

THE WESTERN WORLD - DAILY READINGS ON GEOGRAPHY



Joel Quam & G. Scott Campbell
College of DuPage

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The Western World - Daily Readings on
Geography

Joel Quam & G. Scott Campbell

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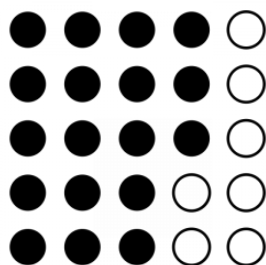
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Foreword



Two full-time Geography professors at College of DuPage have written a particular format of textbook for our course Geography of the Western World. One key feature of the textbook is that it is an open source textbook, online and free for our students (and potentially, for anyone). The other noteworthy feature of the textbook is its format as a series of essays on topical/regional geographic subjects. Given that the textbook is a free and open source textbook, there is no money to be made writing the book. My colleague and I wrote the textbook in order to contest the often exorbitant cost of regular textbooks and to create a base of knowledge that we want our students to have without the need of sifting through longer chapters. Read this and know this.

The essays are organized by matrix. One side of the matrix consists of five regions – North America, Pacific Realm, Europe, Latin American and Caribbean (LACAR), and the Russian Domain. The other side has eight topical categories of Geography – cultural, economic, historical, physical, political, population, regional, and urban. There are other elements of the textbook too, but this is the core. Therefore, essays are created under the headings of pairs of the matrix – an essay on some aspect of political geography in Europe, another on an aspect of physical geography in the Russian Domain. Notice that this does not mean we are covering the whole physical geography of the Russian Domain.



Far from it. Instead we are covering one topic at a time in the physical geography of the Russian Domain, so that the student gains a flavor of the idea of physical geography and gains a fundamental understanding of one topic in that category for the Russian Domain. For instance, one essay that has been written covers the topic of Kamchatka – physical geography in the Russian Domain. Another addresses the city Tallinn – urban geography in Europe. One essay explains the phenomenon of favelas in Brazil – urban geography in Latin America. Another explains the Cyrillic alphabet – cultural geography in the Russian Domain. Each pair in the matrix produces two or more essays in that matched category.

Each essay is written to explain a fundamental understanding of the chosen topic, but definitely not everything on the topic. The essays are based on the format of an intellectual devotional. As such, each essay is expected to be 700-1000 words. This is not a Wikipedia entry, although certainly we often referred to Wikipedia for some general background information. In fact, a Wikipedia entry is too long, often too dense, and just not right for our introductory level students. Instead each of our essays is a focused, student-oriented explanation of the basics of the chosen topic. Essay – 700-1000 words. A fun bonus fact in italics at the end. Citations at the end – yes, but very few. For the variety of icons and photos used in the text, generally we must provide citations for their sources. These readings are not dissertations or articles in peer-reviewed professional journals. Those would not be appropriate for an introductory textbook on the Geography of the Western World. Instead, these essays are a synthesis of our own specialized knowledge, other information commonly understood by geographers, and certain specific facts. This synthesis further

reflects a boiling down of information to its topical essence. It is our challenge to produce the essay that covers the essence of what the informed citizen would know on that topic. Of course, students or any other readers can pursue additional depth of understanding by finding other material on the topic.

In addition, we have written explanations of the natures of topical geography. What is Population Geography? Here too we have explained the basics. What is Regional Geography? Again, we wrote a characterization of this realm of Geography. To this we added a summary of geographic facts about each region. Even with this set of essays, there were some things that we felt obligated to present more broadly for each region. Finally, we also penned an example of how regions are created within each of our matrix's regions. What actually is Scandinavia?

Occasionally, we were fortunate to receive another scholar's work as a guest essay, specifically designed for this textbook project. In those cases, the author's name heads up his essay. Otherwise, we wrote all the other essays. We have made frequent use of The Noun Project, a large set of online icons, available for free use with proper citation. Similarly, all the photos and maps included in this textbook are available for free use with the proper citation, usually through the Creative Commons. We are pleased to promote artists' and scholars' work and do provide them with recognition and citation. Neither they nor we will profit financially from this textbook or its contents.

Overall, consider this. For the student reader, imagine that the student is at a party. When chatting with someone there, somehow Rio de Janeiro is mentioned. By reading, learning, and remembering the information in the essay on favelas, the student would be able to make an impressive explanation of the nature and problems of favelas in Brazil and thus in Rio de Janeiro.

Did you know?

With each chapter the "Did you know?" feature highlights a fun fact that may be tangential to the topic of the essay.

Joel Quam Scott Campbell



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CHAPTER OVERVIEW

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1.1: What is the Western World?



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This course is Geography of the Western World. So, what is the Western World?

This course is a Regional Geography course. When geographers create regions, they strive to incorporate as many similarities as possible in order to develop a recognizable region, while keeping out differences. So, what are the similarities of the Western World?

We could begin with the word “Western.” Would this include every place that is west of the zero line – 0° longitude westward to 180° longitude? This zero mark is the prime meridian that passes through Greenwich, England. Thus, we would include Great Britain, Ireland, France, Spain, Portugal, (Norway’s Svalbard Islands), and Andorra from Europe, plus Algeria, Mali, Burkina Faso, Togo, Ghana, Morocco, Western Sahara, Mauritania, Cote D’Ivoire, Liberia, Sierra Leone, Guinea, Guinea-Bissau, the Gambia, Cape Verde, and Senegal in Africa. All of the Americas are included. The 180° longitude line intersects the easternmost corner of Russia. Going westward to that line would cover much of the Pacific Ocean and a number of islands up to Fiji. Correctly used, all of this 0°-180° is the Western Hemisphere; however, often this hemispherical reference is wrongly shortened to mean the Americas.

Anyway, is that set of countries what we mean by the Western World? No.

Sometimes one of the shared characteristics is a feature of the physical landscape. Since the Western World would seem to consist of half of the world, while the Eastern World is the other half, this is a huge array of lands that would have to share common features. Indeed, the Western World has many different landscapes, as does the Eastern World. Europe is known for islands, peninsulas, and mountains, but not deserts. South America has the Andes Mountains, the Amazon Rainforest, and the world’s driest desert (Atacama). North America has a full array of landscapes, even tundra in Canada and Alaska. Australia is famed for its dry Outback. Russia is enormous and leads the world in coniferous forest and in permafrost. Is there some way to identify the typical landscape of the Western World? No.

Nevertheless, there is one important element of countries’ landscapes as they relate to the understanding of regions. Are the lands contiguous? That is, does a country of the region share an international border with another country of the same region? Normally, this too is a requirement (or being nearby for island states) for inclusion in the region. However, the Western World is a region comprising half the world; surely, contiguity cannot be maintained throughout the whole western half of the world. This is correct. That means that we need to consider each of the sub-regions of the Western World. Do all the countries of North America border another country in North America? Yes, that is easy, as the only two countries in North America are the United States and Canada. Do all the countries in Europe border another country or countries in Europe? Yes, with the understanding the Iceland, Ireland, the United Kingdom, and Malta are island states within the same realm and nearby to continental states of Europe. The Pacific Realm is a host of island countries plus the continent of Australia. We count all of those islands as within the same realm. Russian Domain countries – yes. Latin American and Caribbean countries (LACAR) – yes, either continental or in the shared island realm. So, our rule of contiguity is acceptable when we assess it based on the sub-regions of the Western World.



Photo by Markus Spiske on Unsplash

That brings us to the human or cultural landscape. Are there shared features of the Western World when we consider the people of these lands? Economic development is a key indicator of quality of life in the human landscape. Many economies in the Western World have been very fruitful. The Human Development Index, measuring life span, education, and income as features of successful societal advances, is dominated by countries of the Western World. For 2019, the only non-Western placeholders in the top fifty are Hong Kong #4, Singapore #9, Japan #19, Israel tied with South Korea #22, UAE #35, Saudi Arabia #36, Qatar #41, Brunei #43, Bahrain #45, Oman #47. However, it also is true that not all Western World countries are greatly developed. Haiti ranks #169 out of 189 countries, while some Pacific island states (Solomon Islands #153) and other Latin American and the Caribbean (LACAR) countries (e.g., Guatemala and Nicaragua, tied #126) score poorly. Therefore, this measure also does not fully work for creating the Western World as a region. Some capitalist economies of the Western World have produced strong economies and developed societies, but other Western countries haven't and some Eastern countries have.

språk

Language is a core feature of culture. Indo-European languages include a number of Romance languages such as French and Italian, a set of Germanic languages including English and German, and several Slavic languages such as Russian and Czech. That list goes on, consisting of many other languages too – Greek, Latvian, Romanian, Dutch, ... English settlement of Australia included bestowing its language on this land down under. Note that several languages in this Indo-European family were brought to the Americas to become the dominant languages there – English, Spanish, Portuguese, French. For instance, in Nicaragua over 4.3 million people speak Spanish, whereas the top native language Miskito is spoken by only 154 thousand.

There are some problems with this formula. In Europe, there are only a few national languages that are not in this family, but Hungarian, Finnish, and Estonian are in the Finno-Ugric family. In Latin America, there are countries where the Indo-European language is spoken by large numbers of people, but a native language is spoken by similarly large numbers. For instance, in Paraguay, Spanish and the native language Guarani each are spoken by nearly 90% of the population. In Sub-Saharan Africa, there are a few countries that feature an Indo-European language as an official language, though mixed with several to many native languages. In Liberia, English is an official language, spoken by over 80% of the population, yet there are many languages spoken, as Kpelle is most common at 20%. Also, it should be noted that some national languages are in the Indo-European family, yet we do not count those countries in the Western World. Hindi in India, Persian (Farsi) in Iran, Urdu in Pakistan, and Bengali in Bangladesh are examples. In sum, the national languages of the Western World are almost uniformly in the Indo-European family, but the Western World does not have an exclusive hold on this language family.



Borgund Stave Church, Norway — Photo by Stephen Roth on Unsplash

Religion is a key element of culture. It is immediately apparent that Christianity is a shared feature throughout the Western World. Not necessarily an official national religion, Christianity is the majority religion of the modern histories of the Americas, the Russian Domain, and Australia and New Zealand. Among those professing religious faith, Christians dominate nearly all European countries, except the small states of Albania, Kosovo, and Bosnia & Herzegovina. Sometimes, Christianity is the majority religion in countries on other continents: in Asia – the Philippines, in Africa quite a few – Nigeria, Tanzania, Kenya, Ethiopia and others. In

the Western World, Christianity is the predominant religion, although it can be noteworthy in some countries of the Eastern World too.

If a country's society speaks an Indo-European language, predominantly and historically professes the Christian faith, and borders another country in the Western World (or if an island, then is nearby), then it is in the Western World.

A few countries are included in the Western World even while not meeting all three criteria, but especially due to geographic contiguity. This is where landscape, in this case the continent, makes a difference. There is no other reasonable regional fit for these countries. Admittedly, this is awkward. Yet, this is one of the challenges of Geography in constructing regions.

Some countries do not meet the religion requirement, but must be counted by contiguity. Kosovo, Albania, and Bosnia & Herzegovina are Muslim countries, but must be counted in Europe. Other countries do not meet the language requirement, but must be counted by contiguity. As mentioned, Estonia, Finland, and Hungary do not feature dominant Indo-European languages, but must be counted in Europe. The same is true for Paraguay in LACAR.

In a twist, there are countries that would seem to fit into the Western World by criteria, but are not accepted. In Sub-Saharan Africa, in Liberia over 80% of the population are both Christian faithful and English speakers. In Nigeria, there is a similar majority. However, in Sub-Saharan Africa the only two Christian-believing, Indo-European-speaking countries that border each other are the small lands of Gabon and Equatorial Guinea. So while some African countries have our criteria for religion and language, they fail the contiguity test of aligning next to sets of other Western World countries.

That took a lot of effort. To sum up again, it is location, language, and religion that are the keys to determining which countries are in the Western World.

Did you know?

If Turkey ever is added to the European Union, then it will be counted in Europe, but until then, Turkey is best counted in the Middle East (sometimes called Southwest Asia). With Turkey in the Middle East, could Kosovo or Albania or Bosnia & Herzegovina be counted as part of the Middle East? Any of those choices seems jarring to the concept of Europe. Furthermore, Turkey is not contiguous to any of those three small countries. Albania and Kosovo share a border, but neither touches Bosnia & Herzegovina.

Compare that to the location of Azerbaijan. The Soviet Union included the republic of Azerbaijan. With the breakup of the Soviet Union, Azerbaijan became an independent country. Given its Muslim population with a moderate and oil-based economy, it seems reasonable to place it in the Middle East. Given that Azerbaijan borders Iran, another Middle Eastern country, this is not at all jarring.

In Norwegian and Swedish languages, the word språk means language.

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1.2: What is Regional Geography?



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Regional Geography

What is Regional Geography?

The field of Geography can be divided into various sub-groups, as Geography seeks to answer questions of Where? What? How? Why? Who?

Most people understand that one piece is Physical Geography, the study of the physical landscape of the Earth's surface. Some colleges and universities house this portion of Geography quite naturally within their Geography Departments; however, other schools have separate Earth Science Departments to study these topics. Essentially, Earth Science is the same as Physical Geography.

Within this sub-field of Geography, there are additional categories of study. Geomorphology examines the Earth's landmasses and the forces that build and change the lands. Oceanography considers the Earth's oceans and seas, while climatology and meteorology address the world's climates and weather respectively. Biogeography studies the distribution of life on the planet. All of these sub-fields of Geography interact with each other to cover the land, water, and life on Earth. There are additional sub-fields of these sub-fields.

The other main piece of Geography is Human Geography, though sometimes this field is called Cultural Geography or Social Geography. This is the study of people in places. Human Geography examines the features of individuals and the characteristics of groups of people in order to describe and explain the dynamics of human life in the varied and many locations of the planet. The sub-fields of Human Geography largely are obvious:

- Population Geography
- Political Geography
- Economic Geography
- Historical Geography
- Urban Geography
- and more.

While Physical Geography basically overlaps completely with Earth Science, the sub-fields of Human Geography clearly overlap at times and partially with other disciplines. Obviously, Political Geography overlaps at times and partially with Political Science, and so on. In all cases, it is important to understand that Human Geography is interested in describing people's characteristics at a given location, hopefully to be able subsequently to explain human activity at that location. Every time, location matters.

Regional Geography utilizes both Physical Geography and Human Geography. In order to create meaningful regions, geographers look to find places (usually countries) that share numerous characteristics and have few noteworthy differences. Do Country A and Country B have the same basic physical landscape? Perhaps they could be included in the same region. Do Country C and Country D share the same dominant religion? If so, then this element of Cultural Geography suggests a possible pairing in the same region. Do the people of Country E and Country F speak the same common language? They might belong together. When doing the work of Regional Geography, scholars seek to put many similarities together to form a region. While that is the main structural pattern of

Regional Geography, there are a couple of additional factors to consider. A region could have only a few countries, but generally these countries would cover a large area. For instance, North America consists only of Canada and the United States. A region may have numerous countries, perhaps of smaller sizes.

Countries that belong together in a region must be contiguous, or for islands, adjacent. That is, for a country to be in a specific region, it must border another country that too is in the same region. While New Zealand does share elements of culture with its colonizer – the United Kingdom, New Zealand is thousands of miles distant from the UK; thus, these two lands must not belong to the same region.

Occasionally, a country meet the threshold of adjacency, but is not a good match in many elements of the physical and human landscapes. It seems like this country should fit, but it doesn't fit well. In this case, the regional geographer must consider whether or not there are other possible regions that could include this ill-fitting country. If there is no other regional fit, then the country must be included in the adjacent region, even if awkwardly. For example, in many ways Israel is not similar to other countries of the Middle East; however, it is unreasonable or even ridiculous to include Israel in other regions; therefore, Israel must be fitted into the Middle East as a region.

Creating regions is not a simple task, but the study of Regional Geography is fascinating. Learning everything about the people and places of a region is a great and enjoyable challenge.

To complete the picture of Geography, we can add two overlays. One case is place identification. In all cases of Geography and certainly in Regional Geography, knowing where places are located is valuable. Perhaps expressed through map quizzes, locational awareness can affect choices of policy and action.

Another overlay on top of Geography is cartography. Geographers use maps in all sorts of ways, in all sorts of sub-field, and inherently in Regional Geography. While people have been making maps for thousands of years, the contemporary approach to mapmaking is Geographic Information Systems (GIS). GIS creates maps, but also uses various techniques within the computer software in order to develop answers to questions and to demonstrate patterns and solutions.

Thus, Regional Geography uses maps, rules, and geographic patterns of people and places to create coherent regions melding similarities together.

Did you know?

This textbook is about Regional Geography, but for Geography as a whole, here are two definitions that we like.

1 – “Geography is the art and science of location.” – George Demko

2 – “Geography is the study of the spatial distribution of phenomena.”

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1.3: Cultural Geography

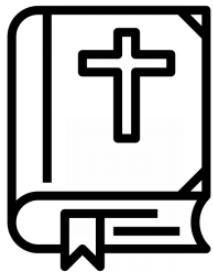


The Louvre Art Museum in Paris — Photo by Alex Holyoake on Unsplash

The term **culture** refers to collective, learned human behavior. It is “collective” in that it is shared among a group of people. Individuals have a personality. A group shares a culture. It is also “learned,” as opposed to being instinctive. All humans, for example, must eat. That is instinctive. What we eat, when we eat, how we eat, and who we eat with, however, is learned.

Some cultural behavior is learned formally, in schools, from books, or in temples, churches, or mosques. Much of it is learned informally, such as the rules of behavior instilled in us by family and community. Much culture, however, is learned subconsciously. From a very young age, humans absorb the behavior of those around them and imitate it. Put simply, culture is what a person considers to be “normal” behavior. This is why travelers to foreign lands often experience “culture shock” when they discover that their normal behavior is perhaps not so normal after all.

Cultural geography is an examination of the spatial variation in cultural traits, and the effect of culture on particular places. All of the world’s cultural variations would take more than a lifetime to discover. In this book, we will focus on three fundamental elements of culture – religion, language, and ethnicity.



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Religion

A **religion** is a set of spiritual beliefs and practices shared by a group of people. Many religions seek to understand the origin of existence, to comprehend the meaning of life, to decide what actions are moral or immoral, to explain what happens when we die, and to answer many more moral and existential questions.

The world’s four largest religions – Christianity, Islam, Hinduism, and Buddhism – collectively account for more than three-quarters of the world’s population. These and other religions will be discussed in subsequent chapters.

A religious **sect** or **denomination** is a subset of a particular religion. While various sects or denominations may agree on fundamental issues of their faith, they may interpret it in very different ways. In Europe, for example, Christianity is divided into three primary sects: Eastern Orthodox, Roman Catholic, and Protestant. Some sects or denominations are further subdivided into yet more subsets, such as the Protestant fragmentation into Lutheran, Anglican, Presbyterian, and Methodist traditions, to name just a few.

A **universalizing** religion is one that actively seeks or accepts new members through conversion. An **ethnic** religion is one that does not actively seek out new converts. Such distinctions have an important impact on the geography of a religion. An example can be found in Judaism, Christianity, and Islam, the three related faiths known as the “Abrahamic” religions. The first to evolve was Judaism. Judaism is an ethnic faith. Although it is possible for non-Jews to convert and join most sects of Judaism, this is not something that Jews actively seek out. Put simply, one is usually either born Jewish, or one is not. By contrast, Judaism’s two

Abrahamic relatives, Christianity and Islam, are universalizing religions. Christians and Muslims believe that their faiths are universal, and apply to all of humanity. Both have a long history of actively seeking out new converts. As a result, Judaism today accounts for less than one-half of one percent of the world's population, while Christianity and Islam collectively account for more than half the world's population.

Secularism refers to belief systems that do not fit into the conventional definition of religion. Among the world's secular population, some identify with **atheism**, which is the disbelief in the existence of a god or gods, or similar supernatural phenomena. Others identify with **agnosticism**, the belief that the existence of a god or gods can be neither proven nor disproven. Some simply identify as **nonreligious**, meaning that they do not adhere to any particular religion.

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Language

A **language** is mutually agreed-upon system of communication. A **dialect** is variation within a language. Speakers of different dialects may pronounce certain words differently, and may use entirely different words to describe the same object, idea, or action. Still, speakers of different dialects of the same language would still be able to read the same words, and carry on at least a basic conversation. In other words, despite their differences, mutual comprehension is still possible. Speakers of two different languages, however, cannot carry on a conversation. This lack of mutual comprehension is what distinguishes separate languages from one another.

Most languages are members of **language family**. A language family consists of a number of languages that have a common ancestral language, and thus share some common traits. An example is the Indo-European language family, which originated about 10,000 years ago in what is now Turkey. As this Indo-European language diffused from its place of origin, it evolved into many separate dialects, and eventually into many separate languages. Today, nearly half the world's population speak a descendant of the original Indo-European language. Many language families include sub-families, sets of closely related languages within the larger family. Examples of sub-families within the Indo-European family include Germanic languages (German, Dutch, English, Swedish, Norwegian, Danish, Icelandic), Slavic languages (Russian, Ukrainians, Belarusian, Polish, Czech, Slovak, Serbo-Croatian, Slovene), and Romance languages (Italian, Spanish, Portuguese, French, Romanian).

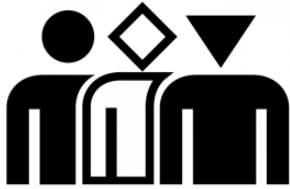
Other prominent language families include the Sino-Tibetan family (which includes languages of China and Burma), the Niger-Congo family (which includes languages of Sub-Saharan Africa), the Afro-Asiatic family (which includes languages of North Africa and Southwest Asia, notably Arabic), and the Turkic family (which includes Turkish and languages of Central Asia).



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A political, economic, or social environment that features speakers of many different languages often necessitates the use of a **lingua franca**. A lingua franca is a language adopted as a common means of communication among speakers of other, different languages. India, for example, is home to ten different major languages, and many more minor ones. Although English is spoken as

a first language by relatively few Indians, it is a common second language for many, and often serves as the lingua franca of economics, academics, politics, and the media. English serves a similar function in Nigeria, as does French in much of West Africa.



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Race and Ethnicity

Although the terms race and ethnicity are often used interchangeably, they refer to different things. **Race** is a biological term, referring to the genetic variations among human populations. The concept of race is problematic in many ways, not the least of which are the racial biases and discriminations that have afflicted human history, and that persist today. It is also academically problematic. The term “race” implies that humans can be easily separated into tidy biological categories, which is not actually possible. It is more accurate to think of race as a spectrum of genetic variation, rather than as a set of easily definable groups. Just as problematic is the fact that humans have long assigned far more significance to racial differences than they merit. While a person’s racial background may influence their height, skin color, hair color, eye color, and other physical features, the idea that race affects human thinking has proven implausible. That said, as long as humans continue to assign meaning to race, it will remain an important element of human cultural identity, whether it should or not.

Ethnicity is a cultural term. It refers to a person’s fundamental cultural identity (and is closely related to the term **nationality**). While a person’s ethnicity certainly does not determine their behavior, it may have a significant influence, since a person’s ethnic background often influences what they consider to be culturally “normal.” A person’s ethnicity may influence where they live, their social circle, their profession, who they marry, what they eat, their religious and political beliefs, and much more.

One’s ethnic identity can be formed by many different traits. Shared racial characteristics, shared ancestry, shared customs and experiences, shared language, and shared religion are examples of common bonds within ethnic groups.

Did you know?

The term “lingua franca” means “language of the Franks.” It originated in the Ottoman Empire during the late medieval period, when the Ottomans referred to western Europeans as “Franks.” The original “lingua franca” was a trade language between Italian and Ottoman merchants. It was basic Italian, with a number of words borrowed from French, Greek, Turkish, Arabic, and Spanish.

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1.4: Economic Geography

Economic geography is the study of the spatial dynamics of the economy, and the role that economic forces play in shaping places. Some key economic themes in world regional geography include economic activity, economic development, economic power, globalization, and trade.



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Economic Sectors

The world's population is engaged in thousands of different kinds of businesses and occupations, but most economic activity can be placed in one of four sectors. The **primary sector** of the economy involves the extraction of raw materials, such as agriculture, mining, fishing, and the timber industry. The **secondary sector** of the economy is manufacturing, and includes the production of relatively simple products, such as cloth or copper wire, to far more complex goods, such as cars, electronics, or aircraft. The **tertiary sector** of the economy is the service sector, in which workers provide a service to consumers. Examples of the tertiary sector include transportation, retail, entertainment, and tourism. The **quaternary sector** is the information sector, and involves the generation, dissemination, management, and interpretation of information. Examples of the quaternary sector include finance, research, publishing, media, and education.

Development

Economic **development** refers to the material conditions of people in a particular place. There are some countries with generally high standards of living. These **More Developed Countries (MDCs)** feature low poverty rates, low rates of unemployment, high levels of education, high incomes, long life expectancies, and opportunity for upward mobility. The United States, Canada, most of Europe, Japan, South Korea, Taiwan, New Zealand, and Australia are examples of MDCs. Other countries have generally low standards of living. These **Less Developed Countries (LDCs)**, tend to feature higher rates of poverty and unemployment, lower incomes and levels of education, shorter life expectancies, and fewer opportunities for upward mobility. Some regions that feature numerous LDCs include Sub-Saharan Africa, South Asia, and Southeast Asia.

It is important to think of MDCs and LDCs as ends of a spectrum of development, rather than as two distinctly separate categories. Some very wealthy countries, such as Norway, Canada, and Japan, are obviously located on the more-developed end of the spectrum. Some very poor countries, such as Niger, Yemen, and Cambodia are obviously located on the less-developed end of the spectrum. Other countries, however, can be somewhat difficult to categorize. One example of an “in-between” country is Mexico. When compared to two of its neighbors, it could be labeled as either an MDC or LDC. Mexico has a relatively low standard of living when compared to the United States, but has a relatively high standard of living when compared to Haiti. Similarly, Turkey, which straddles the border between Europe and Southwest Asia, is relatively poor by European standards, but relatively rich when compared to its Asian neighbors. It also important to remember that significant developmental differences often exist within countries as well. Even the poorest countries on earth contain some very wealthy individuals, and even the world's wealthiest countries often contain significant populations who are relatively poor.

Measuring Development

In the regional overviews, we will examine the development differences among countries and some of the causes of those differences. There are many different ways of measuring economic development. A common one is per capita GNI. **Gross National Income (GNI)** is the combined annual income of all citizens in a country. **Per capita GNI** is determined by dividing a country's GNI by its population. (The term “per capita” means “per person,” or, literally, “per head.”) The resulting number reflects

the number of dollars that each person in a country would receive annually if the country's wealth was divided up evenly. Per capita GNI varies widely from country to country. The United States' per capita GNI is over \$60,000 dollars, while China's is just over \$18,000, which is close to the world average. Burundi has the dubious distinction of possessing the world's lowest per capita GNI, at under \$800.

Per capita GNI is a useful statistic because it is meaningful to most people. One can imagine what it would be like to survive on \$60,000, or \$18,000, or \$800 per year. The problem with per capita GNI is that a country's wealth is never divided evenly among the population. Significant income variations can exist among a country's regions and social classes, and can also vary significantly by age, ethnicity, and gender. For example, while \$60,000 per year may be close to the annual income for a good many Americans, a lot of people in the United States earn well more than \$60,000 per year, and a larger number of people earn significantly less. Here is a sampling of GNI per capita statistics.¹

Gross National Income (GNI) per Capita Statistics

Country	Gross National Income (GNI)
#1 – Qatar	\$94,910 per capita – 2018
#5 – Norway	\$70,530
#9 – USA	\$63,780
#12 – Netherlands	\$58,140
#20 – Australia	\$49,440
#32 – Malta	\$40,120
#37 – Estonia	\$35,340
#51 – Russia	\$27,840
#70 – Mexico	\$19,870
#84 – China	\$15,320
Last – Burundi	\$780

There are other ways of measuring development. The **infant mortality rate** reflects the number of children per one thousand live births who die before their first birthday. In Japan, the infant mortality rate is 2/1000. In Afghanistan, it is 110/1000. Here are several countries' infant mortality rates for 2020.²

Infant Mortality Rate for Selected Countries 2020

Country	Infant Mortality Rate
Afghanistan	110.6
Somalia	94.8
Central African Republic	86.3
Haiti	46.8
Brazil	17.5
China	12
Mexico	11.6
Russia	6.8
United States	5.8
Canada	4.5
Australia	4.3
Estonia	3.8
Malta	3.5
Israel	3.4
Norway	2.5
Japan	2

Life expectancy reflects the average lifespan in a country.³ In Japan, the average person lives eighty-five years. In the Central African Republic, life expectancy is just over fifty-four years. This table displays a selection of life expectancy rates for various countries.

Selected Life Expectancy Statistics

Country	Life Expectancy
Japan	85.03
Australia	83.94
Malta	83.06
Canada	82.96
Norway	82.94
Netherlands	82.78
Estonia	79.18
United States	79.11
Brazil	76.57
Mexico	75.41
Russia	72.99
Haiti	64.99
Central African Republic	54.36

One of the most comprehensive measurements of standard of living is the **human development index (HDI)**. Developed in the 1990s by the United Nations, HDI combines statistics reflecting income, education, and life expectancy into a single index.⁴ According to the HDI, Norway has the world's highest standards of living, while Niger has the world's lowest. Here are some of the better HDI numbers. For an excellent chart, go to <https://ourworldindata.org/grapher/hdi-vs-gdp-per-capita>.

Human Development Index (HDI) Statistics

Country	HDI Rank in 2019	HDI Score (max = 1.00)
Norway	1	0.954
Switzerland	2	0.946
Ireland	3	0.942
Australia	6	0.938
Canada	13	0.922
USA	15	0.92
Chile	42	0.847
Russia	49	0.824

Core and Periphery

Along with levels of economic development, geographers study the uneven distribution of economic power. The terms **core** and **periphery** describe this imbalance. Countries in the **global economic core** are those with tremendous economic power. Such countries are the drivers of the global economy, and set the terms of international investment and trade. Economic growth in a core country can stimulate economic growth throughout the world, and an economic downturn in a core country can, likewise, cause economic stagnation throughout the world. Countries in the **global economic periphery** have much less economic power, and have the terms of international investment and trade dictated to them. Economic growth and decline in these countries may have a ripple

effect on other countries, particularly their regional neighbors, but these changes don't typically have the same global ramifications that economic changes in core countries do.

The countries of the economic periphery are also LDCs, such as Yemen, Chad, Haiti, and Bolivia, and the countries of the economic core are usually MDCs, such as Australia, the United States, Canada, France, Germany, South Korea, and Japan. It is possible, however, for a country to be considered both a core country and an LDC. China, India, and Indonesia, for example, possess moderate to low levels of economic development, but are still at the core of the global economy because of the sheer size of their respective markets.



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Globalization and Free Trade

One of the most significant trends in the global economy over the last eight decades has been globalization. **Globalization** refers to the unification of the world's economy into a single economic system. One could certainly argue that globalization has been occurring for centuries. Two thousand years ago, the "silk road" trade routes across Central Asia were already connecting South and East Asia to the Mediterranean. Centuries later, global trade would accelerate rapidly during the European age of exploration. Still, the full integration of the global economy largely began in the 1940s, and accelerated dramatically in the 1990s. Globalization was enabled by the development of rapid transportation and communications technologies, and has led to the evolution of large transnational corporations. Accompanying economic globalization has been cultural globalization (the increased exchange of ideas across international boundaries), and a dramatic increase in international migration.

One cornerstone of globalization has been the emergence of free trade agreements. For years, many countries embraced anti-free trade measures known as protectionism. **Protectionism** is an attempt to block trade from foreign countries in order to protect domestic industry. There are a wide variety of protectionist measures, but the most common is a tariff. A **tariff** is a tax or similar fee placed on imports in order to make them artificially expensive and, therefore, less appealing. A country might, for example, place a tariff on foreign cars to encourage its citizens to purchase cars made in their own country, thus protecting domestic companies and their workers from foreign competition.

Free trade agreements seek to eliminate such protectionist measures. A free trade agreement can be bilateral, involving two countries, or multilateral, involving many countries. One of the world's largest multilateral free trade agreements is shared by the members of the European Union (EU). Consumers and companies within the EU can trade across the international borders of the EU community with little or no restriction. In other words, it is as easy to trade between France and Germany as it is to trade between Illinois and Indiana.

