latitudes
Tendencies for some cereal productivity to increase at mid- to high latitudes
Cereal productivity to decrease in some regions

COASTS
Increased damage from floods and storms
About 30% of global coastal wetlands lost
Millions more people could experience coastal flooding each year

HEALTH
Increasing burden from malnutrition, and diarrhoeal, cardiorespiratory, and infectious diseases
Increased morbidity and mortality from heat waves, floods, and droughts
Changed distribution of some disease vectors
Substantial burden on health services

	0	1	2	3	4	5°C

Figure 8.3   The potential impacts of climate change. Source: IPCC, 2007, Fig. SPM.2.

Plate 8.2   Solar farm in the Mojave Desert, California, USA. Source: © Tim Rue/Corbis.

Mitigating (limiting/reversing) climate change: AR4 expressed hope that through technology it was now more possible than ever to embrace alternative renewable energy resources (wind power, hydroelectric power, solar power, waste to energy, tidal energy, geothermal heat, and biofuel, not to mention nuclear power) and that in the United Nations Framework Convention on Climate Change's (UNFCCC) Kyoto Protocol the world has a mechanism through which carbon emissions might be cut (Plate 8.2). AR4 also argued that the longer the world waited to cut carbon emissions the more difficult and expensive it would be to arrest climate change in the future and that, however unpalatable, investment now might turn out to be more cost effective in the long run.

The UNFCCC provides a framework for securing international agreements on matters relating to climate change. It convenes an annual meeting of countries (called the Conference of Parties, or COP) to progress dialogue and agree binding target reductions. The twentieth COP will take place in Lima, Peru, in 2014. Perhaps COP 3, held in Kyoto, Japan, in 1997, has been the most significant to date. Here the so-called Kyoto Protocol was signed. To date 192 countries have ratified the protocol, which mandated that 38 industrialized nations cut their greenhouse gas emissions to 5% below 1990 levels between 2008 and 2012. Targets covered emissions of the six key greenhouse gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). This treaty also established an international trading system, which allowed countries to buy and swap carbon credits and raise or lower their allotted tariffs.

Notwithstanding the optimism expressed in the IPPC's (2007) fourth assessment report (AR4), the Kyoto Protocol has at best generated mixed results (See Figure 8.4
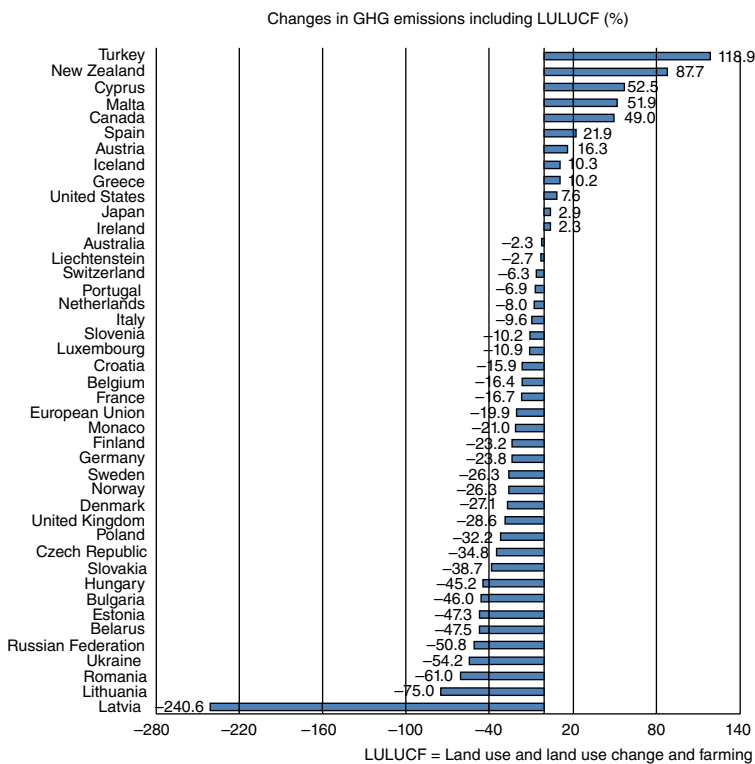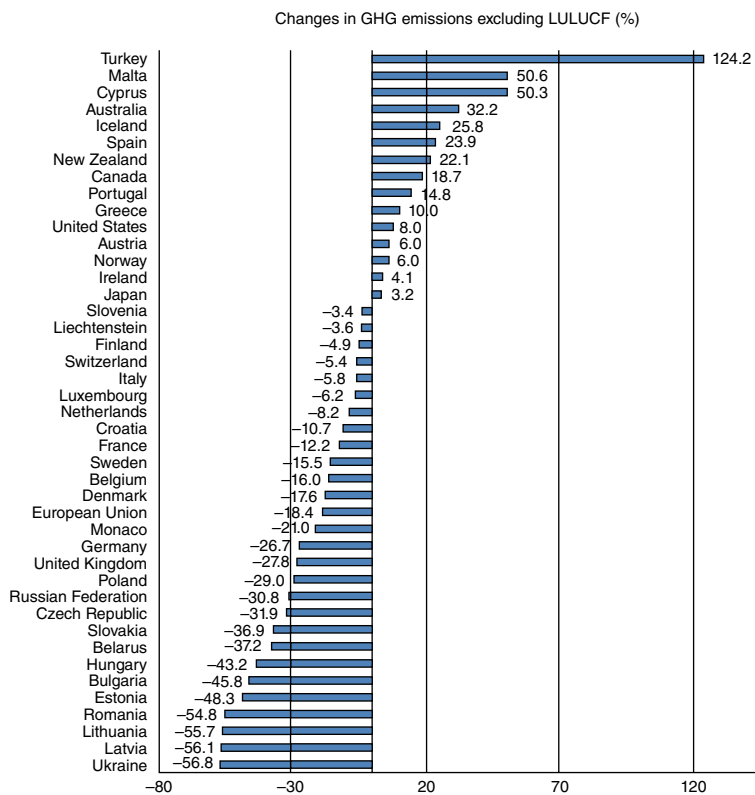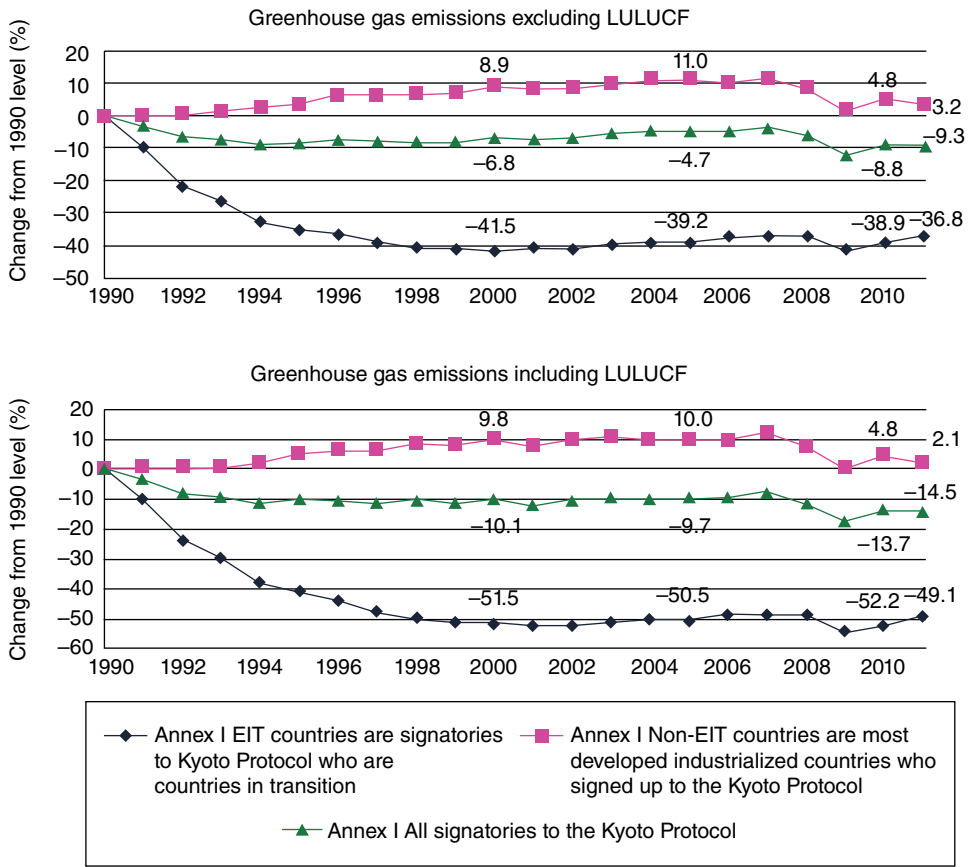
Figure 8.4 Greenhouse gas emissions for selective countries (1990–2011). Source: UNFCCC, 2013.

Greenhouse gas emissions excluding LULUCF

Greenhouse gas emissions including LULUCF

Annex I EIT countries are signatories to Kyoto Protocol who are countries in transition

Annex I Non-EIT countries are most developed industrialized countries who signed up to the Kyoto Protocol

Annex I All signatories to the Kyoto Protocol

LULUCF = Land use and land use change and farming

Figure 8.5 Trends in greenhouse gas emissions (1990–2011). Source: UNFCCC, 2013.

and Figure 8.5). Whilst some countries have achieved their targets (in particular the countries of Eastern Europe), some, such as the United States, never ratified the agreement, others, such as Canada, withdrew when it became obvious they were going to exceed their targets, and still others, such as Australia, overshot by some margin. In addition, although signatories to the agreement, emerging countries (including China and India) were not given emissions reduction targets. Global carbon emissions, therefore, have continued to grow. Moreover, in the 2012 Doha extension of the Kyoto agreement, whilst some countries signed up to an eight-year extension of the Kyoto Protocol (until 2020), the lack of participation of Canada, Japan, Russia, Belarus, Ukraine, New Zealand, and the United States, and the fact that developing countries like China, India, and Brazil have not thus far been subject to targets, suggests that change will be slow in coming in the near future (Plate 8.3).

Climate change and its likely impact continue to excite much debate in the public realm. Moreover, even though the IPCC provides the most authoritative scientific commentary, it has been unable to reconcile ongoing debate between neo-Malthusians, Cornucopians, and population neutralists.

Neo-Malthusians contend that climate change is now the greatest example of the profound effects of humankind on planet earth and stress the extent to which the

Plate 8.3   Father and daughter walking near the Shanghai Bund, China. Source: © Imaginechina/Corbis.

future of humanity is in doubt. In his 2013 *Overheated: The Human Cost of Climate Change* US expert in International Law Andrew T Guzman argues that even with a rise in global temperature of 2 degrees centigrade (a low-end estimate if IPCC forecasts are accurate), this century will witness a climate-induced collapse of society and planetary ecosystems. Water shortages will become acute, leading to drought, lower agricultural productivity, and decreased food security, especially for the world's poor. Rises in sea level will drown some low-lying islands and will flood low-elevation delta regions, leading to mass population displacement. Extreme weather events will create localized hardships. The result will be increased domestic and international tension over food and resources, and mass migration to "climate-refugee camps" and slums in already overcrowded developing world cities. New concentrations of impoverished refugees will in turn create a fertile breeding ground for a new generation of more virulent infectious disease, making global epidemics more likely.

Cornucopians, in contrast, question the extent to which scientific discussion of climate change is scaremongering. In his 2010 *Smart Solutions to Climate Change: Comparing Costs and Benefits* the "skeptical environmentalist" Danish political scientist Bjørn Lomborg concedes that human-induced climate change is both real and a significant problem. But Lomborg argues that environmentalists and the media have over-sensationalized the threats posed by climate change and that reducing carbon emissions will harm the world's poor more than it helps them. Lomborg calls for more attention to be given to adaptation (allowing climate change to happen but dealing with its consequence) and less to mitigation (working to stem carbon emissions and slow and reverse temperature rises). Moreover, he argues that more investment in low-cost, non-carbon energy sources that the world's poor can buy and use provides the only viable way forward.

Population neutralists meanwhile question the extent to which the capitalist economic system has changed the global climate system. It is no accident that humanity's war on the earth has coincided with the rise of the West and the emergence of the world capitalist economy. Solutions to climate change require political action.

Even a root-and-branch overhaul of the capitalist system will not suffice. Humanity needs to discover an economic system that is more environmentally sustainable. Political ecologists argue that, given that it is Western countries that are the heaviest polluters, it is only ethical and just that it should be these countries that bear primary responsibility for pioneering greener energy supplies. At the same time, political ecologists are interested in who benefits from climate change, where, why, and how. Evidently, green technology is providing Western countries with a means of ensuring competitive advantage over more dirty industries in other parts of the world. Without denying the importance of climate change, political ecologists contend that it would be naive not to note the profits now being made by those who have invested in green technology and renewable energy resources. Political ecologists also claim that the impact of climate change is being felt unevenly; it will be the poorest countries that will suffer most. Accordingly, there is a need for those who pollute most to compensate and protect the world's most vulnerable populations.

Conclusion

Across the past 60 years, population pessimists have argued that humanity is depleting non-renewable resources to the point of extinction and is polluting and poisoning the earth's ecosystems. Overshoot and collapse at some point in the twenty-first century is inevitable. Whilst it is true that pressures on the earth's resources have never been greater, it is also the case that human beings have survived and prospered thus far by using technology to find more resources, more efficient ways of using resources, and usable substitutes, and to clean up its worst environmental disasters. For Cornucopians, this proves that the earth can support a far larger population and economy than anything that has been visited upon it to date. Population neutralists argue that it is more appropriate to focus upon relationships between politics, poverty, and resources than upon population growth and the earth's carrying capacity per se. The environmental debates that will occupy most attention in the twenty-first century are likely to focus upon climate change and its consequences. Neo-Malthusians, Cornucopians, and population neutralists offer competing interpretations of climate change and its causes, extent, consequences, and solutions.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:
1) Across the past 60 years neo-Malthusian population pessimists have repeatedly warned that population growth and economic development have reached such a level that the earth's carrying capacity has now been passed and that overshoot and collapse will bring chaos to the world at some point in the twenty-first century.
2) Cornucopians, in contrast, argue that there is no evidence that the human species is plundering and polluting the earth to the degree that the future of humankind is at risk, and that human ingenuity allied with the virtually

unlimited resources that exist on planet earth will ensure that the earth's carrying capacity will not be reached anytime soon.

3) The field of Political Ecology argues that it is politics, society, and economics, not population growth per se, that create environmental pressures, threats, vulnerabilities, and responsibilities.

4) Climate change is the principal battleground on which environmental debates will be fought in the twenty-first century. Debate continues between population pessimists, optimists, and neutralists as to how high temperatures will get, what the effects of climate change might be, and how global warming might best be tackled.

Chapter Essay Questions

a) The Club of Rome's *The Limits to Growth* conscripted and energized a whole generation of environmentalists but its conclusions are largely redundant today. Discuss.

b) It is politics, society, and economics, not population growth per se, that create environmental pressures, threats, vulnerabilities, and responsibilities. Discuss.

c) Climate change is the biggest environmental challenge facing humankind today. Discuss.

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Guidance for Further Reading

The Limits to Growth has played such an influential role in setting the compass for the environmental movement that it merits study for its historical significance. One can trace the evolution of the Club of Rome's thinking in the period from 1972 to 2012 by reading:

Meadows D H, Meadows D L, and Randers J (1992) *Beyond the Limits* (Chelsea Green, Vermont).

Meadows D H, Meadows D L, Randers J, and Behrens III W M (1972) *The Limits to Growth* (Universe Books, Chicago).

Meadows D H, Randers J, and Meadows D L (2004) *Limits to Growth: The 30-Year Update* (Chelsea Green, Vermont).

Randers J (2012) *A Count-Up to 2052: An Overarching Framework for Action* (Chelsea Green, Vermont).

For particularly alarmist and controversial views on the dangers of population growth see:

Ehrlich P R (1968) *The Population Bomb* (Ballantine Books, London).

The most careful and definitive study of the earth's carrying capacity to have been conducted to date is:

Cohen J E (1995) *How Many People Can the Earth Support*? (Norton, New York).

A good introduction to the idea of the Anthropocene is provided in:

Whitehead M (2014) *Environmental transformations: A Geography of the Anthropocene* (Routledge, London).

Although he has more recently changed his position on the peril that humanity is putting the earth's ecosystems to (what he call humanity's war on "Gaia"), James Lovelock provides an interesting account of the Anthropocene in:
Lovelock J (2014) *A Rough Ride to the Future* (Allen Lane, London).

Although the controversies that surround this book should always be noted, *The Skeptical Environmentalist* is worth reading for its independent and critical thinking.
Lomborg B (2001) *The Skeptical Environmentalist: Measuring the Real State of the World* (Cambridge University Press, Cambridge).

Good introductions to Political Ecology can be found in:
Peet R, Robbins P, and Watts M (2011) *Global Political Ecology* (Routledge, London)
Peet R and Watts M J (eds.) (1996) *Liberation Ecologies: Environment, Development, Social Movements* (Routledge, London).
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For a resumé of the IPCC's fourth assessment report (AR4) see:
Pachauri R K and Reisinger A (eds.) on behalf of the IPCC (2007) *Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change Special Report for Policy Makers* (IPCC, Geneva).

At the time of publication the IPCC had only published the first two reports from their fifth assessment (AR5):
Intergovernmental Panel on Climate Change (2013) *Climate Change 2013: The Physical Science Basis* (first report from fifth assessment, AR5) (IPCC, Geneva).
Intergovernmental Panel on Climate Change (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability* (second report from fifth assessment, AR5) (IPCC, Geneva).

For a careful and well-balanced insight into the human impacts of climate change if the earth's temperature rises by 2 degrees centigrade see:
Guzman A T (2013) *Overheated: The Human Cost of Climate Change* (Oxford University Press, Oxford).

For a review of trends in the energy industry see:
International Energy Association (2014) *World Energy Outlook 2014* (International Energy Association, Paris).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 9

Homo Urbanus: Urbanization and Urban Form from 1800

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:

1) document and illustrate the ways in which the rise and development of urban agglomerations is embroiled, entangled, and intertwined in the rise and development of the capitalist economy;

2) describe the origins of urbanization in nineteenth- and early twentieth-century Europe and in countries established through European emigration; comment upon the relationships that exist between the rise of capitalism, the industrialization and development of society, urbanization, and the formation of industrial cities;

3) with reference to the Chicago School of Urban Sociology, reflect critically upon models that purport to describe and explain the spatial organization of late nineteenth- and early twentieth-century cities;

4) document and comment upon the claim that the industrial city has been in decline for over half a century now and has struggled to reinvent itself as an ongoing concern;

5) outline and comment upon the concept of "planetary urbanization";

6) describe rates and levels of urbanization in world regions from the mid-twentieth century to the present and comment on forecasts of likely trends in urbanization to 2050;

7) with reference to such ideas as the "postmetropolis," "megalopolis," and "megacities in the Global South," describe and comment upon the various urban forms that are emerging today;

8) describe patterns of urbanization in contemporary China; comment upon the extent to which Chinese urbanization differs in its aetiology from urbanization in the West.

Introduction

Whilst cities have featured in many prior civilizations it has only been with the ascendance of Western society, and in particular with the rise of the capitalist economic system, that the city has become home for the majority of humankind. **Urbanization**, the movement of people from the countryside to the city, began in earnest in the late eighteenth and early nineteenth centuries in European societies and in countries birthed by European emigration (principally the United States, Australia, Canada, and New Zealand). Cities grew to be, and still remain, the dominant habitat for human beings in these and other Western societies. More recently, mass migration from rural villages to urban centers has become a characteristic feature in Latin American, Asian, and African countries. Increasingly, the distribution of population in these continents is becoming predominantly urban, and undoubtedly the fastest-growing and largest urban centers of the future will be found in these continents.

The purpose of this chapter is to describe and explain the urbanization of the earth's surface that has occurred from 1800 and to document the **urban forms** that have been imprinted on the face of the earth as a consequence.

Capitalism and the Urbanization of the Surface of the Earth

The urbanization of the face of the earth stands as one of the most significant human geographical transformations of the past 200 years. But why has this shift occurred only at this specific moment in human history? How might one account for this historically unprecedented **transition** to urban living? In their efforts to make sense of ongoing processes of urbanization, human geographers have sought to situate **urban agglomerations** with the wider economic and political contexts of which they are part and to which they contribute. Specifically, they have explored the ways in which the capitalist economic system has become entangled, embroiled, and intertwined with urbanization processes in different regions and at different times.

Within the discipline of Geography, undoubtedly the first and most significant author to relate the emergence, growth, and mutation of cities to the rise and development of the wider capitalist economic system and to broader processes of industrialization and economic development was British-born and US-resident Marxist geographer David Harvey. A graduate of Cambridge University, Harvey has worked at Bristol University, Oxford University, Johns Hopkins University in Baltimore, and most recently the City University of New York. When Harvey moved to Baltimore in 1969 it was a blue-collar city subject to industrial collapse and burdened with significant poverty and racial tension. For Harvey, this move proved to be a pivotal moment in his career. Baltimore led Harvey to question the utility of existing perspectives within the discipline of Geography, many of which proved incapable of making sense of Baltimore's predicament or informing what ought to be done about it.

Harvey believed that Baltimore's fate was inextricably linked to its changing role in the US capitalist economy. He believed that geographers needed to develop a much deeper understanding of how capitalism produces spaces, including cities. He argued that the problems faced by many urban communities had their roots in contradictions, inequalities, and malfunctions inherent within the capitalist system. Increasingly, Harvey became drawn to the ideas of Karl Marx and sought to develop a Marxist theory of urbanization. Harvey's Marxist approach was first introduced in his 1973 book *Social Justice and the City*. In his 1982 book *The Limits to Capital* Harvey sought to bring the discipline of Geography into a conversation with Marxism and ventured a sophisticated Marxist theory of how space is both produced by and in turn shapes the course of capitalism. He applied this Marxist theory of the role of space in capitalist societies to the study of the city in his books *The Urbanization of Capital* (1985a) and *Consciousness and the Urban Experience* (1985b) and sought to illustrate his approach in his magisterial book *Paris, Capital of Modernity* (2003). More recently, in his book *The Enigma of Capital: And the Crises of Capitalism* (2011), Harvey has written about the impact of the global financial and economic system on cities from 2007. And in his book *Rebel Cities: From the Right to*

the City to the Urban Revolution (2012) Harvey sketches out the ways in which fundamental changes in society might lead to fairer societies and better cities.

According to Harvey, at any moment in time **capitalism** needs to create particular agglomerations of people, offices, industries, transport facilities, shops, streets, energy facilities, sewerage and sanitation schemes, waste management facilities, open spaces, and so on, to function. Harvey refers to these temporary and transitory geographical arrangements as capitalism's "**spatial fix**." Spatial fixes crystallize onto the landscape when they are needed but these built environments quickly dissolve when they no longer help the economic system to work. For Harvey, old spatial fixes end up frustrating capitalism's ability to do new things. Eventually change becomes necessary and through the "creative destruction" of the old built environment a new spatial fix is created which serves capitalism's needs, at least for another while. For Harvey, capitalism is a restless economic system and spatial fixes have a short lifespan.

According to Harvey, the city represents a particularly significant spatial fix for capitalism. The city helps capitalism to accomplish certain tasks and in turn plays a role in its growth and development. The city allows capitalist owners to recruit and sustain workers, rent buildings and property, collaborate with suppliers, competitors, and customers, sell goods to the market, procure energy supplies and discharge waste, import raw materials and export finished goods, and so on. The extent to which the city remains capitalism's preferred spatial fix is a matter of debate. Certainly, Harvey's insistence that capitalism is an ever-changing system and that all spatial fixes are time-limited would lead to the expectation that the city is but a temporary and changeable form and that through time new relationships between capitalism and **space** will create new agglomerations on the face of the earth.

Urbanization and Urban Form: The Nineteenth- and Twentieth-Century Industrial City

This rise of homo urbanus in Europe from 1800

This rise of homo urbanus began in earnest in Europe around 1800 and spread first only to countries formed through European emigration. Swiss-based Belgian economic historian Paul Bairoch and US political scientist Gary Goertz provide an authoritative overview of historical trends in urbanization in these pioneering countries (Bairoch and Goertz, 1986).

According to Bairoch and Goertz, the percentage of the population in Europe and its offshoot countries living in cities with more than 5,000 inhabitants in 1300 CE was only between 7 and 9%. By 1800, this figure remained stagnant at around 10.7%. By 1880, however, 23.6% of people had become urbanized and this figure was to grow to 35.7% by 1914, 47.1% by 1950, and 66.4% by 1980. Table 9.1 highlights variations in levels of urbanization across Europe and the rest of the developed world from 1800 to 1910. Urbanization began first in the countries of Western Europe and was pioneered most vigorously by the United Kingdom. Meanwhile, the countries of Scandinavia and Eastern Europe were left somewhat behind and urbanized only later and at a slower pace. Starting as overwhelmingly rural countries in 1800, the rest of the developed world at that time experienced rapid and

Table 9.1 Urbanization levels (% population living in settlements > 5,000 inhabitants) by country (1800–1910). Source: Bairoch and Goertz, 1986.

Country	1800	1830	1850	1880	1900	1910
Europe	10.9	12.6	16.4	23.5	30.4	32.8
United Kingdom	19.2	27.5	39.6	56.2	67.4	69.2
Belgium	20.5	25.0	33.5	43.1	52.3	56.6
Netherlands	37.4	35.8	35.6	44.5	47.8	50.5
Germany	8.9	9.1	15.0	29.1	42.0	48.8
Italy	18.0	19.0	23.0	28.0	35.5	40.0
France	12.2	15.7	19.5	27.6	35.4	38.5
Spain	17.5	17.5	18.0	26.0	34.0	38.0
Switzerland	7.0	7.5	11.9	20.4	30.6	37.1
Denmark	15.6	14.1	14.6	23.0	33.5	35.9
Austria-Hungary	6.5	7.1	9.7	16.0	25.6	28.5
Norway	7.0	7.2	9.0	16.0	24.3	25.1
Bulgaria	5.5	5.5	6.0	11.0	15.0	22.1
Sweden	6.6	6.6	6.8	12.5	19.3	22.6
Greece	11.5	12.0	14.0	16.0	21.0	22.0
Romania	7.5	7.5	11.0	14.0	17.3	16.0
Portugal	15.5	15.0	15.0	15.0	15.7	15.6
Russia	5.9	6.0	7.2	10.6	13.2	14.3
Finland	3.5	3.5	3.7	6.1	10.4	12.6
Serbia	10.0	10.0	10.0	10.0	9.8	10.0
Other DCs	5.5	7.9	13.9	24.4	35.6	41.6
TOTAL	**10.7**	**12.3**	**16.2**	**23.6**	**31.3**	**34.4**

DCs = Developing countries

sustained urbanization across the nineteenth century. **Urbanization rates** (defined by Bairoch and Goertz as the rate of growth per year of populations living in a settlement with greater than 5,000 inhabitants) peaked in Europe at the end of the nineteenth century at around 2.2%. But urbanization rates were much higher in the United States, Canada, Australia, and New Zealand, persisting at above 4% for most of the nineteenth century, peaking at 7.2% in 1850.

Capitalism and the emergence of the industrial city

Was it an accident that as Europe transitioned from a feudal and agricultural to a capitalist and industrial society it was first to bear witness to the rise of the modern city? In fact it was only because capitalism was introduced into the countryside first that large-scale urbanization became possible later. Capitalism brought to agriculture new farming methods and technologies, and the production of food expanded dramatically. Having figured out a way of producing secure food surpluses, it became possible for society to "release" significant numbers of people from the binds of the land. Landless laborers could now (and were now forced to) migrate to cities and become part of the urban industrial workforce.

But just because mass urbanization was now possible did not mean that large cities would automatically form. The rise of capitalism changed the structure of Europe's economy, from one based around agricultural production to one predicated upon industrial production. Capitalism brought with it the factory and smoke-filled landscapes of the industrial revolution and created conditions in which cities became not only possible but necessary. The industrial revolution both birthed and, in turn, depended upon cities to provide:

- employment for landless laborers forced from the countryside by mechanization, and thereby a safety valve to protect society from threats posed by mass unemployment, poverty, social chaos, and revolution;
- a large pool of cheap labor that factory owners could exploit and that could more easily be replenished if unruly;
- a means through which factory owners could collaborate with other industries (suppliers, competitors, customers) in support of their production processes;
- a key node in transportation networks that factory owners could use to get raw materials and workers to the factory and goods to the market;
- an infrastructure through which factory owners could source utilities (energy, water, communications) at viable costs;
- an effective channel through which factory owners could retail their goods to large quantities of people;
- a cost-effective way for industrial and political leaders to promote the welfare of factory workers, providing them with public services such as schools, housing, hospitals, and sewerage and sanitation, thereby sustaining their labor power.

We might say, then, that urbanization began when it did, where it did, in response to the rise of the capitalist economic system, and in particular to the industrial revolution's need for urban agglomeration (see Zoom-in Box 9.1).

Modeling the form of the industrial city

Perhaps the most famous attempt to describe and explain the spatial organization of the nineteenth- and early twentieth-century city was that provided by the Chicago School of Urban Sociology, which emerged in the early 1920s and continued through to the 1960s. Within this school, Robert E Park, Ernest Burgess, and Roderick D McKenzie's *The City*, published in 1925 (Park, Burgess, and Mackenzie, 1925), has proved to be particularly influential.