Advocates of free trade cite multiple benefits. One argument is that free trade benefits consumers by giving them access to a wider variety of products, and that it allows companies to access a larger pool of potential customers. Free trade also, in theory, allows each country to specialize in what it can produce most efficiently, and to avoid those economic activities at which they are not particularly efficient. Such efficiency, it is argued, will lead to higher living standards. Put simply, as more countries embrace free trade, more countries will be able to specialize in what they do best, making for more efficient economic production, higher profits, greater reinvestment, more innovation, and higher overall standards of living. Furthermore, advocates of free trade argue that it prevents conflict, since countries that are economically connected to one another are less likely to go to war with one another.

Free trade is not without its critics. Environmental activists argue that free trade encourages the shipping of products over longer distances, which increases the consumption of energy. Also, free trade can be responsible for the shift of manufacturing and raw material extraction from wealthier countries with strict environmental laws to poorer countries with far more relaxed environmental

standards. Similarly, labor activists argue that free trade encourages a “race to the bottom,” in which corporations shift jobs from countries with higher wages and stronger labor standards to countries with lower wages and poorer working conditions. Others are troubled that free trade encourages the concentration of wealth and power into the hands of the relatively few people who control major transnational corporations. Finally, it is argued that free trade can lead to artificial economic specialization, in which a poorer country’s economic “specialty” is having low wages, poor working conditions, and high rates of pollution.

In recent years, there has been significant pushback against globalization. Part of it is a reaction against the environmental, labor, and social issues created by free trade, but also against cultural globalization and international immigration. One example is the emerging trade war between China and the United States.

Did you know?

Brexit is the coined term for the exit of the United Kingdom from the European Union.

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1.5: Historical Geography



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A place's geography and history are inseparable. Each world region has been shaped by its own unique historical forces, which will be discussed in the following regional chapters. Here, we will examine some historical processes of the last few centuries that have had global ramifications.

European Exploration, Industrialization, and Colonization

In the 15th century, Europe emerged from the Middle Ages. The era that followed, known as the Renaissance, was characterized by significant technological, artistic, scientific, and economic progress, as well as a shift from **feudalism** to **capitalism**. This new economic system inspired European governments and a rising merchant class to seek faster trade routes to markets and resources, particularly those in Asia. In 1488, Portuguese ships rounded the southern tip of Africa, opening an era of European sea trade with Asia via the Indian Ocean. Four years later, Spanish ships arrived in the Americas, leading to the establishment of the first permanent European colonies there.



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This **Age of Exploration** would mark the beginning of five centuries of European dominance of global economics and politics. Portugal colonized Brazil, and Spain colonized much of the rest of mainland Latin America. Britain and France established colonies in North America, while Spain, France, Britain, the Netherlands, and Denmark colonized the Caribbean. [MAP] These same growing European empires increasingly controlled global trade, with a number of them establishing colonial footholds in Africa and Asia.

This era had devastating consequences for much of the world's population, notably the millions of Native Americans who died as the result of warfare, displacement, and the introduction of Old World diseases to the Americas. This era also marked the beginning of the trans-Atlantic slave trade, in which millions of Africans were forcibly removed from their homelands to serve as labor in colonial America.

Europe, however, reaped enormous benefits during this period. Control of global trade, easy access to resources, and the colonization of the Americas flooded the coffers of European governments and merchants, making Europe by far the world's wealthiest region. Industrialization would further cement Europe's position as the center of global economic, political, and technological power. Beginning in Britain in the early 1700s, the **Industrial Revolution** represented a shift away from traditional production methods, in which manufactured goods were produced in small quantities, and largely handmade (the term "manufactured" literally means "handmade"). After industrialization, manufactured goods were produced in much greater quantities using machines. Characterized by the rise of the factory and significant advances in metallurgy, chemistry, and

engineering, the Industrial Revolution enabled Britain to produce goods at a scale previously unimaginable. Industrial production soon spread to much of the rest of western Europe. Within a century, the region dominated global manufacturing.

The wealth and technology of the Industrial Revolution would create an appetite in Europe for yet more markets and resources, and it would also give Europe the ability to obtain them, this time through colonization in Africa and Asia. By 1900, those continents had been almost entirely colonized by a European empire. [MAP] Britain, France, the Netherlands, Belgium, Germany, Italy, Portugal, Spain, and Russia were the leading imperial powers.



Cartography by Steven Banas.

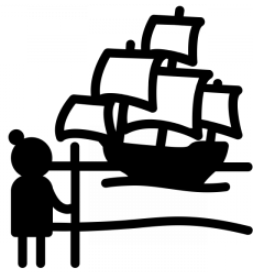
Forms of Colonization

The European colonies took on different forms. One form of colonization was the **settler colony**. As its name implies, a settler colony is one to which Europeans permanently migrated. The United States, Canada, southern South America, South Africa, Australia, and New Zealand are all examples of former settler colonies. Although these countries contain indigenous populations and people whose ancestors were not European, they are still sometimes referred to as **Neo-Europes**, because the socially, politically, and economically dominant groups were, and largely still are, of European descent. Because many of the original European immigrants to these places were farmers, they were interested in settling in areas that had climates and soils similar to those found in Europe. As a result, the settler colonies were typically located, like Europe, in the mid-latitudes.

Another form of European colonization was the **mercantile colony**. While, Europeans did, of course, reside in their mercantile colonies, these places would never become the permanent homes for millions of European settlers. Instead, these mercantile colonies were primarily exploited for their natural resources and labor. The mercantile colonies tended to be located in the tropics and subtropics, largely because they could produce crops such as cotton, tobacco, tea, coffee, sugar cane, and other agricultural products that could not be easily produced in Europe. Examples of European mercantile colonies include British India (India, Pakistan, and Bangladesh), French Indochina (Vietnam, Cambodia, and Laos), the Dutch East Indies (Indonesia), as well as much of China and mainland Latin America, and nearly all of the Caribbean and Sub-Saharan Africa.

Many mercantile colonies were **formal colonies**, directly controlled by a European empire. Some mercantile colonies were **informal colonies**, which remained nominally independent, but which fell under the economic and political sway of one or more foreign powers. A prominent example of an informal colony was China in the late 19th and early 20th centuries. Although China had a sovereign government which maintained a modest level of control over its own territory, vast sections of the country were informally governed by British, French, German, Japanese, and Russian forces.

Of course, history and geography often defy tidy categorization. Some countries, such as Canada and New Zealand, are clear-cut examples of settler colonization. Others, like Jamaica and Nigeria, are prototypical examples of mercantile colonization. Some countries, though, are not so easily categorized. For example, southern Brazil, with its history of mass European immigration, resembles a settler colony. Northern Brazil, however, with its legacy of slavery and the mass export of tropical agricultural products, might better be defined as a mercantile colony. Even the United States, a prime example of settler colonization, demonstrated some characteristics of a mercantile colony, particularly in the slave plantation economy of the antebellum South.



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The Legacy of Colonization

Most of Europe's major American colonies gained their independence in the 18th and 19th centuries. A second wave of **decolonization** occurred in the mid-20th century, with most of Europe's African and Asian colonies gaining their independence. By the end of the 20th century, the age of colonization was largely over.

Still, the legacy of colonization plays an outsized role in shaping the current global structure of wealth and poverty. By the end of the colonial period, most countries could be put into one of three categories: European countries, former settler colonies (or Neo-Europes), and former mercantile colonies. Most European and Neo-European countries are today generally wealthy. Most former mercantile colonies are today relatively poor.

Europe's wealth is not surprising. The intent of colonization was to enrich the colonizer, not the colony. For centuries, colonization provided European merchants unfettered access to cheap resources, cheap labor, vast markets. It also filled the treasuries of imperial governments. Meanwhile, emigration to the settler colonies allowed Europe to reap the benefits of industrialization while suffering comparatively little fallout from the resulting population explosion. Even those European countries that did not build large overseas empires benefitted indirectly from colonization. Sweden, for example, was never a serious imperial power outside of Europe, but Sweden's neighbors were. Wealth generated in British, French, Dutch, Belgian, and German colonies enabled merchants from those imperial countries to purchase more Swedish goods.

Most Neo-Europes today are also quite wealthy. Although the settler colonies attracted scores of relatively poor immigrants, many of the initial European settlers were privileged, arriving with the advantages of European wealth, technology, and trade connections. More importantly, these settler colonies also had imperial ambitions. Examples can be found in three of Britain's most prominent settler colonies. Just as Britain built up wealth and power by conquering and subjugating indigenous people to exploit their land and resources, so did the settlers in the United States, Canada, and Australia. All three of these countries expanded across entire continents, conquering and subjugating indigenous people to exploit their land and resources, creating vast land empires of their own.

On the other end of the economic spectrum are former mercantile colonies, which account for most of the world's poorest countries. While colonized, these places exported cheap raw materials to their colonizer, while importing far more expensive manufactured goods *from* their colonizer. This, of course, put the mercantile colonies at a serious economic disadvantage. Today, even though most of these countries have been independent for more than a half century, many of them remain mired in the same economic relationship that subjugated them during the colonial period. They still primarily export cheap raw materials to wealthy countries, and they still import many of their manufactured goods. This is a situation known as **neo-colonialism**.

A notable exception in this era of European and neo-European dominance was Japan. Because of Japan's self-imposed isolationism from early 1600s to the mid-1800s, European powers were unable to gain a colonial foothold in that country. As a result, Japan was able to avoid the pitfalls of mercantile colonization. In fact, by the early 20th century, Japan was joining the ranks of the world's most powerful countries by industrializing and building a formidable mercantile empire of its own.



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The World Wars and the Cold War

At the dawn of the 20th century, Europe was the unquestioned center of global political, military, industrial, and economic power. Fifty years later, the era of European dominance was over, largely as a result of two costly world wars. World War I (1914-1918) and World War II (1939-1945) cost millions of lives, and left much of Europe in ruins. The human and economic carnage of the wars left most of Europe's major imperial powers unwilling or unable to maintain their colonial possessions. Although the traditional powers of western Europe would recover and remain wealthy, influential countries, they are no longer globally dominant.

The end of World War II ushered in the **Cold War**, a geopolitical struggle between two superpowers that would dominate global political affairs for the next fifty years. The United States emerged from World War II as a significant economic and military power. Its ambition was to be at the center of the global economic order, which had been dominated for centuries by a capitalist economic system. The United States' primary adversary during the Cold War was the Union of Soviet Socialist Republics (USSR), commonly known as the Soviet Union. Based in the old Russian Empire, the Soviet Union was the world's first **communist** state. Unlike capitalism, which is rooted in private property and a free economic market, communism is based on the idea of communal ownership of property and the workers' control of the economy. In Soviet-style communism, the government controlled all property and means of production (farms, factories, businesses, etc.). Just as the United States wished to be at the center of a global capitalist economic system, the Soviet Union wished to be at the center of a global communist economic system.

Berlin, Germany, was often seen as the metaphorical heart of the Cold War. In the wake of World War II, the city was divided into an American-affiliated capitalist west and Soviet-dominated communist east, eventually to be separated by the infamous Berlin Wall. Berlin was a microcosm of Germany, which was similarly divided between a communist east and capitalist west. Germany was, in turn, a microcosm of Europe, which was divided between a capitalist West, aligned with the United States, and a communist East, dominated by the Soviet Union. This division between competing capitalist and communist interests would soon spread throughout much of the rest of the world.

The Cold War took its name from the fact that there was never a serious military engagement between the United States and the Soviet Union. This was a very good thing, of course, considering that both superpowers would construct nuclear arsenals large enough to annihilate human civilization. Nevertheless, the term "Cold War" is misleading. Although it was fought with limited violence in places like Berlin, it resulted in plenty of bloodshed. The Cold War would kill millions of people, most of them in what are known as "proxy wars."

A **proxy war** is a conflict in which the combatants are supported by larger, more powerful outside forces. A typical Cold War proxy war involved an American-backed, pro-capitalist government fighting Soviet-backed communist revolutionaries. In other cases, a Soviet-armed communist government would be fighting American-backed rebels. From 1945 to 1991, Cold War-fueled conflicts raged throughout the world [MAP], with the fiercest fighting occurring in East Asia, Southeast Asia, North Africa and Southwest Asia, Central Asia, Sub-Saharan Africa, Latin America and the Caribbean. American troops were occasionally involved in these conflicts, notably in Korea and Vietnam, as were Soviet troops, notably in Afghanistan. But these wars were largely fought with American and Soviet money and weapons, rather than manpower.

The Cold War ended between 1989 (the fall of the Berlin Wall) and 1991 (the collapse of the Soviet Union). Nevertheless, the last three decades have been deeply influenced by the governments, strategic alliances and, unfortunately, the animosities that were formed and shaped by the Cold War. It is quite likely that the next few decades will continue to feel its chill.

American Hegemony

If the Cold War was defined by the clash of two superpowers, the post-Cold War era has been defined by the dominance of the one superpower that survived. In many ways, the United States got what it wished for. It emerged from the Cold War at the center of a global capitalist economy. Its political, economic, and military power is unequalled by any other country. This age of American dominance, or **hegemony**, may well extend through the twenty-first century and beyond.

Still, this unprecedented power is not without its liabilities. American military interventions, particularly in Iraq and Afghanistan, have led to deep-seeded resentment of American foreign policy in much of the world. Additionally, many Americans have grown increasingly isolationist, questioning the benefits of America's global military commitments. And the United States' continued dominance is by no means guaranteed. A unified Europe, a resurgent Russia, and an emerging China are all examples of potential checks on American power.

Did You Know?

The United States Navy's dominance of the world's oceans was a decisive advantage during the Cold War. It permitted the U.S. to project its military power anywhere in the world, and to protect (and sometimes disrupt) global trade routes. This advantage continues. The United States has twenty aircraft carriers, more than all of the other navies in the world combined, and its total ship tonnage is twice that of China's navy, which is the world's second largest.

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1.6: Physical Geography



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Physical geography is the study of the spatial distribution of environmental features, like landforms, climate, soils, and organisms, and the processes that shape them. Each place on earth possesses its own unique physical characteristics. Here we will look at some basic facts about the earth, and some fundamental concepts of physical geography.

Latitude and Longitude

As anyone who has taken a basic geometry class knows, the location of a point is defined by the intersection of two lines. What is true in geometry is also true in geography. The location of any place on earth can be defined by the intersection of two lines—a parallel of latitude and a meridian of longitude.

The earth is rotating around an imaginary line called the **rotation axis**. The northern end of that axis is called the **north pole**, the southern end of the axis is called the **south pole**. The halfway point between the north and south poles is known as the **equator**.



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A place's **latitude** describes its location relative to the equator, and is an angle defined by two lines—one running from that particular place to the center of the earth, and the other running from the center of the earth to the equator. If you trace a line from Chicago straight down to the center of the earth, and another line from the center of the earth to the equator, the angle created by those two lines is about 42° . Because Chicago is north of the equator, its latitude is 42°N , the “N” standing for “north.”

The equator is at 0° . Everything north of the equator is in the **northern hemisphere**. As locations get farther away from the equator, their latitude increases. New Orleans, for example, is closer to the equator than Chicago, and is at 30°N latitude. Minneapolis is farther from the equator than Chicago, at 45°N latitude, halfway to the north pole.

It works the same way in the **southern hemisphere**, which consists of all areas south of the equator. Quito, Ecuador, just south of the equator, is located at 2°S (south) latitude. A little bit farther away from the equator is Lima, Peru, at 12°S latitude. Even farther away from the equator is Buenos Aires, Argentina, at 34°S latitude.

As you move *toward* the equator, you are moving to a **lower latitude**. As you move *away* from the equator, you are moving to a **higher latitude**. The north and south poles are the highest possible latitudes, at 90°N and 90°S . The equator is at the lowest possible latitude. Chicago (42°N) is at a higher latitude than New Orleans (30°N), but at a lower latitude than Minneapolis (45°N). Lima (12°S) is at a higher latitude than Quito (2°S), but at a lower latitude than Buenos Aires (34°S).

Keep in mind, the terms “higher” and “lower” latitude don’t always mean “up” and “down” on a map. New Orleans is at 30°N . Buenos Aires is 34°S . New Orleans is above Buenos Aires on a map, but Buenos Aires is at *higher* latitude, because it is farther

from the equator.

Parallels of latitude are lines that run east and west on a map, and that connect all places that are at the same latitude. Parallels, as their name implies, are always the same distance from one another, and parallels decrease in length as latitude increases. The equator is the longest parallel of latitude. 1°N and 1°S are slightly shorter than the equator. 2°N and 2°S are slightly shorter than that, and so on up to 89°N and 89°S, which are very short. The poles, at 90°N and 90°S, have no length—they are points.

In addition to the equator and the poles, there are four other important parallels of latitude. The **Tropic of Cancer** is located at 23.5°N latitude. The **Tropic of Capricorn** is located at 23.5°S latitude. These two parallels are the northern and southern boundaries of a region known as the **tropics**. The **Arctic Circle** is located at 66.5°N latitude. The **Antarctic Circle** is located at 66.5°S latitude. These two parallels are the boundaries of the **polar** regions, which extend from these two parallels up to the poles. All places that are not in the tropics or polar regions are known as the **midlatitudes**.

Latitude's counterpart is **longitude**. While latitude has a naturally occurring reference point—the equator—the reference point for longitude is arbitrary. The internationally agreed-upon reference point for longitude is based on Greenwich, England, home to Britain's Royal Observatory. An imaginary line running from the north pole to the south pole, and passing through Greenwich, was established as the **prime meridian** in 1884.

A location's longitude is determined by its position relative to Greenwich. If you were to start in Greenwich (or any other location on the prime meridian), and head due *west*, longitude would increase. When you got a quarter of the way around the world, you'd be at 90°W (west) longitude. When you got exactly halfway around the world from Greenwich, out in the middle of the Pacific Ocean, you'd arrive at 180°W longitude. The same is true if you head *east* from the prime meridian. If you left Greenwich heading due east, longitude would increase. When you got a quarter of the way around the world, you'd be at 90°E (east) longitude. Once again, when you were halfway around the world from Greenwich, you'd be at 180°E longitude (which is the same as 180°W).

Chicago is located at about 88°W longitude, not quite a quarter of the way around the world from the prime meridian. Honolulu located at 158°W longitude, nearly halfway around the world from Greenwich. Heading the other way from the prime meridian, Baghdad is located at 42°E longitude, while Tokyo is located at 139°E longitude.

Meridians of longitude are lines that run north and south on a map. They connect all points at the same longitude. All meridians run from pole to pole. Meridians are not parallel to one another. They are farthest apart at the equator, and get closer and closer to one another as they move into the higher latitudes. Meridians and parallels always intersect one another at right (90°) angles.



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If you look at world map, you might discover that a several of the “rules” of latitude and longitude don’t always hold true. The parallels and meridians don’t always intersect at right angles, the equator is not always longer than the other parallels, and the meridians might not converge at the poles. This is because the earth is a sphere. A globe will accurately reflect the rules of latitude

and longitude, but a flat world map cannot. Whenever you look at a world map, something is, by necessity,



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distorted. Direction, distance, shape, area, or sometimes a combination of all four, will always be distorted to some degree, since it's impossible to display the whole of the spherical earth on a two-dimensional surface. For instance, compare and contrast the world maps pinning this paragraph.

Earth's Movements

The earth is continually making two major movements—revolution and rotation. First, the earth is revolving around the sun, once every 365.25 days (that extra quarter of a day is cashed in every four years for February 29th). The major effect of revolution is seasonality, which will be discussed below.



Coriolis Effect. Photo by quapan on Flickr.

The earth is also rotating on axis, turning eastward, and making one rotation per day. This causes the daily alternation of day and night, and causes the sun, the moon, and the stars to appear to rise in the east and set in the west. Rotation, coupled with the gravitational pull of the moon, also creates the alternation of high tide and low tide along the world's coastlines. The rotation of the earth also causes the **Coriolis effect**. As air masses travel through the atmosphere, they appear to change direction because they are passing over a spinning earth. In the northern hemisphere, the Coriolis effect causes air masses to deflect to the right. In the southern hemisphere, air masses deflect to the left. The effect increases with the latitude—the deflection is greatest at higher latitudes, and much less pronounced at lower latitudes. The Coriolis effect is negated if an air mass is travelling straight down the equator.

Elements of Climate

Weather is the state of atmospheric conditions, such as temperature and precipitation, in a given place at a given time. **Climate** refers to the usual patterns of weather in a given place. Put another way, climate is the long-term average of weather. Most climates can be reduced to three basic elements. The first element is temperature—whether a location is relatively hot, mild, cold. The second element is precipitation—whether a place is humid (receiving a lot of precipitation), arid (receiving little precipitation), or something in between. The third element of climate is seasonality—how the characteristics of temperature and precipitation typically vary over the course of a year.

Temperature

There are a number of factors that affect the temperature of a location, but the most important factor is sunlight, or more specifically, the angle at which the sun's rays strike the earth. Imagine you're standing in a dark room, a yard or so from a wall, holding a flashlight. If you hold the flashlight perpendicular to the wall, so that the beam from the flashlight strikes the wall at a 90° angle, it will create a small, intense pool of light. Now, if you tilt the flashlight to a 45° angle, you'll notice that the pool of light on the wall gets bigger and dimmer. The same amount of energy is coming out of the flashlight, and it's the same distance from the wall, but the change in angle has caused the light to spread out over a larger area, and decrease in intensity.

Because the surface of earth is curved, the sun's rays strike different parts of the earth at different angles. In the lower latitudes, closer to the equator, the sun's rays strike the earth at, or something close to, a 90° angle. The solar energy is concentrated, like our flashlight pointed directly at the wall, so temperatures are hotter. At higher latitudes, closer to the poles, the sun's rays strike the earth at a lesser angle, and the effect is like our tilted flashlight. The sun's energy is spread out over a larger area, the solar energy is diluted, so temperatures are lower.

This is why Sweden is colder than Libya. Sweden is at a higher latitude, where light strikes the earth at a lesser angle. Libya is at a lower latitude, where the sunlight strikes the earth at a greater angle. This is also why Minnesota is colder than Illinois, why Illinois is colder than Tennessee, and why Tennessee is colder than Florida. The effect can be found at relatively small scales. On a typical day, Chicago's northern suburbs will run a degree or two cooler than Chicago's southern suburbs, all because of the angle of the sun's incoming rays.



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Seasons

The major cause of seasonal changes is the inclination of the earth's axis. The axis around which the earth rotates is not perpendicular to the plane in which it orbits the sun. The earth's axis is tilted 23.5° off center, like a buoy listing in a lake. As the earth makes its way around the sun, the northern hemisphere leans toward the sun for part of the year, and the southern hemisphere leans toward the sun the other part of the year.

From March to September, the northern hemisphere is tilted toward the sun. As a result, the northern hemisphere stays illuminated for a longer period of each day, meaning that the days grow longer. The sun's most direct rays also drift into the northern hemisphere, bringing greater heat. During these months, the northern hemisphere experiences spring and summer. At the same time, the southern hemisphere is leaning away from the sun. Days in the southern hemisphere get shorter, and temperatures decrease. From March through September, the southern hemisphere experiences fall and winter.

The situation reverses itself from September to March, as the southern hemisphere tilts into the sun. The southern hemisphere has its longest and hottest days of the year, experiencing spring and summer. The northern hemisphere is now leaning away from the sun, experiencing shorter days and colder temperatures, passing through fall and winter.

Seasonal variations tend to be the greatest at higher latitudes, while seasons don't change much in the lower latitudes. Honolulu, for example, receives about thirteen hours of daylight in June, and about eleven hours in December, not a tremendous difference. Chicago, on the other hand, receives fifteen hours of daylight in June, and only nine hours of daylight in December, a much more noticeable difference. Anchorage, Alaska, receives nearly twenty hours of daylight in June, and only about five hours of daylight in December. Meanwhile, locations at the equator receive about twelve hours of daylight every single day of the year. Places in the Arctic and Antarctic circles receive twenty-four hours of daylight in summer, and twenty-four hours of darkness in winter.

Precipitation

Precipitation—rain, snow, sleet, etc.—is an intensely complicated process. Very smart people with very expensive equipment still have trouble accurately predicting it. That said, the fundamentals of precipitation are relatively simple. Almost all precipitation processes begin with an air mass being lifted. As air rises, it begins to cool down. As air cools down, it approaches its dew point. If it does reach its dew point, the moisture in the air condenses to a liquid state, and a cloud is formed. If enough condensation occurs, then the water falls to the earth as precipitation.

There are different mechanisms that cause the air to lift. **Convective precipitation** occurs when the earth's surface heats the air above it, causing that air to rise, and is most often associated with brief, isolated summer storms. **Frontal precipitation** (sometimes

called cyclonic precipitation) occurs when air masses with different temperature characteristics collide with one another. A cold front is the leading edge of a cold air mass. If the dense cold air along this front collides with a warmer air mass, it forces the more buoyant warm air aloft. Cold fronts are often associated with violent storms. A warm front is the leading edge of a warm air mass. If the buoyant warm air collides with a cooler air mass, it will often rise up over the dense cold air.



Caught in the rain in Sydney, Australia. Photo by Nomad Tales on Flickr.

Orographic precipitation is associated with highland areas. As air masses strike a topographic barrier, like a mountain range, the air rises, which can create precipitation. The side of the mountain range where orographic precipitation takes place is known as the “windward” side. On the mostly dry continent of Australia, the east coast gets rain largely due to orographic precipitation.

A side effect of orographic precipitation is the **rain shadow effect**. The leeward, or “downwind” side of the mountain range is often much drier than the windward side. This is because air masses often dump much of their available moisture on the windward side, but also because air masses are descending and warming on the leeward side, and therefore are less likely to produce precipitation.



Eastern Washington, the dry side of the Cascade Mountains. Photo by thomas alan on Flickr.

The rain shadow effect can be found at relatively small scales, as is the case on many Caribbean islands, where the windward side of an island receives more precipitation than the leeward side. Or, it can exist on massive scales. In the American West, the Sierra Nevada, Cascade, and Rocky Mountains cast rain shadows that extend for hundreds of miles.

Global Pressure Systems

Variations in air pressure are the means by which air masses are moved about the earth. Air pressure is the amount of atmospheric mass exerted on the earth’s surface, and it varies from place to place. Put simply, if there is higher air pressure in Phoenix than in Des Moines, then there is literally more air in Phoenix than in Des Moines.

Air flows from areas of high pressure toward areas of low pressure, and is manifested as wind. If the difference in pressure between two places is great, then the air will move faster, as in a gusty wind. If the difference in air pressure between two places is slight, then the air will move slowly, as in a gentle breeze. Because air moves *away* from areas of high pressure, reducing the chances of collision and lifting, those places tend to be relatively *dry*. Because air is drawn *toward* areas of low pressure, increasing the chances of collision and lifting, those places tend to be relatively *wet*. In most places, air pressure shifts constantly, which is why meteorologists keep an eye on the barometer, which measures air pressure. A rising barometer decreases the likelihood of precipitation. A falling barometer increases the likelihood of precipitation.

On the global scale, there are a few major pressure systems that have a tremendous impact on the world’s weather. The first are **subtropical highs**. The subtropical highs are a series of high-pressure systems that are found at approximately 30°N and 30°S latitude. These massive ridges of high pressure cause dry conditions wherever they are found. A quick look at a map of the world’s most significant deserts reveals that many of them are located at about 30°N latitude, such as the Mojave, Sahara, Arabian, and Great Indian Deserts, or at about 30°S latitude, such as the Atacama, Kalahari, and Australian Deserts. Note that the subtropical

highs are periodic *sequence* of pressure systems, but a continuous belt of high pressure. Not all places at 30° latitude are under subtropical highs. New Orleans, for example, is at that latitude, and is rain-soaked much of the year.

The subtropical highs also generate enormous amount of wind. They push air off toward the higher latitudes, creating the **westerlies**. The westerlies are located between approximately 30° and 60° north and south latitude. As the subtropical highs push air poleward, the Coriolis effect causes them to bend to the right in the northern hemisphere, and to the left in the southern hemisphere. The result is a circulation of air in both the northern and southern midlatitudes from west to east. Much of the continental United States, southern Canada, Europe, and the Russian Domain receive their weather from the west, which has a significant impact on climate patterns there.



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The subtropical highs also push air to the lower latitudes. In the northern hemisphere, these winds bend slightly to the right because of the Coriolis effect, creating the northeast **trade winds**. In the southern hemisphere, these winds bend slightly to the left, creating the southeast trade winds. So, in the southern tropics, air tends to flow equatorward from the southeast. In the northern tropics, air tends to flow equatorward from the northeast. The trade winds collide near the equator, in a region known as the **intertropical convergence zone**, or **ITCZ**. The collision of these warm, often very moist tropical air masses creates extremely wet conditions. Just as some of the world's great deserts are associated with the subtropical highs, many of the world's great rainforests are found near the equator, such as the Amazon rainforest, and the rainforests of central Africa and southeast Asia.

Two more high-pressure systems, the **polar highs**, are located in the Arctic and Antarctic regions, creating very dry conditions. Antarctica, although covered in snow and ice, is technically a desert, receiving very little annual precipitation. The polar highs push air off toward the lower latitudes, and the Coriolis effect deflects them to the right in the northern hemisphere, and to the left in the southern hemisphere. In the **polar easterlies**, air circulates from east to west, usually above 60° north and south latitude.

All of these pressure features shift seasonally. When it is summer in the northern hemisphere, they slide north. When it is summer in southern hemisphere, they slide south. For some places, this can cause significant changes in the weather. Los Angeles, for example, spends much of the year under a subtropical high, and receives very little precipitation. In the wintertime, though, that subtropical high shifts south. The westerlies also shift south, and carry a significant amount of moisture off the Pacific Ocean, bringing rainy winters to Los Angeles.

Other Climate Factors

Elevation has a significant impact on temperature. That is discussed in Chapter 68. The presence of absence or large bodies of water can also have a tremendous impact on temperature. The difference between maritime and continental climates is discussed in Chapter 41.

Climate Change

The earth's climate has been changing for millions of years, with temperature periodically increasing and decreasing. Fifteen thousand years ago, much of the earth was covered in massive sheets of ice, so it is obviously much warmer now than it was then. Climate change is a natural process. That's said, when people use the term climate change today, they are usually referring to **anthropogenic climate change**, or climate change caused by human activity. The earth is currently in a warming phase, but a preponderance of evidence suggests that humans are accelerating that warming at an alarming rate.



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Increased planetary temperatures are associated with the **greenhouse effect**. That term takes its name from greenhouses—buildings constructed primarily of glass that are utilized to grow and sustain plants in cold climates. The glass in a greenhouse allows vital sunlight to reach plants, but prevents heat from escaping the building.

If you don't own a greenhouse, but do own a car, you have probably experienced the greenhouse effect. If you park your car in a lot on a sunny summer day, and return to it an hour or two later, you will likely find that the interior of your car is extremely hot. This is because sunlight, with its relatively short wavelength, has easily passed through the glass in your car. As your car absorbs that energy, it begins to radiate it back off as thermal radiation, or heat. Because thermal radiation has a longer wavelength, it has more trouble passing back through the glass of your car. So, light continues to pour in, but relatively little heat escapes, and the inside of your car gets hotter and hotter.

The same thing happens in the atmosphere. Instead of glass, there are greenhouse gasses, like carbon dioxide and methane. These gasses allow sunlight to pass through the atmosphere with relative ease. When the earth radiates heat, it has trouble escaping through the greenhouse gasses. So, the earth's atmosphere stays relatively warm.

Like climate change, the greenhouse effect is a natural phenomenon, and is, in fact, vital for life on earth. Without the greenhouse effect, the earth would quickly shed its heat, and would be a very cold place. Humans did not create the greenhouse effect, but we are enhancing it. By various means, but primarily through the production and consumption of fossil fuels, humans are pumping large volumes of greenhouse gasses into the atmosphere. In doing so, we are *amplifying* the greenhouse effect. The more greenhouse gasses we put in the atmosphere, the more heat is trapped, and the warmer the earth gets.

Climate change has varied spatially and seasonally. Some places are warming faster than others, and some years are hotter than others, but the earth's overall temperatures are certainly increasing. Of the ten hottest years on record, nine have occurred within the last decade, and all of them have occurred within the last fifteen years. Polar regions are being dramatically altered, since ecosystems based on ice and snow are going to be deeply impacted by even the slightest temperature increase. Precipitation patterns are being amplified. Wet areas are getting wetter, while dry areas are getting drier, wreaking havoc on agriculture in many parts of the world. Sea levels are rising. While it is unlikely that West Virginia will be oceanfront property anytime soon, coastal areas are experiencing increased erosion and dramatic flooding. Plant and animal extinctions are on the rise, as many species have trouble adjusting to the new normal. Climate scientists vary in their predictions for the future, but they generally range from deeply concerned to extremely gloomy. The vast majority of scientists agree that humans must find a way to curb greenhouse gas emissions to prevent a global environmental catastrophe.

Plate Tectonics

The outer crust of the earth is not one solid piece, but rather a collection of interlocking **tectonic plates**—a sort of three-dimensional jigsaw puzzle. These tectonic plates can and do move independently of one another, albeit at a very slow pace. Tectonic plates generally move about as fast as your fingernails grow. Given millions of years, though, the movement of these plates can dramatically rearrange the world map. Brazil used to border Nigeria, Portugal used to border Greenland, India used to border Australia, and the United States used to border Morocco (their territories, that is—this was, of course, millions of years before these countries actually existed).

Plate tectonics play a major role in global landforms and natural hazards. There are a few different types of tectonic boundaries, such as transform boundaries, where one plate is sliding alongside another one, and divergent boundaries, where one plate is

moving away from another one. Of greatest interest to world regional geography is the convergent boundary, where one plate is colliding with another.



Image by OpenClipart-Vectors on Pixabay.

The most important result of a convergent boundary is **folding**. Imagine a throw rug on a floor. If you took a push broom and shoved it against the edge of that rug, the rug would wrinkle up, folding into ridges and valleys. The same thing can happen to the surface of the earth. About 80 million years ago, India began to collide with Asia. Using our metaphor, India would be the push broom, and Asia would be the rug. As a result of this collision, the Himalayas and many other mountain ranges folded upward, while valleys and basins sank downward. This “wrinkling” of the fabric of Asia is ongoing, and its effects have been far flung. India’s collision with Asia has caused the upward folding of mountain ranges as far away as Siberia.

Convergent boundaries are also associated with major natural hazards. All around the Pacific Ocean is a zone known as the Ring of Fire. The tectonic plates beneath the eastern Pacific are moving east, colliding with the plates that make up the Americas. The tectonic plates beneath the western Pacific are moving west, colliding with the plates that make up East Asia. This collision has not only created numerous mountain ranges along the Pacific Rim, such as the Andes of South America, but also volcanoes and earthquakes.

As one tectonic plate slips below another one—a process known as “subduction”—the tremendous pressure involved melts the rock of the subducting plate. Some of the lava, ash, and gasses released by the melting plate find their way to the surface in volcanic eruptions. The Ring of Fire includes scores of volcanoes, such as Mt. Fuji in Japan, Mt. Pinatubo in the Philippines, and Mt. St. Helens in the United States. And every time these tectonic plates slip, the surface shudders. If they make a significant movement, the tremors can amplify into massive earthquakes. The entire Ring of Fire is highly susceptible to this hazard. Japan, Mexico, Peru, Ecuador, the United States, and the Philippines are some of the most earthquake-prone countries on the planet.

Erosion and Deposition

Tectonic plates are not the only forces that shape the world’s landscapes. Two other important forces—erosion and deposition—are constantly reshaping the face of the earth. **Erosion** refers to forces that remove material from a landscape. **Deposition** refers to those same forces depositing that material elsewhere. Running water, freezing and thawing, gravity, coastal waves, wind, and glaciers all pick up bits of earth, both large and small, and deposit them someplace else. A river erodes its banks, ice crystals and plant roots break up rocks, gravity carries material downslope, waves beat at seaside cliffs, wind carries away soil, and glaciers scour out lakes and valleys. And then rivers deposit sediment in deltas and floodplains, rocks come to rest in a valley floor, cliffs crash into the sea, wind-blown sediment settles onto the ground, and glaciers melt, leaving their eroded material behind.

Another name for this process is weathering, and different landscapes are at different **stages of weathering**. Some landscapes are at early stages of weathering, meaning that they are relatively new, and that erosion and deposition haven’t had much time to alter them. Other landscapes are at very advanced stages of weathering, meaning that they are quite old, and have been deeply altered by erosion and deposition. For example, the Great Lakes, and much of landscape of the upper Midwest, were formed by glacial erosion and deposition about 14,000 years ago. That’s relatively new. A few hundred miles away are the Ozark Highlands of Missouri and Arkansas, deeply eroded hills that are more than 200 million years old.

Did You Know?

Many people know that the Coriolis effect causes toilets flush clockwise in the northern hemisphere, and counterclockwise in the southern hemisphere. Unfortunately, many people are wrong. Toilets do not flush different ways in the two hemispheres, and whichever direction they flush, it has nothing to do with the Coriolis effect. So, if you’re planning to fly to Australia just to watch the toilets flush the other way, save your money.

A fascinating book about the importance of longitude in the Age of Exploration is Longitude by Dava Sobel.

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1.7: Political Geography



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Political geography is the study of the spatial distribution of political entities and systems, and the effect that politics has on particular places.

Democracy and Authoritarianism

Democracy is a system of government in which political power is held by the people, who form their government through free elections. **Authoritarianism** is a system of government in which political power is held by a small minority, often against the will of the people. These are not necessarily two separate categories of government, but two ends of a political spectrum. Some countries, such as Norway, are highly democratic. Other countries, such as North Korea, are highly authoritarian. Many countries, though, fall somewhere in between, with some elements of both democracy and authoritarianism.

A **full democracy** is a country that regularly holds free, multi-party elections, permits political dissent and a free press, and where the rule of law and individual civil rights are respected. Examples include the countries of the European Union, the United States, Canada, Australia, and Japan. Of course, many of these democracies are not without their flaws. Nearly every democracy has had some experience with corruption involving elected officials, and sometimes free elections are not entirely fair. In the United States, for example, the electoral college, gerrymandering, and the influence of wealthy political donors are often cited as being somewhat undemocratic.



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A **partial democracy** is country with democratic institutions, but which has some undemocratic traits, such as weak opposition parties, rampant corruption, election fraud, significant limitations on free speech and the press, and frequent constitutional changes. Examples include Nigeria, Turkey, Pakistan, and Thailand, which fall on the political spectrum somewhere between democracy and authoritarianism.

Authoritarian governments come in many different forms. Some feature military rule, or rule by a single political party. Others are dictatorships or absolute monarchies, where political power rests with a single individual. Such government do not hold fair elections, have little respect for law or civil liberties, and little tolerance of free speech or a free press. Examples include China, Russia, Algeria, Iran, and Cuba. Many authoritarian countries are **nominal democracies**, or democracies “in name only.” In fact, all but two of the world’s independent states claim to be democracies, and some of the most authoritarian regimes regularly hold sham elections. It is said that nobody loves elections more than dictators, because the outcome of those elections is predetermined.

Nation and State

Nations and states are the fundamental building blocks of international political geography. These terms can be somewhat confusing for Americans. In the United States, we think of states, such as Illinois, New York, or Oregon, as pieces that make up a whole, which we often refer to as the “nation.” In the context of American politics, this usage is not incorrect. But the terms “nation” and “state” mean something different in the context of world regional geography.

Nation is a cultural term, referring to a large group of people who share a common cultural identity. For example, the Japanese nation consists of all those people who identify as Japanese. **State** is a political term, referring to an independent government, and the territory it governs. The State of Japan, therefore, refers to the Japanese government and its territory.

Often, nations and states share a geography. A **nation-state** refers to a state that is dominated by one national group. Examples of nation-states include Armenia, Egypt, and Japan, where more than 99% of the state’s population belong to a single national group. Some nation-states contain significant minority populations, but if one national group is still demographically, culturally, and politically dominant, it is still considered a nation-state. Examples of nation-states with significant minority populations include Turkey, France, and Israel.

A **multinational state** is state that contains two or more national groups, where no single group is dominant demographically, culturally, and politically. Examples of multinational states include Indonesia, Afghanistan, Nigeria, and Belgium.



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There are some countries that fall somewhere between the definition of a nation-state and multinational state. Such **evolving nation-states** often contain a mixture of indigenous populations and populations of immigrants and their descendants. The United States is an example of such a state. The U.S. could be considered a nation-state, since most people in the country consider their nationality to be “American.” That said, many Americans have a “hyphenated” identity. They are American, but also perhaps African-American, Irish-American, Italian-American, or Chinese-American, to name a few. This ethnic diversity also makes the United States something of a multinational state. Other examples of evolving nation-states include Canada and Brazil.

There are also stateless nations. A **stateless nation** is defined as a large group of people who share a common cultural identity, and who occupy their traditional homeland, but who do not enjoy political independence, often finding themselves divided geographically among multiple states. Examples include the Kurds, whose homeland spills across Iraq, Iran, Turkey, and Syria; the Yoruba, whose homeland is found in parts of Nigeria, Benin, and Togo; and the Palestinians, whose homeland is divided among Jordan, Lebanon, Syria, Israel, and the Israeli-occupied territories known as the West Bank and the Gaza Strip.

Autonomy and Sovereignty

The terms autonomy and sovereignty both refer to political independence. If a state is **sovereign**, that means it has ultimate political authority within its own territory. In sovereign states, there is no higher political power. **Autonomy** refers to limited independence. An autonomous region is a part of a country that enjoys some political independence at the local level, but which is still subject to the higher political power. Examples of autonomous regions include Scotland in the United Kingdom, the Basque Country in Spain, and Greenland, an autonomous territory of Denmark.

There are some states, known as **satellite states** or **puppet states**, that possess nominal sovereignty, but which, in reality, are subject to the political rule of a foreign power. Prominent examples from the past include the Soviet satellite states of eastern Europe. From 1945 until the late 1980s, East Germany, Poland, Czechoslovakia, Hungary, Bulgaria, and Romania were officially sovereign states, but they were, in reality, under the control of the Soviet Union.

Did you know?

There are currently 196 sovereign states in the world. That number includes Taiwan, which is officially part of China, but which has been a de facto sovereign state since 1949, and Kosovo, which has been a sovereign state since 2008, although not all members of the international community recognize its independence.

*In Political Geography, the word **state**, meaning country, can be confusing for Americans who know that their country includes fifty states – meaning fifty political sub-divisions of the United States, a country. Thus, sometimes geographers will use the term **State** to mean country and the term **state** to mean political sub-divisions.*

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1.8: Population Geography



Created by Adrien Coquet
from Noun Project

Population geography is the study of the spatial distribution of human population, and of the population characteristics of individual regions and places. It includes studies of population growth and decline, as well as the migration of people from one place to another.

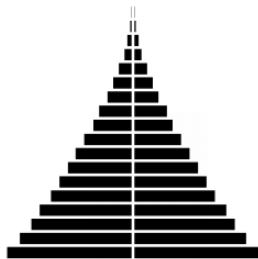
Global Population Distribution and Population Density

The current world population is approximately 7.7 billion, and that population is very unevenly distributed among the world's 193 independent countries that are members of the United Nations. The world's two most populous countries, China and India, collectively account for over a third of the world's population. The world's seven most populous countries, China and India along with the United States, Indonesia, Brazil, Pakistan, and Nigeria, collectively account for more than half the world's population. The population of some countries is, by comparison, very small. The Republic of Ireland, for example, has a population of just under five million, or about half that of the Chicago metropolitan area.

A useful statistic when examining population distribution is **population density**, which is the population of a country divided by its land area. This statistic is somewhat tricky when used to rank countries. Microstates, city-States, and small island countries typically have high population densities due to the limited areas available. Cities inherently are more crowded than rural areas; thus, a country that is precisely one city is intensely crowded – Monaco and Singapore, for instance. Therefore, if you exclude microstates, city-States, and small island countries, then Bangladesh is the most densely populated country on Earth, with a population density of more than 3,200 people per square mile.¹ In contrast, Russia is sparsely populated, but as the world's largest country by area, it has a density of just over twenty-three people per square mile. Remarkably, Russia, which is more than a hundred times the size of Bangladesh, has about twenty million fewer people.

Population Density of Selected Countries

Selected Countries	Population Density, as people per square mile
Bangladesh	3277
Netherlands	1316
India	1202
Haiti	1072
Japan	898
China	397
United States	93
Estonia	81
Brazil	65
Norway	38
Russia	23
Canada	10
Australia	8



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from Noun Project

Population Change

A primary tool geographers use when analyzing population change is the population pyramid. A **population pyramid** is a graph depicting the distribution of a population across various age brackets. If a country's pyramid has a wide base and narrow top, such as Niger (<https://tinyurl.com/nigerpoppyr>), that indicates that a large proportion of the population is relatively young. Such countries are experiencing rapid population growth. If a country has a narrow base and a wide top, such as Japan (<https://tinyurl.com/poppyrJapan>), that indicates that a large proportion of the population is relatively old. Such countries are facing long-term population decline. If the pyramid resembles a column, such as the United States (<https://tinyurl.com/usapoppyr>), that indicates that population is distributed relatively evenly across the age groups, indicating slow or no population growth.

Rate of natural increase is a statistic that examines population change through births and deaths. It is calculated by subtracting a country's death rate from its birth rate. A **birth rate** indicates the number of children born every year per thousand people in a country's population.² The United States' birth rate is 12/1000, meaning that, for every thousand people in the country, twelve are added through births each year.

Birth Rates of Selected Countries

Country	Region	Birth Rate 2018
Angola	Africa	43.7
Afghanistan	Asia	37.5
Guatemala	LACAR	24.6
Solomon Islands	LACAR	24.5
Ireland	Europe	13.8
USA	North America	12.4
Georgia	Russian Domain	12.1
Portugal - lowest in the Western World	Europe	8.2
Japan - lowest in the world	Asia	7.5

A **death rate** indicates the number of people who die each year per thousand people in a country's population.³ The United States' death rate is 8/1000, meaning that, for every thousand people in the country, eight die each year.

Death Rates of Selected Countries

Country	Region	Death Rate 2018
South Sudan	Africa	19.3
Afghanistan	Asia	13.2
Cuba	LACAR	8.9
Tuvalu	Pacific Realm	8.4
Lithuania	Europe	14.8
USA	North America	8.2
Ukraine	Russian Domain	14.3
Solomon Islands - lowest in the Western World	Pacific Realm	3.8
Qatar - lowest in the world	Asia	1.6

Natural increase is the comparison of the birth rate to the death rate. Births are added, while deaths are subtracted to the base population. So, the United States' rate of natural increase is 4.2/1000 (or 0.42% increase).

Another statistic used in the study of population change is **total fertility rate**, or TFR. A country's TFR is similar to its birth rate, and is based on the same data. Countries with high birth rates have high TFRs, and countries with low birth rates have low TFRs. TFR reflects the number of children that an average female in a country will have during her lifetime. TFRs vary widely from country to country. Niger has a TFR of about 6.35. Taiwan has TFR of about 1.13. So, it is typical for a female in Niger to have six

children during her lifetime. In Taiwan, a typical female has just one. Again, microstates and similar regions may have exaggerated numbers, in this case especially low – Singapore = 0.84. The table below shows the high points of TFR for regions of the world.⁴

Total Fertility Rate (TFR) of Selected Countries

Country	Region	Total Fertility Rate 2018
Niger	Africa	6.35
Afghanistan	Asia	5.02
Solomon Islands	Pacific Realm	3.09
Guatemala	LACAR	2.87
France	Europe	2.06
USA	North America	1.87
Armenia	Russian Domain	1.64

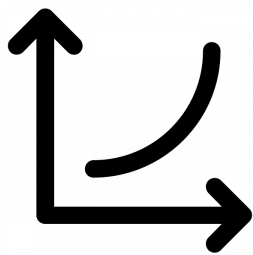
To maintain **zero population growth**, or long-term population stability, a country generally must have a TFR of about 2.1. If a country's TFR is higher than 2.1, it is likely to experience population growth. If it is lower than 2.1, a country is likely to experience population decline.

A country's population can also be affected by immigration and emigration. **Immigration** refers to the entrance of migrants, while **emigration** refers to the exit of migrants. The **net migration rate** refers to the difference between annual immigrants and emigrants per one thousand people in a country's population. The United States has a net migration rate of 2.9/1000, meaning that the U.S. gains about three net migrants per thousand people each year. El Salvador, by contrast, has net migration rate of about -8/1000, meaning that the country loses about eight net migrants per thousand people each year. Here are a sample of net migration rates by country 2015-2020.⁵ Oil states often have high net migration rates, as workers flow into the country.

Net Migration for Selected Countries

Country - 2015-2020	Net Migration Rate
Bahrain - #1 in world	31.1
Austria - #1 in Europe	7.4
Canada - #1 in North America	6.6
Australia - #1 in Pacific Realm	6.4
Chile - #1 in LACAR	6
USA	2.9
Russia - #1 in Russian Domain	1.3
Ê Ê Bottom three	
Venezuela - economic chaos	-22.3
Syria - war	-24.1
Puerto Rico - natural disasters	-31.4

The Population Explosion and the Malthusian Scenario



Created by Adrien Coquet
from Noun Project

The graph of historic human population growth is often referred to as the “J-curve.” It reflects that fact that human population has not grown at a consistent rate over the last several thousand years. Instead, human population grew very slowly for centuries and then exploded upward. This population **explosion** began in the 1700s, and accelerated dramatically in the 20th century. Human population is estimated to have been approximately 300 million in the first century CE. By 1650, it had grown to just 500 million. By 1900, it was more than a 1.5 billion. In 1950, it was 2.5 billion. By the year 2000, it was over 6 billion, and is projected to reach nearly 9 billion by the year 2050.

Such growth rates cannot be sustained indefinitely. Thomas Malthus, an 18th-century English priest and scholar, was among the first to address overpopulation. Malthus noted that earth’s capacity to sustain human population was finite, and warned that unchecked human population growth would lead to a demographic collapse – that is, the deaths of millions of people. In this **Malthusian scenario**, human population exceeds the earth’s capacity to sustain it, and famine, war, or disease lead to increased death rates. Malthus argued for a positive alternative to this population catastrophe – that humans voluntarily reduce their birth rates, leading to stable and sustainable global population.

The Demographic Transition

The J-curve and the Malthusian scenario raise two fundamental questions. First, what caused the population explosion? Second, will the population explosion continue toward a Malthusian scenario, or will it eventually come to an end? Both questions are addressed by a population model known as the demographic transition. Go to <https://populationeducation.org/what-demographic-transition-model/> to view the model.

The **demographic transition** examines birth rates and death rates in societies before, during, and after the industrial revolution. There are four (or some say, five) stages in this model: the pre-industrial, the early industrial, the late industrial, and the post-industrial. It isn’t appropriate to put exact dates on these four stages, since different parts of the world experienced them at different times. Great Britain, the birthplace of the industrial revolution, began to move through this transition in the 1700s. By contrast, much of Sub-Saharan Africa wouldn’t begin the transition until well into the 20th century.

The **pre-industrial stage (Stage 1)** represents the vast majority of human history, extending from the dawn of human civilization until the industrial revolution. During this stage, the vast majority of humans lived in rural areas and farmed for a living. Living standards were poor, and technology was extremely limited. Birth rates in the pre-industrial stage were extremely high. It was common for families to have at least eight children, and many families were much bigger than that. A primary reason for this high birth rate was the economic status of children. Children were viewed as an economic asset. A child, from a very young age, could provide labor on the family farm. The more children, the more labor. Additionally, children served as a sort of retirement plan, providing elder care for their aging parents. And in an era of extremely high child mortality rates, when a famine or epidemic could take the lives of scores of children in a short time, parents felt compelled to have larger families as a sort of insurance against that possibility. Children were also relatively cheap. They were fed with food from the garden, not from the supermarket. For the vast majority of history, farm children didn’t attend school, and they didn’t go to the doctor or dentist. There was no health insurance or college tuition to pay for. Factories didn’t exist in the pre-industrial stage, so there were few possessions that parents could provide for their children, let alone afford. Additionally, the reproductive window for parents was relatively long. People got married at very young age, and had children early and often. Another major reason for high birth rates was the lack of modern contraceptives.

With such high birth rates, it is tempting to conclude that this was the era of the population explosion. It wasn’t. Rather, the pre-industrial stage represents the long, flat part of the J-curve. Although birth rates were extremely high, so were death rates. Even on farms, diets were often inadequate, and always at the mercy of the seasons and the quality of the harvest. People also lived in comparatively unhygienic conditions, without refrigeration, treated drinking water, or modern sanitation. As a result, people got

sick more often, and there was no modern medicine to prevent or treat health problems. With the very high birth rates checked by high death rates, human population grew very slowly, and sometimes not at all, during the pre-industrial stage.

The beginning of the **early industrial stage (Stage 2)** was marked by the advent of the industrial revolution and all the developments that came with it – modern factories, modern agriculture, modern science, and modern medicine. During this period, human population began a slow transition away from rural areas toward urban ones. The mechanization of agriculture reduced the need for labor on farms, and the rise of the factory increased the need for labor in cities.

Birth rates during this stage remained relatively high. Although urbanization was underway, the majority of the population remained in rural areas. In the United States, for example, industrialization was in full swing by the mid-1800s, but the country would not have a majority urban population until the 1920s. Although birth rates began to dip slightly on the farms, they were still comparatively high, for the same reasons they were high in the pre-industrial stage. Even in industrial cities, where having large families was less practical, family sizes remained relatively large due to cultural conventions. Most parents from this era came from large families and, as such, were more likely to have large families themselves.



Ironically, even though the early industrial stage saw a slight decline in birth rates, it was the beginning of the population explosion. The population explosion was not caused by an increase in birth rates, but rather by a decline in death rates. New technologies that accompanied the industrial revolution – modern medicine (in particular, vaccines), improved sanitation, refrigeration, water treatment, and modern agriculture, among others – caused death rates to plummet. As the gap between birth rates and death rates widened, the rate of natural increase soared, and population exploded upward.



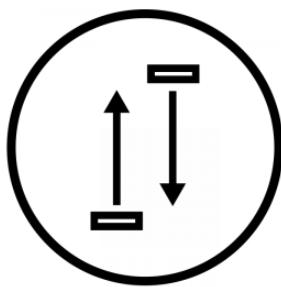
Honiara, Solomon Islands. Photo by Adii Wahid on Unsplash.

During the **late industrial stage (Stage 3)**, the majority of the population shifted away from the farm to the city, technology continued to advance at a rapid pace, and standards of living improved dramatically. In this period, birth rates declined significantly. A primary reason is a change in the economic status of children. On the farm, children were considered an economic asset. In cities and their suburbs, children begin to be viewed as an economic liability. In modern cities, children are no longer able to provide significant income for their family. Additionally, children become far more expensive. Health care costs increase. Children spend more years in school, and therefore remain financially dependent on their parents for a longer period of time. Most importantly, cultural standards for children rose, and parents were inclined to spend more money on them. Large families began to seem unaffordable. Accompanying this change in the economic status of children was a change in the economic situation of their parents. During this period, parents were likely to finish high school, and possibly college, before starting a career. And they often chose to work for a few years before starting a family. As a result, the reproductive window for parents began to contract, and family size along with it. Death rates remained relatively low during this period. As the gap between birth rates and death rates narrowed, population growth rates declined.

Wealth and technology continue to grow during the **post-industrial stage (Stage 4)**. In this period, agricultural and industrial output continues to expand, but the majority of the population shifts toward employment in the service and information sectors.

Birth rates continue their steep decline as children become very expensive, and as more people, particularly women, choose to complete a college education. Marriages are further delayed, and the reproductive window closes even more. Cultural norms shift toward smaller and smaller families. While it might have been “normal” to have a dozen children during the pre-industrial stage, and perhaps four, five, or six during the industrial stages, the new normal for children during the post-industrial stage becomes two, or one, or none. Death rates remain low as birth rates plummet. As a result, population growth rates become very low. In fact, birth rates might even slump below death rates during this period, leading to long-term population decline. Is this form of population decline a new stage of the Demographic Transition or simply a facet of the post-industrial stage? Some argue that a consistent pattern of more deaths than births marks something new, thus a **Stage 5** of the Demographic Transition.

What does this mean for the future of human population growth? Some places, such as North America, Europe, the Russian Domain, and East Asia are clearly in the post-industrial stage, with TFRs already below 2.1. Other places that were rapid-growth regions a generation ago, such as Latin America, South Asia, and Southeast Asia, are experiencing significant declines in birth rates as urbanization surges and cultural attitudes change. A few places, notably Sub-Saharan Africa, continue to experience rapid population growth. Still, the global TFR is now about 2.5, and is projected to drop below 2.1 by the middle of this century. The population explosion, then, is expected to come to a close by the end of the century.



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from Noun Project

Migration

Population geography also examines the movement of people, and significant migration patterns will be discussed in the regional overviews. In general, the two most significant migration flows in recent years has been from rural to areas to urban ones, and from poorer countries to wealthier ones.

When examining migration, geographers analyze the **migration decision**, which are the factors that motivate a person to move. Any time a person decides to change residence, be it a move across town, or across the country, or around the world, that decision is informed by push factors and pull factors. A **push factor** causes a person to choose to emigrate away from the current location. Some common push factors include high unemployment, low wages, high rates of poverty or crime, land or housing shortages, war, natural disasters, or poor government services, such as health care and education. A **pull factor** causes a person to immigrate to a particular destination. Some common pull factors include a greater availability of jobs, higher wages, a change for upward economic mobility, better government services, the opportunity to provide **remittances** (money sent back home to one’s family), or, simply, a desire for a more exciting lifestyle.

Did you know?

Japan’s TFR is about 1.4, well below the 2.1 required to maintain population stability. Japan’s current population of 126 million is projected to decline to less than 100 million by the year 2053. This fact may force Japan to reconsider its long-standing stance against immigration.

The number of countries of the world, set at 193 members of the United Nations, does vary by other levels of recognition. Non-member observer States – Vatican City and Palestine – could be counted. The figure of 193 does not include Taiwan, the island considered by some as part of mainland China. That number does not count Abkhazia and South Ossetia – see Chapter 86 – and several other regions generally unrecognized by nearly all countries of the world.

Did you notice the numbers for the Solomon Islands in the birth and death rate tables? With a birth rate of 24.3, the Solomon Islands ranked highest in the Pacific Realm, only 0.1 from being the highest birth rate in the Western World. This country has the highest total fertility rate in the Western World at 3.09. For death rates, the Solomon Islands did have the lowest death rate (3.8) in

the Western World! These numbers mean that this country has a natural increase of 2.05% per year, quite high in population standards. This rapid increase may explain the island's migration rate of -2.5%.

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1.9: Urban Geography



Urban geography is the study of cities. Geographers examine the factors that lead to the location and relative size of cities, and also the complex processes that shape the nature of individual urban areas.

The History of Urbanization

Humans took their first step toward urbanization over 12,000 years ago with the development of agriculture. As the domestication of plants and animals grew more and more sophisticated, a food surplus began to develop in some societies. This surplus allowed a few members of these societies to step away from agriculture and develop specialized occupations. The first non-farmers were likely political and religious leaders, soldiers, artisans, merchants, and scholars. Whatever their occupations, they began to live in concentrated settlements around 4000 BCE, and the first cities were born.

A **city** was (and still is) a dense settlement of people working in specialized occupations. The rural area surrounding a city is known as its **hinterland**. Hinterlands have long been focused on the **primary sector** – agriculture, timber, mining, and other forms of raw materials extraction. The hinterland supplied these raw materials to the city, and the city provided goods and services for its hinterland. Over time, cities grew larger and more complex, as civilizations linked multiple cities and their hinterlands to form larger states and empires. Since the dawn of urbanization, cities have evolved centers of trade, invention, commerce, education, politics, religion, and culture.

Still, for most of human history, the bulk of labor was needed in the primary sector, so the vast majority of humans remained rural. As late as 1800, fewer than 5% of humans lived in cities. A century later, the global urbanization rate was still under 20%. But the process that would create an urban world was well underway. The **Industrial Revolution** had two profound impacts on urbanization rates. The first was the mechanization of agriculture, which slowly reduced the need for labor in rural areas. The second was the rise of the factory. It has always made good economic sense for factories to cluster together, which means that factories were best suited for large urban areas.

Urbanization accompanied industrialization throughout the world. The industrialization of the United States was in full swing by 1920, when its urban dwellers first accounted for more than half the population. Since then, the U.S. labor market has increasingly shifted from manufacturing to services and information, but these jobs are also primarily located in cities. At the same time, jobs in the primary sector, such as agriculture, have continued to dwindle, furthering rural-to-urban migration. By 2010, the U.S. population was more than 80% urban.

The rest of the world has followed the same trend. By the close of the 20th century, the world was nearly half urbanized. In 2007, for the first time in human history, more people worldwide lived in cities than in rural areas. Since more developed economies have more jobs in manufacturing, service, and information sectors, they tend to have more urbanized populations. The five countries with the highest standards of living (according to the **Human Development Index**) are Norway, Australia, Switzerland, Denmark, and the Netherlands. These countries are, on average, about 84% urban. Less developed economies tend to feature more jobs in the primary sector, and are thus more rural. The five poorest countries on earth are Niger, the Central African Republic, Eritrea, Chad, and Burundi. These countries are, on average, only about 23% urban.

Even though less developed countries tend to be less urban, some of the fastest growing cities are found in the developing world. This is because nearly all economies on earth are seeing a decline in jobs in the primary sector, and because the most rapid population growth is happening in developing countries. Two cities in Africa illustrate this rapid trend. Kinshasa, in the Democratic Republic of Congo, was home to just 450,000 people in 1960. By 2000, its population had swelled to 4.6 million. Over the next

decade, the population nearly doubled, to 9 million in the year 2010. Lagos, Nigeria, had a population of 230,000 in 1950. By 1960, the population had quadrupled to 1 million. In 2000, the population stood at 11 million.



Chicago Skyline – Photo by Pedro Szekely on Flickr.

Urban Regions

A city is as an area of dense settlement that falls within legally defined municipal boundaries. Cities are often surrounded by **suburbs**. Suburbs are generally defined as smaller municipalities and settlements of medium population density that are adjacent to a large city, and part of its economic market. Some suburbs are primarily residential. Such **bedroom communities** are home to those who commute to work in the city or in another suburb. Some suburbs, called **edge cities**, are more economically complex. They are usually relatively new developments, and contain residential areas, but also the same kinds of economic landscapes traditionally associated with urban centers, such as office buildings, shopping and entertainment districts, and even factories. A **metropolitan area**, or “metro area” is the urban region occupied by a large city and its suburbs.

A **metropolitan conurbation** (also known as a **metropolitan agglomeration**) is an area where two or more metropolitan areas grow large enough to overlap one another. Examples of prominent metropolitan conurbations in the United States include the overlapping metro areas of New York and Newark; Washington and Baltimore; Boston and Providence; and San Francisco, San Jose, and Oakland.

A **megalopolis** is an urban region where several metropolitan areas and conurbations form a large, nearly continuous urban region. One example of a North American megalopolis is found along the lower Great Lakes. Extending roughly from Milwaukee to Buffalo, it includes such metropolitan areas as Chicago, Detroit, Windsor, Toronto, Cleveland, and Pittsburgh. Another megalopolis is located in the American Northeast. Sometimes referred to as “Boswash,” it extends from Boston to Washington, and includes such metro areas as New York, Baltimore, Philadelphia, and Providence.

Site and Situation

A city’s location and relative size are often determined by its site and situation. A city’s **site** refers to the properties of its physical environment. A city’s **situation** refers to its spatial relationship to other places. Examples of the importance of both site and situation can be found in the northeastern United States. Four of the largest cities in that region – New York, Philadelphia, Boston, and Baltimore – are located on large harbors. These excellent harbor *sites* stimulated economic activity that enabled these cities to become important commercial and transportation centers. But of all of them, New York had the best *situation*. Located at the mouth of the Hudson River, New York had easy access to upstate New York and, with the completion of the Erie Canal, the Great Lakes.

New York's situation enabled it to tap into the growing economy of the Midwest. Its situational advantage over other east coast cities is the primary reason for its eventual economic and demographic dominance of the region.