The City was published at a time when Chicago was rapidly expanding. In 1850, Chicago had a population of circa 29,000 and was the twenty-fourth-largest city in the United States. By 1900, its population had increased to 1.7 million, making it the second-largest city. Further growth ensured that Chicago retained this ranking and by 1930 the city's population amounted to circa 3.4 million. Chicago grew as a result of significant immigration, incorporating the arrival of Irish migrants in the 1840s; late nineteenth-century immigrants from Europe (principally Germany, the United Kingdom, Scandinavia, and the Netherlands); turn-of-the-century arrivals from Poland, Lithuania, Ukraine, Hungary, the former Czechoslovakia, Greece, and Italy; early twentieth-century Jewish immigrants from the Russian-held territories and also "internal" Afro-American migrants from southern states.

Zoom-in Box 9.1:   Capitalism, the Industrial Revolution, and Urbanization: The Case of Glasgow, Scotland

The city of Glasgow in Scotland provides an excellent example of the relationship between the rise of capitalism, the industrial revolution, urbanization, and the emergence of the industrial city.

In 1717, Glasgow was a small village with a population of circa 15,000 perched on the River Clyde in West Central Scotland. By 1800, the population of the city had grown to 80,000. Behind this growth were the Glasgow Tobacco Lords – entrepreneurs, who exploited Britain's colonization of North America, imported tobacco from among other places Virginia and North and South Carolina, manufactured tobacco products in Glasgow, and exported these products on to the rest of Europe.

The American War of Independence halted tobacco imports. In the ensuing period of 1776 to 1850, the riches that had been accumulated by the Tobacco Lords were reinvested in new textiles factories. Using raw materials imported from lands that were falling under British colonial rule, Glasgow became a city specializing in the manufacturing of cotton, wool, flax (linen), and silk, and thereafter a magnet for migrant workers. By 1850, its population had grown to 350,000.

Recognizing the virtues of Glasgow's location on the River Clyde and the abundance of local resources such as coal and iron ore, from 1850 onward Glasgow then turned its attention to shipbuilding, heavy engineering, machine making, and the production of locomotives. Family dynasties that emerged at the time of the tobacco trade, and that consolidated their power during the period when textiles dominated, now funded the expansion of a rapid industrialization of the city. Migrants flooded to the city from the Scottish highlands and lowlands and from Ireland, and between 1921 and 1931 Glasgow's population peaked at nearly 1.2 million.

By 1920, Glasgow was crowned the second city of the British **Empire** and was held in esteem as a world-leading industrial city.

The City provided the first sustained attempt to figure the geographical order of the city that was emerging from such immigration and growth. It offered the Darwinian idea of "**urban ecology**" as a way of understanding urban form: All individuals and groups compete for a place in the city. Survival of the fittest serves to sift and sort groups of people into different parts of the city. The more able capture the prime locations. Those with less command of resources are forced to occupy the next-best neighborhood or niche they can. Immigration begins a process of "invasion" in which new social groups colonize the poorest neighborhoods. Through time "invasion" leads to "succession" and the prior occupants are forced to take flight. These occupants, when resourceful, contribute to this process by actively searching out a different and better niche.

Perhaps the most famous chapter in *The City* was that written by Chicago-based sociologist Ernest W Burgess. Burgess argued that, because of the workings of urban ecology**,** cities are organized on the basis of a series of concentric zones

Central Business District (CBD). At the heart of the city is the Central Business District (CBD) where commerce, nance, and retailing activities, as well as recreational and political land uses congregate. These actors are among the most resourceful and can successfully bid for the most accessible, and therefore most expensive, locations in the conurbation. Beyond impoverished homeless people few inhabitants reside in the CBD.

Zone of Transition. Here, light industry, warehouses, and industrial factories cluster; these businesses need a central location to maximize their access to pools of labor but, given that they occupy signi cant quantities of land, they prefer not to pay the premium rates for land and property that mark the CBD. The zone of transition is also home to the newest and poorest immigrant populations (living in overcrowded residences at high densities) and bohemian populations courting alternative lifestyles.

Zone of Workingmen's Homes. Second-generation immigrants who have advanced beyond the Zone of Transition dwell in the Zone of Workingmen's Homes. Close enough to the city center to walk to work, this population lives at relatively high densities making rent affordable. This zone is continually being invaded by incomers from the Zone of Transition but depleted by yet more established populations who search for a better life in neighborhoods further a eld.

The Residential Zone. This zone is home to the aspiring middle classes bent on upward social mobility. Normally educated and working in clerical and even professional and managerial roles, this group of people live in lower-density accommodation and enjoy superior residential amenities, including more gardens and open spaces.

The Commuters Zone. The upper classes live in the commuter zone at a distance from the city center. Enjoying the sense of living in smaller communities with a village atmosphere, commuters require salaries commensurate with purchasing a detached home with a spacious garden and investing in an automobile for work and leisure purposes. The commuter zone is reserved normally for only the most established and longest existing immigrant group and for those capable of the greatest upward social mobility.
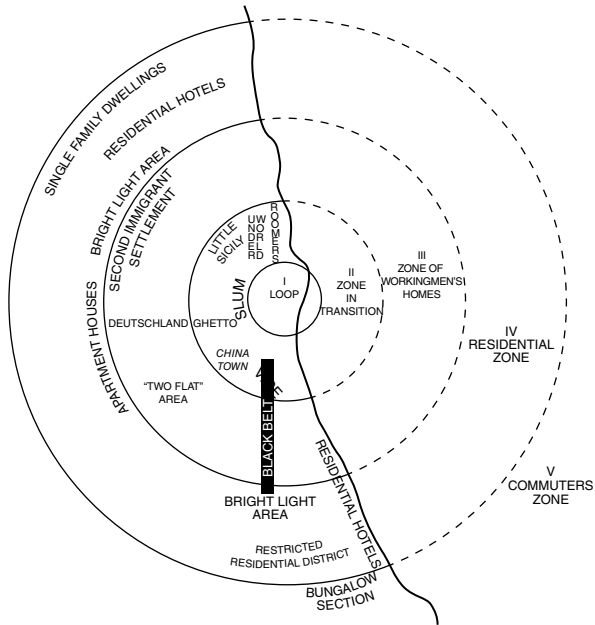
Figure 9.1   Burgess on land-use patterns in the city.

(the Central Business District Zone, the Zone in Transition, The Zone of Workingmen's Homes, The Residential Zone, and The Commuters' Zone) which radiate out from a central core (see Figure 9.1). Many attempts have been made to apply Burgess's model to test its validity with respect both to Chicago and to other cities. Whilst it offers a useful starting point, it is clear that land-use patterns in the city have been transformed by new processes (see Zoom-in Box 9.2).

Whilst applying critically Chicago School models to particular cities remains an instructive exercise, increasingly human geographers are coming to recognize that nineteenth- and early twentieth-century urbanization processes and forms are being eclipsed and that a new era of urbanization and urban agglomeration is dawning.

Voices of Decline: *the death of the industrial city?*

The industrial city has led a precarious life since its birth. It has been beset by many problems and many times its future has looked in doubt. In his book *Voices of Decline: The Postwar Fate of US Cities* US urban planner Robert Beauregard placed under scrutiny over 100 years of public debate on the North American industrial city in particular (Beauregard, 1993). *Voices of Decline* examined framings of the city in public speeches by politicians and city officials, reporting in newspapers, magazines, radio and TV, policy documents written by civil servants, and analyses and reports written by consultants and academics from the late nineteenth century. Beauregard was struck by the manner in which one could discern major sea changes in the way

Zoom-in Box 9.2:   Urban Land-Use Patterns:
The Case of Newcastle, England

Consider the spatial structure of the city you currently reside in. How accurately do you think Burgess's concentric zones model represents land-use patterns in your city? It is clear that across the twentieth century a number of urban processes have conspired to rearrange cities to the extent that the concentric zones model is no longer relevant – assuming that it ever was.

In the case of Newcastle, England, we might point to four distinctive processes which have radically transformed the city and shaped its present layout:

Urban planning: Urban planners have played a significant role in transforming the layout of Newcastle. In particular, in a bid to deal with the late nineteenth- and early twentieth-century drift of inner-city neighborhoods (in the Zone of Transition and the Zone of Workingmen's Homes) into slums, urban planners have cleared slum housing from inner-city areas and relocated populations to tower blocks, large social housing estates elsewhere in the city and in new towns at a distance from the city (such as Washington new town).

Gentrification: Young middle-class professionals are returning to dilapidated inner-city areas (and, in particular, waterfront locations along the banks of the River Tyne) to avail of social and cultural amenities in the city center. This process, called **gentrification**, is transforming the Central Business District and Zone of Transition, breathing new life into decaying parts of the city. But it is also displacing the remaining working-class communities who dwell in these spaces but who are unable to resist development pressures.

Out-of-town and in-town shopping: Retail functions are increasingly being dispersed out of Newcastle city center and into shopping malls and retail parks at the edge of the city (the famous Gateshead Metro Centre shopping mall being a case in point). Moreover, as more people shop online, the need for retailing outlets per se has declined. Whilst these trends have served to reduce traffic congestion and environmental pollution in Newcastle city center they have also threatened the role of the downtown as the commercial, social, and cultural heart of the city. In response, the city center is fighting back. Like many cities across the world, in 2009, Newcastle city center launched its own Business Improvement District (BID). BIDs are defined zones in which it is possible to levy an additional tax on local businesses and for this income to then be used to improve security on streets, to clean streets and remove graffiti, for stone cleaning and improved paving, for street architecture, and to enhance the general atmosphere of downtowns. The idea is to make the city center a more attractive prospect for shoppers.

Counter-urbanization: Some middle-class inhabitants, especially those with families and those nearing retirement, are deciding to leave Newcastle city behind and are choosing to locate in small satellite commuter towns and villages, sometimes at considerable distances from the city. Driven by

(Continued)

Box 9.2   (*Continued*)

lifestyle factors and lower property prices, such "**counter-urbanization**" is also being lubricated by higher rates of multi-car households, growing work-at-home opportunities, and improved transportation options. This flight to the countryside brings both advantages (helps sustain local shops and employment) and disadvantages (places pressures on local services, increases traffic congestion, raises house prices, and changes the character of local places) to surrounding towns and villages.

Are any of these four processes which have transformed the layout of Newcastle rewriting patterns of land use in your city too?

Period	Urban problems and solutions
Prelude to postwar decline: the progressive era, 1880–1930	**Definition of problem** Overly fast growth of cities led to overcrowded slums. Moral corruption within both the state and civil society made cities dangerous and sinful places and a threat to civilization. **Framing of solution** Modernist faith in the capacity of the state to control and to channel growth. Scientific and organizational advances of corporate capital to help the engineering of better cities.
Prelude to postwar decline: a temporary problem, 1920–1950	**Definition of problem** Urban growth had been temporarily restrained by the effects of the Great Depression and World War II. **Framing of solution** Post-Depression and post–World War II recovery would ensure the continuation of healthy urban growth.
Escalating downward: potentially irreversible problems, 1945–1960	**Definition of problem** City was suburbizing itself to death. Out-migration was selective, involving mainly young, middle-class families. In-migration of the Black population from southern states to older industrial conurbations in the North brought new class and racial problems. **Framing of solution** National debate centered upon whether to rebuild existing cities, construct new suburban cities and allow existing cities to pass into a less central role, or to abandon big cities altogether.
From one crisis to the next: 1960s to mid-1970s	**Definition of problem** Underprivileged Black migrants made the slums and the slums could not be cured without dealing with the problems of racially generated poverty. Toward the end of the period, the so-called "negro problem" was linked to the fiscal crises faced by so many cities, which came more to the foreground. **Framing of solutions** Fundamental employment and civil rights needed to be established to overturn racial discrimination. Then, with the race problem solved, the slum or ghetto problem might also be solved.
Rising from the ashes: glimmer of the future, 1970s–1990s	**Definition of problem** The quality of life available in a city, its leisure and cultural amenities, and its overall image, were vital in attracting business and people back to it. The timing was right to represent the city to the world as a place of life and vitality. **Framing of solution** City marketing exercises were to represent the city as a place in which to consume and be entertained. The city could be shown to offer new life styles attractive to those bored by life in suburbia.

Figure 9.2   Beauregard's framing of postwar discourses of urban decline in the United States. Source: Beauregard, 1993.

cities were being "understood" and depicted through time. For the most part, the emphasis was firmly upon the city as a harbinger of intractable problems and as a dying phenomenon (Boyle and Rogerson, 2001) (Figure 9.2).

Since the early 1970s, public discussion has increasingly centered upon the claim that deindustrialization has effectively sounded the death knell for the industrial city. Cities whose economies have traditionally relied upon shipbuilding, heavy engineering, the production of locomotives, and heavy chemical industries have found themselves unable to compete with rival industries based in low-wage regions. Blue-collar or smokestack or rustbelt cities, such as Pittsburgh, Newark, Philadelphia, Baltimore, Cleveland, and Detroit, have for some time now been forced to contend with deindustrialization and its

attendant problems of factory closure, unsightly and dangerous derelict and vacant land, high unemployment and poverty, and outmigration and depopulation. Moreover, this hemorrhaging of industrial jobs continues to this day. With the ongoing collapse and restructuring of the US automobile industry, it is even possible, for instance, that Detroit – Motor City – may well be in the throes of an irreversible decline.

For the foreseeable future all declining industrial cities are liable to be rendered especially vulnerable by the heightened mobility of capital. The capacity of transnational corporations to switch their operations from location to location around the world has created a truly global economy and one which has engendered a competition between places to secure investment. This inter-locality competition has grown to include competition for government facilities, tourists, the consumer dollar, and, perhaps most importantly, for skilled and talented workers (Florida, 2002, 2010, 2012). British-born and US-resident political geographer Kevin Cox (1993) has labeled this self-perpetuating competition between localities as the "New Urban Politics". Increasingly, the task facing city leaders is the creation of urban conditions sufficiently attractive to lure prospective firms, civil servants, tourists, shoppers, and creative workers. For industrial cities in particular, the image of the city has become of paramount importance. Rustbelt cities are trying to alter their image by manipulating their soft infrastructure (cultural and leisure amenities, for instance) and by refashioning their economic attractiveness (through provision of grants, property, transport facilities, or tax abatements, for instance).

According to British-born and US-resident Marxist geographer David Harvey (1989), city leaders are now behaving more as urban entrepreneurs than as urban managers. They are diverting ever more of their budgets away from the provision of welfare services to the poor and toward glossy, hyped-up city marketing campaigns (see also Cox and Mair, 1988). They are turning cities into commodities to be sold to the highest bidder. In so doing, both the facade and the vibe of cities are being given a make-over. By (re)building "prestige" or "flagship" or iconic landmarks, expanding cultural, heritage, and museum amenities, and hosting major leisure, cultural, sporting, or political events (such as the Olympic Games, heads of government meetings, comedy and jazz festivals, city of culture events, and so on), cities are trying to put themselves on the map at the expense of others. Urban entrepreneurs may well salvage some cities ravaged by deindustrialization. But according to Harvey, not every city can win. For less fortunate cities, city marketing projects will erect a public face which will conceal the reality of the rot that lies underneath. Many city marketing projects, then, amount to little more than applying lipstick on the gorilla!

Toward a New Era of Planetary Urbanization

US urban scholar Neil Brenner and Swiss urban geographer Christian Schmid offer a particularly insightful account of the meaning and implications of trends in world urbanization today. Brenner and Schmid argue that the ongoing development of capitalism in the West and the diffusion of capitalism, industrialization, and development to other societies around the world are putting in question the usefulness of existing scholarship on urbanization and urban form. Is there any use, they argue, in continuing to view the city as capitalism's chief expression on the landscape?

Brenner and Schmid develop the concept of "**planetary urbanization**" to set forth a new direction for Urban Studies (Brenner and Schmid, 2011, 2014; Brenner, 2014). Planetary urbanization includes, but is not confined to, the idea that most societies around the world today are in the process of urbanizing and will soon become, if they are not already, predominantly urban in settlement structure. More importantly, planetary urbanization is concerned with the new urban forms that this urbanization will produce (which will, through time, make the traditional city look dated) and the reach of the impact of urbanization to regions hitherto considered to be "non-urban."

At the heart of Brenner and Schmid's account of planetary urbanization are the ideas of "concentration" and "extension":

Concentration: Capitalism, and other economic systems, will continue to drive people to cluster together and more and more people will live in larger and larger urban centers with higher and higher levels of population density. But in so doing, urbanization will convene ever more complex, novel, and monstrous urban agglomerations, rendering the city, as it is conventionally understood, obsolete. For instance, some geographers claim today to recognize the existence of "postmetropolis," urban galaxies or "megalopolis," and historically unique megacities in the Global South.

Extension: Meanwhile, around the world, urbanization is proving to be such a powerful process that its impact is now everywhere; there is no part of the countryside or wilderness, no matter how remote or isolated from urban centers, or how natural and untouched in appearance, that has escaped the consequences of urbanization. Every inch of the earth's surface has been urbanized. Urbanization is affecting everybody everywhere to the extent that it is difficult to know where the city limits might be. Increasingly, the distinction between urban and rural areas is losing its meaning.

Brenner and Schmid are led to the conclusion that it makes little sense for Urban Studies to concern itself with the city per se. The priority today must be to study the ways in which "concentration" is creating new urban forms, in the midst of which the concept of the city is losing its relevance, and "extension" is making redundant the boundary between the urbanized city and the rural countryside.

Following a brief resumé of urbanization trends from 1950 to the present and forecasts to 2050, this section will document three kinds of emerging urban agglomeration which are likely to be important in the twenty-first century: "postmetropolis," "megalopolis," and "megacities in the Global South."

Urbanization trends 1950–2050

In its *2011 Revision* of its biannual *World Urbanization Prospects* the Population Division of the Department of Economic and Social Affairs at the United Nations charts world urbanization from 1950 to the present and offers estimates and projections of likely trends in world urbanization to 2050 (United Nations Population Division, 2012) (see Figure 9.3).
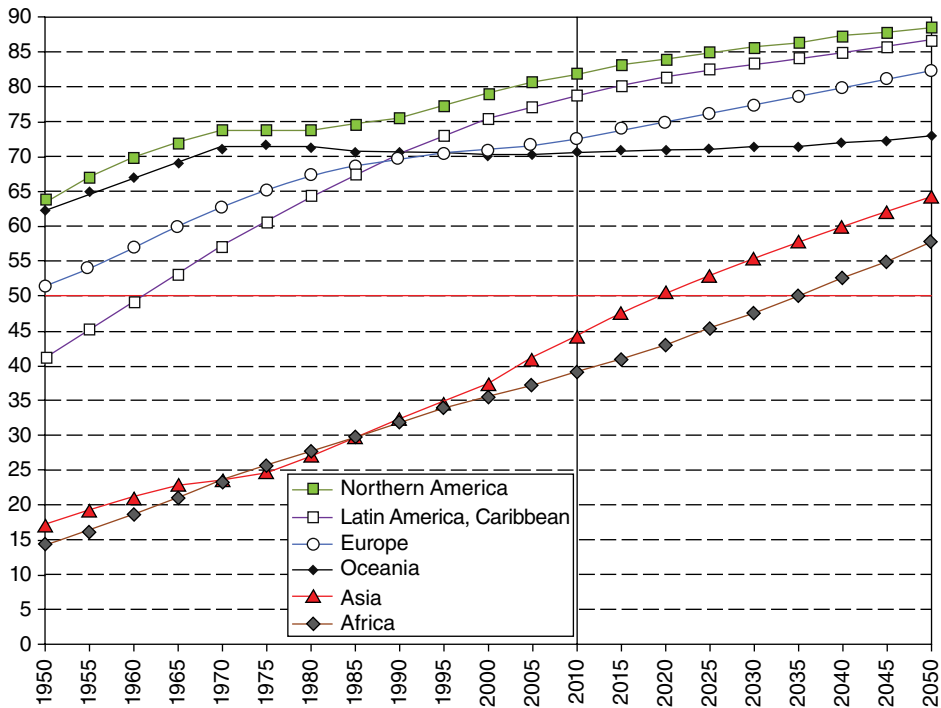
Figure 9.3 Percentage of the population urban by world region. Source: UN Population Division, 2013. Used by permission of the United Nations.

The difficulty of compiling global statistics on urban populations is that there exists a variety of definitions of what is and what is not an "urban" area, including in different national censuses. Because the United Nations does not collect data directly, it has been forced to follow the definitions that are used in each country. Whilst unavoidable, this of course raises questions as to whether comparisons between countries are meaningful.

Still, perhaps four trends are worthy of particular comment:

- North America, already the most urbanized region in the world in 1950, will continue to urbanize, albeit at much slower rates (between 0.5 and 1% per annum), and will remain the most urbanized region (over 85% urban) by 2050. Europe, too, will continue to urbanize, again at a slower pace (around 0.25% per annum), and by 2050 will be over 80% urban.
- Oceania proves to be an exception to the rule in that it is the only world region where rates of urbanization have peaked and settled and where the size of the urban population has stagnated, albeit at a relatively high level of more than 70%. Oceania will see further urbanization by 2050 but it will not catch up with North America and Europe.
- By 1960 Latin America was already more than 50% urbanized and from this relatively high base its urban centers have grown consistently, by between 2 and 4% per annum, meaning that it is now over 80% urbanized. Although urbanization

rates will fall to less than 1%, by 2050 Latin America's population will be 87% urban, making it the second most urbanized region in the world after North America.

- Both Asia and Africa began the period with the lowest levels of urbanization, both between 15 and 17%. Significant rates of urbanization (between 3 and 5% per annum) mean, however, that today Asia is approximately 45% urban whilst Africa is 40% urban. By 2050, Asia's population will be approximately 64% urban, but urbanization rates will be reduced to less than 1%. The percentage of the population of Africa that is urban will increase sharply to around 58% and urbanization rates of between 2 and 3% will persist until 2050.

These trends will also be reflected in the absolute sizes and locations of the largest cities in the world (Table 9.2). In 1950, the largest city in the world was New York-Newark, with a population of 12.34 million. For the most part, the largest cities in the world (18 of the top 30) were to be found in the United States, Europe, Japan, and the Soviet Union. By 2050, Tokyo will be the largest city in the world, with an estimated population of 36.55 million, but by that time only six cities from the United States, Europe, Japan, and the Soviet Union will make it into the top 30. Cities in Latin America and Asia, such as Delhi, Shanghai, Mumbai, Mexico City, São Paolo, Dhaka, Beijing, and Karachi will dominate, with populations in excess of 20 million. In Africa, Lagos will join Cairo as a **megacity**.

Los Angeles: our postmetropolis future?

In the 1980s and 1990s there emerged a Los Angeles School of Urban Geography which sought to track emerging trends and to map and account for the layout of the cities of today. Just as the Chicago School of Urban Sociology had used Chicago as its laboratory in the 1920s, 1930s, and 1940s, the Los Angeles School of Urban Geography has searched the city of Los Angeles for clues as to how cities might be changing today. Los Angeles, it is claimed, has already experienced changes that other cities are likely to encounter in future, and, as such, is a pioneer. In Los Angeles one can glimpse the future of all cities.

Referring to Los Angeles as a postmetropolis, Angelino urban geographer and planner Edward Soja has identified six geographies of urban restructuring in the city. In *Postmetropolis: Critical Studies of Cities and Regions*, published in 2000, Soja labels these "Six Discourses on the Postmetropolis" (Soja, 2000). Of the six, one discourse takes priority over the others:

Exopolis: We might say that the cities of the past were marked by the dominance of an urban core – both functionally (in orchestrating how the wider conurbation worked) and symbolically (through its impressive skyscrapers, important buildings, and public plazas) – over the rest of the conurbation. Today it is sprawling urban hinterlands and their various edges and suburbs, which organize metropolitan regions including former downtown cores. For Soja, the center of Los Angeles is as much in Orange County, the corridor from Malibu to Long Beach, the San Fernando Valley, or San Bernandino and Riverside counties as it is in the traditional downtown.

Table 9.2   The 30 largest cities in the world, 1950 and 2025. Source: UN Population Division, 2013. Used by permission of the United Nations.

Year	Rank order	Urban agglomeration	Population (millions)	Year	Rank order	Urban agglomeration	Population (millions)
1950	1	New York-Newark	12.34	2025	1	Tokyo	38.66
1950	2	Tokyo	11.27	2025	2	Delhi	32.94
1950	3	London	8.36	2025	3	Shanghai	28.40
1950	4	Paris	6.28	2025	4	Mumbai (Bombay)	26.56
1950	5	Moskva (Moscow)	5.36	2025	5	Ciudad de México (Mexico City)	24.58
1950	6	Buenos Aires	5.10	2025	6	New York-Newark	23.57
1950	7	Chicago	5.00	2025	7	São Paulo	23.17
1950	8	Kolkata (Calcutta)	4.51	2025	8	Dhaka	22.91
1950	9	Shanghai	4.30	2025	9	Beijing	22.63
1950	10	Osaka-Kobe	4.15	2025	10	Karachi	20.19
1950	11	Los Angeles-Long Beach-Santa Ana	4.05	2025	11	Lagos	18.86
1950	12	Berlin	3.34	2025	12	Kolkata (Calcutta)	18.71
1950	13	Philadelphia	3.13	2025	13	Manila	16.28
1950	14	Rio de Janeiro	2.95	2025	14	Los Angeles-Long Beach-Santa Ana	15.69
1950	15	Sankt Peterburg (Saint Petersburg)	2.90	2025	15	Shenzhen	15.54
1950	16	Ciudad de México (Mexico City)	2.88	2025	16	Buenos Aires	15.52
1950	17	Mumbai (Bombay)	2.86	2025	17	Guangzhou, Guangdong	15.47
1950	18	Detroit	2.77	2025	18	Istanbul	14.90
1950	19	Boston	2.55	2025	19	Al-Qahirah (Cairo)	14.74
1950	20	Al-Qahirah (Cairo)	2.49	2025	20	Kinshasa	14.54
1950	21	Tianjin	2.47	2025	21	Chongqing	13.63
1950	22	Manchester	2.42	2025	22	Rio de Janeiro	13.62
1950	23	São Paulo	2.33	2025	23	Bangalore	13.19
1950	24	Birmingham	2.23	2025	24	Jakarta	12.82
1950	25	Shenyang	2.15	2025	25	Chennai (Madras)	12.81
1950	26	Roma (Rome)	1.88	2025	26	Wuhan	12.73
1950	27	Milano (Milan)	1.88	2025	27	Moskva (Moscow)	12.58
1950	28	San Francisco-Oakland	1.86	2025	28	Paris	12.16
1950	29	Barcelona	1.81	2025	29	Osaka-Kobe	12.03
1950	30	Glasgow	1.76	2025	30	Tianjin	11.93

Soja observes how a raft of concepts have been used to capture this fact: "postsuburbia," "metroplex," "technopoles," "technoburbs," "urban villages," "county-cities," "regional cities," "the 100-mile city." He himself prefers the idea of **exopolis** – literally meaning a city turned inside out.

Soja's remaining five discourses explain, derive from, and/or supplement the key idea that Los Angeles is an exopolis:

Flexicity: According to Soja, changes in the economic geography of Los Angeles have transformed the geography of the city. In particular, as clusters of high-technology firms have emerged industry has moved from the center to the suburbs – forming distinctive "technoburbs."

Cosmopolis: Remarkably, however, global movements of capital, people, and trade have saved the downtown from extinction. The global film industry in Hollywood continues to prosper. Los Angeles also serves as a headquarters for some of the most powerful transnational corporations in the world and has well-developed financial services and producer services sectors. Meanwhile, the former center has become a magnet for immigrants (Mexicans and, to a lesser extent, migrants from El Salvador, China, the Philippines, Guatemala, Korea, Iran, Vietnam, Taiwan, and Armenia). Driven by these groups, a successful small light-industry sector (producing clothing, jewelry, and furniture) has arisen. Although no longer the center of the agglomeration, the Los Angeles downtown has become a part of the new polynucleated city.

Metropolarities: Los Angeles is also a city that exemplifies the growing social divisions and polarities that exist between society's haves and have-nots. The neighbor-hoods of Bel Air and Beverly Hills somehow coexist alongside almost developing-world neighborhoods such as those found in South Central Los Angeles.

Carceral Archipelagos: The 1992 Los Angeles riots revealed the potential for social inequalities and racial tensions to boil over into social chaos, violence, and crime. In response, Los Angeles has become something of a fortified city, with a premium placed upon surveillance and safety. Gated communities, private policing firms, and high-technology security devices work to preserve an uneasy peace, but at times they themselves can be experienced as menacing.

Simcity: One does not need to enter Universal Studios in North Hollywood or Disney World in Anaheim to view almost imaginary landscapes recreated and presented as reality. The suburban streets and shopping malls of Orange County and Irvine, for instance, look almost forged or fake replicas of the suburbs envis-aged in TV land. Soja refers to Los Angeles, therefore, as a hyper-real city, built in part around fantasy "dreamscapes."

Megalopolis: the rise of urban galaxies?

In 1961, French-born and US-resident geographer Jean Gottmann published *Megalopolis: The Urbanized Northeastern Seaboard of the United States*. In this book Gottmann argued that cities were now expanding in some regions to the extent that they were coagulating into a single overall agglomeration and becoming physically integrated and, to a degree, functionally integrated. Gottmann referred to these new urban spaces as "megalopoli."

Plate 9.1   In Search of Boswash, ChicPitts, and SanSan: USA by night. Source: NASA Earth Observatory/NOAA NGDC.

Gottmann's focus was upon the megalopolis forming on the northeastern seaboard of the United States incorporating Boston, New York City, Philadelphia, Pennsylvania, Baltimore, Maryland, and Washington, DC, and boasting a population in 1960 of 27 million (today 52 million). The term "Boswash" was later coined to capture the sprawl that Gottmann had first discovered (Plate 9.1).