Urban Form

A significant focus of urban geography is **urban form**. This is the examination of the geographic distribution of people, activities, and landscapes that make up a city. A city's physical environment may play a large part in shaping its urban form. For example, cities situated in lowlands will often take different forms than those situated in hilly or mountainous areas. The presence of a major river, a lake, or an ocean will also have a significant impact on a city's form. History plays a role as well. Cities that have existed for hundreds or even thousands of years will obviously look different from much newer cities. In some cities, newer developments are constructed separately from older parts of the city. In others, some of the newest buildings rise alongside some of the oldest. Cultural patterns will often manifest themselves on the urban landscape, with certain sections of a city bearing the imprint of particular ethnic groups. Politics will also shape urban forms. In Europe, feudal governments, fascist governments, and communist governments all left unique urban imprints, and European empires left their unique colonial imprint on cities all over the world. Population density is one of the most easily detected variations in urban form.



Phoenix – Photo by Antoine on Flickr.

Sprawling Phoenix, Arizona, with a population density of about 3,100 people per square mile, certainly has a different form than jam-packed Manila, the capital of the Philippines, which is home to more than 107,000 people per square mile.

Probably the most important force that shapes urban forms is economics. The heartbeat of a city is found in its trade, commerce, and manufacturing. The distribution of these activities, along with the transportation networks that connect them to one another, and to their customers and workers, are some of the defining characteristics of a city. Likewise, the distribution of wealth, both within and among cities, plays an enormous role in shaping urban form. A wealthy city will, of course, look different from a poor one. Singapore, a rich city, is almost infamous for its fastidious dedication to tidiness and order. Poorer Lagos, Nigeria, would strike many native Singaporeans as being absolute chaos. Of course, many cities are both wealthy and poor, depending on the neighborhood. In some cities, the very rich live right alongside the very poor. In other cities, there are distinct income gradients, with the wealthy living as far away from the poor as possible. Additionally, the typical distribution of income relative to a city's center will vary from country to country. In some American metro areas, older industrial cities have fallen on difficult economic times, and are largely dominated by poor or working-class neighborhoods, while the suburbs have become the domain of the wealthy and the middle class. Conversely, in many African cities, wealthy areas are still largely found in the core of the city, while the outskirts of the city are dominated by informal squatter settlements occupied by the very poor.

Did You Know?

The words “metropolis” and “metropolitan” are derived from two Greek words: meter, meaning “mother,” and polis, meaning “city.” The large city at the center of a metropolitan area can be thought of as the metropolis – the “mother city,” surrounded by her offspring – the suburbs.

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1.10: Medical Geography



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What is Medical Geography? As we know, Geography often overlaps with other fields of study. This textbook is designed to present several of the sub-fields of Geography. As 2020 marks the Year of the Coronavirus, it is appropriate to consider the sub-field of Medical Geography too.

Medicinenet.com defines Medical Geography as “a hybrid between geography and medicine dealing with the geographic aspects of health and healthcare.” Indeed, this is how Geography usually overlaps with other fields of study or endeavor, by examining the geographic aspects of that other field.

The medical geography of a population is affected by a variety of factors at any given location. In fact, it has been said that the single most effective determinant of life expectancy in the United States is zip code. That is not to say that the location of your post office influences your health and well-being. However, various geographic features of your location (zip code) very clearly impact your health. These features include average income, crime rate, pollution levels, access to medical care, and a number of other variable circumstances where you live. Geographers study these sorts of things, often statistically determining relationships and correlations between life expectancy and other human variables, between rates of disease and levels of poverty, between cancer rates and pollution levels, and so on.

Additionally, Medical Geography considers the implications of demographic patterns on medical circumstances in a location, region, or country. The stages of the Demographic Transition occur in part due to advances in health care, sanitation, and food supply. These contribute to lowering the death rate, thus triggering movement from stage one to stage two in the Demographic Transition. By the time that countries reach stage four (and stage five) in the transition, their populations have grown old, as life expectancies increased with corresponding advances in medicine and agriculture. However, with older and older populations, medical needs change substantially. In America’s stage four, long term care facilities for elderly population have grown rapidly in number and size. America’s older population places pressure on the Social Security system and drives political debate on the health care system in the United States. Numerous European countries, some with more deaths than births, face noteworthy challenges. Medical Geography examines these issues.

Yet the year 2020 brings more attention to Medical Geography because of the coronavirus. The maps that you see in the newspaper or online show how Medical Geography uses GIS (Geography Information Systems) to display patterns of the spread of disease. GIS not only shows where outbreaks of disease are located, but also can be used to predict sizes and paths of outbreaks. This link goes to a map was created using the popular ArcGIS software and pictures current locations of positive cases of the COVID-19 virus in the Milwaukee area. <https://www.arcgis.com/home/item.html?id=90194541588449b4bbd82b780fe33596> This map from May 2020 is one example of many applications of GIS by news agencies and government organization.

The famous historical example of using maps to counter disease concerned the 1854 cholera outbreak in on Broad Street in London, England. Physician John Snow mapped the outbreak. The geographic patterns on the map pointed to a waterborne disease contaminating a city water pump, counter to the contemporary belief that cholera was an airborne disease. The author Stephen Johnson chronicled this history very well in his book, “The Ghost Map.”

Now the Centers for Disease Control (CDC) uses maps, of course; however, the CDC and current geographic study charts disease through the maps and analysis of GIS.

Some scholars seek to divide this sub-field into two categories – Medical Geography and Health Geography.

Did you know?

A scene in the Syfy series **Helix** showed a CDC official speaking inspirationally at a staff meeting in describing the resolution of the cholera outbreak in London.

The medical geography term **vector** borrows from mathematics. A medical **vector** is the carrier that delivers the disease, but not the disease itself. Thus, the mosquito is the vector that carries the disease malaria.

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2: Pacific Realm



Island in the South Pacific – Photo by driver Photographer

This course is Geography of the Western World. So, what is the Pacific Realm?

This course is a Regional Geography course. When geographers create regions, they strive to incorporate as many similarities as possible in order to develop a recognizable region, while keeping out differences. So, what are the similarities of the Pacific Realm?

Recall how we defined the Western World. We stated, “If a country’s society speaks an Indo-European language, predominantly and historically professes the Christian faith, and borders another country in the Western World (or if an island, then is nearby), then it is in the Western World.”

So, given that definition, we move to the Pacific Realm. Obviously, the next required criterion is that the country or island must at least border the Pacific Ocean, preferably is surrounded by the Pacific Ocean.

Of course, by itself that simple Pacific criterion eliminates many countries from consideration, but it still leaves in a number of countries that should not be counted in the Pacific Realm.

First, we need to exclude countries that very apparently belong in other regions. The United States and Canada both have Pacific coastal regions, yet represent their own region – North America. Russia’s eastern border splashes with Pacific waters, but Russia is the main piece of the region that we are characterizing as the Russian Domain. Chile and several countries of South America do not belong in the Pacific Realm region. Mexico and most Central American countries have Pacific coastal areas, but along with South America are key parts of the Latin America and the Caribbean region.

Second, we must apply our religious and linguistic criteria. The Philippines has thousands of islands surrounded by the Pacific Ocean, has a dominantly Christian population, but does not have an Indo-European language. Out, the Philippines goes to Southeast Asia. South Korea borders the Pacific Ocean and has a noteworthy Christian population, but like the Philippines, it does not feature an Indo-European language. South Korea is in East Asia. We eliminate a number of countries with these tests.



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from Noun Project

We do have an unusual situation with the island New Guinea. The whole island is the second largest island in the world, yet it is divided politically into two rough halves. The western side is the Irian Jaya or West Papua province of Indonesia. Like its eastern neighbors, the peoples there are dominantly Christian (about 83%), but as with other examples noted above, this place does not have a main Indo-European language (although it has a few hundred languages!). The eastern half of the island is the main portion of the country Papua New Guinea (PNG). Here 95% of the people are Christian, including a surprising number of Lutherans. Although there are over 800 languages spoken in PNG, English is an official language. Thus, we do count Papua New Guinea in the Pacific Realm.

Although PNG has a large land area, it is manifestly apparent that the areal leader of the Pacific Realm is Australia. With about 25 million people, Australia also is the clear frontrunner in population size. Australia's eastern coast and part of its northern coast feature the Pacific Ocean, though Australia also borders the Indian Ocean and the Southern (or Antarctic) Ocean. Its historical links with Britain provided Australia with its non-native population's heritage, language, and religion. Although the early characteristics of Britain's link with New Zealand vary from those with Australia, again we find the British influence over the non-native population's heritage, language, and religion. So, we easily add Australia and New Zealand to the Pacific Realm.

As you will read in the essay on Melanesia, geographers created three sub-regional groups of the Pacific Realm – Melanesia, Micronesia, and Polynesia. These three island groups added to Australia and New Zealand comprise the Pacific Realm. We also should note that some of the islands of the Pacific Realm still are colonial pieces of European powers; however, we still include them as in the Pacific Realm, at times with a footnote or asterisk explaining their territorial status. See Hawaii, Easter Island, and French Polynesia for instance.

Having thus made the list of countries and territories of the Pacific Realm, what else is typical of these places?

- 1 – Colonial legacy. From biggest – Australia – to the host of very small islands, these islands are or were held by European or American powers – Britain, France, Spain, Netherlands, Germany, and the United States.
- 2 – Tourist economies. Tourism is a big industry in Australia and often a key economic component of the island nations of the Pacific Realm. Fiji, Tahiti, and others are well-known for tourism. Tropical beaches appeal to many tourists.
- 3 – Tropical agriculture. Given their locations, these islands often have the opportunity to produce agricultural products than cannot be cultivated in the mid-latitude locations of large agricultural regions, such as in the USA. Hawaii's pineapple crop is an example.
- 4 – Occasionally surprising natural resources. Don't count Australia in this category. The vast area of Australia contains large quantities of a variety of natural resources. However, the modestly-sized New Caledonia has a huge store of nickel ore and other resources, quite out of proportion to its land area. For most of the 20th century, phosphate mining produced large quantities in the small island Nauru (from centuries of bird droppings).



source: Oceania_ISO_3166-1.svg; User:Tintazulderivative work: Cruickshanks / CC BY-SA.

Did you know?

The Pacific Ocean is the world's largest and deepest ocean. Portuguese explorer Ferdinand Magellan named the ocean for its calm appearance .

As seen in the map above, some geographers include the whole island of New Guinea in Oceania.

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2.2: Pacific Realm- Regional Example

Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared characteristics over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.



source: Oceania_ISO_3166-1.svg; User:Tintazulderivative work: Cruickshanks / CC BY-SA.

So, what is Melanesia? The Pacific Realm includes Australia, New Zealand, and many other islands. Most of those other islands are quite small, with a noteworthy exception of New Guinea. However, only the eastern half (a bit more than 50% of the land) of the island New Guinea is in the Pacific Realm. The western portion is the Indonesian region of Irian Jaya. Melanesia has some of the largest lands among the Pacific Islands, not counting Australia (continent) and New Zealand (separate). The country Papua New Guinea, the eastern side of the island New Guinea, is larger than all of New Zealand and bigger than any other Pacific island. Melanesia as a whole totals one million square kilometers of land area. Of the remaining islands of the Pacific Realm, Melanesia does have most of the largest islands. New Caledonia, the Solomon Islands, Fiji, and Vanuatu are substantial; each is larger than the big island of Hawaii (Polynesia). Tonga is similarly sized, a bit smaller, more like Oahu in Hawaii, but usually is considered as part of Polynesia, though some maps place it in Melanesia.

Nevertheless, the main reason for naming Melanesia as a sub-region of the Pacific Realm is not land size. An examination of the landscapes of Melanesian islands shows mountainous regions with thick tropical forests.

Fiji – Mt. Tomanivi – 4341 feet in elevation

New Caledonia – Mont Panie – 5344 feet

Papua New Guinea – Mount Wilhelm – 14793 feet

New Ireland (separate island of Papua New Guinea) – Mt. Taron – 7805

Solomon Islands – Mount Popomanaseu – 7651 feet

Vanuatu – Mount Tabwemasana – 6165 feet.

Papua New Guinea features long stretches of mountains, along with extensive valleys between them. The prominent islands of Melanesia are not the low coral islands that are common elsewhere in the Pacific Ocean. As geographers understand that the physical landscape affects, but does not determine, human behavior, certainly the landscapes of Melanesian islands influenced the cultures of Melanesia. Perhaps the naming of Melanesia was a bit prompted by the darkness of forested mountains.

In Greek language, “melan” or “mela” means dark or black, while “nesia” refers to islands. So, Melanesia refers to the dark or black islands. Again, this might have some reference to the physical landscape; however, predominantly the natives of these islands possess very dark skin and hair. Thus, the understood connection of the place name is with the physical appearance of the native peoples. Of course, skin tone does not suggest a single culture. Instead, the cultures of Melanesia are diverse and numerous. One of the most striking features of Melanesia is the vast number of different languages spoken there. Papua New Guinea alone holds over 800 different languages, causing it to be Earth’s most linguistically diverse location. Perhaps an ideal setting for use of a **lingua franca**, Papua New Guinea has Tok Pisin, an English-based Creole language, as its most common tongue. Certainly, the diversity of language there is related to the mountainous physical barriers that separated valley or coastal peoples from other valley or coastal peoples. Historically and without modern transportation and communication, that separation over centuries caused languages to develop and evolve independently of one another. The relative isolation of the Pacific Realm, in particular in regard to European exploration and settlement, led to belated understanding and discovery of the peoples of Papua New Guinea. Basically, it was an unknown land until 1840.

In sum, Melanesia is composed of relatively large islands north of Australia. Commonly, these islands are mountainous. The separation of these mainly dark-skinned natives historically created a plethora of languages and cultures.

Did you know?

Given that “nesia” refers to islands, for the other macro-level island groups of the Pacific, “Micronesia” means the “small islands,” while “Polynesia” means “many islands.”

One of the key locations for observation and analysis in the bestselling “Guns, Germs, and Steel” by Jared Diamond is Papua New Guinea.

Where would Germany rank among colonial powers? Certainly (not in ranked order) behind Britain, France, Spain, Portugal, and the Netherlands. Nevertheless, by 1884 Germany did share New Guinea as colonial territory with Britain. Germany lost that territory due World War I, but some of the effects of those years of control still remain today. Germany’s Lutheran missionary work was successful, so that today the Evangelical Lutheran Church of Papua New Guinea holds nearly a million baptized members, cited as 18% of the citizen population of the country, second only to Catholicism.

Cited and additional bibliography:

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2.3: Pacific Realm- Cultural Geography I



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A **melting pot** is a metaphor for a population that assimilates a variety of different peoples – ethnicities and races. Historically, the United States often has been characterized as a melting pot society, though many question how well contemporary America fits into that model. More recently, America often is characterized as an ethnic **salad bowl**. The salad bowl metaphor portrays a society where many ethnicities are mixed together, but largely maintain their separate identities. Sometimes the salad bowl concept is described with a different picture – the mosaic. Overall, a **multicultural** country has a mixture of peoples and ancestries. Before modern transportation made international migration much easier, countries, especially in Europe, often had a homogenous ethnic population. Everyone in Greece was Greek and all Greeks were in Greece. Now 7% of Greece consist of non-Greeks. Now there are Greeks living in countries around the world. The multicultural spectrum assesses a range of acceptance of the benefits of diverse cultural ideas and offerings, while also looking at the levels of assimilation and pride in the majority culture and citizenship of that country.



Created by webar4i
from Noun Project

Contemporary Australia likely is a better example of a **melting pot** society than present day America, less so a **salad bowl**. This was not always so for Australia, as British exploration and settlement installed a powerful white racial advantage. Even so, it may be that Australia's geographic isolation helps a melting pot society become more likely than a salad bowl.

Long before there was a country Australia, there was a vast empty land. People crossed from nearby islands, so that now-called aboriginal and Torres Strait Islander peoples sparsely populated the continent. Eventually, the British and other Europeans came to explore, but the British took over. Later a variety of peoples from across the globe reached Australia, but were assimilated into the melting pot. Now multiculturalism has allowed more retention of ethnic differences, so that while the salad bowl metaphor has not been certified, it has gained ground.

Following sea captain James Cook's exploration of the eastern shores of Australia, the British claim and settlement of Australia famously began with the transportation of convicts from the Britain to this new land. Over time (1788-1868) more than 160,000 white prisoners sailed to Australia, accompanied by another 200,000 free white settlers who performed various roles in the creation of a new British society in an otherwise lightly populated yet huge land.

Of course, the native peoples had sailed to Australia much earlier, originally about 50,000 years ago, crossing from New Guinea and nearby islands. Numbering between 400,00 and 750,000 in population upon European arrival, the aborigines were divided into many communities, speaking about 700 different languages.

As was frequently true throughout the world of conquest and colonialism, the British easily dominated the native peoples in military might, seizing control of territory with little difficulty. Aboriginal populations not killed by better weaponry were

decimated by disease and through habitat loss.

The large flow of migrants that next followed the stream of convicts to Australia was the gold rush. From 1851 to 1861, about 600,000 people came to Australia to seek their fortunes. While most of these settlers were from the British Isles, notable flows came from a few countries, including 42,000 from China.

Nevertheless, the 20th century brought constraints to immigration. First, the so-called and now infamous White Australia policy limited in-migration. For instance, for the first half of that century, Asian migration to Australia was banned. Second, World War I placed several countries on the enemies list. An example is that Turks were barred as migrants to Australia until 1930. However, small flows of Greeks, Italians, and Jews did move to Australia. Third, World War II reclassified the enemies list. Now Italians were not welcome. After WWII, Australia graciously accepted refugees and displaced persons from Europe. This policy brought 171,000 people such as Estonians, Belgians, Danes, and others. As these migrants of those fifty years were almost exclusively white Europeans, their assimilation into Australians was not too difficult.

The second half of the 20th century introduced reform to the White Australia policy, including its repeal and the substitution of multiculturalism in 1973. Soon, people were arriving from a variety of countries around the world – China, India, Vietnam, South Africa, and other lands. The 21st century has continued this pattern of a diverse range of origins for migrants to Australia.



Created by: Jolan Soens
from Noun Project

What is Australia now? For Australia's current population of 26 million people, there are approximately 800,000 aboriginal or Torres Strait Islander people; accordingly, that is about 3% native ancestry. *The Guardian* reported results of the 2016 Australian national census, that "The top five most commonly reported countries of birth among the 26% of Australians born overseas were England (14.7%), New Zealand (8.4%, down from 9.1% in 2011), China (8.3%, up from 6%), India (7.4%, up from 5.6%) and the Philippines (3.8%). In the same news article, *The Guardian* also indicated that "Nearly half (49%) of all Australians were either born overseas (first generation) or have at least one parent born overseas (second generation). The remaining 51% were at least third generation – born in Australia to Australian-born parents."¹

Clearly, Australia's ethnic mix is becoming more diverse and colorful. Government and society have rejected the "white only" idea, replacing it with ideas of openness. So now, melting pot or salad bowl? That's not an easy call. However, Australia's relative isolation still may have an impact.

Geographically, it makes sense that there are two main factors in affecting ease of or resistance to assimilation into the majority national culture. 1) How easy is it to live within your own ethnic enclave and still succeed economically? As different ethnic groups migrated to America, typically they initially stayed within their own ethnic enclaves, but as these enclaves were not large enough to sustain significant economic success and even the American Dream, the second-generation and overwhelmingly the third-generation ethnicities spoke the English language and assimilated into the American culture. As ethnic groups in America have increased in size and as globalization has increased economic opportunities with foreign connections, perhaps it is easier to resist assimilation in America. 2) How easy is it to travel to and communicate with the ethnic homeland? Again, in America when the first generation Irish or Italian or Norwegian migrants came to the USA, it was costly to travel back to the European homeland and costly to telephone home as well. Modern transportation and communication is much easier, so perhaps this has reduced the urgency of assimilation in America. This is a good geographic discussion, but some now argue that America is more like a **salad bowl** than a **melting pot**.



So what about Australia? Considering both of the factors in the previous paragraph, Australia's relative location suggests higher likelihood of assimilation. 1) How easy is it to live within your own ethnic enclave and still succeed economically? As historically Australia shows a very modest population, currently of 26 million, certainly it would be difficult for any ethnic group of migrants to reach a critical mass needed to succeed outside of the main culture. 2) How easy is it to travel to and communicate with the ethnic homeland? Well, Australia is noted for its isolation and separation from the rest of the world. Certainly, as it developed through British colonization and its successor Australia's growth, Australia's position on the periphery of the world's landmasses made it difficult more migrants from other lands to travel back to or communicate with the homeland. For both of those factors, it has been overwhelmingly easier to assimilate, more so than in America even. Now though, as in America, the modern world of globalization, transportation, and telecommunication has shrunk the world, so in Australia too it is newly somewhat comfortable to keep that separate ethnicity while mixing with the majority Australian identity. In both cases of America and Australia, it seems that the movement from melting pot to salad bowl is a natural evolution, but more advanced in America than in Australia.

Did you know?

A pure melting pot society is portrayed by the Borg in various Star Trek episodes. The Borg assimilate all other species, taking their technological and cultural singularities and incorporating these features into the Borg collective. The Borg mantra "You will be assimilated. Resistance is futile" is presented as an ultimatum. In human societies, melting pot societies sometimes present varied levels of coercion in assimilation.

Australia celebrates Harmony Week as they commemorate the country's cultural diversity but also its sense of belonging together. The Harmony Day holiday is set on March 21.

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2.4: Pacific Realm- Economic Geography I



Created by Dolly Holmes
from Noun Project

Whose water is it? Because water is a liquid that flows and moves over and across the Earth's surface, it can be difficult to determine the answer to that question. When trying to adjudicate rights over a river, often the midpoint of the stream, known as the thalweg line, is used as the divider. Even this may vary from what seems to be obvious to a point of contention, depending on whether the deep channels of the stream or its two banks are selected as the points of reference. Coastline provides access to ocean waters, especially for island countries like Fiji, outlined in the icon to the left.

When dividing lakes jurisdictionally between states or provinces or along international boundaries, again the midpoints of the lake generally are the preferred border demarcations.

But what of open waters? Oceans, seas, gulfs, straits, etc. Here we have the United Nations Convention on the Law of the Sea (UNCLOS), approved in 1982 by this international organization, entering into force in 1996. Initially due to concerns over deep seabed mining, the United States did not join the treaty. Although reaching a separate agreement on deep seabed mining in 1994, the USA remains a non-signee, but acknowledges the provisions of UNCLOS by informally following the practices of the treaty.

Primarily, the Law of the Sea recognizes two essential jurisdictions that are integral interest of coastal countries. One, as a form of safety and national security, a protected zone known as territorial water guarantees the national right to restrict movement or presence of ships from other countries. UNCLOS establishes a twelve nautical mile zone of territorial waters, pushed from each country's coastline. Historically, countries or coastal peoples asserted control over their seacoasts but with varying means of control and measure. At times, coastal waters were claimed as far as the eye could see. As a practical measure, one approach was to claim waters as far as a cannon could shoot.

Occasionally, the open water distance between two countries is shorter than twenty-four nautical miles, thus preventing either country from pushing out to the twelve nautical mile standard. In this case of a narrow waterway between landmasses, the definition of a strait, while given the frequent need for passage of cargo ships (and even passenger vessels) through these straits, the Law of the Sea proclaims such passages to be international waters open for free transit. An example is the Strait of Gibraltar, where these waters connecting the Mediterranean Sea to the Atlantic Ocean are not ten nautical miles across at the narrowest. Similarly, Øresund between Denmark and Sweden is this type of passageway.



Exclusive Economic Zones. Cartography by B1mbo.

Two, ocean water is not simply water. Oceans contain resources such as fish in the water, minerals on the sea floor, and oil beneath the seabed. Obviously, countries have vested economic interests in maintaining and securing rights to these maritime riches. The Law of the Sea delineates a 200 nautical mile exclusive economic zone (EEZ), extending outward from that coastline. Fish in those waters belong to that country. Manganese nodules on the ocean floor, petroleum below the ocean bed, and whatever type of resource there, all belong to that coastal country. Beyond the territorial waters, the ocean surface within the EEZ is considered to be international water; therefore, any ships have the freedom and right to sail through these waters.



Trawler Base Road, Portsmouth, Queensland, Australia Photo by David Clode on Unsplash

Some countries benefit more than others do from the Law of the Sea. Landlocked countries by definition lack coastline and thus hold neither territorial waters nor EEZ. Countries with long coastlines (USA, Brazil, Canada, Russia) naturally have expansive EEZ. Island countries are defined by their coastlines, thus having corresponding territorial waters and exclusive economic zones. For a small island country, its EEZ may hold much greater surface area and its land does.

In this way, countries of the Pacific Realm have rights to vast ocean territories. Australia's land area is about 7.7 million square kilometers (3 million square miles), but its basic EEZ is about six million km². Counting the EEZ of Australia's small islands adds another two million km². That eight million km² exceeds Australia's land area. (This does not even include Australia's claim to an EEZ of two million km² that is adjacent to the Australian Antarctic Territory.) In sum, Australia's EEZ is the third largest in the world. It is safe to say that every island country of the Pacific Realm claims greater areas of the ocean than they hold land mass. Usually, the ratio of ocean-to-land is large; for instance, for the Solomon Islands, this ratio is 43:1. For New Zealand, the ratio is 14:1. In fact, New Zealand has the world's ninth largest EEZ at four million km². Sometimes the ratio is extreme, such as with Nauru measured at 7523:1.

Not all of the Pacific islands are wholly or parts of an independent country. Some islands still have colonial links. Of course, Hawaii is part of the United States. The American territory of the Northern Mariana Islands has an EEZ that is larger than the American EEZ along the Gulf of Mexico. France maintains overseas departments and territories across the globe, including numerous islands in the Pacific Realm. All of these holdings combine to give France the world's largest exclusive economic zone. Oddly, the EEZ of France in Europe is only 3.3% of the country's overall EEZ.

Given the prominence of fishing industries throughout the islands of the Pacific, the UNCLOS rights within the exclusive economic zones are financially significant, if not crucial, for the Pacific Realm.

Did you know?

The exclusive economic zone of the United States is dominated by Alaska. Alaska's EEZ is 3.77 million km², which is more than the EEZ of the American mainland (West Coast, East Coast, and Gulf Coast) and the main islands of Hawaii combined. America's total EEZ is the second largest in the world.

If the expansive exclusive economic zones of distant islands are excluded, as are any claims to Antarctic waters, then the country with the largest EEZ is Russia. Perhaps this is fitting, since Russia has the world's largest land area too.

The Spratly Islands and the South China Sea around it host numerous jurisdictional disputes, even with UNCLOS.

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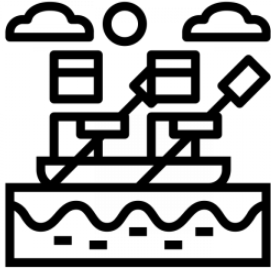
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2.5: Pacific Realm- Historical Geography I



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from Noun Project

The Austronesian Expansion was perhaps the greatest human exploratory achievement until astronauts landed on the moon in 1969. Over the span of a few thousand years, oceangoing horticulturalists in open vessels sailed across hundreds of miles of open sea, and relying on courage, resolve, and not a little bit of luck, colonized islands across the Pacific Ocean.

In some of their voyages, these seafaring farmers encountered people whose ancestors had already been there for thousands of years — perhaps up to 50,000 years, as in the Philippines, Indonesia, and Melanesia. In other locations like Tahiti, New Zealand, and Hawai'i, these explorers were the first humans to ever occupy these lands.

Perhaps a bit paradoxically, the Austronesian (“southern island”) Expansion began *north* of the Equator, in what is now Southeast China around 5000 years ago (3000 BCE). This was when cultivators of rice, along with root crops like taro and yams (who spoke a language that linguists have partially reconstructed and call Proto-Austronesian) rowed across the 75-mile-wide Taiwan Strait and began farming on Taiwan.

From Taiwan, the diaspora moved south to the Philippines and then the islands of central Indonesia. By around 1400 BCE, the southbound expansion forked into a “right turn” heading west and a “left turn” heading east. The descendants of those who headed west sailed across the Indian Ocean and eventually colonized Madagascar, just off the southeast coast of Africa. Those whose ancestors took the “left turn” ended up discovering and settling many of the islands of the vast Pacific Ocean.



Chronological dispersion of Austronesian people across the Pacific

This “eastbound” group discovered and settled some of the islands of eastern Micronesia by perhaps as early as 2000 BCE (Guam) and, hundred of years later, Palau. (It is striking that the archaeological evidence points to these Austronesians on Guam long before they were on Palau. This would have required a voyage west from the Philippines to Guam across *more than 1000 miles of open sea.*)

Other “eastbound” groups veered more to the south. Tracking the progress of this branch of these Proto-Austronesian speakers and their descendants has been relatively straightforward. Many of them relied consistently on an easily recognizable form of pottery called *Lapita*, known for being decorated using something like a comb. This makes it easy for archaeologists to follow the Lapita “breadcrumbs” and track with some precision the timing and locations of the Austronesian presence from eastern Melanesia to Samoa between 1600 and 500 BCE.



Photo by g rard on Flickr.

Here is a photo of a fragment of Lapita pottery, as found in Mus e Maritime in New Caledonia. By 1300 BCE, Lapita pottery could be found in much of the Bismarck Archipelago, and as far as the previously unpopulated islands of Fiji by 900 BCE and Samoa by 800 BCE. Also by 1300 BCE, rice-growing had ceased, with newfound crops such as New Guinea’s breadfruit, coconut, and banana taking its place.

Using round numbers, these Proto-Austronesian-speaking sea-faring farmers had expanded nearly 5,000 miles in just over 2000 years. In the 2000 years starting with the discovery and settlement of the Samoan Islands, they would go nearly twice as far in about the same span of time. What accounted for the rapid acceleration of an already speedy—by human migration standards—expansion?

In short, it is the size of the islands. For much of the first half of the Austronesian Expansion, cultivators found themselves on relatively large islands (Taiwan is larger than Maryland; the biggest Philippine island—Luzon—is larger than Tennessee). So there was little need to expand to another island when there was so much room (relatively) on the island already occupied.

It is worth remembering that these Proto-Austronesian-speaking farmers did not see themselves as part of one of the grandest population shifts in human history. Rather, they were people like us who made the best decisions they could, based on the alternatives before them. And since they were farmers, the need for expansion was necessarily built in.

Imagine a farm, owned and operated by a family with two offspring. Each one inherits half of the family farm. A generation later, and again assuming two offspring each, the original family farm is now in quarters—a size that may not be enough to support a household. This means that somebody has to move on in order for the original farm to be sustainable. If a territory is large enough, a family moving on can pioneer a new plot of land not too far away. There could be a skirmish or two with local hunter-gatherers who don’t like the incursion, but the farmers have enough people behind them to win in the end. (Diamond, 1997, pp. 85–92. Of course, this is also the story of the westward expansion of mostly Europeans across the middle of North America.)

Still, even on large islands like Taiwan and Luzon—and later, the Bismarck Archipelago and the island chains of the Solomons and Vanuatu—eventually, the pressure to find another place to farm would be too much. And once the move to the much smaller islands of Micronesia beyond Guam and Polynesia beyond Samoa began, the need to find places to plant was accelerated.

As of 500 BCE, Many of the small Micronesian islands had been discovered and settled, even as far west as Kiribati. In general, Micronesia was settled before the Polynesian region; the earliest known Polynesian settlement was Tonga by around 900 BCE, followed by Samoa shortly after. The most distant Polynesian islands were discovered within a 500-year period—roughly 700–1200 CE, starting with the Cook Islands, Tahiti, and the Marquesas; then the Hawaiian archipelago (about 900 CE), and concluding with Rapa Nui (Easter Island) and New Zealand, just a few hundred years before Europeans arrived.

While some scholars disagree on the routes taken by these explorers, genetics (Li, et al, 2008; Yong, 2009) confirm the migratory account described here. Linguistically, cognates found in different Austronesian languages corroborate the same story:

Austronesian Expansion and Language

Estimated Date of Austronesian Settlement	Modern Language	hand	coconut	pig	woman	fish
2250 BCE	Tagalog (Philippines)	limá	niyog	baboy	babae	isda
1250 BCE	Malay	lima	nylur	babi	wanita	ikan
1250 BCE	Sursurunga (New Ireland)	limán	ngin	bor	wak	isu
800 BCE	Samoan	lima	pop	puaa	fafine	i'a
900 CE	Native Hawaiian	lima	niu	pua'a	wahine	i'a
1250 CE	Maori	rima	niu	poaka	wahine	ika

The Austronesian Expansion took place long before compasses and sextants, and its voyages were powered by wind and ocean currents—and, of course, a lot of paddling. We will never know, naturally, how many sailing canoes of unsuccessful voyagers rest at the bottom of the Pacific Ocean, but we know they are there, and they are all a testament to the heroism of these explorers over the past 5,000 years.

Did you know?

In the year 1500, the Austronesian language family wrapped more than halfway around the globe—a greater distance than any other until European Expansion.

The Austronesian Expansion may have even reached the New World! Cotton in Hawai'i and sweet potatoes in the Cook Islands have South American origins that seem to have occurred before European contact (Allaby, 2007).

The Republic of Kiribati is in all four hemispheres: some of its 30-plus islands are north of the Equator and some are south; and some of them are east of the International Date Line and some are west.

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2.6: Pacific Realm- Physical Geography I



Created by Benice Bezeredy
from Noun Project

The word **monolith** derives from the Greek words meaning *single* and *stone*. *Mono* is found in numerous English words, such as *monopoly* (a single company that dominates a resource, commodity, or product) and *monorail* (a tram that runs on a single rail, like in Seattle). *Lith* is less common, but *lithosphere* refers to the rocky outer layer of the Earth.

While monolith refers to a single stone, it does so not in the casual mundane way. You can pick up a single stone off the street, but it is not a monolith. There are innumerable grains of sand and millions of pebbles on the beach, but those are not monoliths. In this context, perhaps a better word for *mono* is *singular*. A monolith is a stone of great size set distinctly alone in a striking location. A monolith is a rocky singularity on the Earth's surface.

It seems most logical that a monolith has been thrust upward in some ancient geological movement. While this may be true in certain cases or to some degree, it is best understood that the monoliths remain on the landscape due to erosion. Or more clearly, as single masses of particularly hard metamorphic or igneous rock, monoliths remain on the landscape while adjacent rock or soil material over eons of time has been subjected to sufficient water or wind erosion to be moved away. The massive strongly resistant rock endures.

There are monoliths all across the world. In America, the well-known monoliths are Stone Mountain outside of Atlanta, Devil's Tower in Wyoming, and El Capitan in Yosemite National Park.

Kata Tjuta



Photo by Steve Collis on Flickr.

Nevertheless, Australia is particularly known for its few monoliths. Perhaps this recognition is due to Australia highlighting its large barren Outback, while having only a small set of low mountains. A cluster in the Northern Territory originally was named by the aborigines as Kata Tjuta, meaning *many heads* – see the aerial and satellite photos below. Later rediscovered by the British, it was renamed “the Olgas.” Under current Australian law of dual naming, it is known by both names.

Kata Tjuta



NASA Satellite Image

The most famous monolith in Australia was named Uluru by the aborigines. Later rediscovered by the British, it was renamed Ayers Rock. Both Kata Tjuta / the Olgas and Uluru/Ayers Rock have distinctive orange hues that result from oxidation of iron material in the rock. Given appropriate sunrises or sunsets and when viewed from a particular angle, Uluru may appear to glow. In 1985, as part of a series of land recoveries by the aboriginal peoples, legal title of Uluru was restored to the local Pitjantjatjara group. Tourism is an important feature of Uluru, though climbing of the monolith has now been banned as of the end of October 2019.

Uluru



Photo by Holger Link on Unsplash

The world's largest monolith is in Australia, but is it Uluru or is it Mount Augustus? The latter sits in Western Australia and is twice the volume as Uluru. The dispute focuses on whether or not Mount Augustus is a monolith. In the casual use of the term *monolith*, Mount Augustus is included in this rocky set of places. In tourist literature in Western Australia, Mount Augustus is promoted as the world's largest monolith. However, in geologic study, Mount Augustus is cited as a *monocline*. A monocline is an asymmetrical series of folded rock layers. Indeed, this created Mount Augustus in an ancient geologic buckling movement, likely over a billion years ago. It is safe to say that Mount Augustus is the world's biggest surface rock. If Mount Augustus is excluded from the monolith category, then Uluru is the world's biggest monolith. Either way, Australia has the title holder.

Did you know?

Megaliths are large standing stones set vertically in the ground by people. The famous cluster known as Stonehenge is a set of megaliths.

The word monolith can have other meanings in different contexts. A monolith can be a massive structure, not necessarily a natural rock formation. A monolith can be a singularly powerful or unified force.

Perhaps because of these other meanings, some scholars prefer to include formations like Uluru under the term inselberg.

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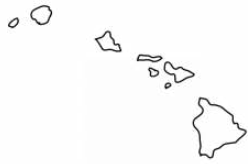
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2.7: Pacific Realm- Political Geography I



Created by Linseed Studio
from Noun Project

Regional geography studies the people and places of a cohesive region. A **region** is defined to be an area with multiple shared characteristics over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

So, what is Polynesia? The Pacific Realm includes Australia, New Zealand, and many other islands. Most of those other islands are quite small. If you consider surface area, then Polynesia is the largest sub-region of the Pacific Realm, with its surface area overwhelmingly being water.



Created by Olena Panasovska
from Noun Project

In Greek language, *poly* means *many* while *nesia* refers to islands. So, Polynesia refers to the many islands. These many islands, simplified, are located east of Micronesia and Melanesia. Some of these islands are volcanic – Hawaii is, while many are coral-based low islands.

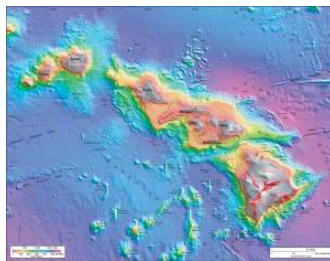
Even so, Polynesia mainly is a culturally-based region that commonly featured matrilineal societies. Their languages fall in the Austronesian language family, but are in a sub-group distinct from Melanesia and Micronesian sub-groups. Skilled navigation using outrigger canoes propelled natives throughout islands in the vast ocean spaces of Polynesia. Following the arrival of Christian missionaries in 1820, Christianity spread quickly and widely throughout the region.



source: Oceania_ISO_3166-1.svg; User:Tintazulderivative work: Cruickshanks / CC BY-SA.

The native presence on Hawaii extends back at least to 800AD, perhaps longer. European arrival was initially chronicled with the landing of British ships led by Captain James Cook in 1778. King Kamehameha I ruled from 1782 to 1819 and succeeded in unifying the islands.

After a controversial coup overthrowing the Hawaiian Queen Lili'uokalani in 1893, the United States annexed Hawaii by treaty in 1898. It remained a territory of the United States, until joining the union as the 50th state on August 21, 1959. Obviously, in political terms this means that Hawaii is in the region of North America, as it politically is part of the United States. This inclusion of Hawaii in North America is plausibly, for nothing but ocean exists between the American mainland and the Hawaiian Islands.



Public Domain.

Although there are many volcanic islands in the Pacific Ocean, Hawaii's formation is unusual, being the "hot spot." A weakness in the Earth's mantle, a hot spot, releases molten rock material from the ocean's floor. This volcanic material accumulates as long as the hot spot remains open. If that time frame is long enough, the hot spot constructs a volcanic island. Additionally, continental drift keeps happening. The hot spot builds an island, but eventually seals off. Continental drift moves the island along. Staying in the original location, the hot spot reopens and builds another island. And so on, over long geologic time frames. Thus, Hawaii is a string of volcanic islands of different ages.

For a handful of European colonial powers, it is difficult to accept that their far distant holdings are part of Europe. For instance, French Guiana remains a part of overseas France, but lies on the mainland of South America. It would seem geographically unacceptable to include French Guiana as part of Europe, even as the European Space Agency's launch site is located there. Similarly, the islands of French Polynesia are part of France, but are halfway around the world from Europe.

As well, could the Falkland Islands of the coast of Argentina be considered in Europe, because they belong to Britain? Or Pitcairn Island in Polynesia?

Like Hawaii, Easter Island in Polynesia also possesses a dual identity that is geographically palatable. Easter Island, famous for its stone statues – moai – is located in the far southeastern corner of Polynesia, fitting the usual elements of this region. However, the island was annexed by Chile in 1888, though the Chilean mainland is over 2000 miles away over unblocked Pacific waters (similar to Hawaii and the American mainland).

The United States has additional territories among Pacific islands. For instance, Guam and the Northern Mariana Islands are US territories; therefore, they are like Hawaii with dual identities.

Did you know?

What other places might be considered to have dual identities? With plausible regional inclusion?

Greenland is an autonomous piece of Denmark and thus Europe, while sometimes being considered part of North America due to its physical landscape location.

Ecuador's Galapagos Islands are over 500 miles west of the mainland, but are not considered part of Polynesia.

The Canary Islands of Spain are directly west of Morocco and thus are in North Africa, but politically belong in Europe, being part of Spain.

*Alaska clearly is separate from the main portion of the United States, thus lacking contiguity. However, by bordering Canada as part of the continental land mass, Alaska clearly is part of North America. It simply is an **exclave** of the United States.*

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2.8: Pacific Realm- Population Geography I



Created by Bence Bezeredy
from Noun Project

With a population density of nine people per square mile, Australia is the third least crowded country in the world, after Mongolia (4.9) and Namibia (7.5), not counting dependent territories of other countries (Greenland (Denmark) 0.08 people per square mile). Australia is overcrowded.

What! Australia is overcrowded? In 1997, the Australian Bureau of Statistics suggested that 25 million would be a likely leveling off point for the country's population. The country is there now. Crowded? How can a population of 25-26 million people living on a whole continent, the world's sixth largest country by area, be overcrowded? The United States has over 300 million more people than Australia, while being 20% larger in area. Is the United States overcrowded? Some scholars and a noteworthy percentage of the American population suggest that, yes, America is overcrowded. This is expressed in terms of immigration debates and of environmental concerns.

So, if America might be overcrowded with 328 million people, could Australia be overcrowded with its nearly 26 million people? As expressed in the essay on urban centralization in Australia, the country's population is dominantly compressed into a handful of cities. So first, we should ask whether or not Australia's cities are overcrowded or not.

Let's take a look at Australia's five most populated cities, ranked among cities of the world.¹

Australia's Top Five Cities, as ranked worldwide

2017	Sydney	Melbourne	Brisbane	Perth	Adelaide
Approximate Population Density, people per square km	1900	1500	1000	1000	1300
Population Density Rank, among cities of the world	936	955	996	986	965
Population Rank, among cities of the world	104	106	250	284	442
Area Rank, among cities of the world	43	32	47	68	152

2020	Sydney	Melbourne	Brisbane	Perth	Adelaide
Density Rank, among cities of the world	935	968	1004	989	979

By worldwide standards, Australian cities are stunningly not crowded. In the short term, at least 2017-2020, Australian cities tend to be comparatively less and less crowded. In 2020, Sydney ranks as Australia's most crowded city with 5499 people per square mile. To find a match in North America, we select Winnipeg, Canada, at #939 and 5361 people per square mile. I don't think that there's anyone out there who is troubled that Winnipeg is too crowded.

Naturally, cities are more crowded than rural areas, as clearly can be seen on this map — <https://www.businessinsider.com.au/australia-population-density-fastest-growing-regions-2019-3>

A fascinating statistical study of urban crowdedness across the world attempts to refine the statistic by measuring and analyzing population-weighted density. This study of Australian, European, Canadian and New Zealand cities found that Australian cities ranked at the bottom of the list, as charted here — <https://chartingtransport.com/2015/11/26/comparing-the-densities-of-australian-and-european-cities/#jp-carousel-2781> . Again, it appears that Australian cities are not particularly crowded urban realms.

By comparison, consider the cities of nearby New Zealand. Auckland ranks 892nd in 2020 with 6585 people per square mile. The most similar North American city is #839 Toronto, Canada, at 7139 people per square mile.

How much population increase will be coming to Australia's cities? Well, for the country as a whole, from 2005 to the present, net overseas migration into Australia has been greater than the country's natural increase. The destinations for these migrants, even more so than for internal migrants, has been the capital cities. This means that capitals of the six states of Australia – Western Australia, South Australia, Queensland, New South Wales, Victoria, and Tasmania, plus Northern Territory, as well as the Australian Capital Territory (ACT) that is Canberra.

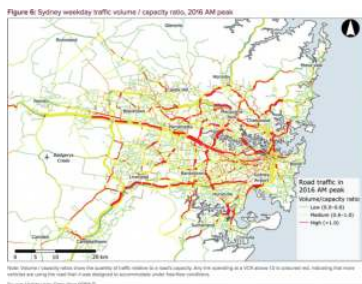
For now, note that by most standards of population growth or density, Australia is not at all overcrowded; rather, on worldwide comparisons, Australia is quite low on population density. Even so, there are other considerations of the contentious question about the number of people appropriate for Australia. Could Australia's population be inappropriately large, even though not overcrowded? This concern is the topic of a longer answer or answers, seeking to determine how many people can be supported on a dry continent. How well does Australia stack up when considering its **carrying capacity**, sustainability, or water supply?

Did you know?

The [Sahrawi Arab Democratic Republic](#) is the disputed territory also known as Western Sahara. At the northwestern corner of Africa, this region is claimed by Morocco, but also asserts its own autonomy. If counted as a country, though not so in this essay, with a population density of six people per square mile, it would be less crowded than Australia.

In the Demografia statistics reported above for Australian cities, the most crowded urban area in the world is Dhaka, Bangladesh. Separately, Bangladesh is noted to be the most crowded country in the world, not counting micro-States or city-States.

Here's a look at Sydney traffic patterns.



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2.9: Pacific Realm- Urban Geography I



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Among the world's countries, there are many that are very highly urbanized. Some of these very urban locations are thus by definition. Monaco as a city-State is 100% urban. The same is true for Singapore. There are small islands that are all or nearly entirely urban – Malta is 94% urban. Other lands are small with few choices – Kuwait as a desert land is 100% urban.

Consider the most populated cities of Australia.

Top Ten Cities of Australia

Rank	City	Population in millions	Coastal?	Which side?
1	Sydney	5.2	yes	eastern
2	Melbourne	4.9	yes	eastern
3	Brisbane	2.4	yes	eastern
4	Perth	2.0	yes	western
5	Adelaide	1.3	yes	southern
6	Gold Coast	0.6	yes	eastern
7	New Castle-Maitland	0.4	yes	eastern
8	Canberra	0.4	almost	eastern
9	Sunshine Coast	0.3	yes	eastern
10	Woolongong	0.3	yes	eastern

Notice that this makes Sydney the residence of 20% of Australia's population. With 85% of Australia's population being urban, Sydney has about 25% of all of the country's urban dwellers. Commonly, if a city possesses 20% or more of a country's urban population, then it likely is a **primate city** – that is, a city that dominates its country in all urban ways. However, Melbourne is nearly as large as Sydney; thus, not being dominated by Sydney in simple numbers. Canberra, though over ten times smaller than Sydney in population, is the political focus, as the planned national capital city.



Sydney. Photo by Jamie Davies on Unsplash.

While we may not say that Sydney dominates the Australian urban life, we can argue that eastern Australia dominates all urban Australia. Adelaide sits on the southern shore, but slightly on the eastern half of the Australian continent. Melbourne is positioned on the southeastern corner of the landmass. Perth with two million people anchors the western side of Australia. Modest-sized Darwin holds port on the northern edge, but only with 150,000 residents. The interior of Australia holds a scattering of towns, such as Alice Springs of about 25,000. The lion's share of the national population is on the eastern coastline.

Too much so? At the turn of the century, Australia had the most centralized population of any country in the world. Seven out of every ten Australians lived in a city of at least 750,000. Less than two decades later in 2018, 74% of Australian urban dwellers lived in the five largest cities alone.

Let's evaluate this measurement of **centralized population**. As noted above, this is not the same as a primate city. There are a number of countries in the world where one city dominates and has a high share of the urban population. For instance, Montevideo in Uruguay has over 50% of the country's urban residents living in that one city. Here though I am taking centralized population to mean something else. I am looking for countries that have several highly populated cities – at least five cities of at least one million citizens each. Compare the sum of the population of those five cities to the total urban population of the country.

Country population share per five largest cities

Country	Urban population in five cities, in millions	% of all urbanites in those five cities
Australia	16	74%
Pakistan	39	50%
South Korea	21	50%
Turkey	27	44%
Russia	23	21%
Japan	24	21%
Nigeria	18	18%
Mexico	17	17%
Brazil	25	14%
Indonesia	19	13%
India	56	12%
China	79	10%
USA	20	7%

Thirteen countries qualify by these measures. Australia is far and away the highest on this standard. These are countries that have considerable urban development, but broadly geographic. It is understandable that hugely populated countries like China and India will have numerous cities of at least one million people each. Yet, their extraordinary population size means that the people are distributed very widely. Countries with small areas like South Korea often have a primate city; in fact, Seoul with about ten million people may be a primate city. For many countries, having a primate city will mean that there are not enough other cities over a million people, so that such a country does not qualify for the **centralized population** category. Here we see that only South Korea and Japan fit this small area focus. All the other countries on the list above have large to huge areas, so that we would expect a wide range of cities by population and by distribution over space. Thus, it is difficult for large area countries to have only a few cities tally a big share of the nation's urban population.

Yet, Australia does. Three-fourths of urban Australians live in just five cities. Historically and geographically, we do find explanation. Since the arrival of British sea captain James Cook to the eastern shores of Australia in 1770, the focus of European population was on the eastern Australia. Cook's exploration and detailed examination of the eastern side of Australia revealed a number of attractive locations for settlement. The coastal plains there offered flat lands for development, agriculture, and population. Moving westward from these plains soon there are the main mountains of Australia – the Great Dividing Range. On worldwide standards these mountains are rather low, at best a bit over 7000 feet (Mt. Kosciuszko), but they do cause orographic precipitation to fall on their eastern slopes – that is, into the coastal plains. Given the dry continent of Australia, Cook's discovery of coastal plains with regular precipitation was like finding treasure. Additionally, Cook's sails revealed several useful harbors along the eastern shores. Given Britain's interest in colonization and trade around the world, access to useful ports also was coveted. These advantages propelled the east coast of Australia to develop several port locations into towns that evolved into several of the main cities of the land. This gives us Sydney, Melbourne, and Brisbane of Australia's top five cities. Adelaide is the key southern port, while Perth is the dominant west coast city. The east has the best settings, but having Adelaide and Perth as well led to Britain claiming all of Australia.

The physical geography of Australia provides additional cause for the country's centralized urban pattern. With the famed Outback as the best-known means of referring to Australia's desert and near-desert settings, the rugged environment of the interior yields few locations for large urban settlements. The Australian center has territory for sheep and cattle ranches, but the livestock far outnumber the human population. The interior has substantial natural resources ranging from key industrial elements such as iron

ore to specialized materials such as opals. These raw materials bring miners to the resource sites, but the harsh environment does not encourage many other people to settle there as well.

The five cities that got their impetus from early British colonization developed into appealing urban realms with jobs, culture, and beaches. However, some argue that these cities now have become overcrowded; for instance, they could use better transportation infrastructure to reduce traffic woes. In any case, these urban patterns of Australia give it this distinctive centralization, the most so in the world.

Did you know?

Note that this is not the same as the Rank-Size Rule. The United States follows the rank-size rule, but its top five cities together only account for 7% of America's urban population.

Maps can be funky. Examine the cartograms at <https://www.dailymail.co.uk/news/article-4680918/Australia-s-overcrowding-crisis-one-map.html>

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2.10: Pacific Realm- Cultural Geography II



Created by Loïc Polvet
from Noun Project

Like in many parts of the world, Christianity arrived with the colonial powers in what is now Papua New Guinea, though even that presence was late in coming compared to other lands.

Humans have inhabited New Guinea Island for about 40,000 years. Little was known in Europe about the island until the 19th century. It was only in 1884 that Germany colonized the northeastern portion of the island (called New Guinea) and Great Britain the southeastern portion (Papua). The western half of the island was occupied by the Netherlands and later this was annexed into Indonesia. And while Australia, on behalf of Great Britain, controlled the eastern half for much of the modern era, Papua New Guinea only gained its independence in 1975.

The religious scene followed these colonial markers, with the first German Lutherans establishing themselves at Finschhafen along the east coast of the German Protectorate of New Guinea in 1886. In the southern half, the London Missionary Society (Reformed tradition) arrived in 1889. These two Protestant streams continued to dominate in these two parts of the county, while the Catholic mission started making inroads in the 1880s. Most German missionaries were allowed to remain when Australia took over the German colony after World War I. In the early 1930s Lutheran missionaries were among the first Europeans to move into the highlands.

Today, Lutherans make up about 20% of the population, United Church (originating from the London Missionary Society) 11.5%, Catholics 27%, and Seventh Day Adventists 10%. With other smaller denominations in the mix, a large majority of Papua New Guineans identify themselves as members of a Christian church (96% in the 2000 census). However, many continue to combine their Christian faith with traditional indigenous beliefs and practices, while in places there are strong remnants of what is called Cargo Cult.



The Evangelical Lutheran Church of Papua New Guinea grew out of the work of the Neuendettelsau Mission Society (1886) and the Rhenish Mission Society (1887), both from Germany. During World War II all missionaries left the area, as many mission stations, churches, schools and hospitals were damaged. In spite of this, the indigenous church leaders and local Christians stood firm in the work of the church.

After the war the Lutheran churches in Australia and North America were asked to help reconstruct the church in Papua New Guinea, working together as the Lutheran Mission New Guinea. In 1956 expatriate missionaries and indigenous church leaders

gathered and formed the Evangelical Lutheran Church of New Guinea (ELCONG) as an indigenous church. The Lutheran Church Missouri Synod established a separate Gutnius Lutheran Church in the highlands in 1948.

At the time of its founding, ELCONG bishops were expatriate missionaries from the American Lutheran Church. The first indigenous bishop was elected in 1973. In 1975, on the eve of the country's independence, the name of the church was changed to Evangelical Lutheran Church of Papua New Guinea (ELCPNG). In 1977 the church was officially declared autonomous and another local Lutheran church organized by the Australian Lutheran Mission joined with the ELCPNG.

Since before independence, different churches have operated roughly half of the educational and medical institutions in the country and, to this day, receive government subsidies to provide these services. The ELCPNG operates 170 primary schools and 11 secondary schools, which function on behalf of the government and as public schools. The church also has a teacher training college, (which sends teachers throughout the country), a nursing school, a couple church leadership training colleges, and three theological seminaries.



Papua New Guinea. Cartography by Steve Wiertz.

In response to the rugged and often inaccessible landscape of PNG, Lutherans helped start some key transportation networks. In 1934 a Lutheran mission bought a plane and pioneered mission aviation. While commercial airlines now connect major towns, Mission Aviation Fellowship (MAF), which took over from Lutheran Aviation, continues to link many more remote places.

Mission groups early on also started Lutheran Shipping as a major carrier of cargo and passengers along the north and northeast coasts. Luship, as it was called, ceased operations in 2014, but Lutheran Shipping Services was established by the ELCPNG to continue key shipping routes.

With some 830 different languages in PNG, another challenge is unifying the functions of the church. Like the country at large, Tok Pisin (Pidgin) and English are the common languages of the church, though local indigenous languages are also widely used for worship and teaching.



Lutheran church service in Papua New Guinea. Photo by Franklin Ishida.

Although there is no state religion, the preamble to the PNG constitution mentions “the Christian principles” upon which the country is founded. This constitution establishes freedom of religion and religious practice, provided that it does not infringe on the rights of others or of the public interest. Several prime ministers and speakers of parliament have been Lutheran. And with a strong Christian backdrop for the country, the government has pursued programs to increase the partnership between churches and the state, including subsidies to churches and the establishment of church councils to assist in local governance.

Germany had few colonies, but one of those colonial pieces was part of the island of New Guinea. The Lutheran Church, one element of this former colonial rule, remains important in contemporary Papua New Guinea. This denomination has evolved into a national Lutheran church run by New Guineans themselves. Lutherans there seek to improve and renew society spiritually, but also through modernization of educational and transportation systems.

Did you know?

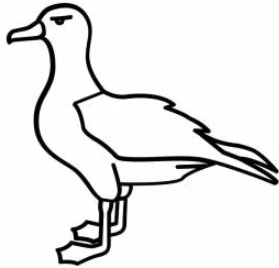
In Jared Diamond’s prize-winning book “Guns, Germs, and Steel,” the key initial question, phrased by native man Yali, is “Why you white men have so much cargo and we New Guineans have so little?” Indeed, “Cargo Cult,” as mentioned above, promotes superstitious practices that seek to deliver more “cargo” or advanced Western consumer goods to the country.

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2.11: Pacific Realm- Economic Geography II



Created by parkjsun
from Noun Project

What does an albatross want? An albatross is a somewhat large seabird whose wingspan often is about ten feet across. Presumably, an albatross would like to have easy access to food such as small fish. The bird also would need a place to roost, rest, and breed. Theoretically, any coastal landscape could work. An island might do well. However, many coastal locations, islands or otherwise, have human populations. Let's go find places to avoid predators, including no human predators. Historically, we are going back in time, past modern times where human settlements often have large quantities of garbage that might provide easy pickings for any birds, even those that usually eat fish. Isolated islands sound like good choices. Certainly there are islands throughout the oceans of the world. Even so, location still makes a difference. Frozen polar islands probably are not the best settings, although penguins do live at Antarctica. Fish do live in cold waters, but perhaps more abundantly in tropical zones. In the Pacific Ocean there are many tropical islands. Often these islands are uninhabited or at least spent thousands and thousands of years uninhabited before the Austronesian Expansion brought people to these Pacific isles.

Therefore, for at least some Pacific islands, seabirds like albatrosses lived on small Pacific islands, over generations of birds and for eons on these rocky sites. The birds ate fish from the water and pooped excrement from the skies. Some of this poop landed in the ocean, but other bits plopped onto the islands themselves. Or, the birds defecated while they walked on the land.

Who knows when animal manure first began to be used as fertilizer? Certainly, cow manure long ago, centuries ago, was tossed onto fields of crops. This dung aids the structure of the soil, but in particular adds nitrogen that promotes plant growth. Chicken poop contains nitrogen and phosphate, both aiding crop growth. Of course, both elements have other industrial uses as well.



Frigate bird, Nauru. Photo by Sean Kelleher on Flickr.

So, however many, many years ago albatrosses, terns, gannets, frigate birds, and many other seabirds found Pacific islands. Many, probably most, descendants of those birds found it easy to stay right there on the same islands. Over a number of generations, the bird populations increased sizably. Fish in the adjacent waters generally remained abundant. The birds ate and pooped.

For some islands, the hundreds or thousands or however many years of bird poop or *guanodeposits* created mountains of phosphate. But, so what?

Well, here we have the story of the island of Nauru. Nauru is a tiny island; in fact, it is the smallest island country in the world. Naturally, it is part of the sub-region called Micronesia. The country has eight square miles and ten thousand people.

In 1899, while Nauru was a German colony, the story of phosphate extraction begins. As the tale goes, Australian prospector Albert Fuller Ellis noticed a large rock that was being used as a doorstep, for the natives had now particular use for it. Ellis determined that it was phosphate, thereby setting in motion a chain of events that brought prosperity and then collapse to Nauru.



Phosphate loaders, Nauru. Photo by Sean Kelleher on Flickr.

The phosphate on Nauru quite naturally was on the surface in great depths, so that it easily was extracted through strip mining. Germany began this mining in 1906, but after losing World War I, Germany lost jurisdiction over Nauru. Australia, New Zealand, and the United Kingdom took over as trustees. During World War II, Nauru was one of many Pacific islands taken by Japanese forces, but after the war, Nauru was returned to Australia, New Zealand, and the United Kingdom as trustees. In 1968 Nauru became an independent country. Given their small population and the considerable income that came from the mines, the people of Nauru became some of the richest people in the world, certainly when measured as income per capita. However, given that the Nauru no longer is an uninhabited island favored by bird species, the phosphate deposits were a non-renewable resource. The supply was exhausted and the mining income disappeared.

Replacing some of the income through other sources, in 2001-2007 Nauru served as a detention center for refugees rejected by Australia. Nauru sought to become a tax haven. Nauru's wealth was gone, but bad habits remained. Nauru is cited as the most obese country in the world, no doubt linked to its #1 rate of type-2 diabetes.

Although Nauru has the most jarring economic story of guano deposits, a number of other Pacific (and Caribbean) islands have noteworthy supplies of guano/phosphate. In 1856, the United States Congress passed the Guano Islands Bill. This law allowed American citizens to claim and take uninhabited, unclaimed islands that contained guano deposits. In the Pacific Ocean, Baker Island was the first location to be claimed under the act. Even today, the United States maintains claims to ten islands that it first acquired through the provisions of the Guano Islands Bill.

So, the next time that a bird uses your automobile windshield as a target, think about Nauru where epic amounts of bird guano briefly brought prosperity to a very small island country.

Did you know?

The word “albatross” also can mean a curse or psychological load. The meaning refers to the 1798 poem “The Rime of the Ancient Mariner” by Samuel Coleridge. “Rime” is not an alternate spelling of “rhyme,” but is a linguistic term referring to parts of syllables.

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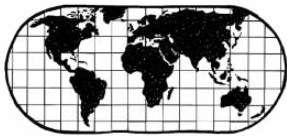
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2.12: Pacific Realm- Historical Geography II



Created by Carpe Diem
from Noun Project

Where? Right there! On the corner of the world. Look at most world maps. Usually Australia is in the bottom right corner of the map. Certainly, on any standardly used world map, this is true. But is that really where Australia is located? Sort of. Is little Australia always in the corner? Is Australia little? Compared to any of the other continents, Australia is pictured much smaller. But, how big is Australia actually? I want to investigate these issues here by considering the topic of map projections.

The planet is a sphere, almost. A mathematical sphere is a smooth ball with every point on its surface being the same distance from the center point of the sphere. In actuality, the Earth is not quite a sphere. When you pause to consider this concept, you realize that, of course, the Earth is not a smooth equal surface. There are mountains and valleys. A few locations are below sea level, while mountains, buttes, mesas, monoliths and other landscape features push up from the surface.

Less well known is that the Earth bulges in areas around the equator, due to centrifugal force. The planet is about 27 miles wider west to east than it is north to south. Therefore, this shape is not quite a sphere, but a rough surfaced oblate spheroid.

Even so, a globe is a fine representation of the Earth. However, there are limits to the usefulness of a globe. A globe doesn't fit in a desk drawer or in a briefcase or on a wall. It is not possible for a person to see all sides of a globe at the same time. For these and other reasons, over several centuries geographers and other scholars have striven to create useful world maps on flat paper surfaces, usually as rectangular maps. In doing so, cartographers attempt to meet five criteria; basically, the cartographer seeks to maintain scale and proportionality across the map, even though this is not 100% possible. Probably the most apparent criteria are size and shape.



Created by Ted Grajeda
from Noun Project

In 1569, Gerardus Mercator created a map projection that bears his name still today. This Mercator projection was very useful at that point in history, for it created **rhumb lines** (or **loxodromes**) that are straight lines of navigation as they follow compass headings. At that point in the world's history, this feature was wonderful for sailing across oceans. However, the glaring flaw of the projection is that these maps distort the sizes of land masses, as the distance from the equator increases. The infamous example of this flaw is the depiction of Greenland as an enormous shape roughly the same in appearance as Africa, whereas Africa actually is fourteen times larger than Greenland. So, how big is Australia?

Big. How big? Well, certainly we can measure Australia in term of square miles (or square kilometers, as the rest of the world does). It has 2.97 million square miles (7.69 million square kilometers). That is rather mundane, but how is it portrayed on a map?

Australia rests between 12°S and 43°S latitude. Northern Australia's closer proximity to the equator means that its area is quite accurately displayed. Error increases as distance from the equator lengthens; however, Australia's location is not extreme, so its

area is not greatly distorted. It is shown about a quarter share too large on the Mercator map.