Since Gottmann's megalopoli, numerous claims have been made regarding the existence of other megalopoli. Examples include:

- the *Blue Banana* in Europe (incorporating Liverpool, Manchester, Leeds, Birmingham, London, Brussels, Antwerp, Amsterdam, Rotterdam, The Hague, Luxembourg, Rhine-Ruhr, Frankfurt, Munich, Stuttgart, Basel, Zürich, Turin, and Milan – a total population of 110 million);
- the *Taiheiyō Belt* in Japan (incorporating Ibaraki, Saitama, Chiba, Tokyo, Kanagawa, Shizuoka, Aichi, Gifu, Mie, Osaka, Hyōgo, Wakayama, Okayama, Hiroshima, Yamaguchi, Kitakyūshū, Fukuoka, and Ōita – a total population of 80 million);
- *Central Mexico* (incorporating Mexico City, Puebla, Cuernavaca, Toluca and Pachuca – a total population of 35 million).

Recognizing value in the idea more as a vision than as a reality, some planners have attempted to imagine megalopoli and then plan to bring them into existence. In these instances, planners have actively encouraged cities to cooperate so that the whole is greater than the sum of the parts. For this to occur, the functions of each node need to be properly understood and complementarities between each enhanced. Gottmann's vision of the megalopolis may in the end be a self-fulfilling prophecy.

Planet of slums: megacities in the Global South

Many of the cities that exist in the Global South have their origins in the European colonial period and continue to bear traces of imperious European quarters and neighborhoods, majestic public spaces, and formal planning and beautification. For the most part rapid urbanization in Latin America, Asia, and Africa, however, emerged only following the departure of the Europeans and as countries were charting their own independent post-colonial futures. Increasingly, the cities of the colonial period have been superseded and new urban forms have appeared.

Whilst emerging megacities in the Global South boast complex urban forms, to date much attention has been focused upon the haphazard and unplanned mushrooming of urban slums or shanty towns at the edges of, and on occasions at the heart of, cities.

In the early 1970s, the most famous of these were the *favelas* that were developing in Rio de Janeiro, Brazil, providing super-impoverished migrants with barely liveable conditions (Plate 9.2). As urbanization spread to other regions in the Global South, the problem of urban slums became more universal and urgent. An estimated 1 billion people now dwell in shanty towns in such megacities as Jakarta, Lagos, Mumbai, Delhi, Karachi, and Dhaka; this figure is predicted to increase to 2 billion by 2030 and 3 billion by 2040.

In his 2006 *Planet of Slums* US urban scholar Mike Davis argues that urbanization in the Global South is distinctive because it appears to be decoupled from industrialization. Urbanization, Davis argues, has arisen as a consequence of prior colonial exploitation and failed postcolonial transitions; transformations in agriculture and the rise of a new class of super-poor landless laborers; and the inability of governments to provide social protection, a consequence of austerity forced on the Global South by

Plate 9.2   A *favela* in Rio de Janeiro. Source: © Alex Robinson/JAI/Corbis.

the Global North and also a result of corruption and kleptocratic government. Urban slums are the direct result of urbanization without growth or development and overseen by poor governance. Davis warns that leaving vast numbers of people in such poverty, insecurity, and hopelessness is not only wrong, and not only threatens the peace and stability of megacities, it also presents a threat to the security of the entire planet. Dwelling on the brink of survival, slum populations breed and are victims of violence – gang wars, drug racketeers, and people-traffickers preside over domestic abuse, sexual assault, violent assault, theft, kidnapping, and murder. Moreover, slums are breeding grounds for militant and fundamentalist groups, including those drawn to sectarian hatred.

Dealing with urban slums remains the most pressing challenge facing municipal authorities in the Global South today. For some, only by changing the position of the Global South in the global economy and promoting development will authorities be able to effect meaningful change. Others warn that the grand urban visions espoused by some municipal authorities are further impoverishing slum populations and that new and more progressive development plans are needed. Either way, political activism by social groups from shanty towns will be needed if the voice of the urban poor is to be heard.

In the meantime, Davis argues, slums in the Global South will continue to attract missionaries from all religious hues who view the urban poor as a significant audience and one receptive to evangelization. Paraphrasing Karl Marx, Davis argues that religion continues to be the opium of the people.

The Chinese Experience of Urbanization

Undoubtedly, the rise of the capitalist economic system has been the single most important progenitor of the urbanization of the surface of the earth from 1800. But capitalism is not the only economic and political system that is driving urbanization today. How, for instance, can one make sense of China's encounter with urbanization (see Zoom-in Box 9.3), a country governed ostensibly by an unelected Communist Party and an economy purportedly built around Communist principles? Some contend that China has simply gone the way of the West and that its emergence as an economic powerhouse has been built on ostensibly capitalist principles. Perhaps, then, the urban processes at work in China today are similar to those that occurred in the West in the nineteenth and early twentieth centuries. But is it this simple? We might, in fact, say that China's urbanization has been enabled by a combination of muscular state planning and anarchic local opportunism.

Chinese cities contributed 75% of the country's total GDP in 2009, and by 2025 this will rise to 95% of total GDP, with the eight largest cities generating almost 25% of the nation's wealth. It is widely recognized that, if it is to achieve its ambitious target of quadrupling its GDP per capita by 2020 from 2000 levels, China will need further urbanization. Against this backdrop, to a far greater extent than has been the case in Western cities, the Chinese state has actively sought to trigger and steer urbanization, to control its speed in different regions, and to shape and plan the spatial organization of the city (as a reflection of urban planning, some Chinese cities boast world-class, futuristic, and innovative iconic buildings, landscapes, and public spaces).

## Zoom-in Box 9.3:   China's Encounter with Urbanization

It is especially important to be careful when considering data on Chinese urbanization. Through time, the proportion of the Chinese population officially designated as "urban" has grown, and certainly migration and, to a lesser extent, natural increase (more births than deaths) have driven this expansion. But increases have also arisen simply as a product of repeated changes in official definitions of the "urban," the widening of city boundaries to include hinterlands, and the official registration of settlements hitherto overlooked. Moreover, some migration to cities, whilst viewed as permanent, is in fact seasonal and circular.

These qualifications notwithstanding, China has undoubtedly witnessed a momentous redistribution in its population over the past 30 years (McKinsey Global Institute, 2009):

- In 1949, only 11% of China's population lived in an urban area. By 1978, that figured had increased only marginally, to 18%, and even as late as 1992 China's urban population amounted to no more than 23% of the country's total population. By 2005, nonetheless, a rapid surge in urbanization had raised this figure to 44%, and forecasts suggest that by 2025 the proportion of the Chinese population living in cities will be 64%.
- From a base level of 254 million in 1990, China's urban population more than doubled, to 572 million, by 2005. By 2025, China will have added a further 350 million to its urban stock (equivalent to the population of the United States), and by 2030 China's urban population will reach 1 billion.
- Between 2005 and 2025, China is projected to increase its number of megacities from two to eight (Beijing, Shanghai, Tianjin, Shenzhen, Wuhan, Chonquing, Chengdu, and Guangzhou), its big cities (cities with between 5 and 10 million inhabitants) from 12 to 15, and its mid-sized cities (cities with between 1.5 and 5 million inhabitants) from 69 to 115. By 2025, China will have 221 cities with over 1 million inhabitants (today Europe has only 35 cities of this scale).
- China is witnessing the rise of its own peculiar megalopolis – the Pearl River Delta megalopolis (Plate 9.3) in the southern province of Guangdong (incorporating Hong Kong, Shenzhen, Dongguan, Guangzhou, Foshan, Jiangmen, Zhongshan, Zhuhai, Macau, and Huizhou – by 2020 projected to have a total population in excess of 70 million; see Map 9.1). Whilst Guangzhou sits at the epicenter of this megalopolis, Shenzhen, dubbed by some "the instant city," provides perhaps the most dramatic example of China's rapid urbanization. From a population base of 94,000 in 1980, Shenzhen grew to house 8.3 million people by 2005, an annual growth rate of 19.6% a year. From 2005, the city has continued to expand at around 5% per year. By 2010, the city was home to 10.3 million people, and forecasts suggest Shenzhen's population could rise to between 12 and 15.5 million by 2025.

Plate 9.3   Capital of the Pearl River Delta megalopolis: Guangzhou, Guangdong, China. Source: Mark Boyle.
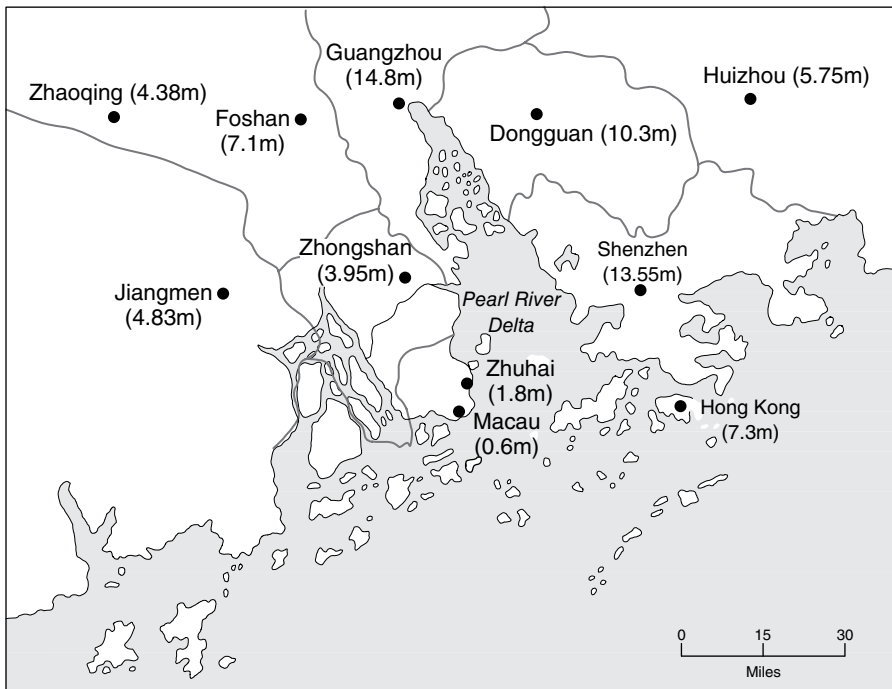
Map 9.1   The Pearl River Delta megacity. Source: population data from Chinese Statistical Press, 2013.

It does so through central planning, urban planning, the selective allocation of resources, and the strategic deployment of monetary and fiscal levers. But while China's urbanization has been shaped by the muscular interventions of the Chinese government and its provincial tiers, growth has been so rapid that many spaces have remained beyond the formal control and governance of state bodies and city officials. It is here that other processes of urbanization, unique to China, have played a role.

China's urbanization has been driven by large-scale migration from the countryside to cities. The urban sprawl that has resulted has drawn villages (now titled "urban villages") that were hitherto only part of the hinterland of cities into urban systems. The Chinese state plays a determining role in guiding land-use patterns in urban centers. To assist urban growth it has also brought under its direct control land in the countryside. But it has left urban villages outside formal planning and administration schemes. Exploiting their autonomy, local village authorities have erected high-density, low-cost apartments. These apartments have generated profitable rental streams for indigenous villagers, facilitated migrant relocation, and helped provide a pool of labor for local factories. They have provided income streams for village leaders. But they have grown haphazardly, lack basic amenities and infrastructure, and have become hubs for crime and social problems. Tensions have also grown between those members of the indigenous population who have benefited most and those who feel they have forsaken their living quarters without compensation.

China's experiment with rapid mass urbanization is one fraught with challenges as well as opportunities. The Chinese government continues to wrestle with the competing options of encouraging the development of a small number of megacities or fostering a spreading of growth in a more balanced way across the urban system. In addition, there is a fear that Chinese cities will not be able to provide sufficient housing, transport, health, and educational services to meet the needs of its growing populations. Moreover, given that rates of urbanization are so closely tied to economic performance, there is a concern that overly rapid urbanization might contribute to an overheating of the Chinese economy. All the while the plight of hundreds of millions of impoverished migrants who flock from the countryside to urban villages in search of factory employment remains troubling. China continues to serve as a low-wage economy only because these migrants accept wages and living conditions that are barely tolerable.

Conclusion

This chapter has recounted the story of the globalization of urbanization, beginning with its birth in Europe and initial expansion to countries formed through European emigration (principally the United States, Australia, Canada, and New Zealand), and incorporating its diffusion to Latin America, Asia, and Africa. It has placed under scrutiny the different relationships that have existed between the capitalist economic system, industrialization and development, urbanization, and spatial agglomerations of people, buildings, and industry, at different moments in time and in different regions of the world. It has reflected upon the claim that we are now living in an era of *planetary urbanization* in which new types of development are convening monstrous new urban forms which, in turn, are pulling even isolated and remote rural regions into the urbanization process. With reference to

the case of China, it has noted that urbanization is both occurring in and being shaped in new ways by non-Western political and economic systems pursuing other pathways to development.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) Human geographers have come to understand that the fortunes of urban agglomerations are inextricably embroiled, entangled, and intertwined with wider economic and political processes, specifically rooted in the capitalist economic system.
2) Whilst cities have featured in many past civilizations, mass urbanization began only around 1800, in (West) European countries and in countries established through European emigration. It is impossible to understand nineteenth- and early twentieth-century urbanization apart from the rise of capitalism and the industrial revolution. The mechanization of agriculture and industrialization of the economy made cities both possible and necessary.
3) The Chicago School of Urban Sociology (illustrated most clearly in the Burgess model) sought to describe the spatial organization of the nineteenth- and twentieth-century industrial city using the central idea of urban ecology.
4) Land-use change in industrial cities has rendered the work of the Chicago School somewhat obsolete.
5) The concept of "planetary urbanization" recognizes the importance of "concentration" (the ongoing agglomeration of people into ever more complicated urban forms) and "extension" (the reach and impact of urbanization into even the most remote parts of the world and therefore the futility of continuing to distinguish urban areas from rural areas).
6) Western countries remain highly urbanized and (with the exception of Oceania) urbanizing countries today; Latin America was among the first of the remaining continents to urbanize and is highly urbanized today; Asia and Africa were amongst the last continents to urbanize but are rapidly urbanizing today and will soon be majority urban.
7) Among the new types of urban agglomeration that are emerging today are postmetropolis, megalopolis, and megacities in the Global South.
8) Whilst most attention has been given to the role of the capitalist economic system in the urbanization of the earth's surface, China's encounters with urbanization suggest that various economic systems and forms of development promote urbanization.

Chapter Essay Questions

a) Describe the historical geography of the urbanization of the earth's surface that has occurred since 1800.
b) Capitalism, industrialization, and urbanization are all inextricably interlinked. Discuss.
c) Outline, illustrate, and comment upon the idea of "planetary urbanization."

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Guidance for Further Reading

Good general introductions to Urban Geography can be found in:

Gandy M (ed.) (2011) *Urban Constellations – An Overview of Contemporary Urban Discourse* (Jovis Verlag, Berlin).

Hall T and Barret H (2011) *Urban Geography* (4th edition) (Routledge, New York).

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Pacione M (2009) *Urban Geography: A Global Perspective* (3rd edition) (Routledge, New York).

A useful overview of nineteenth- and early twentieth-century urbanization in Europe and countries established through European migration can be found in:

Bairoch P and Goertz G (1986) "Factors of urbanisation in the nineteenth century developed countries: a descriptive and econometric analysis." *Urban Studies* 23: 285–305.

Comprehensive coverage of twentieth- and early twenty-first-century urbanization trends can be found at:

United Nations Population Division (2012) *World Urbanization Prospects: 2011 Revision* (UN Population Division, New York).

Students often find David Harvey's work challenging – of all his publications perhaps *The Urbanization of Capital* is the best place to start.

Harvey D (1985) *The Urbanization of Capital* (Blackwell, Oxford).

An excellent, brief, and accessible introduction to the concept of planetary urbanization is provided in:

Brenner N and Schmid C (2011) "Planetary urbanisation." In Gandy M (ed.) *Urban Constellations – An Overview of Contemporary Urban Discourse* (Jovis Verlag, Berlin) pp. 10–13.

Meanwhile, more advanced introductions to the concept of "planetary urbanization" can be found in:

Brenner N (ed.) (2014) *Implosions/Explosions: Towards a Study of Planetary Urbanisation* (Jovis, Berlin).

Brenner N and Schmid C (2014) "The Urban Age in Question." *International Journal of Urban and Regional Research* 38: 731–755.

A productive way to start the process of engaging with Edward Soja's work on Los Angeles is to read Part 2 of his *Postmetropolis: Critical Studies of Cities and Regions*, titled "Six Discourses on the Postmetropolis":

Soja E (2000) *Postmetropolis: Critical Studies of Cities and Regions* (Wiley-Blackwell, Oxford).

The seminal text introducing the idea of the megalopolis is:

Gottmann J (1961) *Megalopolis: The Urbanized Northeastern Seaboard of the United States* (The Twentieth Century Fund, New York).

An informative critical account of the problem of slums in the megacities of the Global South can be found in:

Davis M (2006) *Planet of Slums* (Verso, New York).

A good overview of China's experience of urbanization is provided in:

McKinsey Global institute (2009) *Preparing for China's Urban Billion* (McKinsey Global Institute, Shanghai).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 10

Global Migration: Moving, Settling, Staying Connected

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:

1) provide a typology of diasporas and identify the great diasporas in world history;
2) identify and comment on the world's principal migration corridors; describe the kinds of migrations that occur within and between countries in the Global South and in the Global North;

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3) explore the complex changes in migrant identities that can occur as they settle, integrate, and assimilate into host societies;
4) describe and comment upon the myriad ways in which migration impacts upon both migrant sending states and host countries.

Introduction

One of the chief legacies of the uneven world that the rise, reign, and faltering of the West has bequeathed has been a global migration system structured around flows of people within and between the Global South and the Global North.

Migration is a term that denotes the movement of people from one location to another. International migration is the movement of people from one country to another. Migration can be voluntary or forced. Voluntary migration occurs when people, of their own free will and perhaps in search of a better life, migrate to a new destination which, at least for a while, becomes their new home. Forced migration, in contrast, occurs when people are forced to flee from their homelands due to a humanitarian disaster caused by human actions (war, persecution, famine, etc.) or a natural hazard event (drought, hurricane, earthquake, tsunami, etc.). Forced migration can generate applications for asylum (permanent citizenship) from those displaced. If successful, such asylum seekers are then classified as refugees. Migration need not be permanent. Advances in communication mean many migrants move in a transient, circular, and more nomadic way than hitherto, and lead a transnational existence that entails moving into and out of the homeland for short periods. It is often difficult, then, to distinguish between migrants and business travelers or even long-stay tourists.

The purpose of this chapter is to document past and present migrations within and between the Global South and Global North, to explore migrant identities and processes of assimilation into host societies, and to examine the transnational activities of diaspora and the multiple connections they retain with their homelands.

Great Diasporas in Human History

Whilst migration is as old as time itself, there exist many great population movements in the recent history of humankind. South African–born and British-resident migration scholar Robin Cohen (1997) provides a useful typology to capture these movements. In proposing this typology Cohen makes use of the term "diaspora." In the next section we will place this term under scrutiny as its meaning can vary between authors and it is a term that comes freighted with assumptions. Cohen identifies five types of diaspora:

- Victim diasporas (for example, classic diasporas forced into exile by a traumatic historical event or series of events, such as the Jewish, African, and Armenian diasporas (for an exploration of the African diaspora see Zoom-in Box 10.1).
- Labor diasporas (for example, mass migration in search of work, such as the Indian and Turkish diasporas).

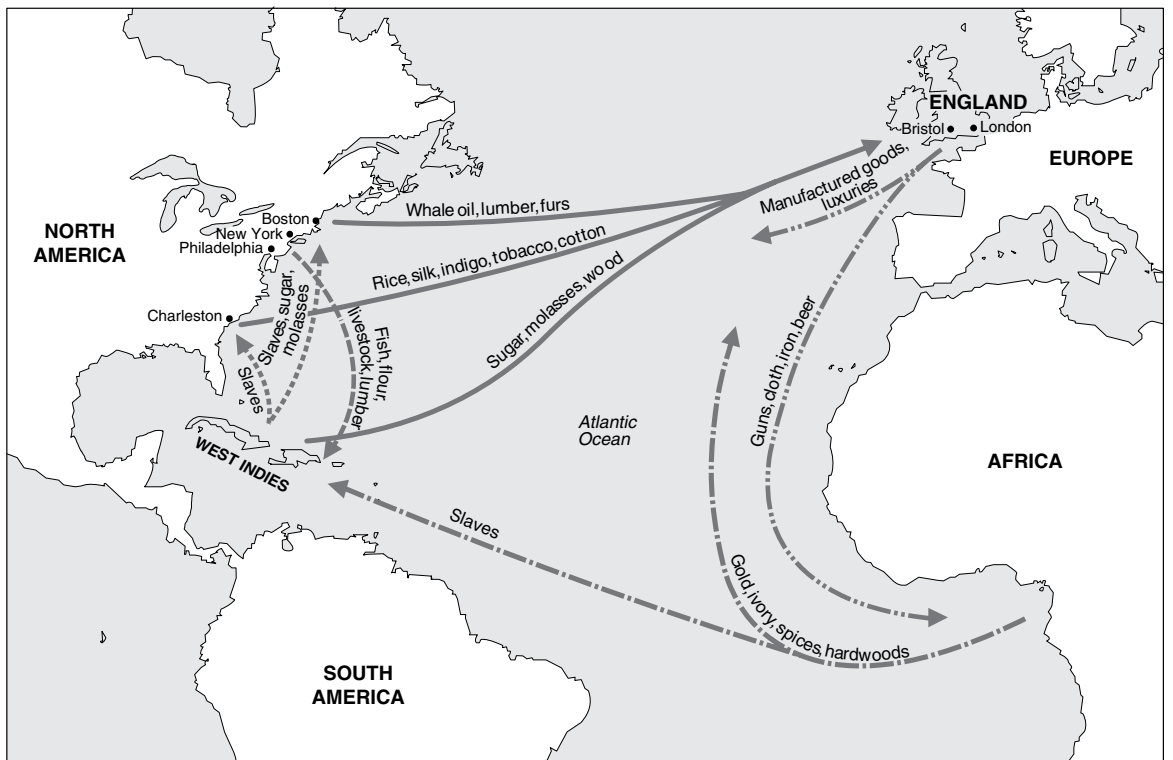## Zoom-in Box 10.1:   The Atlantic Slave Trade

The trade in African slaves formed part of the so-called Atlantic trading system that connected Europe, Africa, and Asia for over 400 years between the fourteenth and nineteenth centuries. Initially, slaves were captured in coastal regions that European traders knew well, but through time these traders penetrated all the way to the interior of the continent. It is estimated that more than 15 million Africans were captured into bondage and forced to migrate across the Atlantic to be sold into slavery. Many (perhaps up to one-fifth or more) lost their lives during the slave raids that were undertaken to capture indigenes and during transit in the horrific coffin ships that took those captured to the United States.

European trade (of gold, spices, and salt) with Africa pre-dated the slave-trade era. As pioneers of seafaring, it was perhaps unsurprising that it was Portugal that was first to instigate the slave trade. But the Dutch, French, Spanish, and British soon followed in their wake. These powers created a trade triangle between Africa, Europe, and the Americas. Slave ships began in Europe and followed a familiar pattern. European-made goods, such as guns and textiles, were traded with African merchants in return for African slaves. Slaves were then forcibly shipped to cotton, sugar cane, and tobacco plantations in North and South America to provide labor for landowners. Landowners from North and South America in turn provided raw materials to Europe for manufacturing (see Map 10.1).

Toward the end of the eighteenth century and by the start of the nineteenth century, pressure mounted to abolish the Atlantic slave trade officially. The writings of Olaudah Equiano played an important role. Born in Nigeria and traded as a slave, Olaudah Equiano bought his freedom (an exceptional event) and in 1789 wrote a book about his life. The eyes of the world were opened to the slave trade and public revulsion followed. In addition, the revolts by slaves in Haiti in 1801 and 1803 provided a warning that indefinite bondage for slaves may prove perilous for their captors. Finally, many European and American industrialists who had supported the slave trade in the eighteenth century came to regard it as ethically and economically detrimental to their interests.

Britain was the first European country to ban the slave trade, in 1807. France and Holland followed thereafter. The United States abolished the slave trade later, in 1864. Spain and Portugal persisted, however, and African slaves continued to be sold to landowners in South America (especially in Cuba and Brazil) until near the end of the nineteenth century. Of course, although banned, an illegal slave trade continued and European war ships were required to tackle piracy until the end of the nineteenth century.

The Atlantic slave trade stands as a pivotal moment in world history. Its effects continue to be felt. Of course, the abolition of slavery did not end the hardships faced by the African diaspora in its new homelands. In many countries, racist and discriminatory laws continued to hamper the progress of free slaves and

Map 10.1 The Atlantic slave trade.

Box 10.1   (*Continued*)

their descendants. In the United States, such discrimination led to the civil rights movement, which, throughout the 1950s and 1960s, agitated for equality of opportunity for all irrespective of race, color, or creed. Against this backdrop, the election of Barack Obama as the United States' first Black president serves as a benchmark of the (qualified) progress that has been made.

Whilst Black resistance to unjust "local" laws and injustices took many forms in different places, British cultural theorist Paul Gilroy argues that it would be wrong to think that over time the African heritage of the African diaspora became overlooked in favor of a series of disconnected localized political struggles. In his 1995 book *The Black Atlantic* Gilroy argues that all African American and other civil rights movements need to be understood against the backdrop of the Atlantic slave trade and its continuing influence on Black culture. To focus only upon particular struggles in particular places is to fail to see the forest for the trees. For Gilroy, the identity of the African diaspora is a fluid and ever-changing one, but one that has its roots in, and continues to be shaped by, the deep origins of the diaspora on the continent of Africa.

- Trade diasporas (for example, migrations seeking to open trade routes and links, such as the Chinese and Lebanese diasporas).
- Imperial diasporas (for example, migration among those keen to serve and maintain **empire**s, such as the British and French diasporas).
- Cultural diasporas (for example, those who move through a process of chain migration, such as the Caribbean diaspora).

International Migration Today

Whilst omnipresent in human history, the scale of migration has steadily grown over time and perhaps today we live in the most migratory of all times. According to the United Nations Population Division, in 2013, 232 million people, or 3.2% of the world's population, were international migrants, up from 175 million in 2000 and 154 million in 1990. In 2013, the total number of refugees in the world was estimated at 15.7 million, about 7% of all international migrants (United Nations Population Division, 2013).

Undoubtedly, the uneven world that the rise, reign, and faltering of the West from the fifteenth century has left as its legacy is playing a crucial role in shaping the circulation of migrants around the world. As a reflection of **uneven geographical development**, it is possible to group migrant corridors in terms of movements within and between the Global South and the Global North:

- Migration between countries in the Global South is as important as migration between countries in the Global South and countries in the Global North (see Figure 10.1). In 2013, nearly 82.3 million international migrants born in the
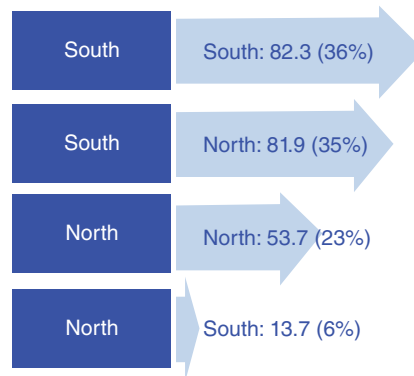
Migrant flows in millions.

Figure 10.1 Migration corridors (Global South/Global North). Source: United Nations Population Division, 2013. Used by permission of the United Nations.

2013	Origin								Retention by destination (%)
	Africa	Asia	Europe	LAC	NAM	Oceania	Various	TOTAL	
Africa	15.3	1.1	0.8	0.0	0.1	0.0	1.4	18.6	82
Asia	4.6	53.8	7.6	0.7	0.6	0.1	3.4	70.8	76
Europe	8.9	18.6	37.8	4.5	0.9	0.3	1.3	72.4	52
LAC	0.0	0.3	1.2	5.4	1.3	0.0	0.2	8.5	64
NAM	2.0	15.7	7.9	25.9	1.2	0.3	0.0	53.1	2
Oceania	0.5	2.9	3.1	0.1	0.2	1.1	0.1	7.9	14
TOTAL	31.3	92.5	58.4	36.7	4.3	1.9	6.4	231.5	
Retention by origin (%)	49	58	65	15	28	58			

(Destination is labeled along the left side; Origin across the top.)

Migrant flows in millions.
LAC = Latin America and the Caribbean.
NAM = North America.

Figure 10.2 Migration corridors by world region. Source: United Nations Population Division, 2013. Used by permission of the United Nations.

South were residing in the South, whilst 81.9 million international migrants born in the South now lived in the North. Meanwhile, the number of international migrants from the North who stayed north was 53.7 million. A significant number of international migrants, 13.7 million, moved from the North to the South. But since 1990, South–North migration has been the main driver of global migration trends and it is likely in future this migration corridor will come to dominate.

- Asia is the largest source region for international migrants. In 2013, more Asians lived overseas than migrants from any other continent (see Figure 10.2). Approximately 18.6 million Asians were living in Europe, 15.7 million in North America, and 2.9 million in Oceania. Migrants born in Latin America and the Caribbean constitute the next-largest diaspora group, with the majority living in North America (26 million). Meanwhile, Europeans amounted to the third-largest group, with 7.9 million Europeans living in North America and 7.6 million in Asia.
- Europe and Asia are home to the majority of international migrants (see Figure 10.2). In 2013, nearly two-thirds of all international migrants worldwide were living in

Destination: South		
Origin	**Destination**	**2013**
Bangladesh	India	3.2
India	United Arab Emirates	2.9
Russian Federation	Kazakhstan	2.4
Afghanistan	Pakistan	2.3
Afghanistan	Iran (Islamic Republic of)	2.3
China	China, Hong Kong, SAR	2.3
State of Palestine	Jordan	2.1
Myanmar	Thailand	1.9
India	Saudi Arabia	1.8
Burkina Faso	Côte d'Ivoire	1.5
Destination: North		
Mexico	United States	13.0
Russian Federation	Ukraine	3.5
Ukraine	Russian Federation	2.9
Kazakhstan	Russian Federation	2.5
China	United States	2.2
India	United States	2.1
Philippines	United States	2.0
Puerto Rico	United States	1.7
Turkey	Germany	1.5
Algeria	France	1.5

Migrant flows in millions.