Some maps choose to address the equal area issue, while accepting error in other categories. There are many examples of this type of map, among them the Hammer projection (Ernst Hammer in 1892) and the Hobo-Dyer projection (2002). These maps distort the shapes of countries and continents. By definition, Australia's area on this type of map projection correctly reflects its actual land area.

Some maps are compromise maps that might not be quite correct on any of the criteria of map projections, but do provide a sense of being reasonable accurate, especially on size and shape. One such map projection is the Dymaxion projection, patented by Buckminster Fuller in 1944. Note the bizarre shape of the map – not a rectangle! Clearly, distances and directions on this map are not odd and not calculable. However, the areas and shapes of landforms are close to correct. Other interrupted projections also choose to cut the map in the oceans in order to help with area and shape of land. So, on these maps Australia's area is very close to correct.



Dymaxion projection. Drawn by Justin Kunimune.

But where is Australia? On the Dymaxion projection, Australia is in the bottom leftcorner. Is that okay? Recall that one most standard world maps, Australia is in the bottom rightcorner. Let's go back to the oblate spheroid. Where is up or down, as well as left or right, on the oblate spheroid? Actually, these terms "up, down, left, or right" are artificial when considering our planet in the solar system. Our planet in space has no real "up" or "down." The planet is a spheroid in galaxy, in open space.



Created by Nick Novelli
from Noun Project

Consider that astronauts in a space shuttle could maneuver the shuttle anywhere around the planet to provide any number of viewpoints. All of those potential viewpoints would be valid perspectives to look at Earth. However, for centuries maps like the Mercator projection have placed North America and Europe at the top of the map. Thus, Australia is placed near the bottom of the map. In contrast, a few so-called upside-down world maps put the southern hemisphere at the top of the map, with the northern hemisphere at the bottom. For these maps, Australia is on the upper half of the map, sometimes even in the center of the top half.

What could happen if Australia was the central focus of the map? For a look, go to www.maths.adelaide.edu.au/matthew.roughan/img/azimuthal.png

For geographers, all of these elements of maps are fascinating; however, there may be societal implications as well. Many social scientists contend that the centuries-long practice of placing North America and Europe at the top of the map at least subliminally implies that these places are better than places at the bottom of the map. Think about how many other ways in our culture we consider top better than bottom. Given the colonial power of various northern countries subjugating various southern lands and peoples, some scholars argue that these maps, even a little bit, helped justify this dominance.

Where is Australia? Right where it's always been, but sometimes in different placements on world maps. How big is Australia? The same size that it's always been, but sometimes appearing in varying relative sizes and shapes on world maps.

Did you know?

In author Joel Quam's murder mystery novel "... or Perish," the protagonist is given the first name of Mercator, so that the name can be a trigger for discussing features of Geography in the storyline.

In terms of geometry, the Mercator projection is a cylindrical projection.

The five criteria considered in map projections are size, shape, scale, direction, and distance.

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2.13: Pacific Realm- Physical Geography II



Created by Bence Bezerezy
from Noun Project

Is New Zealand the Norway or Iceland of the Southern Hemisphere?

New Zealand often is cited as one of the most beautiful countries in the world and deservedly so. Its physical landscape is diverse and stunningly beautiful. Compared to locations in the Northern Hemisphere, New Zealand probably is most like Norway or Iceland. Let's examine the similarities and differences between New Zealand and its possible comparative regions in the north.



Photo by Tyler Lastovich on Unsplash

In physical beauty, certainly the beaches and shorelines of New Zealand are noteworthy. As an island realm, obviously it has coastline. Comprised of two main islands, unimaginatively named North Island and South Island, New Zealand ranks 9th in the world in length of coastline. Iceland, also an island realm, ranks 25th, but Norway, a mainland country while having many very small islands, ranks 2nd, trailing Canada by far. Mixed sand and gravel beaches are common in New Zealand, though some locations feature black sand beaches, economically valuable for gold and iron elements. Due to the mid-latitude (the capital Wellington is at 41° S latitude) presence, a number of beaches are available for swimming, though some beaches and some conditions can present dangerous tides and waves. In Iceland, Reykjavik's geothermally-heated lagoon (Ylströndin at Nautholsvik) offers summer swimming with a water temperature of 60°F, but otherwise Iceland's ocean shores present beautiful and varied settings of sand and rock, but not swimming. Southwestern Norway, for instance at Orrestranda Beach at Stavanger, does see summer swimmers. Note that while the Atlantic Ocean's warm Gulf Stream does pass between Iceland and Norway, bringing moderate temperatures with it, for these two countries their far northern latitudes – Iceland (at its capital Reykjavik) 64°10' N and Norway (at its capital Oslo) 59°55' N – inherently yield cold climates. In fact, Norway is the 4th coldest (average temperature 34.7°F) country in the world, while Iceland ranks #7 (35.15°F) on that measure. Meanwhile, New Zealand averages 51°F.

Coastline

Norway 38351 miles

New Zealand 9404 miles

Iceland 3088 miles

For these three countries, often coastline also means fjords. Fjords are narrow paths of ocean water stretching and twisting inland where ages ago glacial retreats tore out the land. Fjords can present spectacular views of heights, water, and land. Fjords can be found in several countries – Canada, USA (Alaska), Iceland, Chile – but most famously are in Norway and New Zealand. In New Zealand, typically fjords are called sounds, as is Milford Sound in the photograph below.

New Zealand's southwestern side of South Island includes Fiordland, where are fourteen of the country's fjords are located. Both Doubtful Sound and Dusky Sound are the longest at 25 miles. While not numerous in New Zealand, the inherent beauty of fjords is picturesque. Milford Sound is a popular tourist destination, actually the only one of the sounds accessible by road.

Iceland's fjords are more in number and length. Of the 109 fjords there, Eyjafjörðurextends the farthest out to 37 miles. Norway truly is renowned for fjords, justifiably so, counting 1190 of these waterways, with Sognefjord extending an impressive 127 miles.



Milford Sound – Photo by Amy Workman on Unsplash

As fjords were carved by glacial retreat from the Ice Age, it may not be surprising that glaciers remain in these countries today. Clearly, Iceland sounds like it should have glaciers and it does. However, New Zealand has many more glaciers, more than Norway as well; yet, these tend to be very small, averaging 2.5 acres in area. Norwegian and Icelandic glaciers are larger. As around the world, glaciers in these three countries are shrinking in size – surface area and volume.

Number of Glaciers

Country	# of Glaciers	Largest Glacier	Area of largest glacier in square miles
Iceland	269	Vatnajökull	3204
New Zealand	3144	Tasman	39
Norway	1600	Austfonna (in Svalbard)	3248

Glaciers, large bodies of ice moving under its own weight by gravity and melting, often are associated with mountains that provide slopes and colder elevations. The mountains of North Island, but especially the Southern Alps of course on South Island, are the consequence of New Zealand's location astraddle the line where the Australian tectonic plate meets the Pacific tectonic plate. The resulting subduction created high mountains and volcanoes in New Zealand. As pictured below, Mount Cook is New Zealand's highest peak at 12, 218 feet. The Southern Alps include a number of other peaks above 10,000 feet. While Norway has numerous mountains as well, its location does not hit an active line between tectonic plates, thus its mountains do not reach as far skyward. Galdhøpiggen extends the farthest up to 8100 feet. Iceland's complicated geology, noted in its own essay, produced its peak of Hvannadalshnjúkur at 6952 feet.



Mount Cook – Photo by Casey Horner on Unsplash

In sum, New Zealand features higher mountains, more but small glaciers, fewer yet gorgeous fjords (or sounds), and warmer beaches than Norway and Iceland do. All three countries incorporate beautiful scenery into enticing location for tourist visits. New Zealand's far distant location is a disadvantage compared to Norway's and Iceland's respective proximities to America and Europe.

Did you know?

Pakistan has the most glaciers in the world.

The 17th of May is Norway's national day. In Norway and among those elsewhere who have Norwegian ancestry, the day is known as syttende mai – Seventeenth May. In Fiordland in New Zealand, the day is celebrated as well.



Tracy Arm Fjord in Alaska — Photo by David Kozaczka

Being at similar latitudes as Norway and Iceland, Alaska is cold. As noted in the text above, like Norway and Iceland, Alaska has fjords. Misty Fjords National Monument and Kenai Fjords National Park are two regions established for the protection of these distinctive and beautiful coastlines.

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2.14: Pacific Realm- Political Geography II



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What do doctors call it when someone has a little bit of memory problems? Micronesia!

Ok, that was a pathetic joke. However, *micro* does mean *small*, appropriately so for a set of islands in the Pacific Ocean.

Micronesia is a set of quite small islands within our region, the Pacific Realm. There are eight countries/territories in Micronesia, roughly located north of Melanesia (Chapter 13). One of the territories is called the Federated States of Micronesia. Links to the United States are common.

“Good things come in small packages.” “Small is beautiful.” There are some well-known proverbs that suggest that small can be a fine thing. “The bigger they come, the harder they fall.” Yes, there are sayings that suggest that bigger isn’t necessarily better. Nevertheless, being a tiny island country/territory doesn’t have a lot of advantages. Sometimes you get lucky. Read about the rise and fall of tiny Nauru in Chapter 21.

Wouldn’t it make sense for tiny islands to work cooperatively together? That is the approach taken by the Federated States of Micronesia (FSM). These islands are centered in the **archipelago** of the Caroline Islands. The 607 islands that comprise FSM are grouped into four sets – Yap, Chuuk, Pohnpei, and Kosrae. It is likely that fewer than 1% of people of the world have ever heard of those four island names. Again, tiny. In fact, the whole Federated States of Micronesia includes only 270.8 square miles of land. The area of the city of Chicago is 234 square miles. The average size island, measured by the mathematical mean, is about half a square mile. In contrast, FSM includes over one million square miles of ocean. That ocean surface area is about the same size as the land area of Alaska, Texas, and Wisconsin combined.



Chuuk Lagoon, Federated States of Micronesia. Photo by Marek Okon on Unsplash.

As an individual island, any of these dots of land would struggle, so it is logical to work cooperatively together politically and economically. The national government is based on Pohnpei. Historically, Spain, Germany, and Japan held territory among these islands, but after World War II, the United Nations established the Trust Territories of the Pacific Islands (TTPI). That trust included the island sets now in FSM, as well as the Marshall Islands, Palau, and the Northern Mariana Islands. In 1978 referendum, residents voted to create the Federated States of Micronesia, so that this union was formed the following year. Largely due to the American presence, English is the official language, though there are eight major indigenous languages spoken there too.



Steam plume from volcano on Pagan Island in the Northern Marianas. NASA Earth Observatory.

Politically, the Northern Mariana Islands were part of the TTPI, but did not join the FSM. Instead, they formed a commonwealth under the jurisdiction of an American territory. Only 22 islands as compared to the 607 of the Federated States of Micronesia, these islands are somewhat larger, totaling 464 square miles. Ninety percent of the commonwealth’s 50,000 people live on the island of Saipan.

In 1979, the Marshall Islands gained independence, but in 1986 established a free association with the United States, whereby the US provides defense and other services. The Federated States of Micronesia have the same connection with America.

In 1994 out of the TTPI, Palau secured its status as an independent country, but like the Marshall Islands, for its benefit in political and economic terms, it created a free association with the United States.

Guam is the largest island in Micronesia. It was a Spanish territory that was ceded to the United States in 1899.

Kiribati has a somewhat different colonial history, being British subjects until independence in 1979. Maintaining its connection with the United Kingdom, Kiribati is a member of the Commonwealth of Nations. Nauru (Chapter 21) too is in the Commonwealth of Nations.

Eight of the United State Minor Outlying Islands complete the set of islands in Micronesia. These are:

Baker Island,
Howland Island,
Jarvis Island,
Johnson Atoll,
Kingman Reef,
Midway Atoll,
Palmyra Atoll (the largest at 4.6 square miles),
Wake Island.

The islands have no permanent residents and are grouped together for statistical convenience. (In the Caribbean Sea, Navassa Island, Bajo Nuevo Bank, and Serranilla Bank complete the list of the United State Minor Outlying Islands.)

Overall, the islands of Micronesia are too small to be successful economically and politically alone. Thus, all of these islands maintain broader connections. The Federated States of Micronesia chose to agglomerate, melding over 600 islands into one federation, while also linking with the United States. Palau and Guam have similar associations with America, while Kiribati and Nauru share other countries' ties with Britain as members of the Commonwealth of Nations. Trade, tourism, and security are bolstered by these connections.

Did you know?

Because of the International Date Line, Guam experiences dawn as the first piece of American territory to enter each new day.

One of this textbook's authors is Professor Joel Quam, no relation to Guam.

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2.15: Pacific Realm- Population Geography II



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Sometimes there are advantages to being an island country. Of course, there may be disadvantages too. You can't drive to the islands that are Japan nor to Iceland nor Fiji nor New Zealand. (Now you can drive through the Chunnel (the tunnel under the English Channel) from France to England. Cost of living often is higher on islands, due to the additional costs of transporting products to an island. Islands face the factor of isolation.

Nevertheless, isolation can be a good thing. In the global pandemic of COVID-19, isolation can be a positive factor. At least theoretically, island countries or territories have the possibility of blocking all travel to and from their island. As you will read in Chapter 76, attempts to close an island may fail, as they did for Puerto Rico. Clearly for a pandemic, land borders are much more difficult to monitor than are sea and air borders. As we see from America's current attempt to build a wall along its border with Mexico, land borders may be crossed in a variety of means. To arrive in an island country, you need a boat or an airplane.



Banks Peninsula, New Zealand – Photo by Bernard Spragg on Flickr.

New Zealand is an island country, featuring two main islands for nearly all of the populace. It has a population of nearly five million people. In addition to the inherent isolation of being an island country, New Zealand's remote location places it far distant from almost every other place on the planet. To fly to nearby Australia is to travel nearly 2600 miles. Yes, that's right, the proximity of its nearest prominent neighbor is like the distance from Los Angeles to New York City.

This makes New Zealand an ideal location for a demographic and medical experiment. How would a contagious disease spread through an island country of five million people? Naturally, no one would set this up as a real experiment. Computer simulations could be run. However, COVID-19 made this a reality.

The first documented case of COVID-19 in New Zealand was on February 28, 2020. The initial cases of the virus were travelers who had returned from Iran or Italy. New Zealand's government instituted a nearly complete shutdown of the country for March 24 to April 9, followed by very gradual relaxation of restrictions. International travel was highly regulated, so that New Zealand citizens could return to the homeland but would face a two-week quarantine upon arrival. Foreigners were not allowed to enter the country. New Zealand instituted very active measures for virus testing and in contact tracing. The country tallied 1504 cases, but only 22 deaths. New Zealand now has no new cases of the coronavirus, in fact, no new cases for over two weeks.

According to worldometers, on June 11th, 2020, New Zealand was the second most populated country that has no active cases of COVID-19 (Papua New Guinea was the most populated such country.). Of the 22 countries/territories with no active cases of the virus, 19 are islands. The exceptions are Laos, Montenegro, and the microstate of Vatican City.



Subdude street art, Shoreditch. Photo by duncan c on Flickr.

New Zealand Prime Minister Jacinda Ardern is very popular in her country, actually the most popular there in the past century. In mid-May 2020, a Newshub poll asked people if they felt that the nationwide lockdown was the right call. The poll revealed that 91.6% of respondents said “Yes.” I doubt if we could find any national political action to have 90% support of Americans.

As revealed in Chapter 23, in several ways Iceland is northern hemisphere’s version of New Zealand. The parallels continue with the coronavirus, as Iceland had only 3 active cases on June 11th and only 1807 total cases.

Did you know?

Here is a Kiwi popular pandemic joke. Note that Aotearoa is the native name for the land there.

God was spotted in New Zealand.

Someone asks: “What are you doing in Aotearoa, God?”

“Working from home, bro!”

New Zealand Prime Minister Jacinda Ardern picked up Stephen Colbert at the airport, as featured on The Late Show with Stephen Colbert. <https://www.youtube.com/watch?v=DUPo62ouU84>

Would shelter-at-home seems like living in small tucked-in homes?



Hobbiton in New Zealand – Photo by Andres Iga on Unsplash

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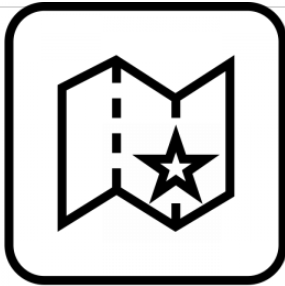
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2.16: Pacific Realm- Urban Geography II



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Countries have capital cities. The cities are selected for a variety of reasons, generally based on the social, economic, and political assets that those cities hold. Sometimes countries change the locations of the capital cities. Let's consider the capital cities of the Pacific Realm, with particular attention to Canberra, the capital of Australia. Let's do so by examining geographic concepts relating to capital cities.

For many countries, the capital city is an obvious choice, because that country has a **primate city** (see Chapter 54). A primate city dominates its country in all urban ways, including politically. The predominant development of that city may be predicated partly upon its securing and early historical designation as the capital city. Or, perhaps the city already possessed so much authority and power that it became the capital city almost automatically. Some countries have these obvious capital cities – how else could it be? Certainly, across the world there are examples, such as Bangkok, Thailand. In the Western World, here is a list of several primate cities.

Country	Primate City
Argentina	Buenos Aires
Austria	Vienna
El Salvador	San Salvador
England	London
France	Paris
Hungary	Budapest
Iceland	Reykjavik
Latvia	Riga
Mexico	Mexico City
Nicaragua	Managua
Peru	Lima

However, in the Pacific Realm, the major countries of Australia and New Zealand lack primate cities, while Papua New Guinea (Port Moresby) and other small islands may have primate cities – Samoa (Apia).

In a few cases, countries have changed their capital cities. In fact, the initial Congress of the United States held its session in New York City, deciding there to build a new city as the national capital — Washington in a special capital territory – the District of Columbia. While this new city was being constructed, Philadelphia served a decade as the national capital. The designated site would be roughly centered among the new states that stretched along the Atlantic sea coast.

Brazil followed a similar course of action. Originally, Salvador was Portugal's colonial capital in the New World, beginning in 1549. The ascendancy of Rio de Janeiro brought economic, demographic, and political power, culminating in acquisition of the

colonial capital in 1763. Rio retained the capital upon Brazilian independence in 1822. Eventually, Brazil sought to diversify political power and created the planned city of Brasilia, opening as the capital city in 1960.

Other countries such as Myanmar, Nigeria, and Pakistan have moved their capital cities as well.



Canberra. Photo by Greg Schechter on Flickr.

For the Pacific Realm, Australia followed this course too. In Australia, Sydney and Melbourne both grew in population and in social, economic, and political power and distinction. In 1901, Australia opened the 20th century by declaring itself a commonwealth, a country and no longer a British colony, though it has retained its commonwealth connection with Britain to this day. At that time, Sydney and Melbourne were rivals for the title of national capital; however, the newly defined commonwealth established a plan to build a new city as the national capital. A piece of territory was ceded from New South Wales for the construction of this planned city Canberra in the new Australian Capital Territory. Melbourne served as the temporary capital until 1927 when the legislature first met in Canberra. The site was chosen to be roughly between Melbourne and Sydney. Additionally, the decision to be somewhat inland reflected a desire to be secure from any potential future naval attack. Clearly, there are similarities with the planned city of Washington, DC.

In certain cases, capital cities are moved or are originally sited in so-called forward locations. These **forward capitals** are placed away from the dominant national cities, due to economic, strategic, symbolic, and diversifying motivations. In these cases often the new capital city is located quite a distance inland, away from other major cities, and into otherwise less utilized areas. Definitely, Brasilia meets this model in Brazil, as do Eastern World capitals of Islamabad in Pakistan and Naypyidaw (Nay Pyi Taw) in Myanmar. For the Pacific Realm, Australia's Canberra is located along the string of prominent eastern coastal cities. Canberra was required to be over 100 miles from Sydney, but it doesn't stand out as a forward capital in the way that perhaps Alice Springs would have.

Planned cities are numerous across the world, but are noteworthy when chosen for design as the national capital. Washington, DC, and Canberra, ACT, are similar in that regard.

Wellington was named the capital of New Zealand in 1865. It has an excellent location at the southern tip of the North Island; thus, it is very nearly at the geographic center of the country.

Did you know?



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from Noun Project

A capitol is the building(s) where government happens, typically a state legislature operates there. A capital is the city where the national or state government resides.

Cited and additional bibliography:

Schechter, Greg. 2009. *Canberra*. <https://tinyurl.com/canberra2009>. Attribution 2.0 Generic (CC BY 2.0).

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2.17: Pacific Realm- Overview



Perth. Photo by Pedro Szekely on Flickr.

In the various essays about the Pacific Realm in this textbook, there are many facts presented and many ways of life understood. After reading the textbook, students or other readers should know and understand many things about the Pacific Realm. Also, as has been stated, it is not the point of this textbook to attempt to convey every possible bit of knowledge about the Pacific Realm. However, there are a few basics about the Pacific Realm that the reader should know, whether picked up in previous chapters or not.

The Pacific Realm is dominated in land area by Australia. Papua New Guinea and New Zealand feature large islands, but Australia is a continent. The rest of the Pacific Realm is made up of small and tiny islands. Actually, the most common surface of the Pacific Realm is water – the Pacific Ocean.

Given the larger landmass, naturally Australia also leads the region in population. This is true, even though Australia features mostly dry landscapes that have very low population densities. The Austronesian Expansion highlighted in Chapter 15 explains a great deal about the populating of the Pacific Realm. This migration also explains much of the complex ethnic patterns across the region.



Kalgoorlie Mining in Western Australia. Photo by Tor Lindstrand on Flickr.

Again given the larger landmass, Australia dominates the region in terms of raw materials. As of 2012, Australia had:

- 51% of the world's antimony
- 34% of the world's bauxite
- 38% of the world's black coal
- 51% of the world's cobalt
- 28% of the world's copper
- 55% of the world's diamonds
- 42% of the world's gold (see the so-called Super Pit, pictured above)
- 34% of the world's iron ore
- 45% of the world's lead
- 55% of the world's lithium
- 72% of the world's manganese
- 39% of the world's molybdenum

90% of the world's opals

67% of the world's rare earths

36% of the world's silver

48% of the world's tantalum

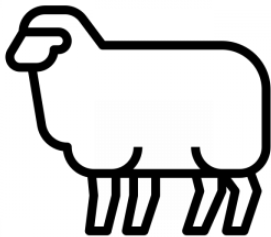
61% of the world's tin

51% of the world's tungsten

34% of the world's uranium

50% of the world's zinc.

Now in 2020, Australia leads the world in exporting liquefied natural gas (LNG), a means of selling their natural gas output without using pipelines (under the ocean?).



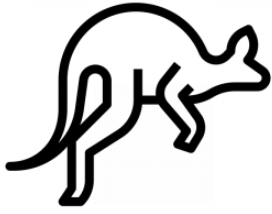
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from Noun Project

The extensive land area also is heavily utilized in agriculture, sometimes for crops such as wheat and sugar cane, but significantly for ranching – cattle and sheep. Comparatively, New Zealand has significant dairy and sheep farming.

For the small islands of the Pacific Realm, the random chance of having noteworthy raw materials is low. As described in Chapter 21, Nauru had the odd circumstance of huge phosphate deposits from bird droppings. New Caledonia does beat the odds with raw materials, especially in heavy deposits of nickel ore.

The physical landscape of the region is dominated by islands, a mix of high volcanic islands and low coral islands. The larger islands of New Zealand feature volcanoes and high mountains, in addition to beautiful fjords – see Chapter 23. Australia has few mountains and they are relatively small in stature. Instead, Australia features a great deal of dry landscapes.

A dominant element of the Pacific Realm is its relative isolation. Hawaii and Easter Island are some of the most remote places on the planet. Isolation makes the Austronesian Expansion even more impressive. When compared to other parts of the globe, Australia's isolation led to its late European discovery and settlement. Nevertheless, this isolation meant that Australia was relatively empty, a feature that the British utilized in their colonization and eventually claim of all of the landmass. Strikingly, this settlement mainly began with the shipping of convicts to Australia to settle that new land. The original settlers of Australia brought with them the English language; however, the isolation of this place, both in distance and in separation from British civilization, endeavored the language to evolve, so that modern Australian English has a distinctive accent and numerous words that do not fit into British English nor into other regional variations of English (such as American English). Similar linguistic changes happened in New Zealand, as seen in "Zealand speak."



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from Noun Project

In addition, isolation created a unique set of wildlife in Australia with some unusual animals and others that can be found only in Australia. This land down under is famous for the kangaroo and certainly known for the platypus and the koala. Wallace's Line and Weber's Line are two scholars' works to delineate the separate Asian animal species (fauna) from Australian animal species.

Beautiful Pacific islands in tropical settings offer very appealing tourist destinations; however, the isolating distances to these islands is a deterrent to some potential tourists choose not to overcome. Similarly, Australia's economy includes a major tourist sector, partly existent because of exotic elements present because of its isolation, while at the same time partly diminished because of the costs of distance as created by the same isolation.

Overall, the Pacific Realm is a fascinating region, largely dominated by Australia, and strongly influenced by its isolation.

Did you know?

The koala is not a bear. Although the koala looks like a cuddly teddy bear, it is in the marsupial category and not at all related to bears.

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3: North America



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Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared characteristics over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

Defining North America is both simple and yet not quite meeting a consensus. North America is comprised by Canada and the United States. Both of these countries were British colonies with a touch of French influence. Both countries rank in the top five countries of the world by area, as each stretches from Pacific Ocean to Atlantic Ocean. These countries share the longest international land border in the world. Their cultures, economies, and politics are similar, though not quite the same. The countries are friendly allies.



Cartography by Steve Banas.

As a landmass, the North American continent extends from northern Canada to Panama. This fact leads to the argument that the North American region includes Mexico and maybe other countries. As you will read in Chapter 63, most geographers assert that the cultural and linguistic similarities within Central America match well as part of Latin America, instead of pairing the contrasting cultures and languages of Central America against the British cultural ties and English language of the United States and Canada.



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The island of Greenland is an autonomous territory of Denmark, while being a part of the North American continental formation. Therefore, some will count Greenland as a segment of the North American region. Fitting a remote, nearly unpopulated, icy island with two of the world's most prosperous countries, one with nearly 330 million people, seems rather incongruous. Let Greenland be part of Denmark and leave it alone.

For Geography of the Western World, the North American region is the United States and Canada.

Did you know?

As will be discussed in the LACAR section – Chapter 63, the Bahamas, Bermuda, and the British Turks and Caicos islands technically are not Caribbean islands. These sets of islands are located northeast of Cuba and east of the Carolinas and Florida in the Atlantic Ocean. No, we don't count them in North America.

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3.1: Introduction to North America



Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared characteristics over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

Defining North America is both simple and yet not quite meeting a consensus. North America is comprised by Canada and the United States. Both of these countries were British colonies with a touch of French influence. Both countries rank in the top five countries of the world by area, as each stretches from Pacific Ocean to Atlantic Ocean. These countries share the longest international land border in the world. Their cultures, economies, and politics are similar, though not quite the same. The countries are friendly allies.



European Colonies in North America, 1763.
Cartography by Steve Banas.

As a landmass, the North American continent extends from northern Canada to Panama. This fact leads to the argument that the North American region includes Mexico and maybe other countries. As you will read in Chapter 63, most geographers assert that the cultural and linguistic similarities within Central America match well as part of Latin America, instead of pairing the contrasting cultures and languages of Central America against the British cultural ties and English language of the United States and Canada.



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The island of Greenland is an autonomous territory of Denmark, while being a part of the North American continental formation. Therefore, some will count Greenland as a segment of the North American region. Fitting a remote, nearly unpopulated, icy island with two of the world's most prosperous countries, one with nearly 330 million people, seems rather incongruous. Let Greenland be part of Denmark and leave it alone.

For Geography of the Western World, the North American region is the United States and Canada.

Did you know?

As will be discussed in the LACAR section – Chapter 63, the Bahamas, Bermuda, and the British Turks and Caicos islands technically are not Caribbean islands. These sets of islands are located northeast of Cuba and east of the Carolinas and Florida in the Atlantic Ocean. No, we don't count them in North America.

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3.2: North America- Regional Example



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When I grew up in Minnesota, it was quite apparent to me that the Midwest region of the United States was a set of five states – Minnesota, North Dakota, South Dakota, Iowa, and Wisconsin. When I later moved away from Minnesota, I was surprised to learn that other Americans had different definitions of the Midwest than I did. Furthermore, these other definitions were not all the same, but offered multiple variations.

So, how do we define the American Midwest? Well, the US Census Bureau cites the Midwest as those five states listed above, plus Ohio, Michigan, Indiana, Illinois, Nebraska, Missouri, and Kansas – thus, twelve states in total.



In 2014, the website fivethirtyeight.com used a SurveyMonkey Audience of self-selected Midwesterners to define the region. Indiana, Illinois, and Iowa received the highest scores with over 70% of respondents indicating that these states are in the Midwest. A few, about 10%, voters let Montana, Wyoming, and Colorado into the Midwest, choices that I consider felonious. Similarly, a few offered Midwestern status to Pennsylvania and West Virginia. No!



Cartography by Melissa Jankovic.

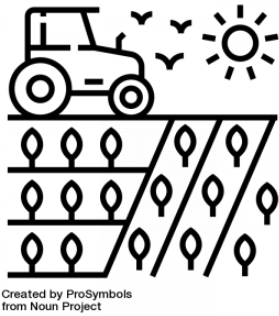
So, here is Rule #1. Midwestern states do not have mountains! South Dakota comes close, but its Black Hills are called hills after all. Colorado's Rocky Mountains disqualify it (and Wyoming and Montana too) as a Midwestern entry, as do the Appalachian Mountains for Pennsylvania and West Virginia.

In 2019, Citylab.com also attempted to settle this question of Midwestern membership. Their survey appears to be open still for submissions. The pattern of their respondents' opinions matches well with the US Census Bureau's twelve states, for all these states are marked with counties showing 80% or higher self-designation as Midwestern. Several other states showed a bit, but scant support. Shockingly, Texas, Georgia, and Rhode Island had more than zero support. Wrong! Rule #2 – Midwestern states do not border the Pacific Ocean, the Atlantic Ocean, or the Gulf of Mexico. Midwestern states may, but are not required to, border one or more of the Great Lakes.

This is a popular and divisive topic. In 2016, Vox.com also gave it a shot. Over 34 thousand readers voted. Iowa won, receiving 95% of the vote as a Midwestern state. The Census Bureau's dozen were the top twelve vote getters, with North Dakota coming in twelfth with 45% of the votes.

What else is true about the Midwest?

A – Farming.



According to the US Department of Agriculture, “in 2018, the top 10 agricultural producing States in terms of cash receipts were (in descending order): California, Iowa, Texas, Nebraska, Minnesota, Illinois, Kansas, North Carolina, Wisconsin, and Indiana.” Seven of these states are in the Midwest. This is not to say that everyone in the Midwest is a farmer. No, even in Iowa where 85% of the land is farmed, only 5% of the people are farmers. Instead, we understand that farming is economically important, if not crucial, in Midwestern states. Wisconsin is renowned for its dairy industry. Iowa leads the United States in hogs and corn. North Dakota and Kansas lead in wheat.

B – Glacial landscapes.



Photo by Mary Herbers

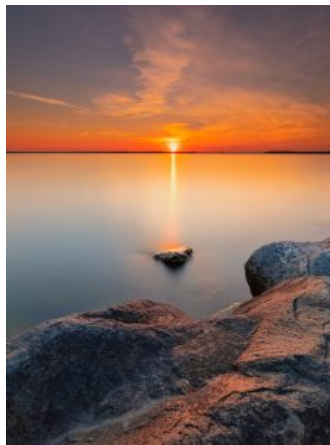
As noted, Midwestern states do not have mountains nor do they have deserts. The Ice Age’s Laurentian Ice Sheet stretched from what is now Canada into what is now the United States. As shown by Idaho State University’s map at <https://tinyurl.com/midwest-region>, the glacial maximum reached all the Midwestern states, including full coverage of Minnesota, Iowa, Wisconsin, Illinois, and Michigan. The thousands of lakes in Minnesota, Wisconsin, and Michigan were carved by glaciers as they receded. Otter Tail Lake in Minnesota is pictured to the left.