Figure 10.3 Key migration corridors by country. Source: United Nations Population Division, 2013. Used by permission of the United Nations.

these two continents. Europe remains the greatest magnet, with 72 million international migrants in 2013; Asia has 71 million. With respect to specific countries, in 2013, half of all international migrants were living in 10 countries, with the United States hosting the largest number (45.8 million), followed by the Russian Federation (11 million); Germany (9.8 million); Saudi Arabia (9.1 million); United Arab Emirates (7.8 million); United Kingdom (7.8 million); France (7.4 million); Canada (7.3 million); Australia (6.5 million); and Spain (6.5 million).

- Within the Global South, the principal migration corridors are to be found in Southern Asia. In 2013, migrants from Bangladesh living in India constituted the largest "bilateral stock" of international migrants in the South (3.2 million). Migrants from Afghanistan living in Pakistan and the Islamic Republic of Iran (around 2.3 million in each destination), the majority refugees, were another important corridor. Meanwhile, approximately 2.9 million Indians were living in the United Arab Emirates and 1.8 million in Saudi Arabia (see Figure 10.3).

- Within the Global North, the United States, Germany, and France host some of the largest "bilateral stocks" of international migrants. The world's largest migration corridor is between the United States and Mexico (some 13 million Mexican-born people were living in the United States in 2013). Meanwhile, 2.2 million foreign-born people from China, 2.1 million from India, and 2.0 million from the Philippines were living in the United States in 2013. Germany and France host the largest bilateral migrant stocks in Europe whilst migrant flows between countries making up the former Soviet Union remain important (see Figure 10.3).

Global South to Global South

Migration that begins in the Global South and ends in the Global South can be driven by labor-market opportunities. Migrants from ultra-poor countries often move to countries which whilst still poor are nevertheless comparatively more prosperous. These migrants often work for low wages and are vulnerable to exploitation and abuse. A significant volume of South-to-South migration, however, is forced migration resulting from (often civil) war, famine and starvation, political oppression and victimization, or **natural hazards** (tsunamis, hurricanes, earthquakes, etc.). These migrants move at short notice, carry with them little of their belongings, risk their lives by crossing borders, and arrive in (often not so) safe havens destitute and vulnerable. When large volumes of displaced people are forced to flee their homelands they are often accommodated in refugee camps (see Zoom-in Box 10.2). These camps provide makeshift homes (tents and rudimentary buildings) which are built by host and other governments, aid agencies, and international NGOs. They offer short-term relief until such time as it is safe for displaced people to return home. In some cases, people spend many years in camps as conditions in the homeland worsen. Refugee camps can degenerate into dangerous places – recruiting grounds for child soldiers, sites of sexual abuse and lawlessness, and breeding grounds for disease. If it is decreed that the displaced will never be able to return home, host governments work to provide permanent settlement (to change their status to refugees), either in their place of first refuge or in a neutral third country.

Global South to Global North

Migration from the Global South to the Global North is often driven by migrants' desire to access better employment opportunities and vastly improved standards of living. Many countries in the Global North welcome talented and skilled workers from the Global South. Indeed, some actively procure skilled workers with particular specialities (for example, doctors, nurses, engineers) to fill gaps in the labor market. This can be ethically questionable as it starves poor migrant-sending countries of their best talent. Occasionally, countries in the Global North also open their borders to low-skilled workers from the Global South to fill jobs that the indigenous population refuses to do. These jobs tend to be low paid, demand long hours, and are often concentrated in the service industries (cleaning, child minding, collecting garbage, etc.). A subset of all South-to-North migrants is asylum seekers. Fearing persecution on the basis of their race, religion, social group, or political opinion, asylum seekers cross international frontiers in search of refuge.

Zoom-in Box 10.2:   The Syrian Civil War and the Plight
of Displaced Syrians

A product of the fallout of the wider Arab Spring, since March 2011 there has emerged a civil war in Syria. This war has been waged by opponents of sitting President Bashar al-Assad, and his Ba'ath government. Whilst rebels have gained control of parts of the country (with the help of, among others, the United States), the Ba'ath government has remained in power (with the help of, among others, Russia) and has used the Syrian army to crush insurrection. Both the government and rebel forces contend that war atrocities have been committed against them. Fighting continues, especially in northern and western regions. Peace talks between both sides have proved difficult and divisions seem intractable.

To date (March 2014), in excess of 100,000 lives have been lost. Moreover, according to the United Nations, more than 9.3 million Syrians can be thought of as "in need of assistance" (40% of the total population of the country); 9 million Syrians have been "internally displaced"; and more than 2.3 million people (half of them children) have been forced to move to surrounding countries. The principal host countries are the Lebanon, Jordan, Turkey, Iraq, and Egypt (see Map 10.2).

Host countries have been overwhelmed by the sheer scale of displaced peoples crossing over their borders and have turned to the international community for help. Whilst some migrants have sufficient resources to live overseas (at least temporarily), many more have sought protection in temporary refugee camps. Displaying entrepreneurial flair, some refugees have somehow managed to earn a living inside these camps, but the majority remain in need of humanitarian aid for survival. The Office of the United Nations High Commissioner for Refugees
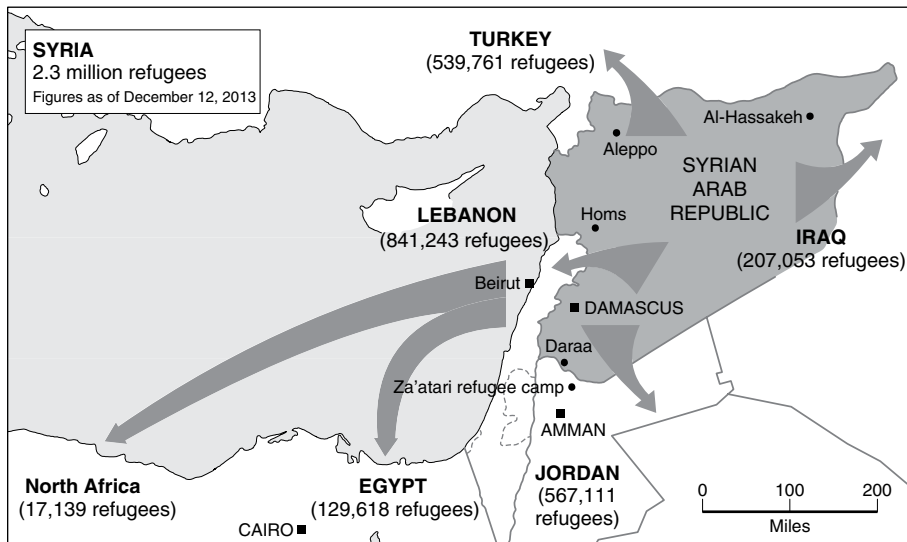
Map 10.2   The Syrian refugee crisis. Source: UNCHR, 2014.

Plate 10.1 Za'atari Syrian refugee camp in Northern Jordan. Source: © POOL/ Reuters/Corbis.

(UNHCR) has worked with international aid agencies and local charities to build such camps and to service them.

The Za'atari refugee camp in Northern Jordan (12 km from the Syrian border) is a good example (Plate 10.1). The camp is so vast that it takes an estimated 20 minutes to drive around its 8-km radius. Built to house around 60,000 residents, the camp is currently home to over 140,000 people living in over 27,000 shelters (tents). In addition to providing displaced Syrians with makeshift accommodation, the Za'atari refugee camp provides food (over 0.5 million loaves of bread per day), access to water and sanitation (the camp needs 4.2 million liters of water per day), hospitals (there are three on the site), and schools. In addition, there has emerged a vibrant retail sector (there exist 3,000 shops and 850 food outlets – many along a main road which has been retitled the "Champs-Élysées"!). All of this is coordinated by over 1,700 administration points and costs US$0.5 million each day to run. The camp has witnessed the emergence of gangs, and women and children remain vulnerable to violence and exploitation. But administrators have worked hard to empower local residents and neighborhood committees have been formed. Due to overcrowding, the UNHCR and Jordanian authorities have been forced to open a second camp 20 km away, called the Mrajeeb Al Fhood refugee camp.

Refugee camps were built to be temporary but, evidently, as time passes it seems more unlikely that many Syrians will return home. As long as the UNHCR and aid agencies donate and deploy sufficient resources, host countries may be able to sustain camps until the crisis is over. Ultimately, however, it will be necessary

(Continued)

Box 10.2   (*Continued*)

to find permanent homes for those unable or unwilling to return to Syria. Here, the countries of the Global North need to play a role. Thus far, countries like the United States, Germany, Canada, Sweden, and Norway have offered resettlement opportunities, but many claim that more needs to be done. If left to absorb the majority of refugees, it is likely that Syria's neighbors will be overwhelmed, leaving refugees to deal with long-term social, economic, and political marginalization.

Some of these migrants seek temporary protection whilst others apply for permanent relocation, refugee status, and citizenship in the new host country. Many countries in the Global North implement strict asylum regimes. Asylum seekers are placed in detention centers and furnished with few resources. In particularly poor systems they can wait over five years to have their case heard. Critics suggest that countries adopt harsh asylum regimes in an effort to reduce the number of claimants arriving on their shores.

Global North to Global North

Migration between countries located in the Global North is driven largely by labor-market opportunities. Whilst many migrants seek out work and somewhere to live independently others use recruitment companies to search for employment opportunities and to lubricate their relocation. Frequently, skilled migrants are channeled through the internal labor markets of transnational companies (TNCs), that is, they move to take up posts within their existing companies. The global economy is increasingly powered by the activities of TNCs for whom the transfer of skilled workers between one country and another is essential for their internal efficiency and to ensure rapid rates of expansion into new markets and new zones of production. For most of these companies, the possibility of training indigenous labor to take up managerial and technically skilled posts is often undesirable for strategic reasons and a cause of unnecessary delays in the expansion of their operations. A key defining feature of the development of skilled international migration is its transience. Rather than being settler in nature, most such migration assumes a more transitory character. Company relocation of personnel will invariably be of a short-term nature. For the "careerist" within the firm, international transience is essential for promotion, whilst for others a temporary foreign placement often carries significant remuneration.

Global North to Global South

Migration from the Global North to the Global South incorporates the movement of people working for charitable, religious, and aid organizations. But it, too, is powered by the global expansion of TNCs. Historically, these TNCs have been concentrated in the primary and extractive industries (oil and gas companies and

agrobusinesses, for instance). More recently they include companies manufacturing consumer products and firms in higher-technology sectors like information and communication technology and biotechnology. Establishing branch plants in the Global South in particular can be achieved more rapidly and more efficiently by the introduction of expatriate staff to oversee the development phase and to monitor the subsequent operation of imported technological functions. The growth and extension of the activities of these complex transnational organizations necessitates the continuation and expansion of skilled migration to fulfill key tasks of managerial control and technical development, as well as to permit career development, promote organizational development, and interpret corporate policy in the local context. A further significant reason why TNCs prefer senior executives to be nationals from the headquarters' country is to ensure better communications and liaison with the rest of the organization.

Assimilating and Integrating into Host Societies

Some migrant communities, at least for a period, are less interested in settling into the new host society and, if anything, display a heightened patriotism toward their former homelands. As noted when speaking of the great population movements that have occurred in the past and the large-scale population displacements that are unfolding today, scholars of migration are increasingly making use of the idea of "diaspora." We need now to place this term under greater scrutiny. Of Greek origin and commonly thought of as popularized by Jewish religious history, the notion of diaspora eventually worked its way into the social scientific literature in the 1950s, first through African Studies and then Armenian Studies. Taken to refer in principle to the scattering or scrambling of a particular population, in the past 20 years the concept has diffused widely throughout the **social sciences** and **humanities** and in so doing has lost much of its original meaning.

US political scientist William Safran (1991) conceives of diaspora in terms of only one form of mass migration, that involving forced exile, a fraught and lengthy period of resettlement, and a failure to plant down new roots in regions of destination. For Safran, a hallmark of diaspora is a shared interest in preserving a common national, civic, or ethnic identity, an interest which seeps down to the descendants of migrants who remain interested in their heritage. Diaspora continuously re-engage with their ancestral home and often act in transnational ways. Diaspora are characterized by migrations where:

- original communities have spread from the homeland to two or more countries;
- these communities are bound to their original geographical locations by a common vision, memory, or myth about their homeland;
- these communities harbor a belief that they will never be accepted by their hosts and therefore develop autonomous cultural and social needs;
- they believe that they or their descendants will return to the homeland should conditions prove favorable;
- they are strongly motivated to maintain support for their homeland, and continue to take an interest in the affairs of their homeland (see Zoom-in Box 10.3).

Zoom-in Box 10.3:   Armenia: A Classic Diaspora?

Whilst emigration from Armenia has been a constant feature of its history, the main waves of large-scale, systematic emigration occurred in the periods 1894–1896, 1915–1922, and 1988 to the present. The first two waves were triggered by conflict with the Ottoman Empire (Turkey) and were fueled by claims of genocide and forced migration. The third wave started with an earthquake in 1988 (which killed 25,000 Armenians and displaced 500,000) and included the mass exodus of almost 400,000 Armenians living in Azerbaijan who claimed their flight was due to persecution. It was spurred on by conflict between Armenia and Azerbaijan over the disputed territory of Nagorno Karabakh, independence from the Soviet Union (in 1991) and a resulting economic collapse of the country and political instability and ethnic tensions in the wider Caucasus region.

The consequence of all three waves is a sizeable diaspora of some 6 million plus, located in five predominant geographic locations – former Soviet states (for example, Russia, 2,250,000; Georgia, 460,000; Ukraine, 150,000); North America, predominately concentrated in the United States (1,400,000); Europe, with by far the largest concentration in France (450,000); the Middle East (with large groupings in Lebanon, 234,000, and Syria, 150,000); and South America, with a large group in Argentina (130,000).

Armenia's history of trauma, wrought by centuries of foreign domination and natural disasters, undoubtedly has underpinned the strength of Armenian-mindedness in the Armenian diaspora. The Armenian diaspora considers itself to be a classic victim diaspora. A number of important cultural and political movements continue to commemorate and preserve Armenian collective memory of trauma and victimhood. These include the Armenian Apostolic Holy Church, the Armenian Revolutionary Alliance ("Dashnaktsutyun"), the "Ramkavar Azatakan" (Liberal) Party, the Social Democratic "Hunchakyan" Party, and the Armenian General Benevolent Union. These organizations work together to bind a strong Armenian identity and nurture the idea that they and/or their descendants were forced to leave Armenia against their will. They champion the need to support fellow Armenians as they continue to establish themselves in host countries. Given its history, the Armenia diaspora has strong views about Turkish complicity in the genocide of Armenians, and has harbored a deep desire to see Nagorno Karabakh reclaimed as Armenian territory. It has actively sought to contribute to the development of Armenia, by remitting monies, visiting as tourists, making philanthropic donations, sitting on advisory bodies, and investing directly.

According to some scholars, as diaspora communities relax into their new environments they neither retain their existing identities nor assume the identity of the new host but instead develop a series of hybrid or in-between identities. It is in migrant communities that one begins to get a glimpse of the mechanisms through which "newness enters the world." (Boyle, 2001).In the hands of some scholars, the notion of hybridity is invested with a very grand political significance – occupying "border zones" or "liminal spaces," diaspora groups oppressed by the dominant national identity that prevails in the homeland (perhaps ethnic minorities, women, the LGBT community, children, and so on) can emancipate themselves and establish new forms of belonging. Freedom to experiment beyond the rigid and suffocating categorizations imposed by existing national identities facilitates the production of new and liberating identities. Whilst there is certainly merit in promoting the idea of cultural hybridity, critics have warned against the simplistic equation of "in-between" identities with freedom from pigeon holes and cultural and political emancipation. To live an in-between identity is not always attractive; it can lead to disorientation and confusion about one's sense of self. It can result in one being excluded by communities (both in the migrant-sending country and in the host) who prefer to live with clearer and more fixed identities.

Through time, however, migration often creates in its wake new processes of integration and assimilation by migrants into host societies. Migrant assimilation into host societies can take one of four principal forms:

- Social assimilation occurs when migrants forge new social networks in the host society and secure equal access to housing, educational, health, and recreation facilities.
- Economic assimilation occurs when migrants plant new roots in the host society and secure employment. Through upward socioeconomic mobility they begin to achieve parity with the socioeconomic profile of the host population.
- Political assimilation occurs when migrants gain full citizenship rights in destination countries and participate as equal members in the political life of the nation (vote in elections, stand for elections, participate in public debate, and so on).
- Cultural assimilation occurs when migrants begin to adopt the cultural practices of the local population and embrace local ways of life (clothing, dance, religion, food, national belonging, etc.).

Assimilation and integration, when they run their course, result in a loss of attachment to the country of origin and a complete sense of belonging and loyalty to the country of destination.

What determines migrants' senses of estrangement from and belonging to host societies? Clearly how open, cosmopolitan, and welcoming, as opposed to closed, monolithic, and hostile, a place is plays a crucial role in shaping migrants' experiences (Teixeira, Lee, and Kobayashi, 2012) (see Zoom-in Box 10.4). Places that are closed and claustrophobic can be said to be regressive places. Their borders are sealed and policed and they tend to suffer from racism and xenophobia. In contrast, places that are generous and hospitable to incomers can be said to be progressive places. Their borders are porous and permeable and they cherish different cultures and traditions. Alas, as migration increases, and especially in the context of the global recession and growing unemployment levels, many host societies are becoming more

Zoom-in Box 10.4:   Canada: A Multicultural Dream?

Canada has a long history of immigration. Record numbers of immigrants settled in the country in the early 1900s. By 1931, 22% of Canadians (2.3 million) were foreign born, deriving principally from Europe and in particular from the United Kingdom. Because immigration levels declined during the 1930s Great Depression and in the ensuing years of World War II, the proportion of foreign-born people dropped to 17.5% (2.1 million) in 1941 and 14.7% (1.9 million) in 1951, but subsequently recovered and has since grown again, to 15.6% (2.8 million) in 1961, 15.3% (3.3 million) in 1971, 16% (3.8 million) in 1981, 16.1% (4.3 million) in 1991, and 18.4% (5.5 million) in 2001. In 2006, 19.8% of Canada's population (or 6.2 million) was foreign born and today 21% of Canada's 35 million population is foreign born (6.8 million). Canada estimates that by 2031, 28% of the Canadian population will be foreign born. Whilst in 1971 migrants from Europe constituted 61.6% of all newcomers, by 2006 they comprised only 16.1% of all newcomers. Meanwhile, whilst in 1971 migrants born in Asia (including the Middle East) made up only 12.1% of recent newcomers, by 2011 such migrants constituted the largest proportion of newcomers to Canada, at 62.1%.

Given this history of immigration, it is hardly surprising that Canada is known as a country with a rich ethnic diversity. More than 200 ethnic origins were reported in the 2011 National Household Survey and 13 different ethnic groups were estimated to include over 1 million members. Canadian (10.2 million), English (6.5 million), French (5 million), Scottish (4.7million), Irish (4.5 million), and German (3.2) ethnicity dominate whilst the other ethnic origins that surpassed the 1 million mark were Italian, Chinese, First Nations (North American Indian), Ukrainian, East Indian, Dutch, and Polish. Just over 1.3 million people reported having First Nation ancestry, whilst 447,700 reported Métis and 72,600 Inuit.

Against this backdrop, Canada presents itself as a tolerant and multicultural society with a progressive and open attitude to incomers. It points to its two principal Citizenship Acts, of 1947 and 1977, and its 1988 Multiculturalism Act as having enabled immigrants to enjoy access to Canadian citizenship, promoting their right to celebrate their own culture, religion, language, and customs. The 1988 Act in particular recognizes that:

- Canada has a multicultural heritage and this heritage should be protected;
- the rights of Aboriginal peoples should be promoted;
- whilst English and French remain the only official languages, other languages may be used;
- every group is equal under the law, regardless of origins, race, or creed;
- ethnic minorities have the right to enjoy their own cultures.

But Canada's aspirations to be a multicultural society have been called into question. Some critics argue that multiculturalism merely serves to keep

people apart (in enclaves and ghettoes) and retards the gelling of immigrants and the formation of a coherent Canadian culture. They suggest that Canada has a weak national identity as a consequence. Instead of encouraging a melting pot (a fusion of cultures), multiculturalism has merely introduced a salad bowl (cultures tossed together but remaining apart from one another). Other critics lament the loss of Canada's European heritage and contend that not all cultures are equal. They suggest that whilst minority cultures should be respected, British (and in Quebec, French) culture should always be prioritized. Others again suggest that Canada's multiculturalism pays insufficient attention to First Nation peoples. These peoples remain to be compensated for their losses at the hands of European colonizers. And yet others suggest that, notwithstanding its stated intentions, Canada is toughening, not liberalizing its citizenship rules.

Canada's recent interest in rethinking its rules on citizenship stem from the fact that it is a country with a strong history of immigration, where a very particular subset and minority of the immigrant population arrives, becomes naturalized, and re-emigrates. Among some constituencies, there would appear to be concern that Canadian citizenship is being appropriated by migrants for strategic reasons and that Canada is being treated as something of a "migrant hotel" (Ong, 1999). Events came to a head in 2006. Many Lebanese citizens who had moved to Canada, gained citizenship, and then moved back to Lebanon, became caught in the war between Israel and Hezbollah, or the Lebanese–Israeli War. Honoring a commitment to protect Canadian citizens no matter where they were, the Canadian government evacuated some 15,000 citizens at a cost of Can\$94 million. This event triggered a national conversation on how "cheaply" Canada was furnishing immigrants with no intention of staying in the country in the long term with dual and multiple citizenship. Canada's response has been to restrict its citizenship entitlements for recent immigrants who then re-emigrate out of Canada (for example, withdrawing the right to vote in Canada from re-emigrants who have lived overseas for five years – affecting an estimated 1.4 million people). Meanwhile, in 2009, amendments were made to citizenship law (Bill C-37), which conspired to restrict intergenerational transfer of Canadian citizenship by descent to citizens who live overseas.

Whether Canada will develop into a less hospitable place for immigrants to live remains to be seen.

regressive and less progressive. People are becoming more suspicious, resentful, and fearful of migrants and less inclined to recognize the needs of migrants and the contribution they make to host societies.

Human geographers are also interested in the ways in which the micro-geography of migrants in cities in destination regions influences processes of assimilation. Many migrant groups, out of both choice and necessity, cluster into ethnic neighborhoods, enclaves, and ghettoes (such as Chinatowns, Little Italy's, Little India's, and Little Armenia's – see Zoom-in Box 10.5). These neighborhoods provide protection and

Zoom-in Box 10.5: Chinatowns: Beachheads Lubricating Migrant Assimilation or Buffers Slowing Down Integration?

The term "Overseas Chinese" is used by Chinese scholars and politicians to refer to all peoples with Chinese ethnicity living overseas, including first-generation Chinese nationals living overseas and second-, third-, and later-generation descendants who continue to identify themselves as Chinese. Today, an estimated 50 million Overseas Chinese can be found literally in every corner of the world.

The Overseas Chinese community is the result of three principal waves of emigration from China, each occurring under a different political regime:

- The first wave came during the reign of the Qing dynasty (China's last great imperial dynasty) from 1644 to 1912. Constant warring with European imperial powers (typified by the First Opium War (1839–1842) and the Second Opium War (1856–1860) weakened the Qing dynasty and migrants spilled over into surrounding regions and even traveled to Europe.
- The second wave came as the Qing dynasty fell, to be replaced by the Republic of China (ROC) which ruled from 1912 to 1949. Guided by leader Sun Yat Sen and the Kuomintang (Nationalist Party), and drawing resources from Chinese living overseas, the ROC sought to build a modern industrial country. But its reign was marked by chaos; the downfall of the Qing dynasty had left a power vacuum, there was incessant fighting between warlords, and Sino-Japanese tensions constantly threatened peace. Emigration continued throughout this volatile period.
- Finally, the Communists came to power in 1949. Until the death of Mao Tse Tung, migration was viewed with suspicion; an act of betrayal, this time to the Communist Party. With the opening of China from 1978 and the rise of a more tolerant attitude toward migrants, Chinese emigration has once again resumed.

The first two waves of emigration from China were dominated by Cantonese and Hokkien peoples from the more wealthy and "Western" Guangdong and Fujian Provinces. Whilst migrants from coastal China continue to dominate, the third wave, from 1978 onward, has incorporated migrants from all provinces in China. Meanwhile, whilst migrants have traditionally moved to other Southeast Asian countries, the third wave has propelled proportionately more migrants to Oceania, North America, and Europe.

Some argue that the first two waves of migration prepared the ground for the third wave and that, as a consequence, the third wave has enjoyed a much easier **transition** to living in diaspora. Why so?

Perhaps the most iconic cultural freight that Chinese migrants have introduced into host cities is the phenomenon of Chinatown. Many Chinatowns in North America were built in the nineteenth century. Those in Europe tended to form later, from 1950s onward. Chinatowns form both in response to

Plate 10.2 Chinatown in San Francisco. Source: © Gavin Hellier/JAI/Corbis.

discrimination against Chinese people in the housing market (structural constraints) and as a preference among some Chinese migrants to cluster together for safety and comfort (lifestyle choices). Although nearly every major city in the Western world has a Chinatown in one form or another, the largest Chinatown in the United States can be found in San Francisco (Plate 10.2), the largest in Canada is located in Vancouver, the largest in Australia can be traced to Melbourne, and in Europe the largest can be seen in Paris and London. Because Chinese migrants in Southeast Asia often enjoy better economic and political conditions and feel less culturally estranged from the host population, Chinatowns (although they do exist) in Southeast Asian cities tend to be less common and less pronounced.

Chinatowns help provide Chinese migrants with a beachhead into host societies. Initially, restaurant and catering services (and also barbers and laundries) sustained many Chinatowns. These services did not demand start-up capital and afforded unskilled Chinese migrants with limited language skills a means of earning a living. They also provided familiar food to the overseas Chinese community, which eased assimilation. Subsequently, other services, including travel agencies, health clinics, legal consultants, Chinese schools, and Chinese grocery stores, have flourished. But Chinatowns can also be thought of as a barrier limiting integration into the host society. Chinatowns permit migrants to live with only minimum contact with local people; they can dine in Chinese restaurants, shop in Chinese stores, surf Chinese websites, and gamble in Chinese casinos. Moreover, Chinatowns can support the work of human traffickers like the infamous Snakeheads – gangs from the Fujian region who

(*Continued*)

Box 10.5   (*Continued*)

route illegal migrants via Chinatowns and exploit such migrants by forcing them to work for low wages or to serve as prostitutes to pay off their debt.

But perhaps the work done by Chinatowns is today changing (Wong and Chee-Bing, 2013). In the United States, Western Europe, and Australia, Chinese migrants (especially following the abolition of discriminatory laws in the 1940s and 1950s) have enjoyed upward social mobility and have joined the flight of the wealthy to the suburbs. This process has rendered Chinatowns vulnerable. Some have been turned from functioning ethnic enclaves into more superficial tourist attractions. Moreover, today migrants leave China to pursue economic opportunities, to study abroad, to improve their language skills, and to acquire a better quality of life. As private investors and Chinese state-owned enterprises undertake projects overseas (not least in Africa), Chinese workers are also being relocated to oversee operations. These migrants have less need for support. In addition, some recent migrants have left to escape political persecution (democratic and human rights activists) and religious discrimination (like the dissident Falun Gong movement). These migrants might benefit from support but Chinatowns can be inappropriate places for them to dwell.

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security for new migrants. They can serve as a beachhead and an elevator of immigrant advancement. But they also permit migrants to live in a goldfish bowl, looking out at the wider community but having no contact with that community. There exists a debate, then, as to the degree to which ethnic neighborhoods serve to accelerate integration or retard it and even render it impossible.

The Impacts of Migration on Sending States and Host Countries

There exists a long tradition of scholarship on the effects of emigration on the development of migrant sending states. Whilst existing literature has failed to generate a consensus, until recently the weight of opinion would appear to hold that emigration retards the development of sending states. Insofar as emigration tends to be selective, sending countries most often lose their youngest, best, and brightest talent. This "brain drain" starves the domestic labor market of essential pools of talent. Furthermore, emigration transforms the age structure of sending-state populations; dependency ratios grow and the burden of sustaining an ever-growing elderly population falls on ever fewer shoulders. Moreover, emigration, especially when it leads to an overall decline in the domestic population, can work to reduce domestic consumption, adversely affecting local service industries and more seriously disincentivizing investment in innovation. Accordingly, stemming brain drain and encouraging return migration have been the preferred policy responses. But today this view is being challenged. Language, which at times has been intemperate,

has been transformed. Emigrants are no longer to be thought of as disloyal "quitters," "deserters," or "sojourners" but as a potential "resource," "asset," and "endowment." Their transnational practices mean that they contribute from afar and in myriad ways to the betterment of their countries of origin (Sahoo and Pattanaik, 2013; Boyle and Kitchin, 2013a, 2013b) (see Figure 10.4).

As attitudes to emigration change, many sending states are now reflecting upon how, if at all, they might intervene so as to scale and ramp up their efforts to more effectively harness the energies and talents of their émigrés. A new domain of public policy, referred to as "diaspora strategy," has been born (Agunias and Newland, 2012). A diaspora strategy is a formal and stated policy initiative or series of policy initiatives enacted by a sending state aimed at fortifying and developing relationships with expatriate communities, diasporic populations, and foreign constituencies who share a special affinity. Diaspora strategies are most commonly pursued by poor and middle-income countries from the Global South. Examples include Armenia, India, Mexico, China, Chile, Argentina, Jamaica, El Salvador, Nigeria, South Africa, Tunisia, Ghana, and Morocco. But more affluent countries in the Global North with large diaspora populations are also expressing an interest, including Israel, Scotland, Ireland, Israel, Japan, Australia, New Zealand, and Singapore.