C – Distinctive European heritage¹

Selected Ethnic Groups in Minnesota

Ethnic Group	Number of Midwest states with this group	Top Midwest state ranking for that group
Norwegian-Americans	5 of top 7 states	Minnesota = #1
Swedish-Americans	4 of top 7 states	Minnesota = #1
Danish-Americans	2 of top 4 states	Minnesota = #3
Icelandic-Americans	2 of top 3 states	Minnesota = #2
Finnish-Americans	3 of top 5 states	Michigan = #1
Czech-Americans	6 of top 8 states	Illinois = #2
Polish-Americans	2 of top 3 states	Illinois = #2
Belgian-Americans	3 of top 5 states	Wisconsin = #1

This is in contrast to the populations of Irish-Americans and Italian-Americans, who tend to be more heavily located in northeastern states, while Americans with English or German heritage have very widespread distributions across the whole United States. In the Midwest we find the largest shares of Northern European ancestry and other somewhat northern European ancestries. It is noteworthy that these ethnic patterns are generally uncommon in the rest of the United States. (Note that California, due to its very large population of about forty million people, has lots of peoples of many ethnicities.)



Madison, Wisconsin. Photo by Dave Hoefler on Unsplash.

In sum, the American Midwest is larger than my childhood vision understood. The list of twelve states, as provided by the US Census Bureau, is best. Midwestern states lack mountains and ocean coastlines, but feature an emphasis on farming, glacial landscapes, and atypical European heritage.

Did you know?

Formerly there was an American Mideast Conference made up of collegiate sports teams in Ohio, Pennsylvania, New York, and Massachusetts. Unlike the Midwest it is unusual to refer to any portion of America as the Mideast.

According to the Annie E Casey Foundation's 2016 KIDS COUNT report, Minnesota is the best state in which to raise a child. Iowa is the third best state.

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¹ US Census totals from 2000 as reported by various entries in Wikipedia.

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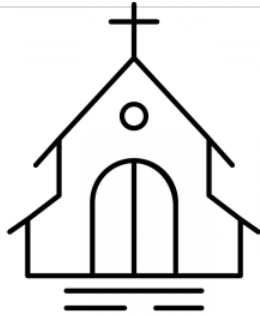
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3.3: North America- Cultural Geography I



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In this essay, we'll examine the religious geography of the United States, including a look at the origin and traits of some denominations and movements that are particularly common in the U.S. For a more general look at religion, see Chapter 3. The origins and traits of Roman Catholicism, Eastern Orthodox Christianity, and Protestantism are discussed in greater detail in Chapter 48. The origins and traits of Judaism, Islam, Hinduism, and Buddhism are not covered here for they predominantly are found in the other half of the world – the Eastern World.

Protestants

About 71% of Americans identify as Christian, and there are many different denominations of Christianity in the United States. Protestants account for just under half the U.S. population (47%), and the single largest Protestant denomination are the Baptists (15% of Americans). The Baptist movement began when a group of English reformers broke from the Anglican Church. It was a relatively small movement in England, but flourished in the United States.

Another 15% of Americans identify with various churches that are sometimes collectively referred to as Mainline Protestant. The term “Mainline” is not strictly defined, but it implies a few things. First, Mainline churches are usually theologically moderate, rather than fundamentalist. That means that most members of Mainline churches look to the Bible for truths, but agree that some of the stories, particularly those of the Old Testament, might be symbolic parables, rather than a strict record of facts. This makes them distinct from some of the more conservative or fundamentalists denominations, such as some Baptist, Pentecostal, Evangelical, or non-denominational churches. Second, mainline churches tend to be fairly traditional in their worship, and have not generally embraced the more contemporary approach of some Evangelical churches. Third, Mainline churches tend to be somewhat apolitical, although many have actively promoted social justice and civil rights movements. Finally, Mainline churches might be thought of as “national” churches. Although some of them tend to be more numerous in certain parts of the country, Mainline churches can typically be found in nearly any city of even modest size anywhere in the United States.

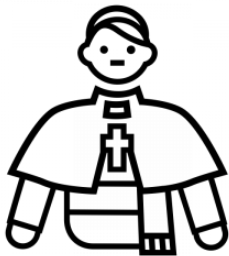


Image by Ricarda Mölck from Pixabay.

Four Protestant denominations account for the largest numbers of Mainline Protestants: Methodists (5% of the U.S. population), Lutherans (4%), Presbyterians (2%), and Episcopalians (1%). Methodism began as a reform movement within the Church of England, and soon spread to much of the British Empire, with its greatest success coming in the United States. Lutheranism was initially an immigrant Church, associated with Germans and Scandinavians, but as German-Americans became the single largest ethnic group in the country, and spread to nearly every part of it, Lutheran churches were soon found nationwide. The Presbyterian Church is a Calvinist church that was founded in Scotland, and made its way to the U.S. with Scottish immigrants. The Episcopal Church is essentially the Church of England in the United States. After the Revolutionary War, Anglicans in the U.S. could no longer accept the King of England as the official head of their Church. So, they separated to form their own organization, although Episcopalians are still part of the global Anglican communion.

In stark contrast to the Mainline churches is the Pentecostal Church, which accounts for about 4% of the U.S. population. Originating in Kansas in the early 1900s, Pentecostalism is a fundamentalist movement. Fundamentalists tend to view the Bible as strictly factual and unerring. And while most Mainline churches tend to feature formal liturgical services, in Pentecostal churches, sermons and prayers are to be extemporaneous expressions of the Holy Spirit, and the services can therefore be pretty lively. The Pentecostal movement is often seen as the predecessor of the later Evangelical movement.

About 14% of Americans are non-denominational Protestants. They are members of churches that are part of the Protestant lineage, but which don't adhere to the doctrine of any larger church organization. Such churches develop their doctrine, for lack of a better term, "in house." There have long been non-denominational churches in the United States, but their popularity rose sharply in the 1970s, particularly in large urban and suburban "megachurches." Many of the converts to this new movement in Christianity had grown up in Mainline Protestant denominations. Frustrated or bored with the traditionalism of the Mainline, they sought churches that were more contemporary in their worship and personalized in their approach. Often times, these churches would crystalize around a particularly popular pastor. Many of these churches are closely connected to the modern Evangelical movement.



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Roman Catholics and Orthodox Christians

There are more than twice as many Protestants as Catholics in the United States, but because Protestants are so highly fragmented, the Roman Catholic Church is actually the single largest religious organization in the country, accounting for about 21% of all Americans. Eastern Orthodox Christians account for a much smaller share, about 1%.

Other Christian Groups

Mormons, who account for about 2% of the U.S. population, are followers of the Church of Jesus Christ of Latter Day Saints (sometimes abbreviated as the LDS Church). Founded in western New York state in the 1830s, LDS beliefs are based on the Christian Bible, but also on the teachings of the church's founder and prophet, Joseph Smith. Smith attempted to establish a Mormon community in western Missouri, but was driven out of the state. Smith and his followers retreated to Illinois, where Smith was murdered by a mob for some of his controversial teachings. In the 1840s, the Church's new leader, Brigham Young, led his followers to Utah, where the largest LDS organization is still based. Mormons are well-known for their missionary zeal, and LDS churches are now found throughout the United States and the world. Another church with origins in New York state, and likewise famous for its missionary proselytizing are the Jehovah's Witnesses, who account for about 1% of the U.S. population.

For a map showing the distribution of American religious affiliations by county, go to <https://tinyurl.com/countyreligion>.



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Evangelical Christianity

The term “evangelism” in Christianity simply refers to the spreading the word of Christ, and has been used by Christians for centuries. One of the largest Lutheran groups in the United States is called the “Evangelical Lutheran Church of America.” Since the middle of the 20th century, however, the term “Evangelical Christian” has come to refer to a specific movement within Christianity.

To begin, it is a trans-denominational movement, meaning that members of multiple Christian denominations identify as Evangelical. Some Mainline Protestants, and even some Catholics, have adopted the term. But those identifying as Evangelical are far more likely to be Baptist, Pentecostal, or non-denominational. Because it is a cultural movement, and not a specific church organization, a concise definition is difficult, but it usually implies four things. First, Evangelical Christians are likely to be fundamentalists – believing in the strict historical accuracy of the Bible. Second, Evangelicals believe that one must renew their faith in Christ, which is why they are sometimes referred to as “Born Again” Christians. Third, Evangelicals take seriously the traditional definition of the term, and make significant efforts to convert non-believers to Christianity. Finally, Evangelicals usually believe that their religious lives should intersect with every aspect of their personal lives.

The term Evangelical has also taken on three other connotations, which are true of many, but certainly not all, Evangelicals. First, Evangelical worship often reflects traditions established by the Pentecostal movement – it tends to be contemporary and lively. Second, some Evangelical movements preach a “prosperity gospel,” promising rewards not only in heaven, but in this life as well. Third, Evangelical Christianity has generally been associated with conservative politics. It has been said, somewhat sarcastically, that the most accurate definition of an Evangelical is “white, Christian, and Republican,” and Evangelicals are certainly a force to be reckoned with in Republican politics. That said, the political ideology of the movement may be shifting somewhat. Many younger Evangelicals tend to be far less conservative than their parents and grandparents, particularly regarding such issues as gay rights and climate change.

Non-Religious Americans

About 23% of Americans do not identify with any particular religious group. Of the three categories of non-religious individuals, 16% identify as unaffiliated, 4% as agnostic, and 3% as atheist.

Other Religions

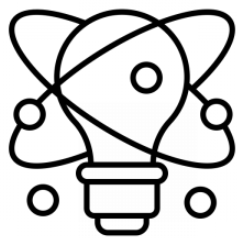
Judaism has long been the largest non-Christian religion in the United States. About 40% of the world’s Jews live in the U.S., and they make up about 2% of the country’s population. Muslims, Buddhists, and Hindus each account for about 1% of the population. All other religions collectively account for around 2%.

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3.4: North America- Economic Geography I



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In Chapter 4, we defined the four sectors of the economy: the **primary sector** (raw materials extraction), the **secondary sector** (manufacturing), the **tertiary sector** (services), and **quaternary sector** (information). During the **preindustrial era**, the American economy revolved around the primary sector. In the **industrial era**, the American economy was focused on the secondary sector. In the current **postindustrial era**, more and more American livelihoods are dependent on the tertiary and quaternary sectors.

Each era has reshaped the geography of the United States. During the preindustrial phase, the American population was mostly rural, and the country's geography was highly dependent upon the location of raw materials. In the primary sector, mining has to take place where the minerals are; fishing has to take place where the fish are; timber has to take place where the trees are, and farming is heavily dependent upon the geography of soils and climate. As discussed in Chapter 32, American cities evolved along coasts, lakes, rivers, canals, and railroads in order transport and process those raw materials. Those same cities blossomed during the industrial era, when manufacturers found them to be convenient places to accumulate raw materials and components, and to distribute finished products, as in the Steel Belt.

Here, we will examine the geography of the postindustrial era. How has the rise of employment in the tertiary and quaternary sectors changed the geography of the country?



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The Tertiary Sector

The tertiary sector is the service sector, in which workers provide services to businesses and consumers. Examples of the tertiary sector include transportation, retail, wholesale, food service, telecommunications, property maintenance, health care, live entertainment, and public services like police and fire departments, social work, and the military. Because much of the service sector revolves around proximity to potential consumers, the tertiary sector largely reinforced the geography that already existed in the United States – it did little to rearrange it.

One major exception is tourism, which is one of the largest components of the tertiary sector. In the 20th century, as incomes rose in America and around the world, and as modes of transportation became cheaper and faster, more and more people engaged in recreational travel. Some of that travel was to cities that grew up during the industrial era. New York, Chicago, San Francisco, New Orleans, Washington, Boston, and Nashville are all particularly popular destinations, and tourism is integral to the economies of those and other American cities.

Still, there are many towns and cities around the country that grew up almost entirely around the tourism industry. The evolution of places like Las Vegas, Nevada; Orlando, Florida; Sedona, Arizona; Branson, Missouri; Napa, California; and Aspen, Colorado is

tied almost entirely to tourism. The same can be said for hundreds of cities and towns along the Atlantic, Gulf, and Pacific coasts, along the upper Great Lakes, in the hills and mountains of the Northeast and the Upland South, in the mountains and canyonlands of the West, and on the islands of Hawaii.



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The Quaternary Sector

The quaternary sector deals with generating, managing, and interpreting information. Finance, media, technology, education, consulting, engineering, and research are just a few examples of this sector. It is the fastest-growing sector of the American economy, and is emerging as a leading employer for college-educated Americans. The quaternary sector enjoys much more geographic freedom than the other three economic sectors. This information sector is essentially a “weightless” economy. Theoretically, information sector jobs can be performed just about anywhere. If you’re designing software, or analyzing risk for an insurance firm, you don’t rely on raw materials or transportation. Still, there is some geography to the quaternary sector. The quaternary sector has thrived in four kinds of places: large metropolitan areas, places near large university complexes, in places with specialized labor pools, and in places with attractive topography and climates.

Like the secondary sector, the quaternary sector tends to favor large metropolitan areas. Workers in this sector are often highly educated, and different firms will actively compete with one another for the most talented employees. Large metropolitan areas offer more amenities to potential employees, meaning that they offer more interesting stuff to do. If two firms are competing for the same employee, and one firm is located in New York City, and the other is located in Wichita, the firm in New York is likely to win that battle. Also, large cities have a bigger pool of potential employees, which makes labor cheaper.

The quaternary sector is also thriving near large university complexes – places that have several prestigious colleges are universities. Such places offer a larger pool of college graduates to recruit from. Also, universities are the epicenter of cutting-edge research, and quaternary sector firms often consult and partner with these universities, so being in close proximity to them is beneficial. Universities are to the Information Age what coals mines were to the Industrial Revolution.

A prime example of this is Silicon Valley, just south of San Francisco. Its proper name is the Santa Clara Valley, and it falls right between Stanford University and Cal-Berkeley, two global leaders in software design and research. Route 128 is another example. A globally prominent research corridor, Route 128 is located in Boston, the home of Harvard, MIT, and many other leading colleges and universities. Chicago is yet another example. Unlike many other Midwestern industrial cities, Chicago has made a smoother transition to the post-industrial era, largely because it is bookended by Northwestern University and the University of Chicago, two of the most prestigious research universities in the country.



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This economic importance of colleges and universities can be found throughout the country. If you examine any state, and ask which city is doing the best economically, it's often home to a flagship university. Ohio and Michigan, for example, are two states that have suffered from significant industrial decline. Still, places like Columbus (home of Ohio State), East Lansing (Michigan State), and Ann Arbor (Michigan), have fared pretty well because of their universities.

Additionally, highly specialized fields within the quaternary sector are often already concentrated in a particular city. Those wishing to work in that field are wise to move to that city, and firms in the field are practically required to locate there if they want to find employees. Examples include advertising in New York, auto engineering in Detroit, software in Boston and San Francisco, food research and marketing in Chicago, and different segments of the entertainment industry in New York, Los Angeles, Chicago, Nashville, and Austin.

Finally, and somewhat ironically, environment has played a major role in the quaternary sector's reshaping of American geography. It is ironic because the information sector is largely divorced from environmental needs. But just as large cities can lure potential employees, so can attractive environments. This is known as **amenity migration** – migration driven by preferences for certain kinds of natural environments. Often amenity migration is driven by topography – a lot of Americans prefer mountainous environments and the recreational opportunities that go along with them. This explains the recent population boom in states like Colorado and Utah. But the far more important factor has been climate. Given the choice, more Americans prefer to live in places with mild winters. A college graduate who is offered one job in Buffalo, and another in San Diego, is far more likely to choose the job in San Diego.

This subset of amenity migration is known as **Sunbelt migration**. Definitions of the Sunbelt vary, but it is most often associated with states in the American South, Southwest, and West Coast. California, Texas, Georgia, Florida, Nevada, and Arizona best exemplify the Sunbelt. Sunbelt migration accelerated in the 1950s with the evolution of the quaternary sector, and shows few signs of slowing down. The effects of Sunbelt migration can be seen in the table below, which shows the twenty largest American metropolitan areas in 1950, and again in 2010:

Selected American Cities, ranked by population

Rank	1950	2010
1	New York	New York
2	Chicago	Los Angeles
3	Los Angeles	Chicago
4	Philadelphia	Dallas-Ft. Worth
5	Detroit	Houston
6	Boston	Washington
7	San Francisco-Oakland	Miami
8	Pittsburgh	Philadelphia
9	St. Louis	Atlanta
10	Washington	Phoenix
11	Cleveland	Boston
12	Baltimore	San Francisco-Oakland
13	Minneapolis-St. Paul	Riverside
14	Buffalo	Detroit
15	Cincinnati	Seattle
16	Milwaukee	Minneapolis-St. Paul
17	Kansas City	San Diego
18	Houston	Tampa
19	Providence	Denver
20	Seattle	St. Louis

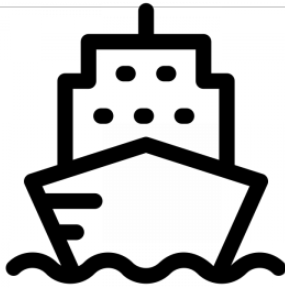
Over that sixty-year period, New York retained its spot at the top of the list, but the rest of the list has been rearranged by Sunbelt migration. Fourteen cold-winter metro areas with saw their population ranks decline, including Chicago, Philadelphia, Detroit, Boston, St. Louis, and Minneapolis-St. Paul, Pittsburgh, Cleveland, Baltimore, Buffalo, Cincinnati, Milwaukee, Kansas City, and Providence. Eleven mild-winter metro areas – Los Angeles, Houston, Seattle, Dallas-Ft. Worth, Miami, Atlanta, Phoenix, Riverside, San Diego, and Tampa – all saw their rankings improve.

Did you know?

College of DuPage, of course, is in the knowledge business – thus, in the quaternary sector. The college's mascot is the chaparral, another name for the roadrunner bird. Wikipedia lists only two teams with this sports mascot, the other being the former ABA basketball team, the Dallas Chaparrals (now the San Antonio Spurs), but there are a few other colleges and high schools with this mascot.

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3.5: North America- Historical Geography I



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The history of the United States, and its current geography, have been deeply influenced by transportation, and nothing has shaped the American map more than water transportation. Water was far and away the most important means of domestic transport until the late 1800s, and is still a primary means by which products are shipped into, out of, and around the country. Because of this, water was by far the most important factor determining the location of major American cities, particularly in the eastern half of the country. More often than not, the initial economic activity that created these cities was shipping on an ocean, lake, canal, or river. Water traffic was essential to the founding of major American cities in five different regions:

- **The Atlantic Coast (the East Coast):** For years, most American imports and exports came into and went out of the country via the Atlantic Ocean. So, it's not coincidental that some of the country's most important cities evolved as major ports on the East Coast. Such cities include New York, Boston, Philadelphia, and Baltimore. For years, the American South was far less industrialized than the Northeast, so its Atlantic ports were not nearly as important. Still, many major southern cities began life as an Atlantic port, such as Miami, Norfolk, and Jacksonville.
- **The Mississippi Valley (the Central Coast):** As the interior of the country was opened to non-native settlement, the Mississippi River and its tributaries were the primary means of moving people and goods around the central U.S. You can think of the Mississippi Valley as being a sort of "Central Coast." The primary Mississippi River ports were Minneapolis, St. Louis, Memphis, and New Orleans. The cities of Pittsburgh, Cincinnati, and Louisville sprang up as ports along the Ohio River (as did Nashville via the Cumberland River), and the cities of Kansas City and Omaha began as ports on the Missouri River.
- **The Great Lakes (the North Coast):** As is discussed in Chapter XX, the Great Lakes were integral to the development of the Steel Belt, the United States' most important manufacturing region. Several major industrial cities originated as ports on the "North Coast," including Chicago, Detroit, Cleveland, Milwaukee, Buffalo, and Duluth.
- **The Gulf Coast (the South Coast):** As mentioned above, the ports of the American South were less active than those of the rest of the country early on, but over time, particularly as trade with Latin America increased, the ports of the Gulf Coast (or "South Coast") became some of the most important cities in the region. Such cities included Houston (via Galveston Bay), Mobile, Tampa, and New Orleans (which overlapped with the Mississippi Valley).
- **The Pacific Coast (the West Coast):** Most of the major cities of California, Washington, and Oregon began as ports on the Pacific Ocean, including Los Angeles, San Francisco, Seattle, San Diego, Sacramento (via the Sacramento River), and Portland (via the Columbia River).



Transportation and Urban Location. Cartography by Kelly McFadden.

An early ambition of the United States was to link together the four “coasts” (Atlantic Coast, Mississippi Valley, Great Lakes, and Gulf Coast) in the eastern half of the country. Of course, the Atlantic is naturally connected to the Gulf, and the Gulf is naturally connected to the Mississippi River. The real trick was finding a way to link, by water passage, the Great Lakes with the rest of the country.

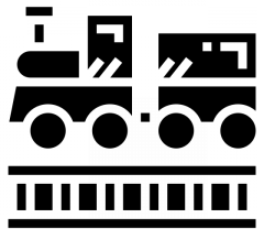
For Americans, the biggest geographic problem with the Great Lakes is the way they empty into the Atlantic Ocean. Even after Canada completed the Welland Canal, bypassing Niagara Falls, in 1829, it was hardly helpful for the U.S., since Canada was still a colony of Britain, and the U.S. was not yet on particularly good terms with the British. And even if they had been, Lake Ontario connects to the Atlantic via the St. Lawrence River, which enters the ocean hundreds of miles north of the United States’ major East Coast cities.



Photo by Mitch Barrie on Flickr.

So, the United States dug its own canal. Completed in 1825, the Erie Canal cuts across Upstate New York, connecting Lake Erie at Buffalo to the Hudson River at Albany. The Hudson River then flows to New York City. This shipping route finally connected the economy of the Atlantic Ocean to the economy of the Great Lakes, and is the primary reason why New York became the most important city on the East Coast.

The United States then sought to create a direct link between the Great Lakes and the Mississippi Valley. It accomplished that in 1848 with the completion of the Illinois & Michigan Canal. The I&M connected Lake Michigan at Chicago with the Illinois River at Morris. The Illinois River then flows south to the Mississippi River near St. Louis. Just as the Erie Canal cemented New York’s position as the most important city on the East Coast, the I&M cemented Chicago’s position as the most important city in the Midwest.



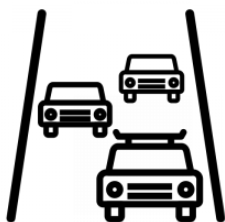
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The second-most important form of transportation in shaping the geography of the United States was the railroad. The first practical steam locomotive was invented in the 1830s, and became an important mode of shipping in the United States around the 1860s. Most of the major cities in the eastern half of the United States had already been established by that point, and the railroads of the east largely reinforced the importance of established transportation routes and cities. Chicago, for example, became the most important rail hub in the Midwest, and soon rail traffic would soon dwarf that of the city's canal, but the reason that Chicago became the rail hub, rather than, say, Kenosha, Wisconsin, is because the canal had already established Chicago's importance. Similarly, as railroads decreased the importance of the Erie Canal, most of the rail traffic connecting the Steel Belt to the East Coast still passed through cities that became important *because* of the canal – cities like Buffalo, Rochester, Syracuse, Utica, Schenectady, Albany, and, of course, New York City.

That said, a few eastern cities owe their importance to the railroad, and one major example is Atlanta. Since it was difficult to build railroads across the Appalachians, many rail lines went around the mountains. Since Atlanta is located at the southern tip of the Appalachians, almost all major rail lines in the South passed through there, making Atlanta the most important southern city, as it remains today.

It was a different story in the American West. West of Kansas City and Omaha, the climate becomes quite dry, which means there are few rivers that carry enough water year-round to be of much use for shipping. So, a lot of Western cities got their start because they were located along a major rail route. Dallas, Albuquerque, Denver, Phoenix, and Salt Lake City are all cities that became prominent once the railroad arrived.

Finally, railroads reinforced the importance of three West Coast cities. The first railroads to reach the Pacific Ocean terminated at San Francisco-Oakland, Los Angeles, and Seattle. It is not a coincidence that the first three Pacific ports to be connected by rail to the eastern U.S. are today the three largest metropolitan areas on the West Coast.



Created by Toorah Khan
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Unlike waterways and railroads, highways had little to do with creating large urban areas. For the most part, they simply reinforced the existing geography of the United States. They did, however, reshape the internal geography of American cities. The reason why highways had such little impact on shaping the national map of the United States is because they came along relatively late, well after the major urban areas were well-established. Prior to the 1920s, outside of cities, highways were rare, poorly maintained, and usually unmarked.



Transportation at Night.
Boyd Shearer on Flickr.

Almost all passenger and freight transport was still done by water and rail. To drive from Chicago to Los Angeles, or even from Chicago to St. Louis, took a very long time, and was usually done only by adventurous spirits. Like highways, airlines had little to do with reorganizing the geography of the country, although they certainly aided in the development of such tourism-rich cities as Las Vegas, Honolulu, and Miami.

Did you know?

The name Chicago is derived from “Checagou,” the French version of the Native American word shikaakwa, a plant commonly known as a ramp or leek. These garlicky, onion-like plants once grew in abundance along Chicago’s once-marshy lakefront.

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3.6: North America- Physical Geography I



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Many – if not most – regions of continents have a physical basis and in North America, the Canadian Shield exemplifies this. The Shield is a three million square mile (eight million square kilometer) area of ancient geology, directly linked with Canada’s landforms, climates, and cultures. Ringing Hudson Bay, the Shield is the fundamental surface for nearly all of Labrador, Quebec, and Ontario, before extending into parts of Manitoba, Saskatchewan, and the Northwest and Nunavut Territories. These same Precambrian era (beginning 4.5 billion years ago) rocks extend for hundreds of miles under the sedimentary strata of surrounding regions, such as the Great Plains and Central Lowlands.



Cartography by Jeff Wandersen.

The Shield’s location – globally and within North America – not only has affected its landforms, but also its climate and therefore its soils and vegetation. In turn, human activities can’t be separated from the Shield’s physical characteristics because resource availability and exploitation, transportation and accessibility, settlement patterns and growth, and even cultures and lifestyles are so strongly affected by this environment.

Most of the rocks exposed in the Shield are over 600 million years old; some are older than four billion years. Their formation during the Precambrian period (sometimes referred to as the Cryptozoic or ‘hidden life’ eon) means that in the Shield there are virtually no fossil fuels (or fossils) but instead it holds an abundance of metal deposits. Native copper (pure copper) was found and used long ago by the indigenous peoples around Lake Superior (especially Michigan’s Upper Peninsula) while more recent mines were critical to the development of both countries. Gold, silver, nickel, and iron deposits have been major economic activities for two centuries; the iron deposits in Minnesota’s Mesabi Range supported the American steel industry from the late 1800s through the 20th century, while Ontario’s Sudbury mines did the same for Canada.

Erosion over millions of years exposed Shield rocks by removing mountains of soil and rock. Not only did this expose the deeper older rocks and allow easier access to mineral resources (including diamonds in recent decades), but also it helps explain the hydrology of the region. First, the rocks of the Shield are mostly igneous (often granitic) and are relatively impermeable. The surface works like a “shield” in blocking water from passing through the rock, snowmelt and rain tend to either runoff downslope (rivers) or be trapped in lower areas as lakes. Second, glacial activity, either through erosion or deposition, has created “deranged” (random) stream patterns and depressions for thousands of lakes. Minnesota may be the “Land of 10,000 Lakes” – check the

license plate – but Manitoba is the land of 100,000 lakes! (Canada claims to have the greatest amount of lakes in the world; Finland disagrees.)



Georgian Bay, Canadian Shield – Photo by Michael Beckman on Flickr.

The role of lakes and rivers created by glaciers and the Shield has changed over the centuries, but these waterways have always been vital to the inhabitants. During France's early colonization of Canada, access to the interior was either on foot or by canoe and the French voyageurs were famous for their travels to obtain pelts from the natives (now known in Canada as First Nations). Settlers, especially in Quebec, used the 'long lot' system where property included river-frontage for access and then extended onshore. In the last century a "cottage culture" developed where having a summer place on the water was part of the Canadian dream, for the wealthy at first, but then for the middle class. Fishing in Canadian waters now attracts millions of tourists each year and hydropower facilities provide over half of Canada's electricity.

Winters in the Canadian Shield range from cold (averaging -48°F) around the Great Lakes to extremely cold (averaging -30°F) near the Arctic Ocean, but summers – though short – can be warm to hot. Despite the lakes and rivers, Shield climates are classified as 'continental' so that seasonal extremes are the rule. The extreme northern latitudes are a factor. Winter days are extremely short (sometimes nonexistent) and the long summer days (up to 24 hours) allow vegetation to exist at the Arctic, attracting insects and the migrating birds that feed upon them (e.g., Canada Geese and Tundra Swans.) The early fur trade in the Shield relied on the heavier pelts of those animals that live through the brutally cold winters.

True tundra occurs in a climate that is found only on the northern shores of the Shield and lacks the forests that dominate the rest. Since most of the air masses in the Shield lack moisture, there is surprisingly little precipitation (and also little evaporation) but the remaining Shield climates can support pines, firs, and some deciduous trees. In Canada two climates – Taiga and Boreal Forest – dominate the Canadian Shield; taiga forests are shorter, less dense and to the north of boreal forests. The harsh weather of the Shield limits the variety of trees and has resulted in huge expanses of spruces and firs – the best trees for the pulp mills that cover Ontario and Quebec.

Most Shield soils are relatively thin, relatively infertile, and relatively acidic. The glaciers of the last Ice Age removed the existing soils and the development of new soils has been slowed by the climate. In short, agriculture is limited to the few places where rivers or lakes have deposited fertile silt, such as the Clay Belt south of Hudson Bay (where the former Lake Ojibway once stood.) Farther north in the Shield much of the soil is frozen year-round (permafrost), which creates huge problems for construction during summer, melt. In the summer peat bogs (containing decayed vegetation) and swamps appear in the Shield and are a major concern for global warming; the increased decomposition of peat from higher temperatures adds even more carbon dioxide to the atmosphere.



Photo by Francis Mariani on Flickr.

The geology of the Canadian Shield, combined with the history of the rise and fall of the Ice Age and with the northern latitudes of Canada, creates a large swath of Canada that has a plethora of mineral resources exploited for wealth, a network of waterways used for transportation and tourism, and a landscape better suited for forests than for agriculture.

Did you know?

During the Cold War following WWII, the US was concerned about a nuclear attack by the Soviets (Russians). Since the shortest air route for Soviet bombers to reach America was across the North Pole and Canada, to monitor this potential Soviet threat, a system of radar stations was placed across the Shield. This DEW Line (Distant Early Warning Line) has since been 'transitioned' to the North Warning System, but the relative location of the Shield means it remains important to US defense strategies.

Hudson Bay wasn't a bay before the last Ice Age and eventually in the future it won't be a bay either. This is due to isostatic rebound, the gradual rise of land after the departure of glaciers or ice sheets.

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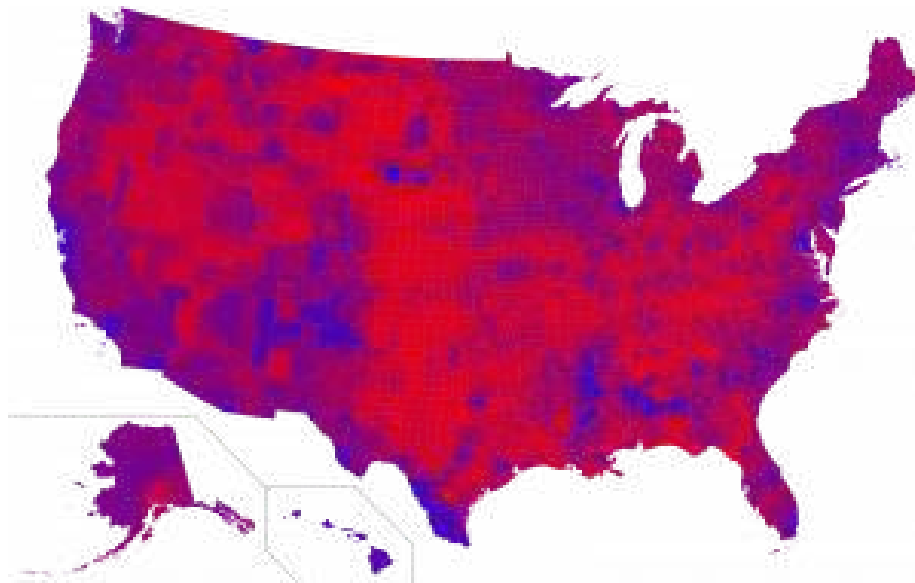
3.7: North America- Political Geography I



Elections by Bartosz Kapka from Pixabay.