But there is a risk that the current preoccupation with harnessing, leveraging, and even exploiting diasporic populations to accelerate economic growth and development in the home country is recasting the diaspora-homeland relationship as a mainly instrumental and pragmatic one, driven by utilitarian motives. Understood in this way, diaspora strategies may misapprehend the complexity of the diaspora-homeland relationship. This relationship can be fickle, awkward, and controversial. At their worst, diaspora strategies constitute a fundamental abuse of diasporans' proclivity to care for their homelands. The assumption seems to be, "let me exploit our shared heritage for my sole gain," or, "I see you as someone who can broker my interests." This misspecification of the relationship threatens to do great damage to the actual relationship, damage which will not easily be repaired. Paradoxically, some diaspora strategies, then, might be said to be sabotaging rather than fortifying diaspora-centered development (see Zoom-in Box 10.6).

The impact of migration on host countries has also generated significant topical discussion. But alas a balanced debate on the merits and demerits of immigration has proved impossible in some host countries. Appropriate discussions on the need for managed migration have given way to a Far Right politics which has pandered to racist and xenophobic attitudes and more recently forms of Islamophobia. The ideas of "fortress Europe" and "fortress US" now abound. The concept of "place" is a central one in Human Geography. But it is one that comes freighted with certain assumptions that can prove unhelpful. Places are often considered to be coterminous with coherent communities and are assumed to be predicated upon monolithic cultural identities, cherished customs, and valued traditions. Threatened by globalization and fearing the loss of local culture, self-appointed custodians of local tradition often take it upon themselves to pursue a series of hostile, reactionary, and regressive countertactics. They reassert exclusive identity for places, re-establish boundaries between their place and other places, and actively police cultural practices to ensure that their place is kept "pure" and "free" from the "contaminating" influences of "foreign" cultures. And so it is no surprise that

Diaspora advocacy

Diaspora capital markets

Diaspora direct investment

Diaspora knowledge networks

Diaspora philanthropy

Diaspora remittances

Diaspora return migration

Diaspora corps

Diaspora tourism

Diaspora human capital effects

1) Diaspora advocacy and diplomacy Advocates, activists, agitators, and ambassadors within diasporic communities can exploit their knowledge, contacts, linguistic skills, and cultural insights to promote peace and security in their homelands and to enhance the strategic, diplomatic, and foreign policy objectives of homelands.

2) Diaspora capital markets Diasporic members can fuel capital markets (portfolio investment) through holding deposit accounts; securitizing remittance flows; providing transnational loans; buying diaspora bonds; and supporting diaspora mutual funds.

3) Diaspora direct investment Diasporic members can invest in homelands as senior executives in TNCs and venture capitalists, and outsource contracts to SMEs in countries of origin.

4) Diaspora knowledge networks Diasporas can assist companies in sending countries by sharing knowledge and contacts; participating in mentoring organizations; training talented colleagues; and joining think tanks, consultation groups, and advisory councils.

5) Diaspora philanthropy Diasporic communities can provide private and voluntary donations for charitable and public good, through such vehicles as private and voluntary organizations (PVOs), religious organizations, corporations, foundations, volunteer citizens, and university and college alumni associations.

6) Diaspora remittances Diasporic remittance flows entail private or person-to-person transfers from migrant workers to recipients in the worker's country of origin.

7) Diaspora return migration Diasporic populations can promote bilateral and multilateral agreements to restrict recruitment from especially vulnerable and at-risk countries; increase accountability among recruitment specialists and employers; establish protocols for the treatment of foreign workers; and facilitate return migration.

8) Diaspora corps Diaspora groupings can establish volunteering schemes to promote short-term assistance in countries of origin by skilled diaspora volunteers and youth diaspora volunteers, especially in relation to the support of vulnerable populations and the provision of skills that are in short supply, and to assist in the administration of aid, not least following a natural or human-induced disaster.

9) Diaspora tourism Diaspora visits to homelands provide an important source of revenue and foreign currency. Such visits include medical tourism, business-related tourism, heritage (or "roots") tourism, exposure or "birthright" tours, education tourism, VIP tours, and peak experience tours.

10) Diaspora human capital effects The prospect of joining the ranks of a sometimes more wealthy diaspora can result in a pre-departure boost in the human capital of sending states; migrants prepare for a potential exit by upgrading their competencies and skill set and increasing their likelihood of securing a relocation to a more developed labor market.

Figure 10.4 The migration/development nexus. Source: Boyle and Kitchin, 2013b.

Zoom-in Box 10.6: Philippines' diaspora strategy: The pros and cons of the Migrant Workers and Overseas Filipinos Act (1995)

In 1995, the Philippine government enacted the Migrant Workers and Overseas Filipinos Act. This Act presented itself as a progressive intervention designed to better prepare and equip would-be emigrants and to support Overseas Filipino Workers (OFW) whilst in diaspora. Recognizing the limited opportunities that exist in the Philippines, the government decreed that it was its duty to help people to migrate; migrants would gain employment, wages, and skills, reduce unemployment in the country, and remit monies to families in need. The Philippine government recognized that it had a duty of care to OFW and needed to act to help safeguard the welfare and well-being of its overseas workers. It put in place measures to aid and support OFW. Approximately 10 million Filipinos (10% of the country's population) now live overseas in 183 countries. Approximately US$23 billion worth of remittances were wired home by OFW through the Central Bank of the Philippines in 2012 alone.

But some now question the extent to which Philippine labor migration policy really is geared toward protecting and enhancing the interests of Filipino labor or whether it is best thought of as a money-making enterprise for corrupt politicians.

In 2013, the Philippines was shaken by allegations of massive and widespread corruption within the country's political class, including within the party led by President Benigno Aquino. In what has been called the "P10 billion pork barrel scam," whistleblowers have accused leading politicians of misappropriating public funds for personal gain. In particular, it is alleged that monies from the country's Priority Development Assistant Fund has been siphoned into bogus NGOs. Currently, the Philippines Senate is investigating these claims. But a furore has erupted across the country.

In September 2013, a "Million People March" took place at Rizal Park in Manila calling for political reform and a cleaner politics. Joining this campaign have been Filipino migrant organizations from over 23 countries, including Hong Kong, Japan, Taiwan, Saudi Arabia, the United Arab Emirates, United Kingdom, the Netherlands, Italy, Canada, and the United States. On September 19, 2013, these organizations participated in "Zero Remittance Day." This day marks the anniversary of the Overseas Workers Welfare Administration Omnibus Policy, which mandates OFW to pay the government US$25 for every employment contract they enter into. To date this tax has raised US$325.35 million. Whilst it is supposed to provide for services for vulnerable OFW, critics argue that it has been appropriated by the government and abused. Few services have been provided. Moreover, they argue that they are not willing to sacrifice their lives by working abroad and repatriating remittances only to prop up a corrupt political regime.

The case of the Philippines demonstrates the ill effects of political corruption in eroding the compact of care between the diaspora and the homeland. Whilst remittances and taxation have been extracted from the OFW in the name of caring for their families, communities and other OFW, the misappropriation of funds resulted in an outcry by migrant communities demanding greater accountability and a more responsible approach toward the diaspora-homeland relationship.

many countries are trying to stop migration at its source, tightening their immigration and asylum rules, and toughening their border controls.

According to British Marxist and feminist geographer Doreen Massey (1991), in the globalized world of today a more progressive concept of place is both necessary and possible. Globalization has not smoothed out differences between places. Local cultures continue to exist. But places are no longer bounded entities. What makes places unique now is the specific bundle of relationships they have with other places. In Massey's view, all places are best thought of as nodes in a globally networked world in which people, cultures, goods, money, and cultures flow and mix in endlessly original ways. To exemplify her point, Massey draws upon the example of Kilburn High Street in North London, a place where the traces of cultures and peoples from around the world meet, collide, mix, and fuse in a unique way and where "newness" has entered the world. Kilburn is a place with porous borders and multiple and fluid identities which are forever changing. Massey calls for a rethinking of the idea of place and for the introduction of a less defensive and reactionary and more progressive and relational concept of place, which she titles a "local sense of the global" or a "global sense of place." Recognizing that places always have permeable borders, multiple identities, and complex relations with other places will lead to a less hostile and more hospitable attitude toward migrants.

As Canadian geographer of migration and race Audrey Kobayashi insists, it is necessary to cut through misinformed public opinion and establish a debate on managed migration that is grounded in fact (see Teixeira *et al.*, 2012). Clearly, impacts vary depending upon the country of origin of migrants, their chosen destination, and their age and skill levels. Migrants can bring to host countries skills that are absent or in short supply in the labor market. They are often prepared to do jobs that locals are less keen to do. In societies in the Global North where population ageing is an issue, migrants can correct imbalanced population profiles and dependency ratios and help to pay for health care and pensions. Many work as carers, tending the children of workers in host countries and thereby freeing both women and men to join the labor force. Immigrants often bring with them energy and innovation and are disproportionately more likely to become entrepreneurs and to start up their own business. They also enrich the culture of host societies and promote cultural diversity and cosmopolitanism. On the other hand, because of their flexibility, migrants can depress the wages paid to other (normally unskilled) workers. Migration can lead to greater unemployment, can create ethnic and racial tensions, and can bring security threats. They can also place pressure on scarce health, education, and housing resources.

Conclusion

Mass migrations and the formation of great diasporas which have fanned out across the world have been a feature of human history. Migrants have moved for a variety of reasons, sometimes out of choice, on other occasions out of necessity. In future, an ever-growing number of people are going to live in a country other than that into which they were born. It is impossible to understand contemporary migration both

within and between the Global South and Global North without an understanding of the rise, reign, and faltering of the West from the fifteenth century. Human geographers consider the global migration system that exists today as a product of uneven geographical development across the face of the earth left as a legacy of history. Human geographers are interested in the experiences of migrants as they settle into their new host societies. They recognize that whilst some migrants retain their culture whilst dwelling overseas, others fuse their culture with local cultures in complex ways and out of these meetings and intersections come hybrid and in-between identities and complex senses of belonging, and yet others steadily assimilate into the cultural, social, economic, and political life of the host society. The impact of migration on both sending states and host countries remains a sensitive issue. Overall, a growing number of sending states are viewing migration in positive terms, whilst an increasing number of host countries are considering migration to be a problem.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) Robin Cohen's typology of diasporas provides a useful framework through which to classify the mass migrations that have occurred in human history.

2) Today just over 232 million, or 3% of the world's population, live as migrants. The vast majority of the migrants who move today depart from a country in the Global South. Shortly, migration from the Global South to the Global North will emerge as the world's most significant migration corridor. But for now, migration within the Global South continues to be more voluminous.

3) Migrants settle into host societies in complex ways, as a function of the factors that led them to migrate in the first instance, ongoing political events and happenings in the country of origin, and conditions in places of destination. Whilst some migrants retain their existing identity when dwelling in diaspora, others display creolized identities and complex senses of belonging to and estrangement from the new host. Over time migrants can integrate and assimilate into the host society.

4) Migration impacts both sending and receiving countries. Whatever the reality, sending countries are increasingly mobilizing the idea of diaspora-centered development whilst host countries are tightening their immigration systems and toughening their border controls.

Chapter Essay Questions

a) Describe and explain trends in migration within and between the Global South and Global North.

b) Write an essay on the factors that determine migrant assimilation into host societies.

c) In what ways do migrants impact upon both sending states and countries of destination?

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Wong B P and Chee-Bing T (eds.) (2013) *Chinatowns around the World: Gilded Ghetto, Ethnopolis, and Cultural Diaspora* (Brill, Leiden).

Guidance for Further Reading

Good general introductions to the Human Geography of migration are:

Boyle P, Halfacree K H, and Vaughan R (1998) *Exploring Contemporary Migration* (Routledge, London).

King R (2010) *People on the Move: An Atlas of Migration* (University of California Press, California).

Samers M (2010) *Key Ideas in Geography: Migration* (Routledge, London).

Good general introductions to the world's great diasporas are provided in:

Cohen R (1997) *Global Diasporas: An Introduction* (Routledge, London).

Fisher M A (2013) *Migration: A World History* (Oxford University Press, Oxford).

Knott K and McGlouglin S (2013) *Diasporas* (Zed Books, London).

Up-to-date statistics on global migration patterns can be found in:

United Nations Population Division (2013) *Trends in International Migrant Stock: The 2013 Revision* (UN Population Division, New York).

Doreen Massey's famous statement on the global sense of place was first published as:

Massey D (1991) "A global sense of place." *Marxism Today* 38: 24–29.

An interesting case study of Chinese migration in Canada is provided in:

Ong A (1999) *Flexible Citizenship: The Cultural Logics of Transnationality* (Duke University Press, Durham, NC).

A good overview of migrant experiences in North American cities can be found in:

Teixeira C, Lee W, and Kobayashi A (eds.) (2012) *Immigrant Geographies of North American Cities* (Oxford University Press, Oxford).

An authoritative guide to Chinatowns can be found in:

Wong B P and Chee-Bing T (eds.) (2013) *Chinatowns around the World: Gilded Ghetto, Ethnopolis, and Cultural Diaspora* (Brill, Leiden).

Important books exploring diaspora-centered development and diaspora strategies include:

Agunias R and Newland K (2012) *Developing a Road Map for Engaging Diasporas in Development* (MPI, Washington, DC).

Sahoo S and Pattanaik B K (eds.) (2013) *Global Diasporas and Development: Socioeconomic, Cultural, and Policy Perspectives* (Springer, New Delhi).

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Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 11

At Risk: Society and Natural Hazards

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:

1) describe and explain the significance of Gilbert White's contributions to human geographical studies of natural hazards;

2) explain what is meant by the "social production of vulnerability" to natural hazards and document the social, economic, cultural, and political processes that put some social groups at greater risk than others;

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3) referring to the United Nations University's (UNU) ongoing project of "Mapping the World at Risk," define the concepts of "risk," "exposure," and "vulnerability" and identify the countries most and least at risk from natural hazards;

4) outline what is meant by the idea of "disaster politics" and compare and contrast the political implications of approaching disaster mitigation in terms of building "resilience," fostering "transition," or embracing "transformation."

Introduction

Whilst population growth and economic development have brought human beings into a new relationship with the natural environment, nature's extremes continue to leave their mark on societies. **Natural hazards** such as earthquakes, tsunamis, hurricanes, floods, droughts, mudslides, wildfires, and tornadoes continue to threaten humanity, often leaving in their wake death and injury, wreckage, social disruption, and economic carnage. With the rise of the West came a new level of optimism and confidence; human beings believed that they no longer needed to cower in the wake of nature's extremes for technology could afford humankind unprecedented levels of protection. Of course, such **anthropocentricism** has proven itself ill founded. The purpose of this chapter is to explore the claim that whilst the rise of Western society brought with it new technologies and competencies to shield humanity against nature's extremes, paradoxically it also created as its legacy historically unprecedented levels of **vulnerability** to hazard events, at least for some people.

Whilst recognizing the importance of underlying geological, meteorological, and hydrological processes, human geographers believe that there is nothing particularly natural about **natural disasters**. Drawing upon the idea of "coupled human and natural systems" **(CHANS)**, they place under scrutiny the ways in which social, political, cultural, and economic processes play a role in increasing the **risk** that natural hazards more easily become natural disasters for specific social groups.

Natural hazards are inherently more risky for impoverished, powerless, and disadvantaged populations – in reality, the poor, women, the less educated, those socially isolated, ethnic minorities, people with disabilities, and children, especially, although not exclusively, in the developing world. Social, political, and economic **precarity** renders some populations especially vulnerable, leaving them without the capacity to limit danger through forward planning, and making them more susceptible to the harmful effects of nature's extremes and less able to cope when hazards strike.

The objective of this chapter is to examine the ways in which the ascendance of the West has shaped global variations in inequalities in vulnerabilities to hazards within and between the **Global North** and **Global South**, and has, as a consequence, deposited in its wake a new world at risk.

Gilbert White: Pioneering Human Geographical
Interest in Natural Hazards

Earlier than most, US geographer Gilbert White came to the realization that natural hazards and extreme weather events ought to be of interest to human geographers and not just physical geographers. White's thinking on hazards was rooted in and informed by the risks posed by flooding and his passionate advocacy of the need for comprehensive floodplain management. But his approaches and insights were pertinent to all hazards and as a consequence he is widely considered to be the founder of Hazards Studies as a formal branch of knowledge (Hinshaw, 2006).

White's interest in flood events was ignited when, as a young civil servant in Washington in the 1930s, he was appointed by US President Franklin D Roosevelt to serve on the National Resources Planning Board (NRPB). Roosevelt's New Deal response to the Great Depression which then gripped the United States included putting the nation's unemployed to work in grand public works schemes. Roosevelt decreed flood defense and **floodplain** management a priority and set out to build new protective dams and levees throughout the country. During this period, the Hoover Dam was built on the Colorado River, and the Tennessee Valley Authority was created and the Wilson Dam built on the Tennessee River.

White's specific responsibility was to work with officials to improve floodplain management in the Missouri River basin. During this time he became convinced that "technological fixes" alone were doomed to failure. Building better flood defenses was a necessary but insufficient solution to the problems caused by flooding. Whilst such defenses might protect floodplains in the short term, eventually they would succumb to extreme flood events. White was convinced that a whole variety of supplementary strategies were needed; alongside protection there needed to be prevention, prediction, mitigation, response, and adaptation.

Later, working as a geographer at the University of Chicago in 1966, White was appointed by the national Budget Task Force on Federal Flood Control Policy to lead a review of the merits and demerits of establishing a national flood insurance program. White's proposals supporting such a scheme were widely praised and accepted. Although the complexities entailed in introducing a National Insurance Scheme proved overwhelming and retarded progress, a modified system of insurance against losses incurred due to flooding was eventually introduced. In 1979, this scheme was integrated into the roles and responsibilities of the Federal Emergency Management Agency (FEMA), the country's principal hazard planning agency.

All the while, White continued to argue that flood defense systems, whilst important, could only ever be considered a partial response to the threats posed by extreme flood events. Of equal importance were stronger spatial planning to limit land use development in floodplains, better forecasting, improved emergency services, expanded social insurance, and superior building regulations and standards (see Zoom-in Box 11.1).

White recognized that his comprehensive approach to minimizing risks posed by extreme flood events was capable of wider application to other hazard events. In 1976, he founded the Natural Hazards Research and Applications Information Center (today simply the Natural Hazards Center (NHC)) at the University of

Zoom-in Box 11.1: Westcoat and White (2003) *Water for Life: Water Management and Environmental Policy*

Gilbert White's final book (co-authored with US environmental geographer James Westcoat) provides a summation of his views on the management of floodplains. Good governance, it was argued, requires actions in seven particular areas:

- Mapping incidences of flooding in history and estimating the frequency of different kinds of flood events by scale or magnitude (for example, a 2-meter rise in the water level may be a 1-in-100-year event (that is, it may have a probability of occurrence in any given year of 1%) in this floodplain but a 1-in-25-year event in another floodplain).
- Applying suitable planning and regulation in particularly vulnerable floodplains (so as to prevent risky building and development in the first place) and in areas that affect drainage (so as to ensure development does not create even more dangerous drainage regimes).
- Establishing, with government support, an effective insurance scheme to ensure that those who are affected by flooding can rebuild their lives.
- Improving short-term forecasting and warning systems and up-skilling all stakeholders (the general population, community groups, the emergency services, business, local governments, and so on) so that they are competent to respond effectively to early warnings.
- Fortifying the ability of architects, builders, construction companies, and property developers to build sturdier structures that are at least better able to withstand flood events, and at their best flood-proof.
- Scaling up support and relief offered by federal government to victims of flood events, to enable these victims to abandon particularly damaged property and move into homes and workplaces that lie at a safe distance from floodplains.
- Undertaking a cost benefit analyses of the impacts of both flooding and flood defense systems on natural ecosystems, both those created by and those destroyed by flood events.

Colorado and served as Director of the NHC from 1976 to 1984 and 1992 to 1994. This center continues to serve as a world-leading authority on public policy as it relates to natural disasters, and has undertaken research on flooding, drought, earthquakes, mudslides, hurricanes, wildfires, tsunamis, tornadoes, and volcanoes. Inspired by White's insistence on a comprehensive approach to the mitigation of hazards, the NCH places equal importance on disaster avoidance, preparedness, response, and recovery.

According to his colleague US anthropologist Robert E Hinshaw, throughout his career White continued to revisit five questions he deemed to be central to the human geographical study of hazards (Hinshaw, 2006): What are the characteristics

of the physical hazards involved in extreme events? What sorts of human adjustments have societies made to these hazards? What is the complete range of possible adjustments that people might make where they are in a position to do so? Why is there a difference between adjustments to threats posed by hazards from one place to the next? What impact do changes in public policy make to the behavior of stakeholders with respect to their choice of one adjustment strategy over another?

White's legacy was to raise awareness that "technological fixes" to hazard events, if introduced in isolation, were destined to end in failure. And from this point of departure Hazards Studies have since developed more critical insights into the role of social, economic, cultural, and political processes in heightening people's vulnerability to hazard events.

There is Nothing Natural about Natural Disasters: Risk = Exposure × Vulnerability (R = E × V)

A common misconception about natural disasters is that populations most at risk are simply those unlucky enough to have been born in parts of the world where nature's extremes are most manifest; danger is simply a function of the uneven distribution of the magnitude and frequency of hazards across the face of the earth. Increasingly, it is being recognized that, whilst **exposure** to natural hazards is important, ultimately it is society that puts people at increased risk and, therefore, that solutions to natural hazards need to tackle the root causes of the social production of vulnerability to hazard events.

And so the formula *Risk = Exposure × Vulnerability (R = E × V)* has become of central importance in Hazards Research.

Arguably, it was only in the light of the pioneering work of Canadian geographer Kenneth Hewitt that human geographers began to take seriously the role of society in increasing and aggravating the lethality of natural hazards. In his 1983 book *Interpretations of Calamity: From the Viewpoint of Human Ecology* (Hewitt, 1983), Hewitt demonstrated that natural hazards are always threatening but only develop into calamities when societies pursue development pathways that unwittingly increase their vulnerability. In his book *Regions of Risk: A Geographical Introduction to Hazards*, published 14 years later, in 1997, Hewitt elaborated on this claim by showing that calamity results from three factors: the natural hazard itself, the vulnerability of societies, and the degree to which societies are active in defending themselves.

In the early 1990s, British geographers Keith Smith and David N Petley's book *Environmental Hazards: Assessing Risk and Reducing Disaster* (Smith and Petley, 1991) and US and British geographers and scholars of International Development Piers Blaikie, Ben Wisner, Terry Cannon and Ian Davis's (Blaike *et al.*, 1994) book *At Risk: Natural Hazards, People's Vulnerability and Disasters* also played a leading role in shifting the attention of human geographers toward the role of social, political, cultural, and economic processes in hazard events.

According to Smith and Petley, through time Hazards Studies have developed four main **paradigms**, each paradigm viewing hazards and approaching their mitigation in particular ways. Before 1950, an *Engineering paradigm* dominated. Here nature's extremes were perceived to be the root cause of natural disasters and

technological and engineering solutions were advocated to shield communities where possible. Between 1950 and 1970, a *Behavioral paradigm* captured thought. Here the focus was upon hazards in more developed countries, the ways in which development was encroaching onto land exposed to hazards and the role of spatial planning in steering future land-use development toward safer sites. The period of 1970 to 1990 witnessed the rise of a *Development paradigm* in which underdevelopment and poverty in lesser developed countries was viewed as a key source of heightened vulnerability, and social, political, cultural, and economic change the only route to redemption. Finally, according to Smith and Petley, from 1990 onward, a *Complexity paradigm* has emerged, which has located hazards within CHANS and sought to help local communities better manage interactions between society and nature so as to minimize their vulnerability to hazards.

At the center of Blaikie *et al.*'s (1994) approach to hazards is the view that because there exist marked inequalities within and between societies, between more-resourced and less-resourced social groups, it follows that vulnerability to hazards is unevenly distributed. Blaikie *et al.* develop a Pressure and Release (PAR) model to explain the ways in which deep structures in society (how society is organized politically, economically, socially, and culturally) lie at the "root" of vulnerability, generating "dynamic processes" (such as wars, poverty, **urbanization**) which in turn lead to "unsafe conditions." The ability of populations in more impoverished regions of the world – the Global South – to withstand the effects of a natural hazard is likely to be less than that of populations in more affluent parts of the Western world – the Global North. Moreover, there exists a marked variation in vulnerability to hazards between social groups within the Western world, and indeed within the developing world. Hazards produce more disastrous consequences for some social groups (for example, the poor, women, ethnic minorities, people with disabilities, children, refugees, the less educated, and those without family supports) than others (for example, the wealthy, men, the ethnic majority, the better educated, the able-bodied, adults, those with strong social networks, and settled populations).

It is possible to identify six ways in which social, political, cultural, and political processes increase the vulnerability of populations exposed to natural hazards: poor governance, poverty, social exclusion, war and violent conflict, megacities, and environmental degradation. Of course, all six feature in all world regions, rich and poor. But they tend to manifest themselves in particularly acute ways in the most destitute regions of the world:

Poverty: Poverty alone is perhaps the greatest progenitor of precarity. Poor people tend to live in overcrowded conditions and suffer from poorer nutrition and even malnutrition, both environments in which disease more easily incubates and spreads. Their means of subsistence and lack of savings ensure that they have limited access to resources in times of environmental upheaval. They are less likely to have political influence and representation in local, regional, and national governments. Poor people tend to live in homes that are poorly constructed and more prone to the effects of hazard events, and that are in parts of cities and regions where land prices and rents are lowest (usually areas more exposed to hazard events). They are less likely to have life and health assurance, or insurance against loss of property owing to natural hazards.

Social exclusion: In addition to poverty, other forms of social exclusion can add to people's precarity, such as gender, age, ethnicity, disability, sexuality, and so on. Many societies are riven with inequalities in opportunity and welfare. For women, children, ethnic minorities, people with disabilities, those stigmatized on the basis of their sexuality, and, indeed, those marked out as different from mainstream society, natural hazards can often bring elevated vulnerability to an already highly precarious existence. In times of scarcity, it is an unfortunate fact that white middle-class men, majority and mainstream populations, and the able-bodied capture more than their fair share of emergency resources, and, accordingly, are better equipped to weather hardships.

Poor governance: Effective governance and strong and able institutions help societies protect their most vulnerable people, develop long-term plans to mitigate against the effects of disasters, prepare for disasters, cope with disasters when they occur, and recover from disasters more speedily. Poor governance, in contrast, heightens the precarity of vulnerable groups, militates against long-term planning, and reduces the capacity of communities to prepare for, to cope with, and to recover from a hazard event. Countries marked by military dictatorships, repeated coup d'états and political instability, weak institutional capacity, and political corruption are likely to render their populations more vulnerable to nature's extremes.

War and violence: Violent conflicts increase vulnerability to natural hazards by making disaster preparation and planning impossible or less of a priority, displacing people from their homes and forcing them to live in makeshift and unsanitary refugee camps, disrupting emergency supplies and humanitarian relief, depleting resources and raw materials to the point of exhaustion thereby increasing precarity, intentionally or unintentionally destroying hazard defense infrastructure, and increasing predatory practices (such as human trafficking, bonded labor) and crime (especially rape, looting, murder).

Rapid urbanization: The rise of megacities is another factor that serves to deepen the precarity of already marginalized populations in the Global South. Migrants living in unregulated and under-regulated shanty towns, *favelas*, and slums are among the most vulnerable of all populations. **Megacities** both draw upon the resources of the surrounding hinterland (for food and raw materials) and provide services to that hinterland (energy, employment, finance, water, and so on), and so any disruption caused by natural hazards can quickly become a disaster for populations apparently at a remove from the natural hazard itself. For good reason, many megacities form in coastal regions, and the effects of hazards can be heightened by the supplementary and associated risks of subsidence, salinization, liquefaction, flooding, and tsunamis.

Environmental degradation: Eking out a living at the extremes of the natural environment, living sustainably is a particular challenge for marginal communities in the Global South, and environmental degradation and resource depletion can in turn become problems that affect vulnerability to natural hazards. These problems can be further aggravated by climate change. Some ecosystems, such as forests, wetlands, mangroves, and coral reefs, can shield people from risks posed by landslides and tidal waves. Because ecosystems often provide for nutrition, income (for example tourism), building materials, and medicines, their destruction increases communities' susceptibility to hazards. Ecosystems can often help communities

cope with natural hazards by providing emergency resources such as food and freshwater when normal supplies are interrupted. Finally, by increasing options and possibilities to diversify the available pool of local resources, biodiversity helps communities formulate long-term hazard-mitigation plans; a reduction in biodiversity, therefore, can render populations more vulnerable.

Mapping the World at Risk

The United Nations University (UNU) in Bonn, Germany provides a useful framework through which the social production of vulnerability might be better understood (UNU, 2012). The UNU begins with the formula $R = E \times V$, but then breaks down vulnerability into three component parts: degree of susceptibility to hazards (likelihood of suffering harm), capacity to cope with hazards (capacity to mitigate the impact of hazards when they do occur), and ability to plan ahead to adapt to natural extremes (ability to minimize the degree to which exposure to hazards is increased by prior poor human decision making).

According to UNU, social, economic, cultural, and political processes determine a society's degree of susceptibility, coping capacity, and ability to adapt (Figure 11.1).

Susceptibility: Societies marginalize and impoverish some social groups to the extent that their existence is so precarious that small setbacks have significant consequences. They are likely to be predisposed to feel the full ferocity of hazards. In contrast, social, political, cultural, and economic processes also enrich and empower other social groups to the extent that they are fortified and inoculated to a degree against hazard events.

Coping: The ability of a society to cope with a natural hazard when it does occur is a function of competencies in the areas of disaster preparation (the quality
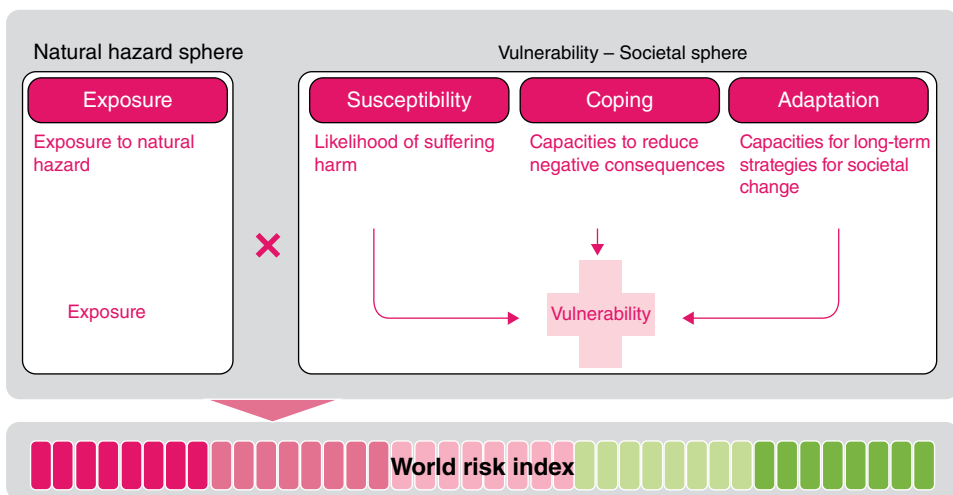
Figure 11.1 Factors in the World Risk Index. Source: United Nations University, 2012.

of forecasts and early warning systems), disaster management (the readiness of emergency and humanitarian services to evacuate; provide medical support; conduct search and rescue; provide temporary shelter, distribute food supplies, and maintain law and order), and disaster recovery (the availability of resources to rebuild and repair communities and infrastructure; social insurance schemes). Communities with resources are more likely to have superior systems of preparation, management, and recovery. Impoverished communities are liable, in contrast, to be underprepared, to suffer from poor governance, and to lack the resources to rebound quickly after disaster strikes.

Adaptation: Ideally, societies should formulate comprehensive long-term disaster management plans. In particular, *spatial planning* should be used where possible to steer human activities from areas exposed to hazards and to work to make communities, both poor and wealthy, more resilient. Wealthy societies generally have stronger institutions and superior systems of governance and are better able to engage in long-term planning. Lesser developed societies, in contrast, tend to suffer from weak and failing institutions and poorer governance and as a consequence find it difficult to formulate and implement long-term plans.

Based upon these distinctions, UNU has developed a set of indicators (see Zoom-in Box 11.2) and produced maps showing global patterns of exposure, vulnerability (a composite of susceptibility, coping, and adaptation), and overall risk (a risk index comprising exposure and vulnerability – see Maps 11.1a, b, and c).

Clearly, natural hazards pose less of a threat for rich advanced Western countries in the **Global North** and more of a threat to the comparatively more impoverished countries of the **Global South** (see Zoom-in Box 11.3 and Zoom-in Box 11.4). Specifically, it is possible to discern in the data at least five important trends.

Some countries enjoy lower levels of risk because they are neither exposed to natural hazards nor are they especially vulnerable. Countries in this classification are among the safest in the world (for example, Germany, Estonia, Israel, Egypt, Norway, Finland, Sweden, the United Arab Emirates , Bahrain, Kiribati, Iceland, Grenada, Saudi Arabia, Barbados, Malta, and Qatar).

Other countries suffer high levels of risk because they are both exposed to natural hazards and are especially vulnerable to these hazards. Countries in this classification are among the riskiest in the world (for example, Vanuatu, Tonga, Philippines, Guatemala, Bangladesh, the Solomon Islands, Costa Rica, Cambodia, Timor-Leste, El Salvador, Brunei Darussalam, Papua New Guinea, Mauritius, Nicaragua, and Fiji).

A third group of countries bear an elevated exposure to hazards but, because they are not vulnerable, the risk of a hazard becoming a disaster is lessened. These countries are better able to withstand hazards and to diminish their lethality (Australia, New Zealand, Ireland, and Italy, and, to a lesser extent, the United Kingdom, Greece, and the United States, are good examples).

Conversely, there exist countries that are not especially exposed to hazards but which, because they are exceptionally vulnerable, tend to amplify the effects of hazards and to experience hazard events as particularly devastating. These countries are liable to convert minor disturbances into traumatic events (they include Afghanistan, Mozambique, Tanzania, Liberia, Eritrea, and Yemen).

Zoom-in Box 11.2: The United Nations University World Risk Index

In the *World Risk Report 2012*, UNU (2012) used the four risk factors of exposure, susceptibility, coping, and adaptation to create a World Risk Index.

Indicators were chosen for each risk factor:

- *Exposure*: Measure of the proportion of the population exposed to earthquakes, cyclones, floods, droughts, and sea-level rise.
- *Susceptibility*: Public infrastructure (share of the population without access to improved sanitation, share of the population without access to an improved water source), nutrition (share of population undernourished), poverty and dependencies (dependency ratio – share of under 15- and over 65-year-olds in relation to the working population), extreme poverty population (living with US$1.25 per day or less – calibrated by Purchasing Power Parity), and economic capacity and income distribution (**Gross Domestic Product** (GDP) per capita – calibrated by Purchasing Power Parity and inequalities in the distribution of income).
- *Coping*: Government and authorities (measured by a Corruption Perceptions Index), good governance (Failed States Index), medical services (number of physicians per 10,000 inhabitants, number of hospital beds per 10,000 inhabitants, material coverage), insurances (life insurances excluded).
- *Adaptation*: Education and research (adult literacy rate, combined gross school enrolment), gender equity (gender parity in education, share of female representatives in the national parliament), environmental status/ecosystem protection (quality of water infrastructure, biodiversity and habitat protection, forest management, agricultural management), and level of investment (public health expenditure, life expectancy at birth, private health expenditure).

The UNU has used these indicators to map the regions of the world most at risk today and to inform improvements in comprehensive disaster planning.

(a) Exposure – Exposure of the population to natural hazard events

Map 11.1a Mapping the world at risk: exposure. Source: United Nations University, 2012.

(b) Vulnerability – Vulnerability of a society to a hazard event/capacity to cope with an event
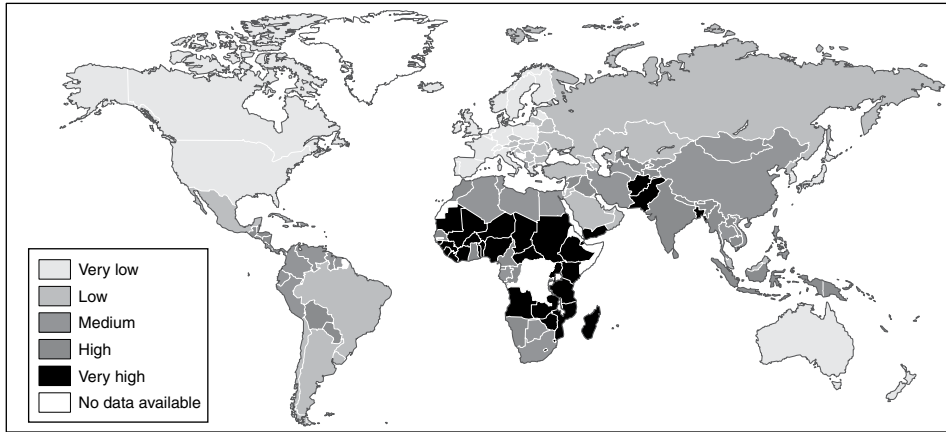
Map 11.1b　Mapping the world at risk: vulnerability. Source: United Nations University, 2012.

(c) World Risk Index – Overall aggregate measure combining exposure and vulnerability
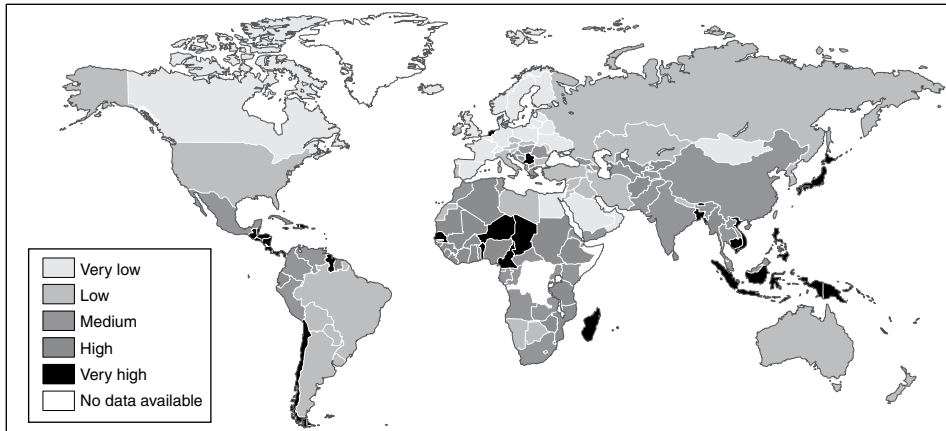
Map 11.1c　Mapping the world at risk: World Risk Index. Source: United Nations University, 2012.

Finally, Japan and the Netherlands, and, to a lesser extent, Chile and Mauritius, are interesting examples of countries that, notwithstanding their abilities to reduce their vulnerabilities, remain at heightened risk of natural disasters simply because their level of exposure is so great.

Toward a Safer Future: Resilience, Transition, and Transformation

Hazards and their impacts 1900–2011

With assistance from the World Health Organization (WHO) and the Belgium government, in 1988 the Centre for Research on the Epidemiology of Disasters (CRED) in Brussels began the task of compiling an Emergency Events Database

Zoom-in Box 11.3: A Tale of Two Earthquakes:
Haiti and Japan

Insights into the ways in which social, political, cultural, and economic processes can increase or decrease countries' vulnerability to natural hazards can be gleaned from a comparison of the impacts of the Haiti earthquake in 2010 and the Tōhoku earthquake and tsunami in Japan in 2011.

According to the UNU's *World Risk Index 2012*, Haiti is ranked the 21st most risky country in the world, with Japan the 16th most risky. Both countries are especially exposed to earthquakes, but Japan suffers less because it is not as vulnerable as Haiti.

The Haiti Earthquake, 2010

The Caribbean island of Haiti is located at the boundary between the North American Plate and the Caribbean Plate and as such is exposed to earthquakes. On January 12, 2010, at the Enriquillo–Plaintain Garden fault zone (EPGFZ) an earthquake of magnitude 7 on the Richter Scale occurred, with an epicenter 25 km southwest of the capital city Port-Au-Prince and 13 km below the earth's surface (a relatively shallow depth). Across the next fortnight, over 50 aftershocks measuring 4.5 or over on the Richter Scale aggravated the consequences of the main earthquake (see Map 11.2).

Estimates of the damage caused by this earthquake continue to be disputed. The Haitian government initially estimated the death toll to be around 230,000 but later revised this upward to 316,000 (the island has a total population
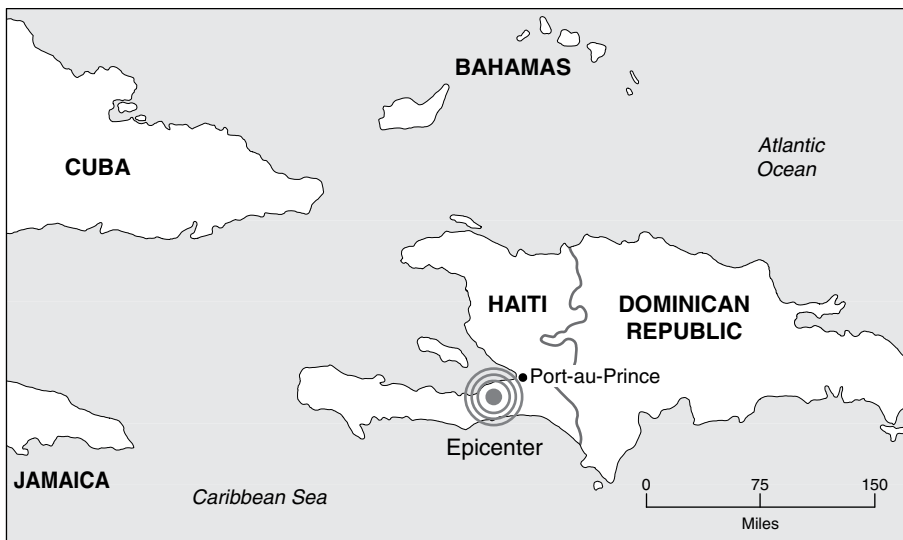
Map 11.2 The epicenter of the Haitian Earthquake 2010.

(*Continued*)

Box 11.3 (*Continued*)

Plate 11.1 Aftermath of the Haiti earthquake 2010. Source: © Ron Haviv/VII/Corbis.

of 10 million, with 940,000 in the capital city). Others dispute this claim and suggest that between 46,000 and 85,000 perished. Approximately 250,000 homes had collapsed or were severely damaged, resulting in 1.5 million people being displaced, around 550,000 of whom remained homeless two years after the event. A further 30,000 commercial buildings were said to have collapsed or were severely damaged. The social infrastructure on the island was also badly affected, with an estimated 1,300 schools and 50 health care facilities destroyed and the island's main prison flattened, leading to 4,000 inmates escaping (Plate 11.1).

Having secured independence from French colonial rule in 1804, Haiti has suffered from a series of dictatorships, corrupt political regimes, coups d'état, violence, and social unrest and remains one of the most impoverished countries in the world. Haiti's troubled political history, broken economy, inadequate infrastructure, poverty, and inept system of governance all contributed to a magnification of the lethality of the 2010 earthquake:

- The population of Haiti is among the poorest in the world, living on less than US$3 per day, and as a consequence, poor nutrition, sanitation, and water supplies, and high levels of disease meant people were already living in extreme precarity.
- The earthquake's epicenter was in close proximity to Port-au-Prince, a city which has experienced rapid urbanization and where the majority of its inhabitants live in makeshift and illegal slums. Because construction on

the island has been unregulated and under-regulated, many buildings, including those in Port-au-Prince, were not designed or erected to be earthquake resistant.

- Already poor transport connections exacerbated the capacity of relief efforts to ameliorate the plight of the most vulnerable populations immediately following the earthquake; the island only has a single airport (and a single runway) and a single principal port, both of which were damaged by the earthquake. Aid that had arrived at the airport was not distributed efficiently because of limited onward transport options and personnel.
- Due to a shortage of trained local emergency teams and medical personnel, the search for and treatment of those buried in rubble and collapsed buildings was hampered, leading to unnecessary death, suffering, and injury.
- Desperation and inadequate governance led to looting, anarchy, and violence, exposing the population to new risks.

The Tōhoku Earthquake and Tsunami in Japan, 2011

Japan is located west of the boundary between the Eurasian and Pacific Plates. On March 11, 2011, an earthquake registering 9 on the Richter Scale occurred, with an epicenter 72 km east of the Japanese coastal region of Tōhoku and 130 km northeast of the city of Sendai, and at a relatively shallow depth (32 km beneath the sea). Shortly after, a tsunami carrying waves in excess of 40meters in height crashed onto the northeastern coastline of Japan (see Map 11.3).

According to the Japanese government, 15,883 died in the disaster (the vast majority by drowning), 6,145 people were injured, 129,225 buildings collapsed, 254,204 buildings partially collapsed, 691,766 buildings were damaged, approximately 4.4 million households had their electricity supplies cut, and 1.5 million households were left without clean water and sanitation. Moreover, the tsunami damaged the Fukushima Daiichi Nuclear Power Plant complex leading to a dangerous meltdown of reactors. In total, 340,000 people were temporarily displaced.

Whilst the Tōhoku earthquake and tsunami highlight the risks that natural hazard events pose even for wealthy countries, arguably Japan's privileged status, world-class infrastructure, strong institutions, and effective systems of governance ensured that it escaped even harsher punishment:

- Japan enjoys one of the highest life expectancies in the world and its population boasted comparatively strong health prior to the disaster.
- Japan's strict building and construction regulations and codes ensured that buildings were better able to withstand the effects of the earthquake and its aftershocks.

(Continued)

Box 11.3   (*Continued*)
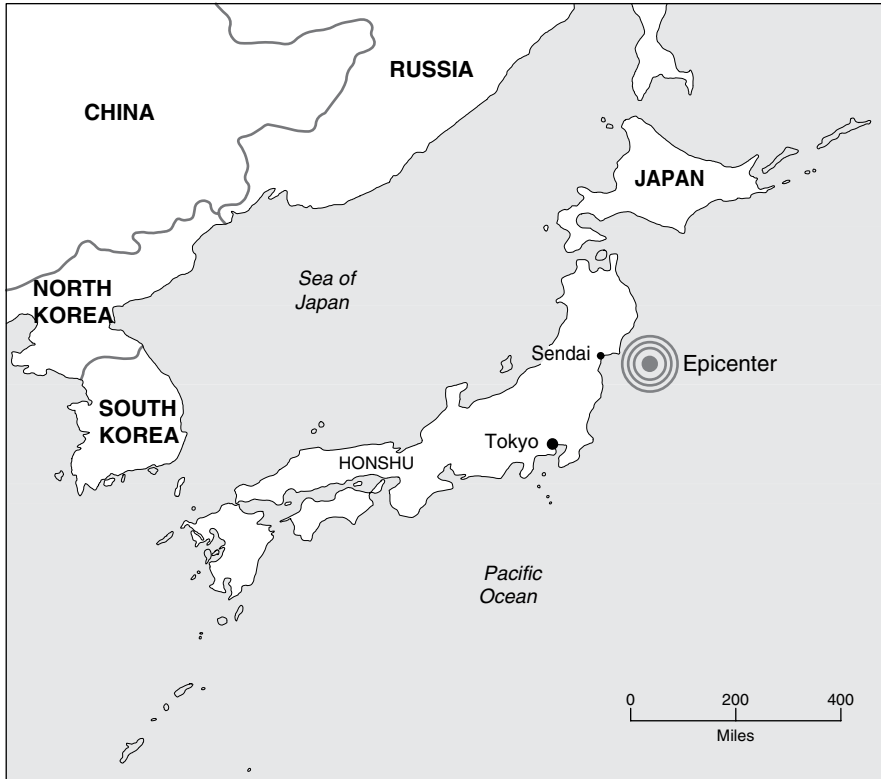
Map 11.3   The epicenter of the Japanese Earthquake 2011.

- Japan's Earthquake Early Warning system allowed it to detect the earthquake a minute in advance of it happening and to issue a warning. Even that short lead-in time prevented a more significant loss of lives.
- Following the failure of the cooling systems at the Fukushima Daiichi Nuclear Power Plant complex, the Japanese government announced a state of emergency, enacted a plan to evacuate local residents, and introduced expert monitoring systems to trace the presence of radioactive substances in water supplies and in the food chain.
- Drawing upon its own wealth, the Bank of Japan offered US$183 billion to the country's principal banks to protect them against losses and to allow the banking system to continue as normal.

It is clear, then, that the impact of an earthquake varies according to the level of development of a country. Whilst Japan's earthquake caused damage estimated at US$200bn this was equivalent only to 3% of Japan's GDP that year. Meanwhile, the Haitian earthquake inflicted only US$14bn worth of damage but this was equivalent to 160% of Haiti's GDP in 2010. It is easy to see which country was best able to absorb the impact and act quickly to get back on its feet.
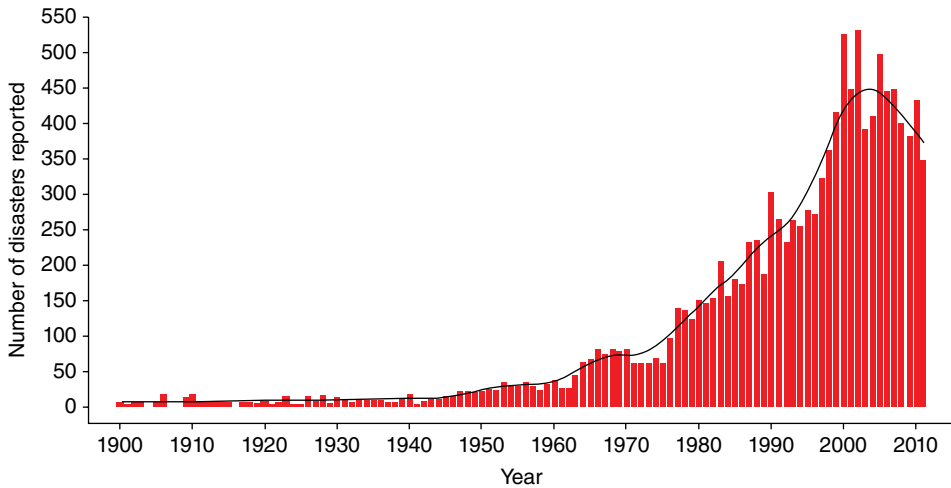
Figure 11.2 Natural disasters reported, 1901–2011. Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be – Université catholique de Louvain, Brussels, Belgium.

(EM-DAT). The EM-DAT now incorporates data on the frequency and impact of over 18,000 disaster events that have occurred across the world from 1900 to the present.

Among the key conclusions to derive from the EM-DAT are the following:

- The number of natural disasters reported has grown rapidly across the past century. It is unclear whether reported increases reflect better reporting and recording procedures or derive from actual increases in hazard events (Figure 11.2).
- Accordingly, and not surprisingly, the number of people affected by hazard events and the economic damage and losses incurred as a consequence of disasters have also increased significantly (Figure 11.3).
- These points notwithstanding, it remains the case that the number of people dying in a hazard event has decreased significantly in the past century (Figure 11.4).

The implication is that, when placed into historical context, it might be the case that hazards are indeed occurring with increased frequency and severity, and are affecting more people and leading to greater economic losses than ever in the past, but they are decreasing in their lethality. At least in this regard we might say that societies are successfully working to protect their citizens and to produce a safer world. Nevertheless, according to the United Nations, since 1993, disasters caused by natural hazards have affected 4.4 billion people, resulted in the loss of 1.3 million lives, and caused US$2 trillion in economic losses. In each of the years of 2010, 2011, and 2012, natural disasters have resulted in losses in excess of US$100bn, far exceeding humanitarian aid (UNISDR, 2013a). Further action is needed.
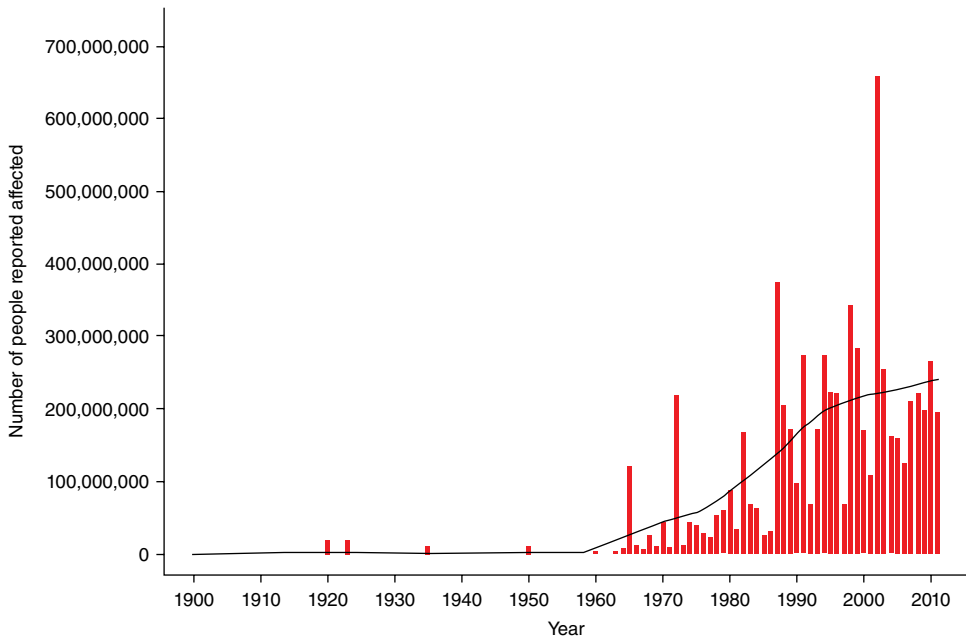
Figure 11.3 Number of people reported affected by natural disasters, 1900–2011. Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be – Université catholique de Louvain, Brussels, Belgium.
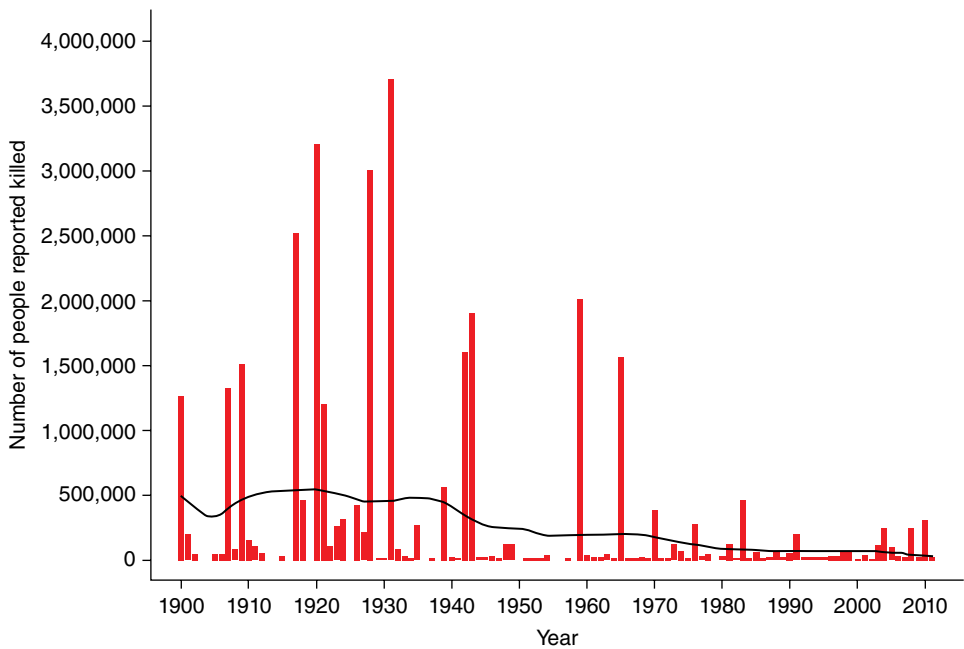
Figure 11.4 Number of people reported killed by natural disasters, 1900–2011. Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be – Université catholique de Louvain, Brussels, Belgium.

The Hyogo Framework for Action (HFA) 2005–2015

Responsibility for promoting and coordinating international efforts to minimize the risk that natural hazards become natural disasters falls on the shoulders of the United Nations. Since its inception in 1945, the United Nations has adopted at least four different approaches to disaster risk reduction:

Phase 1 (1946–1970): In the first phase, the focus was largely upon the coordination of stakeholders and partners following a natural hazard event to provide relief and to assist countries to return to normality.

Phase 2 (1971–1999): In the second phase, a series of formal policy frameworks and institutional arrangements were pioneered to help improve countries' preparedness, ability to respond, and capacity to mitigate damage. During this phase two important milestones were crossed. First, the United Nations established UNDRO (Office of the United Nations Disaster Relief Coordinator) in 1971, which evolved later into the present United Nations International Strategy for Disaster Reduction (UNISDR). Second, in 1999 the United Nations adopted a strategy called "A Safer World in the 21st Century: Disaster and Risk Reduction" (later labeled the International Strategy for Disaster Reduction).

Phase 3 (2000–present): In the third phase, further policy frameworks and institutional innovations were pioneered. Increasingly, the focus has been upon managing the risk presented by disasters. Reflecting this trend, in 2005, the United Nations adopted the *Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters* (UNISDR, 2005; see Zoom-in Box 11.4 and Zoom-in Box 11.5).

Phase 4 (future): According to some, we now stand on the threshold of a new approach to disaster risk reduction which is emphasizing the conscious incorporation of disaster risk management into social, political, and economic policies, for example, in the areas of sustainable development, environmental management, and climate change.

Perhaps the central concept that *The Hyogo Framework for Action 2005–2015* (UNISDR, 2005) promotes is the concept of "**resilience.**" Making societies more resilient is now a well-worn trope in the field of comprehensive disaster planning. In fact, the concept of resilience has become so popular that it has displaced to a large degree the rival idea of "sustainability." But what does it mean to say that societies need to fortify themselves so that they might be more resilient and therefore better able to weather hazard events?

In *Searching for Safety*, US political scientist Aaron Wildavsky (1988) identifies six principles which collectively define the capacity of a system to absorb the shock of a natural hazard and stay on course:

- *Homeostasis principle*: promotes the view that systems regulate themselves through feedback loops which work to restore equilibrium.
- *Omnivore's principle*: holds that systems that procure resources from multiple sources are less vulnerable to system collapse.

Zoom-in Box 11.4:   The Hyogo Framework for Action (HFA) 2005–2015

Whilst it might be possible to reduce the magnitude and frequency of natural hazard events (for example, through geophysical intervention and engineering and minimizing the contribution of human-induced climate change to extreme weather events), it is likely that future disaster management strategies will focus principally upon decreasing people's vulnerability to natural hazards. These strategies will work to fortify communities who, on account of their precarity, are most susceptible to hazard events, will strengthen the capacity of these and other communities to cope better when hazards do strike, and will work to enable all societies to devise and implement long-term strategies through which adaptation might be improved.

Currently, the United Nations' *Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters* (UNISDR, 2005) provides the most authoritative framework around which countries are rising to meet the public policy challenges presented by natural hazards. Agreed at the World Conference on Disaster Reduction held in Kobe, Japan, in 2005, the Hyogo Framework for Action (HFA) has been signed by 168 countries and serves as a 10-year strategy through which losses incurred through hazard events might be minimized.

At the heart of the HFA is the claim that there exist five key areas where action is needed:

1 *Governance: organizational, legal, and policy frameworks*. Greater effort is needed to ensure that comprehensive disaster planning is a national and a local priority and is supported by strong institutions and effective governance.
2 *Risk identification, assessment, monitoring, and early warning*. Notwithstanding recent improvements in understanding, greater competence is needed in the areas of disaster forecasting, early warning, and analyses of the vulnerabilities of different populations.
3 *Knowledge management and education*. The management and distribution of existing knowledge needs to be improved and a culture of sharing best practice and experiences built.
4 *Reducing underlying risk factors*. There needs to be a renewed interest in tackling poverty, inept and corrupt governance, social inequalities, war, urban slums, and environmental degradation so as to reduce the precarity that turns hazards into disasters.
5 *Preparedness for effective response and recovery*. Improvements in disaster management are required. Competency in the coordination and administration of preparation plans, emergency services, relief efforts, and recovery strategies needs to be scaled up.

Whilst the HFA is scheduled to end in 2015, already it is clear that it has only started what will be a long journey. Accordingly, the United Nations intends to agree a follow-up framework at the World Conference on Disaster Reduction to be held in Sendai, northeastern Japan, in 2015. In 2013, the UNISDR published advanced thoughts on what might replace HFA (UNISDR, 2013b).

Zoom-in Box 11.5:   Disaster Management in Peru: The Work of the Sistema Nacional de Defensa Civil (SINADECI)

Peru is a country especially exposed to a range of hazards, including earthquakes, avalanches, floods, mudslides, and El Niño/La Niña. Perhaps earthquakes present the greatest threat to Peru. Peru is located close to the Peru–Chile Trench, where the Nazca Plate subducts under the South American Plate, creating a fault and consequently significant seismic activity. Peru experiences earthquakes of varying intensity on a regular basis. Perhaps the most serious earthquakes to have occurred in recent times have been those that struck in 1970, 2001, and 2007. Of these three, the Ancash earthquake, which occurred on May 31, 1970, and which registered 7.7 on the Richter Scale, was undoubtedly the most lethal (see Map 11.4). Approximately 73,000 Peruvians perished in this quake and a further 22,000
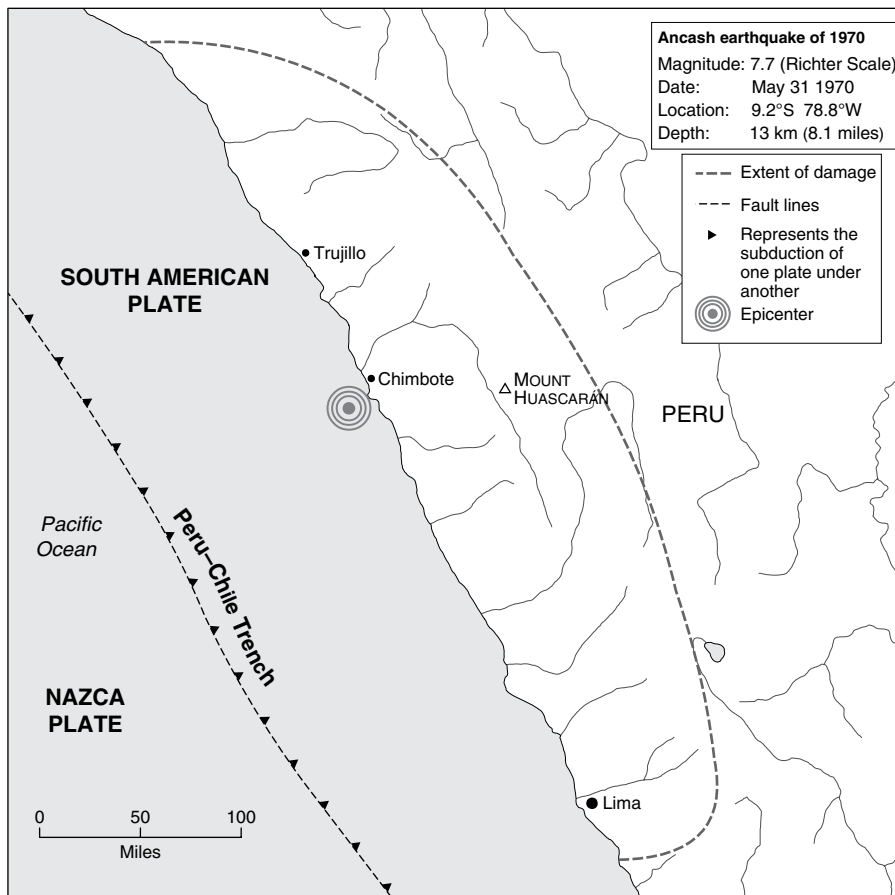
Map 11.4   The 1970 earthquake in Peru.

(*Continued*)

Box 11.5   (*Continued*)

were presumed killed by an associated avalanche, which occurred in Mount Huascarán. Over 140,000 people were injured and over 500,000 people were left homeless.

Given the degree to which it is exposed to natural hazards, it is unsurprising that Peru has built up expertise in disaster planning. Such is coordinated by Sistema Nacional de Defensa Civil (SINADECI) – the national civil defense system – and, in particular, the office termed El Instituto Nacional de Defensa Civil (INDECI). The purpose of SINADECI is to help prevent natural hazards from becoming human disasters and to manage disasters when they do occur. Whilst disaster planning is ultimately the responsibility of the presidency, the cabinet, and the national offices of civil defense, in reality it is INDECI that has primary responsibility on the ground. This bureau governs over "Civil Defense Committees," which operate variously at the regional, provincial, and district levels. Their job is to:

a)   promote disaster prevention (annual prevention plans are drawn up);
b)   implement disaster prevention plans;
c)   use science and technology to better understand when and which populations are most exposed and vulnerable;
d)   enhance the capacity of emergency services to handle disasters;
e)   coordinate logistics and humanitarian aid in the event of crises;
f)   prepare health services to deal with crises and to coordinate these services during crises;
g)   ensure law and order is maintained during crises;
h)   improve communications vis-à-vis promoting education to prevent disasters and to enable communication systems to work during crises.

Peru's approach to disaster management is famed for its attempts to incorporate local communities into disaster planning and to empower these groups to deal with disasters when they emerge.

Still, many claim that Peru remains vulnerable to natural hazards and that the principal cities of Lima and Arequipe in particular are ill equipped and poorly prepared to deal with hazards should they arise. Peru's vulnerability to natural hazards is aggravated by its poverty. With a Gross Domestic Product (GDP) per capita of US$6,060 (US$10,090 in Purchasing Power Parity (PPP)), Peru is one of the poorer countries in Latin America. It has a population of 29.9 million of whom 25.8% are officially classified as living below the poverty line (Plate 11.2). In addition to poverty, Peru's vulnerability to natural hazards has been heightened by the inappropriate development of settlements in regions with known seismic activity, the rapidity with which cities have expanded (resulting in the shoddy construction of buildings), deforestation, and inadequate infrastructure.

(*Continued*)

Plate 11.2   Vulnerable to natural hazards: slum housing in the outskirts of Lima, Peru. Source: © Hervé Hughes/Hemis/Corbis.

- *High flux principle*: holds that the faster resources flow through a system the more capable that system will be of recovering following a disaster.
- *Flatness principle*: holds that systems that are governed from above in centralized, hierarchical, and top-down ways are less resilient than systems in which decision making is decentralized to grass roots communities with strong "on the ground" local capacity and knowledge.
- *Buffering principle*: refers to the need for systems to operate in excess of actual need, so that any reduction in performance caused by a hazard does not lead to fatal shortfalls in capacity.
- *Redundancy principle*: promotes doubling up system functions so that, in the event a function is lost, a back-up can be easily deployed as a substitute.

We might say, then, that the most resilient systems are ones in which all actors in the system automatically respond to neutralize a disaster when any one actor is threatened; when systems procure inputs (food, water, medical supplies, finance) through multiple channels and from multiple origins; when resources move through systems in a free-flowing way, efficiently and without impediment; when decision making is decentralized to communities and local stakeholders; when systems are built to perform at levels well in excess of actual need; and when systems can substitute functions that fail with a back-up.

In his 2010 *Adaptation to Climate Change: From Resilience to Transformation* British geographer Mark Pelling cautions against promoting resilience as always and everywhere the goal of disaster management (Pelling, 2010). Pelling calls for

more attention to be given to the ways in which natural hazards play into the politics that prevail in countries. He deploys the term "disaster politics" to refer to the ways in which natural hazards interact with the existing political order, consolidating, destabilizing, and transforming this order in different circumstances. Societies that frame comprehensive disaster management in terms of the pursuit of greater resilience need to recognize that in so doing they are making a *political choice* about the kind of future they want. Thinking in terms of resilience implies prioritizing bounce-back (to return to the status quo). In fact, disasters provide opportunities to bounce forward (to establish a new and better equilibrium state).

According to Pelling, natural hazards can lead to at least three different political outcomes; in addition to "resilience**,**" there can be "**transition**" and "**transformation**" outcomes.

Resilience is the most conservative outcome of all. Here comprehensive disaster management works simply to help societies improve their capacities to return to their pre-disaster condition as quickly as possible after a hazard event. Pelling contends that, wittingly and unwittingly, resilience has become the option of choice in many countries. The consequence is that natural hazards have been captured by political elites so as to preserve the status quo.

Transition, in contrast, refers to outcomes in which comprehensive disaster management works to help citizens exercise their existing rights more effectively, but within the existing political order. Here disasters force political regimes to introduce incremental improvements in the protection of citizens against harm. Pelling cites post-hazard improvements in government respect for the rights of citizens in the Mexican cities of Cancún, Playa del Carmen, Tulum, and Mahahual as a perfect illustration of transition outcomes.

Finally, transformation stands as the most radical of possible outcomes, promoting profound changes in the relationships that exist between governments and citizens. Pelling contends that hazard events alone are unlikely to trigger transformations in society but can tip political regimes already on the brink of change over the edge. Pelling uses the cases of the Bhola Cyclone in East Pakistan (Bangladesh) in 1970, Hurricane Mitch (Nicaragua) in 1998, and the more recent 2005 Hurricane Katrina in New Orleans (USA) as examples of hazards that resulted in structural changes in the social compact that exists between states and citizens. Disaster provides both governments and citizens with a chance to rethink their methods of coping with nature's extremes and how they might better act together to minimize losses of life and property.

Clearly, resilience, transitioning, and transformation all have strengths and weaknesses in different contexts. Shielding vulnerable populations by improving their resilience is a worthy endeavor but not if it merely serves to preserve the social, economic, cultural, and political processes that produced precarity in the first instance. Strengthening the rights of citizens within the existing political order is obviously a welcome development but not if it produces tokenistic transfers of power that only marginally reduce risk. Finally, transforming societies so as to address the root causes of precarity may provide the only durable solution to human-induced vulnerability but it is questionable whether political revolution is wise in times of existing environmental upheaval.

Conclusion

This chapter has shown that, at least according to human geographers, there is nothing particularly natural about natural hazards. Although global variations in the risk posed by a natural hazards is in part a product of geological, meteorological, and hydrological mechanisms, it is also a function of the ways in which social, economic, cultural, and political processes render some populations more vulnerable to hazard events than others. It is little surprise, then, that natural hazards become natural disasters more readily in the Global South, and are more lethal to and impactful on populations living in greater precarity in both the Global North and the Global South, including the poor, women, children, people with disabilities, and ethnic minorities. If the risks associated with natural hazards are to be reduced, greater attention needs to be given to minimizing the susceptibility of vulnerable populations, increasing their capacities to cope with disasters, and fortifying their abilities to adapt in the long term. For some, this will require that more resilient societies be built, for others, it will necessitate a transition within society and improved rights for marginalized groups, whilst for still others only a transformation in the deep structures in society that produce precarity will suffice.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) US geographer Gilbert White believed that natural hazards only become natural disasters when societies expose people to unnecessary risks. White's public advocacy of the need for comprehensive floodplain management in the United States and elsewhere proved to be midwife to the birth of the interdisciplinary field of Hazards Research.

2) Whilst exposure to natural hazards remains a crucial factor, increased attention is now being given to the role of social, economic, and political forces as root causes of natural disasters. Adopting the formula Risk = Exposure × Vulnerability ($R = E \times V$), the United Nations University recognizes three determinants of human vulnerability to hazards: susceptibility (prior existing openness to harm), coping (capacity to prepare for, manage, and recover from a hazard event), and adaptation (degree of long-term planning, for example, through spatial planning to minimize the impacts of disaster events).

3) Using the formula $R = E \times V$, the United Nations University's ongoing project of "Mapping the World at Risk" identifies the countries most and least at risk from natural hazards. With important exceptions, a clear divide is evident between advanced Western countries (who enjoy limited vulnerability, so that even when they are located in areas of high exposure they have lower overall risks) and more impoverished countries in the Global South (who suffer from elevated vulnerability, which ensures high exposure has devastating consequences and even low exposure presents a threat). Japan and the Netherlands

are examples of Western countries that, in spite of their low vulnerability, are so exposed to nature's extremes that they remain at a high level of risk.

4)   Disaster politics refers to ways in which natural hazards interact with the politics of a country. Natural hazards can work either to strengthen existing political regimes or to promote political change and even revolution. The strategies of pursuing resilience (allowing affected systems to rebound to the pre-hazard state quickly), transition (encouraging countries to strengthen hazard management following a hazard event), or transformation (advocating deep structural changes within society to remove the root social, economic, and political causes of vulnerability) provide societies with different ways through which they might build safer communities.

Chapter Essay Questions

a)   Document the contributions of Gilbert F White to Hazard Studies and comment upon the ways in which themes in White's work have since been developed by scholars and policy practitioners.

b)   Using the United Nations University's World Risk Index, describe and explain global variations in risk from natural hazards.

c)   Define what is meant by "disaster politics" and identify the political implications of responding to disasters by building "resilience," encouraging "transition," and embracing "transformations."

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Westcoat J L and White G F (2003) *Water for Life: Water Management and Environmental Policy* (Cambridge University Press, Cambridge).

Wildavsky A (1988) *Searching for Safety* (Transaction Books, New Brunswick and London).

Guidance for Further Reading

Gilbert White's final book with James Westcoat provides an excellent summation of his thinking on floods and flood hazard management:

Westcoat J L and White G F (2003) *Water for Life: Water Management and Environmental Policy* (Cambridge University Press, Cambridge).

An excellent overview of the life and contributions of Gilbert White can be found in:

Hinshaw R E (2006) *Living with Nature's Extremes: The Life of Gilbert Fowler White* (Johnson Books, Colorado).

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Blaikie P, Wisner B, Cannon T and Davis I (1994, see also 2nd edition, 2013) *At Risk: Natural Hazards, People's Vulnerability and Disasters* (Routledge, London).

Hewitt K (1983) *Interpretations of Calamity: From the Viewpoint of Human Ecology* (Allen and Unwin, London).

Hewitt K (1997) *Regions of Risk: A Geographical Introduction to Hazards* (Longman, London).

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A comprehensive mapping of risk, exposure, and vulnerability to natural hazards across the globe is provided in:

United Nations University (2012) *World Risk Report 2012* (UNU, Bonn).

An overview of the Hyogo Framework for Action can be found at:

United Nations International Strategy for Disaster Reduction (2005) *Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters* (UNISDR, New York).

Up-to-date insights into disaster planning and disaster management can be found in:

United Nations International Strategy for Disaster Reduction (2013) "*Towards the post-2015 framework for disaster risk reduction.*" (UNISDR, New York).

United Nations International Strategy for Disaster Reduction (2013) "*A prospective retrospective: considerations on, and lessons learned from, the international frameworks for disaster risk reduction.*" (UNISDR, New York).

A good overview of disaster politics, including the concepts of resilience, transition, and transformation, can be found in:

Pelling M (2010) *Adaptation to Climate Change: From Resilience to Transformation* (Routledge, London).

Website Support Material

A range of links to useful websites are available from the Wiley website: www.wiley.com/go/boyle. Students are strongly encouraged to visit the Wiley website and to follow up on these links if they wish to explore the themes discussed in this chapter in greater depth.

Chapter 12

Toward a Postcolonial Human Geography

Chapter Table of Contents

Chapter Learning Objectives

By the end of this chapter you should be able to:

1) identify four ways in which human geographers (and this book) have sought to make sense of uneven geographical development across the surface of the earth; identify and comment upon how these four explanatory frameworks help to account for the rise, reign, and faltering of the West; identify the four contending images of the contemporary world that flow from these four explanations;

2) outline and ruminate on the claim that Human Geography needs to become a less Western-centric and more cosmopolitan academic subject if it is to prosper throughout the twenty-first century; define Postcolonial Human Geography and comment upon the reasons why some human geographers are calling for Human Geography to embrace a postcolonial future.

Introduction

Human Geography is a discipline that seeks to describe and explain the differentiation of human activity across the face of the earth. Its five central concerns are: the location of human beings and their activities (the distribution of people and their activities over the earth's surface and how this distribution changes through time); the places human beings create (the unique social, political, economic, and cultural characteristics that mark places as distinctive); the relationships human beings have with their surrounding environment (how people pollute the environment and how natural hazards can become human disasters); the movements generated by human activities (through, for example, migration, forced displacement, trade, investment, the media, and tourism) and the interconnections between places that result; and the regions around which human beings invent and organize their lives (from regions within a country, to countries themselves, to regions operating at continental scales). Human geographers use their **geographical imagination** to *explain* why human beings choose to locate themselves and their activities variably over the surface of the earth, make earth home in different ways in different places, enter into different relationships with the natural environment, generate movements of different kinds in different areas, and imagine themselves to dwell in regions of different **scale**.

This book has challenged you to become conscious of your own geographical imagination and to strengthen and cultivate that imagination through formal education. It has introduced you to a geographical imagination built around the idea that in order to understand human activity and its variable manifestations across the face of the earth it is first necessary to understand the history that lies behind the geography of the earth's surface. Specifically, it has argued that Human Geography is best introduced in and through the story of the rise, reign, and faltering of the "West" from the fifteenth century. To study the principal demographic, social, political, economic, cultural, and environmental processes that are unfolding in any region of the world today is in essence to study how that region has featured in the story of the rise, reign, and faltering of the West.

Even more specifically, it has revealed the ways in which the rise, reign, and faltering of the West has both triggered and shaped: the establishment of **capitalism** as an economic system, the formation of a world capitalist economy, and the engraving of uneven development across the surface of the earth (Chapter 4); the innovation of the sovereign nation state and liberal democracy, the violent colonization and command over by European nation states large of parts of Latin America, Asia, Africa, Oceania, and the Polar Regions, and the postcolonial geopolitical order that is emerging today (Chapter 5); civilizing missions evangelizing the myth that "West is best" and resulting culture wars over this myth, including cultural conflicts over what constitutes civilized spaces and unruly places (Chapter 6); a dramatic rise in world population and a redistribution of human beings across the earth's surface (Chapter 7); the super-exploitation by human beings of the earth's resources and the development of a new geological period, the Anthropocene (Chapter 8); the urbanization of the face of the earth and the rise of a new era of planetary urbanization (Chapter 9); patterns of migration within and between countries in the Global South and the Global North, flows and connections between migrants

and homelands, and the rise of an era of migration-centered development (Chapter 10); and, notwithstanding technological innovation and historically unprecedented levels of control over the natural environment, the heightened exposure of whole new swathes of humanity to natural hazards (Chapter 11).

The purpose of this final chapter will be draw together the various ways in which this geographical imagination has been mobilized throughout this book. Two principal conclusions will be reached. First, that human geographers tell different stories about the West and the world and that it matters which story you believe to be the most compelling because each story leads to a different image of how the world is currently forming and in which direction it is heading. Secondly, that if it is to prosper in future Human Geography may need to embrace a postcolonial future that not only provincializes "Western" ways of looking at the world but also actively courts theories, concepts, and ideas that are capable of making sense of and responding ethically to non- and/or less Western geographical processes and patterns.

Explanation in Human Geography: Four Stories of the West and the World

At the center of this book is the claim that the ascent and dominance of the West from the fifteenth century has left in its wake a deeply unequal and socially differentiated world, comprising core, semi-peripheral, and peripheral regions. For nearly five centuries countries in the Global North have grown affluent and developed whilst countries in the Global South have been left to languish in poverty and precarity. This structure of inequality has proved stubborn and ingrained. But according to some, since the 1970s there has occurred a dethroning of the West and a certain degree of rebalancing in favor of the Global South. It remains crucial to recognize that the majority of humankind still lives in both absolute and relative poverty, and an unacceptable proportion continue to dwell in a state of chronic destitution and lack even the most basic of amenities. But some countries in the Global South (in particular the "Tiger economies" of Southeast Asia, oil-rich countries in the Middle East and Central Asia, and the **Brici** countries) have already experienced significant development and in some cases have already eclipsed their richer neighbors in the Global North. More generally, according to the United Nations, the Global South is now on the march and the twenty-first century will see the majority of developing countries close the gap with, and perhaps even catch up with, the developed West.

As this book testifies, there are many ways to tell the story of the rise, reign, and faltering of Western civilization from the fifteenth century. In 2004, British-born and US-resident Marxist geographer David Harvey delivered the eighth Alfred Hettner Lecture at the University of Heidelberg in Germany. Hettner (1859–1941) was a seminal figure of the rise of the discipline of Geography in Germany. He was interested in mapping and explaining variations between regions over the surface of the earth and had himself undertaken studies of regions in Europe, Colombia, Chile, and Russia. Meanwhile, Harvey's intellectual career has been dedicated toward studying the root causes of **uneven geographical development** and what might be done to tackle inequality, injustice, and poverty and to create a fairer world. Summing a life's work,

Harvey titled this lecture, "Towards a general theory of uneven geographical development" (Harvey, 2006). Reflecting Hettner's interest in regional difference across the globe, Harvey fastened on the crunch question: Why do different parts of the world develop at different rates and why at any point in time does uneven geographical development exist? Specifically, he asked why do global regions like the West break from the pack and develop more rapidly than other regions.

Harvey argued that there exist four possible ways of making sense of uneven geographical development. We might title these explanations: *Only in the West because of favorable environmental endowments*; *First in the West, then elsewhere*; *Because in the West, not elsewhere*; and *The West versus the Rest.* It matters which of these stories you find most compelling. Each leads to a particular way of thinking about the rise, reign, and faltering of the West. Each results in a different image of how the contemporary world is organized and in which direction it is moving. And each circumscribes the kinds of political interventions we might want to make as we work to produce a better and fairer world.

1.   The mantra of the first explanation is *Only in the West because of favorable environmental endowments*. Uneven geographical development arises because there exist different physical environments in different parts of the globe and these different physical environments endow the societies that dwell therein with different levels of opportunity. Deeply flawed and racist versions of this argument suggest that Europe's more temperate climate bred a superior species of humanity: with a better intellect, Europeans were able to build more civilized societies. Europe succeeded because its climate bequeathed a more advanced civilization. It is little surprise that this civilization went on to dominate over the entire world. Humans who, by dint of their formation in harsher environments, were debilitated by inferior intellects, built only primitive societies and were no match for the Europeans. More respectable versions of this tradition of scholarship prioritize the resources nature provided for Europeans, resources which, if presented to any race, would allow them to stride ahead.

If you endorse the environmental explanation you might imagine the West to be reaching the end of a process that has been thousands of years in the making. The capacity of the West to continue to harvest the prior advantages afforded to it by nature is now encountering the law of diminishing returns and running its course. Indeed, through over-extraction of natural resources and pollution you might speculate that the West has sabotaged any environmental advantages it might once have enjoyed. You might also consider the extent to which the physical environment is playing an active role in shaping winners and losers today. And you might speculate on the claim that the civilizations that will succeed in the future will be ones that are currently most able to treasure, conserve, and sustain their natural habitats.

2.   The mantra of the second explanation is *First in the West, then elsewhere*. History unfolds down a single pathway, during which one civilization streaks ahead of the others, and following which lagging civilizations steadily submit to the same inevitable process. The history of humanity from the fifteenth century is the story of human innovation in the West followed by a staggered catching-up by other world regions. The West is best. It alone figured out how to bring humanity to a new level. With the help of West, the rest can copy the winning formula and make the same transition. There is only one pathway to modernization; the West has trodden this pathway and

shown the rest how it is to be done. All regions are predestined to follow the same course of development. "Westernization" and "development" (and other ideas such as "modernization," "progress," and "civilization") are one and the same thing.

If you accept this explanation you might conclude that our world is a world that is reaching the end of a process of modernization that began in Europe in the fifteenth century and steadily entrained other regions thereafter. Some of these regions have accelerated through the process and are beginning to eclipse the West. Some are even becoming better at being the West than the West itself. You might ponder why the original West has allowed the rest to catch up. Believing that West is best, you might conclude that the original West has faltered because of ignorance of, and a loss of faith in, the central pillars that brought it to greatness. All is not lost, however. As long as it rediscovers what made it best and returns to its core values, the "original" West will rebound.

3.   The mantra of the third explanation is *Because in the West, not elsewhere*. The West only became a global superpower because it was able to oppress, exploit, and plunder the resources of other world regions. The rest only became the rest because they were subordinated, impoverished, and pillaged by the West. The haves get richer only because the have-nots are forced to have even less. Underdevelopment in no way reflects cultural backwardness or inferiority. Instead, it is a product of a historical process in which the rapaciousness of one civilization has been serviced only at great cost to other civilizations. This active development of uneven development began with the rise of the European-centered world capitalist economy from the fifteenth century. It was consolidated during the Age of European Empires, when Europe annexed vast tracts of Latin America, Asia, and Africa.

If you believe in this approach you might conclude that the West will remain best only if it continues to be able to accumulate wealth from the labor of other regions. No longer benefiting from global empires to oversee this extraction of resources and wealth from elsewhere, today the West might be recognized as engaged in a series of **neo-colonial** strategies and struggles, desperate efforts to continue to extract resources from the rest for its own gain. Our world, then, is a volatile and dangerous one precisely because the West, recognizing that it sits on the brink of losing its dominance, is thrashing to maintain its supremacy. Meanwhile, you might reflect upon the postcolonial trajectories of former European colonies. In what ways and to what extent have these colonies escaped the long arm of the West? How are they making their way in the world and, in so doing, contributing to a fairer but more uncertain world?

4.   The mantra of the final explanation is *The West versus the Rest*. Uneven geographical development arises when competition between different territorially organized powers (cities, regions, states, and continents) creates winners and losers. Ongoing competition, however, means winners need to stay constantly alert; their success is not preordained to continue forever. For the past 500 years, it has been the West that has proven the most formidable competitor. But the West's dominance has always been precarious and it has had to actively strive to sustain its supremacy. Rival competitors have never left the field of play and through time they too have learned to be more dynamic and innovative. By securing a new competitive edge, it is entirely possible that losers will eventually become winners; that the West will be usurped and that the world will be turned on its head.

If you accept this approach, you might view the world as one reeling from 500 years of Western dominance and in the throes of a volatile process of rebalancing. Whilst European colonization and annexation of Latin America, Asia, Africa, Australasia, and the Polar Regions stacked the world decisively in Europe's favor, other civilizations refused to succumb entirely to Western dominance and influence. Our world is a product of the hurdles the West has encountered as it has marched to the four corners of the world, and the struggles and conflicts that this march has generated. These struggles are now entering a new phase. Quite what will emerge remains up for grabs. For this reason, it is only possible to say that the post-Western world into which we are heading will, for a while at least, be an unstable, unpredictable, and potentially violent world.

All four explanations have been mobilized in many guises throughout this book. Based upon Human Geography's historic rejection of the doctrine of Environmental Determinism, it should be clear that this book rejects outright deeply offensive and flawed ideologies that trace the success of the West to the superiority of the people of Europe. Patently this is a nonsense. Otherwise, it has been cosmopolitan in its coverage, accommodating authors with a range of different views. Its purpose has not been to encourage you to settle upon any one or any particular combination of these four contending images of the contemporary world but simply to bear witness to the ways in which each has contributed to human geographical studies of our complex and restless world. Harvey (2006) himself sees virtue and vices in each. He refuses to fully endorse or fully dismiss any particular one, albeit he finds certain variants within each abhorrent. He sets about putting all four to work in what he terms a "unified field theory" of uneven geographical development. Now that you have completed the book you yourself might begin to favor one of these explanations over the others. Or perhaps, like Harvey, you see merit in each and agree that they all ought to be combined into a unified field theory. Either way, this book has provided you with sufficient fodder to reach a considered choice.

Toward a Postcolonial Human Geography

As discussed in Chapter 2, Human Geography today is living through a postmodern era in which suspicion is being cast on the capacity of grand narratives or overarching schema or theoretical frameworks to render the world intelligible. The postmodern challenge necessitates that we take seriously the idea that Human Geography is in its outlook a quintessential white, middle-class, able-bodied, masculine, adult-centered, heterosexual, European subject. It is no accident that Human Geography flourished at precisely the same moment that the West began its ascent to the summit of world history and, in particular, at the time of the European enlightenment. Because of this history, human geographers continue to look at the world in a very particular way and perhaps one that might be said to be Western-centric. Human Geography's take on the world is usually (I would argue always) situated and ideological. What some human geographers take to be an objective, true, and accurate "view from nowhere" in fact often turns out to be a subjective, partial, and loaded "view from somewhere," and somewhere very specific. This is not to denigrate the work that Human Geography has done to yield

insights into the world and its workings. It is to say, however, that Human Geography is at once indispensable and inadequate.

It is important, therefore, that you are always conscious of the strengths and limitations of the explanatory frameworks human geographers use when making sense of the world. There is a need to develop a new, less Western-centric, more cosmopolitan Human Geography that is better able to render the whole world comprehensible and to include the experiences and perspectives of all peoples (people of color, the world's poor, people with disabilities, women, members of the lesbian, gay, bisexual, and transgender community, children, and non-Western peoples). In this final section, I endorse in particular recent work by postcolonial geographers which has called for a move toward a less Western or post-Western Human Geography. Today **Postcolonial Human Geography** is being pioneered by, among others, British geographers Alison Blunt, Catherine Nash, Cheryl McEwan, Jennifer Robinson, Joanne Sharp, and James Sidaway (Sidaway, 2000; Blunt and McEwan, 2002; Nash, 2004; Robinson, 2006; Sharpe, 2009). These authors have sought to provincialize Human Geography and to encourage human geographers to include in their analyses the experiences of non-Western peoples, including **subaltern peoples**.

Whilst the following typology is rather clumsy and is offered here strictly for heuristic purposes, it is instructive to reflect upon the idea that human geographers study processes that range along a continuum: processes whose origins lie in the West and which have forged human geographies in Western societies; processes whose origins lie beyond the West but which have traveled to the West, intermingled with the West, and forged mongrel human geographies in the West; processes whose origins lie beyond the West but which have traveled to the West and forged non-Western human geographies in the West; processes whose origins lie in the West but which have traveled to non-Western societies and forged Western human geographies beyond the West; processes whose origins lie in the West but which have traveled to non-Western societies, intermingled with non-Western processes, and forged mongrel human geographies; processes whose origins lie beyond the West and which have forged human geographies that are largely foreign to Western human geographies (see Figure 12.1). Postcolonial human geographers argue that whilst traditional Human Geography is equipped best to make sense of geographical processes whose origins lie in the West, it is steadily less capable and sure of itself the more "foreign" geographical processes become.

The Human Geography of the future will be a Human Geography equally at ease with geographical processes whose origins lie in the West, those whose origins lie beyond the West, and indeed, those whose origins lie at the border between the West and the Rest (see Figure 12.1). Conversations between Western Human Geography and new and emerging non-Western human geographical traditions ("Indian Human Geography," "Latin American Human Geography," "Sub-Saharan African Human Geography," "Chinese Human Geography," etc.) are now underway in an effort to broaden Human Geography's horizons. Eventually, these conversations will help Human Geography to move beyond the limits of its origins and to develop more cosmopolitan and customized concepts capable of making sense of all kinds of geographical processes, whether they originate in the West or elsewhere.

If Human Geography is a child of the West, then one might think of Human Geography today as a young adult, tentatively leaving the family home, drawing
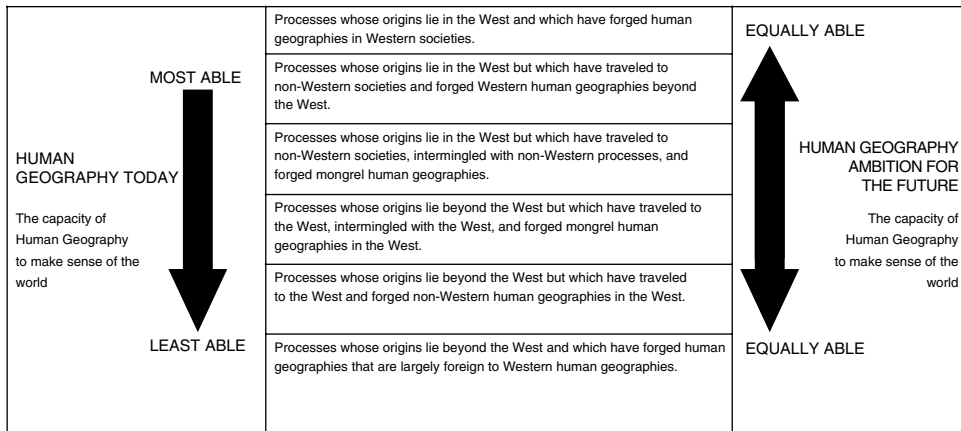
Figure 12.1 Human Geography: today and in the future.

strength from but also reflecting critically upon its childhood, and readying itself for life in the wider world. The West has made Human Geography, and for that we should be grateful. But Human Geography is recognizing that its personality and outlook have been overly shaped by its upbringing and that it has lots to learn about the world and its workings. Certainly, it has lots to learn, good and bad, about its parents' role in forging the world, and about its own complicity in their deeds. Human Geography cannot and should not disavow its childhood; its rearing has bequeathed many positive and progressive developments. But certainly, if Human Geography is to mature into adulthood it needs to leave the family nest, face up to its parents' and its own impact on the world, and take stock of the strengths and weaknesses it has inherited as a consequence of its privileged upbringing. It needs to be open to unlearning things about the world and thinking about the world anew.

Conclusion

We are privileged to be living through an especially restless, turbulent, and volatile but equally exciting, fascinating, and potentially promising moment in human history. The twenty-first century is beginning to stamp its authority and its signature on world history in earnest. All that is solid, it seems, is melting into air. And few now doubt that a new world is being built before our very eyes. In the throes of such turmoil it is easy to lose one's bearings and to become overwhelmed and even cognitively disabled. In the twenty-first century it will be the job of human geographers to make sense of the brave new world that is now emerging as the sun sets on 500 years of Western hegemony, and to do so from less (Western) ethnocentric perspectives. This presents a daunting but essential challenge.

   I hope you have found in these pages a short introduction to Human Geography that inspires you and provokes your curiosity about the kinds of worlds that have been, those that are, and those that might be. Writing this book has been an enormous pleasure. If you procure even a fraction of this pleasure in reading it, perhaps I too might play a small role in passing the torch to the next generation. Nothing would be more satisfying.

Checklist of Key Ideas

Key ideas to take from this chapter include the following:

1) There are many ways to tell the story of the West and the world. Some accounts foreground the idea *Only in the West because of favorable environmental endowments*; others explore ideas such as *First in the West, then elsewhere; Because in the West not elsewhere*; and *The West versus the Rest*. It matters which story you believe to be most compelling because each story leads to a different image of how the world is currently forming and in which direction it is heading.

2) Postcolonial Human Geography calls for greater attention to be paid to Human Geography's partisan origins in Western civilization. It cautions students to avoid consciously or unconsciously supporting uncritically the highly pervasive myth that the view from the West is the view from nowhere. Postcolonial geographers seek to provincialize human geographical knowledge and to learn how to look at the world anew through the eyes of all peoples, including subaltern populations.

Chapter Essay Questions

a) Compare and contrast the theories that human geographers use to explain the story of the rise, reign, and faltering of the West.

b) "The Human Geography of the future will be a Human Geography equally at ease with geographical processes whose origins lie in the West, those whose origins lie beyond the West, and indeed, those whose origins lie at the border between the West and the Rest." Discuss.

c) Write an essay titled: "My Geographical Imagination." Include in this essay a commentary on the ways in which this book has helped you to (re)form your geographical imagination.

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Nash C (2004) "Postcolonial geographies: spatial narratives of inequality and interconnection." In Cloke P, Crang P, and Goodwin M (eds.) *Envisioning Human Geographies* (Arnold Hodder, London) pp. 104–127.

Robinson J (2006) *Ordinary Cities: Between Modernity and Development* (Routledge, London).

Sharp J (2009) *Geographies of Postcolonialism: Spaces of Power and Representation* (SAGE, London).

Sidaway J D (2000) "Postcolonial geographies: an exploratory essay." *Progress in Human Geography* 24: 573–594.

Guidance for Further Reading

A summation of David Harvey's thoughts on uneven geographical development can be found in:

Harvey D (2006) *Spaces of Global Capitalism: Towards a Theory of Uneven Geographical Development* (Verso, London).

Good introductions to Postcolonial Geography are provided by:

Blunt A and McEwan C (2002) *Postcolonial Geography* (Continuum, London).

Nash C (2004) "Postcolonial geographies: spatial narratives of inequality and interconnection." In Cloke P, Crang P, and Goodwin M (eds.) *Envisioning Human Geographies* (Arnold Hodder, London) pp. 104–127.

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Glossary

absolute location   The location of a place relative to a formal system of coordinates; for example, a grid showing longitude and latitude (parallels and meridians). For illustration, the absolute location of Bangkok in Thailand might be said to be 13°45'N 100°28'E.

Anthropocene   A term used to capture the idea that we are now living in a new geological time period. The 12,000-year-old Holocene period is giving way to the Anthropocene period. Today planetary ecosystems have been so modified by humanity that there exists no such a thing as pristine or first nature but only historical nature or socio-nature.

anthropocentric   Of the belief that the human species is at the center of the universe and is sufficiently enlightened to dominate over the rest of the natural world.

Arab Spring   A series of revolutionary uprisings in the Maghreb and the Middle East that started in 2010 and that are still running their course. These revolutionary up-swellings are attempting to replace dictatorial regimes left behind in Arab states following European decolonization with polities that reflect the will of the people. Quite what that means in practice remains to be seen.

arithmetic rate   An arithmetic rate of growth is a rate of growth that occurs in a step-like fashion; for example, 1, 2, 3, 4, 5, 6 ....

Brici countries   A group of emerging economies (Brazil, Russia, India, China, and Indonesia) which, by dint of their pace of growth and size, could rise to become future economic and global superpowers. Some commentators use the phrase Brics, replacing Indonesia with South Africa. Others again speak in terms of Brick countries, replacing Indonesia with Kazakhstan.

capitalism   A political and economic system based upon private ownership of the means of production and the distribution of wealth, property, and income through

the mechanism of the free market. This system is regulated to varying degrees by liberal democratic states.

carrying capacity   The maximum number of people the earth (or any other defined territory) is able to sustain given known resources and current technology.

cartography   The art and science of making maps.

centrifugal forces   Forces that cluster human activities around a common center.

centripetal forces   Forces that disperse human activities across a wider area.

CHANS   The idea of coupled human and natural systems (CHANS) seeks to capture the ways in which human and environmental or social and natural processes become entangled, embroiled, and intermeshed to the extent that one cannot be understood without the other.

Cold War   A period from 1945 to the early 1990s when the world became polarized into two camps, those who supported the United States and cherished liberal democratic capitalist systems and those who supported the USSR and wished to see a Communist world predicated upon state control and central planning.

collective consumption   The provision of mass public services, such as health care, education, and housing, by governments to citizens.

colonialism   The systematic occupation and governing by one nation of lands already settled and claimed by other peoples.

communism   A political and economic system inspired by the writings of German economist and philosopher Karl Marx which is based upon centralized state planning of the economy, state control over the means of production, and state control over the distribution of national wealth, property and income.

Consanguine family   A family in which blood relatives such as brothers and sisters are allowed to marry and produce offspring. Marriage between generations is not permitted but marriage between members of any specific generation is allowed.

Cornucopians   Adherents to the view that the earth has limitless supplies of resources and is more than capable of sustaining and nourishing the human population irrespective of the size to which it might grow.

counter-urbanization   A process that has occurred, and is occurring, in some (largely more developed) countries through which people migrate from cities to small satellite towns and villages in the hinterland.

cultural landscape   The etching, engravings, deposits, and imprint of human activities on the surface of the earth. Cultural landscapes are built environments that are inscribed onto natural environments.

cultural politics/culture wars   Struggles between social groups who represent or depict or caricature people, places, and things in different ways.

decolonization   The withdrawal by a colonial power (by choice or under threat of force) from lands formerly held as part of an empire and the return of those lands to indigenous peoples.

division of labor   The fragmentation of a given production process into a number of discrete tasks.

domesticable species   Species that are capable of being brought under the stewardship of farmers and formally cultivated and engineered.

DNA mapping   A technique that allows the unique codes or signatures contained in genetic and familial lines to be read.

dystopia   A world that results when bold experiments to change the world for the better end up changing it for the worse, aggravating rather than ameliorating human suffering, poverty, oppression, and misery.

ecological footprint   The amount of useful land and sea area necessary to supply the resources a human population consumes and to assimilate human waste. The ecological footprint is a measure of the scale of the human impact on the natural environment through resource exploitation and pollution.

empire   The total bundle of territories that a country amasses during its colonial expansion and that now come under the rule of the colonizing power.

environmental justice   The doctrine that responsibility to ameliorate the environmental challenges facing humankind today should be borne in proportion to the ecological footprint particular societies create *and* their capacities to change without further impoverishing vulnerable groups.

Estado Novo   A period in Portugal's political history (the so-called Second Republic, 1933–1974) in which Prime Minister António de Oliveira Salazar led a Catholic, authoritarian, and conservative regime motivated by a desire to restore Portugal's status as a leading world power.

Eugenics   Born as a political movement in the late nineteenth and early twentieth centuries, Eugenics promotes the use of scientific knowledge to socially engineer human reproduction and to improve the genetic composition of the human race. It is now a discredited enterprise.

Eurasia   The single landmass connecting the continents of Europe, the Middle East, and Asia. In some definitions the Maghreb in Northern Africa is also included.

exopolis   Cities that are not organized around an urban core and where polynucleated urban development occurs.

exposure   The proportion of a population likely to be effected by a natural hazard as a function of the magnitude and frequency of hazards in any particular location.

feudalism   A rigid and hierarchical social structure that dominated across Europe prior to the rise of the European-led capitalist economy in the fifteenth century.

film noir   A genre of film that uses cinemagraphic techniques to depict the world as mysterious, dark, and threatening.

floodplain   Lands that flood under particular meteorological and hydrological conditions. Floodplains include, but are not limited to, low-lying estuaries where major river systems meet the sea.

Fordism   An approach to production that seeks to use rigid divisions of labor and assembly lines to improve productivity. Fordism lay behind the rise of mass production in the twentieth century.

Fordist-Keynesian compromise   A pact made between governments, Fordist firms, and organized labor designed to support growth, profits, and productivity on the one hand and wages and improvements in standards of living on the other. This compromise undergirded the 30 glory years of capitalism (1945–1975).

fracking   The process whereby oil and natural gas are recovered from shale rock layers deep in the earth's surface.

gentrification   The process through which former deindustrialized sites in inner cities (often along abandoned docks) are regenerated by or on behalf of young professionals who choose to dwell in the heart of cities for cultural and lifestyle as well as professional reasons.

geographical imagination   The world as imagined by people. People's mental maps, perceptions, and images of the world's mosaic of cultures and environments.

Geography journal   A magazine that publishes formal academic articles on topics of interest to geographers. These articles are normally peer reviewed and therefore of significant quality. Geography journals normally publish between two and 12 editions each year.

geometric rate   A geometric rate of growth is a rate of growth that occurs in an exponential fashion; for example, 1, 2, 4, 8, 16, 32 ....

Global North   An imagined region of the world comprising the more developed countries (most of which reside in the Northern Hemisphere, hence the reference to "North").

Global South   An imagined region of the world comprising the more underdeveloped countries (most of which reside in the Southern Hemisphere, hence the reference to "South").

Greco-Roman world   Those regions of the world that formed part of first the Greek Empire, and then later the Roman Empire, and whose history has been fundamentally shaped by each.

Gross Domestic Product (GDP)   The total domestic output claimed by residents of a country, excluding incomes earned by nationals living overseas but including income earned in the home economy by non-nationals. It is normally expressed in per capita terms.

Gross National Income (GNI)   The total domestic and foreign output claimed by residents of a country, consisting of Gross Domestic Product (GDP) plus incomes earned by foreign nationals minus income earned in the home economy by non-nationals. It is normally expressed in per capita terms.

hegemony   The dominance of one social group over another by presenting this dominance as natural and inevitable.

hierarchical network   Networks of places (threaded together by movements of people (migrants, refugees, tourists), information, pollutants, trade, capital, aid, ideas, and culture) in which one node (place) in the network dictates the scale and direction of flows, normally to its own advantage.

Holocene   A geological time period dating from the last ice age (around 12,000 BP) to the present and marked by comparatively warmer and milder climates and a retreat of glaciers toward the polar North and South.

hominin   A term used to describe modern humans, human species that once lived but have now become extinct, and all immediate ancestors to modern humans. The term hominin does not include more primitive species such as chimpanzees, gorillas, and orang-utans.

homo erectus   An extinct ancestor in the hominin family, which lived some 1.8 to 1.3 MYBP and migrated from its place of origin (Africa) to Asia (as far as India, China, and Java).

homo neanderthalensis   An extinct ancestor in the hominin family (the closest ancestor to modern humans), which migrated perhaps as long ago as 350,000 BP from Africa to Western Europe and which lived for a time among modern humans, ebbing to extinction around 30,000 BP.

homo ergaster   An extinct ancestor in the hominin family, which lived some 1.9 to 1.4 MYBP in Central and Eastern Africa.

Human Development Index (HDI)   A composite measure employed by the United Nations to gauge the level of development of a country.

human gene   Biological codes which are transmitted to siblings, thus allowing family blood lines to be traced.

humanities   The set of academic disciplines that attempt to explore the human condition in all its complexity through means that permit and encourage subjective speculations.

Judeo-Christian   A religious tradition based upon writings, beliefs, values, and doctrines shared jointly by Judaism and Christianity.

leachate   Black and toxic liquid that forms as rainwater percolates through landfill sites. If not collected properly, it can enter the water table and soil ecosystem and become a threat to human health.

map projection   A set of methods used to depict any three-dimensional object on a two-dimensional surface; for instance, the earth as a spherical object on a two-dimensional map.

megacity   A city with more than 10 million inhabitants.

Millennium Development Goals (MDGs)   Targeted actions, specified by the United Nations and agreed in the year 2000, designed to transform the plight of the Global South by 2015.

mission civilisatrice   The concept that European colonization of Latin America, Asia, and Africa was a benevolent act by Europe aimed at bringing civilization and progress to foreign cultures perceived to be comparatively more primitive, backward, and irrational.

mode of production   The way in which society organizes itself (creates institutions) to produce, distribute, and consume material goods hewn from raw materials procured from the surface of the earth.

Monogamian family   The exclusive marriage of a man and a women cohabiting under the same roof.

multilevel governance   A form of governance in which no actor has effective sovereign authority over a territory but in which multiple organizations operating at a variety of geographical scales govern concurrently.

Municipal Solid Waste (MSW)   Trash or garbage discarded by households and offices and normally dealt with by local municipal authorities. MSW excludes waste produced by industrial factories, the agricultural and construction sectors, end-of-life vehicles, and hazardous (chemical) waste.

nations   Communities of people who believe themselves to be part of a single cultural and political unit with a shared history and sense of belonging. This idea is of recent origin and can be traced back to the seventeenth century.

nation states   Nations who enjoy the privileges of sovereign statehood.

natural disaster   A natural hazard that adversely impacts upon human populations, causing injury and death, infrastructural damage (to buildings, transport arteries, etc.), financial loss, and disruption to the everyday functioning of social, cultural, economic, and political systems.

natural hazard   An extreme event that occurs in nature, such as an earthquake, cyclone, tsunami, flood, drought, mudslide, landslide, avalanche, and so on.

natural sciences   The set of academic disciplines that attempt to make sense of the laws that govern the workings of the physical world and natural environment.

neo-colonialism   The strategy whereby one country attempts to determine the actions of other countries from afar (by persuasion and coercion) without actually colonizing these other countries. Neo-colonial strategies afford countries with "soft power," that is, power to get others to serve their needs without ruling from a distance.

neoliberal capitalism   A form of capitalism that promotes entrepreneurialism, free markets, small governments, and flexible labor markets. Whilst neoliberal capitalism presents itself as free capitalism unburdened by state interference, in reality it requires a strong business-friendly state to function.

neo-Malthusians   Scholars who draw inspiration from the writings of English Anglican curate, demographer, and economist Thomas R Malthus and who try to put Malthus's ideas to work to make sense of the world today.

non-renewable resources   Resources that humankind uses faster than they can be replenished by nature.

New International Division of Labor (NIDL)   The exploitation by transnational corporations (TNCs) of variable wage and skill levels across the globe. TNCs locate different "bits" of their operations to different regions to produce goods as cheaply as possible.

Occidentalism   A phrase used to capture how the West is imagined and perceived, often by populations living beyond the West and sometimes by populations hostile to the West.

Old International Division of Labor (OIDL)   A division of labor introduced by the rise of the European-led world capitalist economy. The OIDL envisages the world to be organized around a core (manufacturing heartland), a periphery (supplying the core with raw materials and cheap labor) and a semi-periphery (performing roles normally undertaken by both the core and the periphery).

Oriental   A phrase coined by United States and Palestinian literary theorist and activist Edward Said to refer to those people in the Middle East and the Arab world who were on the receiving end of Orientalist misconceptions.

Orientalism   A phrase coined by United States and Palestinian literary theorist and activist Edward Said to refer to a world view crafted by Western elites which framed the Middle East and the Arab world in Western-centric and demeaning ways.

Orientalist   A phrase coined by United States and Palestinian literary theorist and activist Edward Said to refer to Western elites and travelers who looked at the Middle East and the Arab world through a prejudiced lens but who believed their distorted images to be objective and true.

paradigm   A framework used by a community of scholars to make sense of the world. Paradigms inform what is to be studied, how, why, and to what ends. Paradigms prevail for a limited period of time; following a period of scientific revolution, old paradigms are overthrown and new paradigms introduced.

patriarchal society   A society in which men use and abuse their authority over resources to subordinate and deny women equal opportunities.

peak oil   The point at which the rate at which oil is extracted from the earth reaches its peak, implying that thereafter reserves of oil are depleting to exhaustion.

place   People's everyday attachments, senses of belonging, and emotional and affective responses to locations. Place differs from space. Space refers to territory that human beings approach in the abstract whilst place refers to territory that human beings anoint and decree meaningful. The general idea of the city refers to a space, the concrete entity known as Dublin, Ireland, in contrast, is very much a place.

planetary urbanization   The idea that urbanization is now so pervasive a process and is creating such monstrous new urban agglomerations that it makes little sense to recognize the existence of a non-urban or rural or remote space. Every inch of the planet has been profoundly affected by urbanization.

Political Ecology   An emerging approach to the study of the environment which emphasizes the importance of social, cultural, political, economic, and technological

processes in the creation of the principal environmental pressures and threats that face humankind today.

polities   The set of institutions, and the rules by which these institutions operate, that undergird the government of a country.

Postcolonial Human Geography   A body of scholarship that recognizes that Human Geography has emerged as a quintessential Western academic subject; seeks to reveal how provincial and parochial some Human Geography theories, concepts, and ideas are; and supports the flourishing of alternative non-Western human geographical traditions, including those produced by subaltern populations.

post-Fordism   An approach to industrial production that emphasizes flexibility and small-batch production of niche goods for specialized markets.

precarity   The degree to which poverty and marginality render a person's very existence precarious and uncertain.

Punaluan family   A family in which blood relations such as brothers, sisters, and cousins are not allowed to marry and produce offspring.

Purchasing Power Parities (PPP)   The adjustment of measures of national income to take into account the cost of living in a given country. People in poor countries might in reality live at higher standards of living than their income implies simply because goods are produced and sold cheaply. People in affluent countries, in contrast, might enjoy lower standards of living than expected simply because the cost of living is so expensive. The measure of PPP calibrates indicators such as GDP per capita and GNI per capita so that these variations can be taken into account.

Reith Lectures   The British Broadcasting Company's (BBC's) flagship annual lecture series (1948 to present), named after the BBC's first director general, Lord John Reith.

relative location   The location of a place relative to other places; for example, the proximity of a person's home to hospitals and schools, war zones, and hurricane tracks.

renewable resources   Resources that nature replenishes at a faster rate than they are used by humanity.

resilience   The capacity of a physical, ecological, social, economic, cultural, or political system to return to its original steady state after a hazard event. Resilience tends to imply the "bouncing back" of a system to its original state rather the "bouncing forward" of a system to a better state.

risk   The extent to which a population is likely to suffer a natural disaster. Risk = Exposure × Vulnerability (R = E × V).

scale   The geographic unit under scrutiny. Scales of analyses can range from the home, to the street and the neighborhood, to the city, region, and country, and even to a global region, continent, or to the globe itself.

Scientific Management   The scientific study of production processes motivated by the goal of improving productivity and efficiency.

scientific racism A deeply flawed and discredited doctrine which believed that science can be used to support the claim that people with different racial backgrounds are innately endowed with different levels of culture, intellect, and civilization.

social construction The ways in which different cultures represent, depict, frame, and imagine people, places, and things. In addition, this term refers to the role of culture in making social inequalities (on the bases of social class, gender, ethnicity, sexuality, age, disability, and so on) seem perfectly "normal" and "natural."

social protection Social insurance dividends paid out by governments to vulnerable populations (unemployment benefit, health and sickness payments, pensions, family allowances).

social sciences The set of academic disciplines that attempt to make sense of the processes that shape the workings of societies.

sovereignty The rights of a people to enjoy absolute rule over a territory.

space Impersonal and dehumanized built environments created by planners, engineers, and developers. Place differs from space. Space refers to territory that human beings approach in the abstract whilst place refers to territory that human beings anoint and decree meaningful. The general idea of "country" refers to a space, the concrete entity known as Australia, in contrast, is very much a place.

Spatial Divisions of Labor The roles undertaken by regions in a given division of labor.

spatial fix Specific built environments (for instance urban agglomerations) that crystallize on the face of the earth at specific moments in the history of the capitalist economic system and initially enable that system to work, but through time become an obstacle and are destroyed or rendered moribund. Space is then created for a new generation of spatial fixes to emerge.

subaltern peoples The world's poorest and most marginalized peoples. Subaltern peoples tend to be people who are marginalized on a number of fronts; for example, on the basis of their class, gender, age, ethnicity, and sexual orientation.

superorganism A biological entity with a life (birth, growth, death) of its own.

Syndyasmian family A family in which polygamy remains common for males whilst females are bound to a monogamous relationship with their dedicated male partner.

transnational corporations (TNCs) Companies that operate over multiple territories.

territoriality Claims made by people to ownership over a territory.

topophilia A love of place. People's sense of belonging to and rootedness in a place (perhaps where they were born) is a powerful force. Some even say that love of place is a central condition of human existence.

transformation An approach to hazard management that proposes that durable solutions will only be found if society is prepared to tackle the root causes of vulnerability by changing its fundamental, social, political, and economic structures.

transition   The ability of communities (especially vulnerable ones) to strengthen and fortify themselves after a hazard event so that they are better able to shield themselves from a subsequent event.

tribal confederacy   A political pact in which tribes or clans come together in an alliance and function as a single political entity.

uneven geographical development   The tendency for some regions to develop and grow economically at a faster or slower pace than other regions, creating inequalities in levels of economic development and standards of living over space.

urban agglomeration   Concentrations of people, buildings, and industries that can take many forms, of which the traditional city is but one.

urban ecology   The process through which social groups compete for urban space and sift and sort themselves into different neighborhoods or niches, according to their capacities and resources.

urban form   The spatial organization of the city or the geographical layout of cities.

urban planning   A movement that developed in the late nineteenth and early twentieth centuries to deal with the haphazard growth of the industrial city and which has developed into a profession dedicated to optimizing land use in the city.

urbanization rate   The rate of growth (or decline) of the population resident in an urban agglomeration, expressed as a percentage of the total population per annum.

urbanization   The process through which people migrate from the countryside to urban centers.

utopia   The perfect or ideal world. Literally, paradise or heaven on this earth.

value chain   The stages which a commodity passes through as it is fashioned from a raw material into a finished product ready for distribution to the market.

vulnerability   The extent to which social, economic, and political processes weaken and impoverish a population so that it is especially likely to be harmed by a hazard event. Vulnerability is the sum of susceptibility (how open to harm populations are), coping (how able populations are to cope with hazards), and adaptation (the capacity of populations to defend themselves through long-term strategic planning).

Western-centric   Looking at the world through Western eyes whilst all the while presuming that one is viewing the world from nowhere in particular. To be Western-centric is to be unconscious of the peculiarity and partisan nature of Western ways of seeing.

List of Abbreviations

AR4	IPCC fourth assessment report
AR5	IPCC fifth assessment report
Asean	Association of South East Asian Nations
BCE	Before the Common Era
BP	Before the Present Day
Brici	Brazil, Russia, India, China, and Indonesia
CBRs	crude birth rates
CDRs	crude death rates
CE	Common Era
CHANS	coupled human and natural systems
COP	Conference of Parties
DALY	Disability-Adjusted Life Year
DDT	dichlorodiphenyltrichloroethane
DNA	deoxyribonucleic acid
EM-DAT	Emergency Events Database
EU	European Union
GDP	Gross Domestic Product
GIS	Geographical Information Systems
GIScience	Geographical Information Science
GNI	Gross National Income
HDI	Human Development Index
HFA	Hyogo Framework for Action
HFCs	hydrofluorocarbons
ICC	International Criminal Court
IHME	Institute for Health Metrics and Evaluation
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
EU	European Union

LTO	light tight oil
MDGs	Millennium Development Goals
Mercosur	Mercado Común del Cono Sur – Southern Cone Common Market
MSW	Municipal Solid Waste
MYBP	Million Years Before the Present Day
Nafta	North American Free Trade Agreement
NGO	non-governmental organization
NIDL	New International Division of Labor
OECD	Organisation for Economic Co-operation and Development
OFW	Overseas Filipino Workers
OIDL	Old International Division of Labor
PFCs	perfluorocarbons
PPP	Purchasing Power Parity
TFR	total fertility rate
TNC	transnational corporation
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Risk Reduction
UNHCR	United Nations High Commissioner for Refugees
UNPD	United Nations Population Division
UNU	United Nations University
US	United States
USSR	Union of Soviet Socialist Republics
WHO	World Health Organization

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