In the 2016 presidential election, the votes in Claiborne County and Wayne County were not at all close. In Claiborne County, 87% of voters selected Hillary Clinton. In Wayne County, 84% of voters chose Donald Trump. This might not surprise many people, given the apparent polarization of the American political map. What might surprise them, however, is the location of those two counties. The heavily Republican Wayne County is in Illinois. The heavily Democratic Claiborne County is in Mississippi.

Each presidential election generates a new map. States won by the Democratic candidate are shaded blue, and states won by the Republican candidate are shaded red. For the past several elections, many of those states have always been solid blue, while others remain solid red. These maps are useful, given the winner-take-all nature of the electoral college, but they can create something of a political mirage. These maps might leave someone with the impression that nearly everyone in Texas, Georgia, and Missouri is a Republican, while nearly everyone in California, New York, and Illinois is a Democrat. That is not the case. In 2016, Hillary Clinton received a significant share of the vote in Texas (43%), Georgia (46%), and Missouri (38%), while Donald Trump received a significant share of the vote in California (32%), New York (37%), and Illinois (39%). While none of these states were terribly competitive, it is important to note that there are plenty of Democrats in red states, and plenty of Republicans in blue states. It is rare for the losing presidential candidate in a state to receive less than a third of the vote.

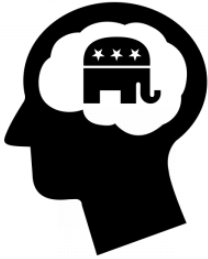


2016 Presidential Election by County (Red-Blue-Purple View, where darker shades show higher percentages). Map by Ali Zifan.

That said, there are certainly areas of the country that tend to lean heavily toward one party or the other, while other parts of the country are extremely competitive. Here, we will look at nine essential facts about America's political-ideological geography. We will examine the places where Democrats or Republicans do well in elections, as well as those places that are competitive. The first three facts will include brief examinations of the traditionalistic, moralistic, and individualistic American political subcultures, which were first defined by political scientist Daniel J. Elazar in 1966.

1. Republicans Do Well in the Traditionalistic South.

The Southern political region roughly corresponds to those states that were once part of the Confederacy: South Carolina, Mississippi, Alabama, Georgia, Louisiana, Texas, Virginia, Arkansas, Tennessee, and North Carolina. The region also includes West Virginia, Kentucky, Oklahoma, and southern Missouri, which were not part of the Confederacy, but which have traditionally shared the South's political ideology. Florida was part of the Confederacy, but is its own unique political region, and will be discussed below.



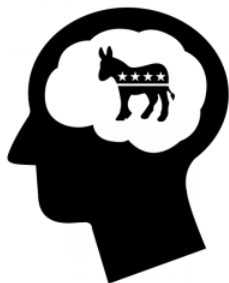
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from Noun Project

The South is the birthplace of the **traditionalistic** American political subculture, and is still dominated by it. This subculture is built on three foundational beliefs. First, respect for traditional religious, family, and social values are profoundly important, and politicians are expected to share those values. Second, government should be small and limited to basic operations; it should not be expansive or innovative. Third, taxation and spending should, as a result, be limited.

The South was once solidly Democratic, but the political emphasis on small government, low taxes, and traditional values much more closely aligns with the Republican Party today. For the last forty years, the South has been solidly red. As we'll see below, Virginia has drifted somewhat from these traditionalist values, as has North Carolina. There are even signs that Texas and Georgia are shifting from the traditionalist subculture, and could turn blue in the next decade or so. The rest of the South, however, shows few signs of abandoning their loyalty to the Republican Party anytime soon.

2. Democrats Do Well in Moralistic New England and the West Coast.

New England was the birthplace of the **moralistic** political subculture. This subculture is the polar opposite of the traditionalistic subculture. It believes that government can and should be a positive agent promoting the collective well-being, and that politicians should be driven by progressive issues. Government should not be limited, but large and innovative, and taxation and spending should be utilized to promote the public good.



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These ideals closely align with the liberal wing of the Democratic Party. New England was, for many years, a Republican stronghold. The abolitionist movement was born in New England, and drove the early evolution of the Republican Party. Over time, however, as Republicans grew more conservative, the region began to drift away from the party, and is now mostly Democratic. Two standard-bearers of the moralistic subculture, Senators Bernie Sanders and Elizabeth Warren, are from Vermont and Massachusetts, respectively. In 2016, Donald Trump did not win a single county in either of those states.

The moralistic subculture is also strong on the West Coast, particularly in liberal bastions like San Francisco, Portland, and Seattle. This region was the political hearth of a number of progressive ideals, including the gay rights and environmentalist movements.

Democrats usually dominate statewide races in California, Oregon, and Washington.

3. Much of the Individualistic Midwest is Competitive.

North Dakota, South Dakota, Nebraska, Kansas, and Missouri all have a tendency to lean Republican in presidential elections, but each of those states has elected a Democratic governor or U.S. senator at some point in the last two decades. Minnesota and Illinois tend to lean Democratic in presidential elections, but both states have elected Republican senators and governors over the last two decades.



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The rest of the Midwest – Iowa, Wisconsin, Michigan, Indiana, and Ohio – along with neighboring Pennsylvania, are some of the most competitive states in presidential elections. They are classic swing states. They are dominated by the **individualistic** political subculture, which originated among German and English settlers in the Mid-Atlantic states. They carried their ideals across the Appalachians to the Midwest, where the subculture is strongest today. The individualistic subculture falls between the moralistic and traditionalistic subcultures, both geographically and ideologically. Unlike traditionalistic Southerners, Midwesterners are not obsessed with making government as small possible. They typically favor good schools, a solid infrastructure, safe streets, and a strong military, and they are willing to pay taxes to maintain them. That said, Midwesterners often find that the moralistic subculture of New England and the West Coast takes things too far. Individualistic voters don't believe that government is a bad thing, but also don't believe that it's government's job to solve all of the world's problems.

Essentially, individualistic voters view government as a business. It should be practical and utilitarian. Taxes are an investment, and voters expect a return on that investment. Government spending should emphasize economic growth. Voters in this subculture are generally unconcerned with a candidate's personal life – they're not expecting politicians to be saints or crusaders, they simply want pragmatism. Extremely liberal or extremely conservative ideologues have a tough time in the Midwest's swing states. Voters there have demonstrated that they are willing to swing from one party to the other, provided the candidate is moderate and practical.

4. Hybrid Florida is Very Competitive.

Florida is an unusual mixture of voters. The northern part of the state is an extension of the South's traditionalistic region, which heavily favors Republicans. Florida is a popular destination for retirees, most of whom are older, white, and middle or upper-class, which also favors Republicans. However, Florida is also home to numerous large cities and a significant immigrant population, which strongly favors Democrats. Additionally, much of the state has been settled by migrants from the individualistic Midwest and Mid-Atlantic, who might favor moderates of either party. As a result, margins between Republicans and Democrats tend to be razor thin in Florida. That fact, coupled with the state's large allotment of electoral votes, makes it one of the most hotly contested states in each presidential election.

5. Republicans Do Better with White Voters; Democrats Do Better with Voters of Color.

According to exit polls in 2016, Donald Trump won 58% of the white vote, compared to Hillary Clinton's 37%, a huge margin. Clinton, however, did far better among the three primary non-white populations, trouncing Trump among Black voters (88% to 8%), Latino voters (66% to 28%), and Asian voters (79% to 17%).

These numbers do not bode well for Republicans. The percentage of non-white voters in the United States is steadily increasing, and it stands to shift the political map significantly if party loyalties remain the same. Nowhere is this more apparent than the Interior West. The region has traditionally been a Republican stronghold, and some of Trump's biggest margins of victory came in states like Wyoming, Idaho, Montana, and Utah – he won each of those states by more than ten percentage points. They are also

predominantly white. 78% of Utah's population is white, and in Wyoming, Idaho, and Montana, that number tops 80%. Hillary Clinton, however, won states where the white population was smaller, including Colorado (68% white), Nevada (48% white), and New Mexico (37% white). Trump won by just four points in Arizona, which is 54% white. Arizona, usually solid red, might turn blue in 2020.

6. College-Educated Voters are Trending Democratic.

For years, the Republican Party's policies have favored business owners and managers, while the Democrats were largely the party of the working class. As a result, Republicans have traditionally fared better among voters with a college degree. That pattern has been reversing for several years, and in 2016, Hillary Clinton defeated Donald Trump among college-educated voters, 52% to 43%. This trend explains North Carolina's shift from a solid-red state to a swing state. As cities like Charlotte and Raleigh-Durham have morphed into major centers of finance and research, North Carolina has experienced a significant increase in the number of voters who are college graduates.

This trend was also reflected in 2016's national electoral map. The ten states with the highest percentage of college graduates are Massachusetts, Colorado, Maryland, Connecticut, New Jersey, Virginia, Vermont, New Hampshire, New York, and Minnesota. All ten of those states were won by Hillary Clinton. The ten states with the lowest percentage of college graduates are Mississippi, Arkansas, Kentucky, Louisiana, Nevada, Alabama, Oklahoma, Indiana, Tennessee, and Wyoming. All but one of those states were won by Donald Trump.

7. Democrats Do Well in Cities

Cities are big, complex places, often requiring big, complex government programs. Compared to rural areas and small towns, cities also tend to be younger, more ethnically diverse, and better educated. Urban populations tend to be progressive on social and cultural issues, like race, gender, and sexuality. City dwellers are also likely to recognize the societal codependence required of living in a densely populated area. All of these traits strongly favor Democrats. This is why Democrats usually do well in places like the Northeast, the West Coast, and the Steel Belt, all home to large urban agglomerations.

State by state, large and mid-sized urban areas tend to be blue. In 2016, Hillary Clinton won in just twelve of Illinois' 102 counties, but they were all densely populated counties, allowing her to carry the state comfortably: Six of them were in the Chicago metro area, one in the St. Louis metro area, and the remaining five contained the mid-sized cities of Champaign-Urbana, Carbondale, Peoria, Moline, and Rockford. Cities lean Democratic even in deep-red states. In Utah, which was easily won by Donald Trump, Clinton still won in Salt Lake County, home of the state's largest city.

8. Republicans Do Well in Rural Areas

Democrats do well in some rural areas. Claiborne County, Mississippi, mentioned at the top of this chapter, is a very rural area of only about 9,600 people. In 2016, Hillary Clinton received 87% of the votes in Claiborne County, which is, not coincidentally, 84% African-American. Similarly, Zapata County, Texas, home to just 14,000 people, delivered 66% of the vote to Hillary Clinton. Zapata County is 85% Latino.

Most rural counties in the United States, however, are predominantly white, and lean heavily Republican. Wayne County, Illinois, where Donald Trump received 84% of the vote, is 98% white. As mentioned above, Wayne is one of the ninety Illinois counties, mainly rural and white, won by Trump. In deep-blue California, Donald Trump failed to receive even a third of the statewide vote, but cruised with 72% of the vote in Lassen County, which is located in the remote, rural northeastern corner of the state.

In addition to being whiter than the national average, rural areas also tend to be older and have a lower percentage of college graduates. They also tend to adhere to traditional views of cultural, religious, and social issues, all of which favor Republicans. Unlike big and complex cities that highlight societal codependence, life in rural areas often features a good deal of personal independence. State and federal governments are often seen as a distant nuisance, at best. Many rural voters prefer that problems be solved by families, churches, or local government. This also very much favors Republicans.



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9. The Suburbs are Increasingly Competitive

Like North Carolina, Virginia used to be a solidly conservative, but it has drifted toward the political center in recent years. It now leans Democratic in presidential elections, and a major part of shift has come from northern Virginia, in the suburbs of Washington, D.C.

The suburbs have traditionally been white and middle or upper-class. As a result, they have also traditionally been predominantly Republican. That is changing. Suburban Republicans often do not share some of the deeply conservative values of rural Republicans. On cultural, environmental, and social issues, as well as on the issue of immigration, suburban voters tend to be relatively moderate. The suburbs are also becoming more ethnically diverse. Most importantly, suburbs tend to have very high concentrations of college-educated voters. All of these trends favor Democrats. While suburban voters are unlikely to flock to extremely liberal candidates anytime soon, they are increasingly turned off by extremely conservative candidates as well. Donald Trump, in particular, has become deeply unpopular in the suburbs, particularly among college-educated women. In 2016, Donald Trump won the suburban vote, 49% to 45%. Polls in mid-2020 have him losing 60% to 35%, a massive collapse. Suburban counties will be among the most closely watched in the 2020 election.

Did You Know?

Missouri, now a reliably red state, was once the ultimate swing state. In the 20th Century, Missouri voted for the winner in all but one presidential election. In 1956, Missouri was won by Illinois Governor Adlai Stevenson, who lost the general election to President Dwight D. Eisenhower.

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3.8: North America- Population Geography I



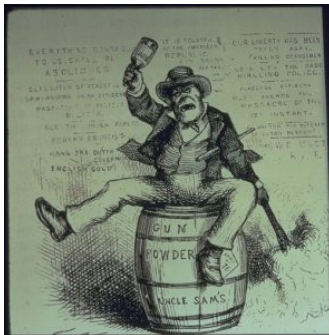
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When Donald Trump announced his candidacy for the Republican presidential nomination in 2015, he shocked many Americans, and delighted many others, with a stridently anti-immigrant message:

“When do we beat Mexico at the border? They’re laughing at us, at our stupidity.... The U.S. has become a dumping ground for everybody else’s problems.... When Mexico sends its people, they’re not sending their best.... They’re sending people that have lots of problems, and they’re bringing those problems with us. They’re bringing drugs. They’re bringing crime. They’re rapists.”

Trump’s message catered to those who feared that immigration rates were at a dangerous and unprecedented level, and upset those who believed his message was unprecedented in its divisiveness. Of course, any student of American history knows that current rates of immigration to the United States are not unprecedented, and that ugly and divisive debates about immigration are also nothing new.

Immigration to the United States has ebbed and flowed over the years, largely due to changes in American immigration policies, as well as to fluctuations in both the American and the global economy. As a result, the percentage of foreign-born residents of the United States has risen and fallen over the years. It peaked in 1890, when 14.8% of Americans had been born in a foreign country. It fell to its lowest level in 1970, when just 4.7% of Americans were foreign-born. Throughout much of American history, that number has usually hovered around 11%. As of the 2010 census, 12.9% of Americans were born in a foreign country, just a little above the historic average.



Immigration is nothing new, nor is resistance to it. Every March, millions of Americans deck themselves out in green, and flock to parades, festivals, and parties to celebrate St. Patrick’s Day. They are celebrating Irish culture, and the contributions of Irish immigrants to American culture. The Irish were not always so celebrated in America. This cartoon, entitled “The Usual Irish Way of Doing Things,” was published in 1871, and drawn by Thomas Nast. It depicts an Irishman as an unruly, apelike creature, waving a liquor bottle as he sets off a powder keg. Nast was infamous for his anti-Catholic, anti-Irish sentiments, but he was not, in his time, regarded as a dangerous radical. Nast was one of the most popular political cartoonists of his day, and his anti-Irish attitude was shared by millions of Americans. Irish-Americans were not the first group to face an anti-immigrant backlash, and they certainly wouldn’t be the last. Immigrants from Poland, Italy, Japan, China, Mexico, and dozens of other countries have faced similar discrimination.

Here, we will examine anti-immigration and pro-immigration arguments. It is nuanced debate. Some are hardliners in their anti-immigrant sentiments, believing that immigration should be greatly reduced, or even eliminated entirely, and that all undocumented

immigrants should be deported. Others agree that immigration is necessary and inevitable, but that immigration rates should be reduced and that immigration rules should be more strictly enforced. On the other end of the spectrum, many argue that immigration is beneficial to the United States, and that current immigration rates should be at least maintained, and perhaps even increased. Many believe that undocumented immigrants should be given a clear pathway to citizenship.

The Anti-Immigration Argument



Created by Matt Wasser
from Noun Project

We'll begin with two very common anti-immigration arguments that don't hold up under scrutiny. Many anti-immigration advocates argue that immigration leads to increased crime rates (as evidenced in the excerpt from the Trump speech above), and that immigrants are a drain on public funds, utilizing many public services, but paying few taxes.

Of course, it would be ridiculous to argue that immigrants commit no crimes. That said, the evidence suggests that not only does immigration *not* lead to an increase in crime, but that immigrants are, in fact, *less likely* to commit crimes than those born in the United States. As for the public funding debate, a sudden influx of immigrants into a place can indeed put a strain on public resources. This is particularly true in public education. Still, in the larger picture, immigrants are hardly a drain on the tax base. They most certainly pay taxes. Everyone is obligated to pay sales taxes – there is no way around that – and immigrants pay property taxes, either directly through property they own, or indirectly through property they rent. Documented immigrants must pay federal and state income taxes, just like everyone else, and the widely held belief that undocumented immigrants do not pay income taxes is untrue. Hoping to avoid a crime that may lead to their deportation, and to create a paper trail that may aid in their eventual citizenship, most undocumented immigrants *do* file a tax return. In 2015, it was estimated that undocumented immigrants paid \$13.6 billion in federal income taxes.

A far more sound argument against immigration can be found in the labor market. Increased immigration inevitably leads to increased job competition and wage deflation. It is often argued that immigrants take jobs that native citizens are unable or unwilling to take, and there is certainly some merit to that argument. Still, there is no denying that increased immigration means that many native citizens will eventually find themselves competing for a job with an immigrant. Since many immigrants come from countries that are poorer than the United States, they are often willing to work for much lower wages than native citizens, and are thus more attractive to employers.

Additionally, increased immigration will drive wages down because of fundamental economic laws. If the supply of anything increases, its value decreases. This is why gold is more expensive than cardboard – one is rare, the other is not. As immigration increases the supply of labor, it becomes cheaper, and its value declines. Put simply, more immigration means more labor, which means lower wages. This has long been true in the blue-collar workforce, and is becoming increasingly true in white-collar fields as well.

Finally, cultural forces play a very important, although often unspoken, role in the anti-immigration movement. Geographers often use two terms when examining the cultural forces involved in immigration: acculturation and assimilation. **Acculturation** is a process in which immigrants shed some of their ethnic traits, while absorbing some traits of the mainstream culture. **Assimilation** is complete acculturation, where immigrants shed all of their ethnic traits, and fully adopt the traits of the mainstream.

In America, acculturation is inevitable. The children and grandchildren of immigrants will shed some of their ethnic traits, and replace them with the traits of classmates, coworkers, friends, and neighbors who are not part of their ethnic group (often to the dismay of their parents and grandparents). Total assimilation by ethnic groups, however, is rare. And if it does happen, it often takes many generations. As a result, a place that receives lots of immigrants will inevitably change. The civic, religious, economic, and

political institutions of the place will change. The faces, the food, the music, and dozens of other cultural traits will never be the same. For many Americans, this is a source of tremendous dismay. They see their towns and neighborhoods become less and less recognizable. That is why older Americans are more likely to be anti-immigrant than younger Americans. They have longer memories and often a greater sense of cultural change and loss.

The Pro-Immigration Argument



Immigration advocates also make cultural arguments. They argue that the United States is a rich multicultural mosaic created by immigration, and that further immigration only serves to enrich that mosaic. They might also argue that the anti-immigrant movement is hypocritical, since the vast majority of Americans are either immigrants or the descendants of immigrants. But perhaps the strongest pro-immigration arguments are based on profound economic and demographic realities of modern America.

First, there is the labor market. As mentioned above, immigration makes labor cheaper, and while that is not popular with workers, it is quite popular with employers. Some blue-collar industries, notably agriculture and food processing, would simply not be profitable in their current forms without access to cheap immigrant labor. And, as mentioned above, immigrants are increasingly filling white-collar jobs as well. It is difficult, if not almost impossible, to go to an American hospital, university, research lab, or engineering firm, and *not* find an immigrant working as a doctor, nurse, technician, professor, scientist, or engineer. Among the immigrants who have arrived in the United States since 2010, 50% have held college degrees. That is significantly higher than the native-born population of the United States, among whom only 30% have college degrees. This process is known as a **brain gain**, in which wealthy countries successfully draw the best and brightest from the world's poorer countries.

Immigrants are important to the current U.S. economy, and they will only grow more vital over time. The current **total fertility rate** in the United States is 1.87, meaning that the average American woman has just under two children. That is below the replacement rate of 2.1. Without immigration, the population of the United States will eventually begin to decline. Low birth rates are also leading to a rapidly aging population. It is extremely difficult for a country to maintain economic growth without population growth, and an aging population leads to a diminished tax base, as well as decreased rates of production and consumption. Immigration provides a new pool of young workers, consumers, and taxpayers to offset declining birth rates.

Years from now, people may find our current immigration debate profoundly ironic. Today, many people are arguing about how to keep immigrants *out* of the country. In the not-too-distant future, the United States may very well be trying to figure out how to get more immigrants *into* the country.

Did You Know?

Thomas Nast is widely regarded as the founding figure of American political cartooning. He invented or popularized national icon Uncle Sam, the donkey and elephant mascots of the Democratic and Republican parties, as well as the modern face of Christmas – Santa Claus. His reputation has been tarnished by his anti-immigrant views. Ironically, Nast was himself an immigrant, having migrated with his family from Germany to New York at the age of six.

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3.9: North America- Urban Geography I

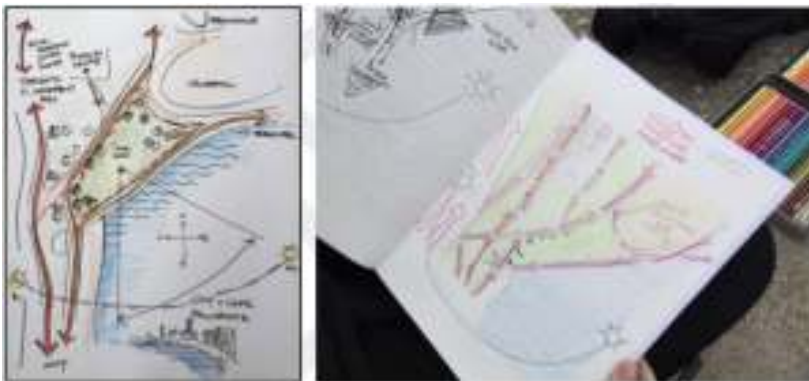


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from Noun Project

In 1974 the French author Georges Perec sat in the place Saint-Sulpice in Paris for three days and recorded everything he saw. His quirky essay “An Attempt at Exhausting a Place in Paris” reads like a laundry list of mundane observations. But as one progresses through the text a kind of rhythm is slowly revealed. Through his observations of the mundane, Perec brings to life the spirit of a place, its rhythms, pulsations, and attributes that makes real places and spaces memorable. Perec himself said that his attempt was to describe “that which is generally not taken note of, that which is not noticed.”¹ By observing the often overlooked aspects of everyday life, a deeper understanding of a place emerges.

What Perec was doing was making a kind of map. Not necessarily a literal map like we might think of, but rather a deep observation and record of a place. Architects are interested in the ways in which they can come to truly understand places and spaces in the built environment. Mapping, the act of recording and observing, is one method we can employ to understand and see places more clearly.

Architecture students are encouraged to use mapping as an analysis tool before beginning any design work. The idea is to look deeply at a place, observe, record, and analyze. This is an essential first step in the design process that occurs before any concept sketch or design gesture has been considered. The idea is that a deeper understanding of place and space will lead to more authentic and sensitive design responses to a given place.



Students in the Architecture 2201 Design I class use mapping exercises as a part of site analysis research before design begins. Photos by Mark A. Pearson.

Taking Chicago as a model, mapping can reveal and help us see and understand a place. It can also raise important questions for a designer to consider.

Architects often use types of maps known as figure grounds. Figure ground maps are graphically beautiful. Simplifying an urban environment into buildings (figure) and space (ground) can reveal patterns of development, scale and density. Overlay this same type of map with highlights of public parks and open space can reveal another type of pattern. These mapping activities also raise questions. Where are the public spaces in a city? Who has access to them?



Figure ground maps created using open source data from the Chicago Data Portal.



Traffic maps can reveal the movement and flow of people and products (and also tell you where not to drive), but have you ever looked at illustrative maps of fitness tracker activities? These beautiful maps reveal an entirely different pattern of use, leisure, and fitness within an urban environment. For an example, go to <https://flowingdata.com/2014/02/05/where-people-run/#jp-carousel-33724> ² By slightly shifting the way we look at a city, we can begin to see anew. The maps equally force us to ask questions about who has access and proximity to public parks, trails, and open space.

Mapping can also help us understand deeper social justice issues and reveal uncomfortable histories. In June 2020, WBEZ Chicago public radio published an essay on where banks have invested money through lending (mortgages) in the city, and where they have not. ³ The centerpiece of this article is a striking data visualization map which overlays the inequities of lending practices over neighborhood racial data. With striking clarity, it reveals the disparities that exist. Shockingly, these are not redlining maps from the 1930s and 1940s, rather, these maps reveal contemporary data collected from 2012 to 2018 which illustrate the lack of investment in poor and minority neighborhoods. Mapping, in this sense, is an activity that reveals. It forces us to encounter difficult truths about structural inequities within the urban environment.

The City of Chicago has an open source data portal tool that you can use to view and create your own mapping analysis projects. ⁴ In the Chicago Data Portal you can find maps illustrating datasets on everything you can imagine from crime to fire station locations, bike racks, abandoned vehicles, green roofs, grocery stores, urban farms, libraries, parks, red-light cameras, pothole repairs, and so on. You can use the data set tools to create your own mapping combinations and analysis. For example, draw a map that compares farmers' market locations to affordable rental housing, thus linking two things that are fundamental to human life, the needs for shelter and food. Unsurprisingly, there is a visible disconnect between affordable housing locations and access to fresh produce in the City of Chicago, such that areas with lower cost housing often are food deserts that lack fresh fruits and vegetables. Mapping in this way can help us understand the concept of food deserts by revealing spatial inequities. Mapping can help us ask the right questions. Who has access to fresh produce? Who does not? Why?

So what does this have to do with Architecture and Design? Well here are a few examples.

In 2012 Chicago Architect Katherine Darnstadt, in partnership with Architecture for Humanity Chicago, transformed a decommissioned CTA bus into a mobile produce market. ⁵ Called "Fresh Moves," this project transformed a city bus into a mobile farmers' market on wheels. It was designed to both raise awareness to the issues of food deserts within the City of Chicago, as well as to provide access to fresh produce for communities that lack that access to fresh nutritious food.



Ben Kolak, Courtesy Borderless Studio. This map of Chicago is painted in the parking lot of the former Anthony Overton Elementary School, highlighting 45 CPS school closures by neighborhood.

Chicago based designer and educator Paola Aguirre Serrano, founder of the firm Borderless Studio provides another example. In her project titled “creative grounds”, Aguirre Serrano addresses the issue of repurposing closed Chicago Public Schools.⁶ Part design project, part installation art, this project features a larger than life map of Chicago that was painted in the parking lot of the former Anthony Overton Elementary School, highlighting the neighborhood locations of over 45 CPS schools that have closed since 2013 due to budget cuts. This larger scale interactive map (you can walk on it) is a tool used to reveal. It is also used by the design team as a tool to spark dialogue about the topic of school closures and to solicit inclusive responses regarding the future repurposing of these structures.⁷ In this project, a map becomes the catalyst and a key element of a project that attempts to instigate inclusivity and collaboration around the difficult and politically charged topic of school closures. This map, and the resulting dialogue sessions, had the added benefit of creating a network of community partners. Anthony Overton school is located in the heart of the Bronzeville neighborhood in Chicago. In 2020 when the combination of pandemic and protest shut down many community grocery stores, this community partner network was leveraged to set up a rapid response food distribution center in the former school to assist neighbors who had no access to food in close proximity. Architecture firms like Borderless studio believe that design professionals should be discussing issues of design justice and asking questions like “Who benefits from design? Who gets the burden?”⁸

Maps are not just static illustrations. They are reflections of those who create them, and at best can be used as active tools to see and understand. The act of mapping can reveal, raise questions, illustrate, provide analysis, and ultimately help us to see, like George Perec, that which might otherwise remain unseen. For designers (and future design professionals), this ability to see and understand the spirit of a place is an essential component to the creation of meaningful, authentic design solutions, especially those solutions that attempt to make the built environment we all share a better place for everyone.

Did you know?

The city of Chicago is organized like a giant piece of graph paper, with the zero-zero point located at the intersection of State and Madison Streets. State and Madison streets are also the dividing line between North and South and East and West Street addresses. This giant Cartesian grid helps make the city logical and navigable. A typical Chicago city block is 660 feet. Every 800 street addresses (8 city blocks) equals a mile. Going North, Chicago Avenue (800 N) is one mile north, North Avenue (1600N) is two miles north, and Fullerton Ave (2400N) is three miles north of the city center. The same pattern works going west, with Halsted, Ashland, and Western Avenue each located at one mile intervals. There are some anomalies to this grid system, but for the most part Chicago, like the entire Midwest, is organized on a mathematical grid system based on one mile squares.

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3.10: North America- Medical Geography I



Created by José Manuel de Laa
from Noun Project

The circumstances of COVID-19 are anthropologically and geographically striking now in early June 2020. Spread of the disease has not produced a randomized pattern, but instead has affected Americans differently based on location and on social, racial, and ethnic patterns.

Throughout the country, governors issued stay at home restrictions and other strategies of mitigation, including public health responses that involve testing and contact tracing, quarantining, and treating the infected. Significantly, there has not been a national testing and contact tracing strategy for addressing COVID-19, even though over 100,000 Americans have died from this pandemic. It is shocking to know that we have had more Americans die in a little over two months than we lost in Viet Nam (58,000) and the Korean War (36,000) combined. Columbia University issued a report that if the US had closed one week earlier and began mitigation, then 36,000 American lives could have been saved. Over 40 million jobs were lost in the US by May 28, 2020.

Due to the ease of infection in places of high population density, early hot spots were Los Angeles, San Francisco, and Seattle on the west coast and New York City, New Jersey, and Boston on the east coast. New Orleans became a hot spot after the Mardi Gras festival. Detroit and Chicago were hot spots in the Midwest. Approximately half the country still has uncontrolled cases of COVID-19 but all the states have entered some phase of reopening the state and economy.



The strength in the US response has been its governors and local leaders across most of the nation. New York (Governor Chris Cuomo), California (Gavin Newsom), Washington (Jay Inslee), Michigan (Gretchen Whitmer), and Illinois (J. B. Pritzker) are but a few examples of governors and local leaders who let science be the primary reference when addressing their constituents.

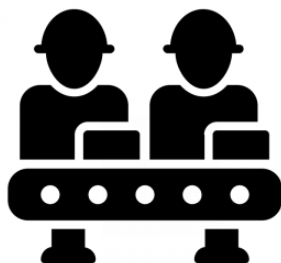
Other states have taken less scientific approaches. Officials in Georgia manipulated statistics to fraudulently report improvement in COVID-19 cases over time. Federal leadership also chose to avoid science when it contradicted their personal hopes for better news. President Trump fired the Health and Human Services Inspector General Christi Grimm after she issued a report observing the shortage of protective personal equipment (PPE) to properly respond to this pandemic. Scientist Dr. Nancy Messonnier of CDC was demoted after alerting the public that the upcoming pandemic would disrupt our lives. Whistle-blower scientist Dr. Rick Bright who headed BARDA, the division in CDC responsible for developing vaccines, was demoted after he would not recommend hydroxychloroquine, as otherwise touted by President Trump for treating COVID-19. Silencing and ignoring the advice of Dr. Anthony Fauci, Dr. Deborah Birx, and the CDC left the public with misleading and incomplete information.

The impact of the virus socially, demographically, and economically has varied. African Americans, Latinx, and Native Americans have been the hardest impacted communities. They are more likely to live in urban centers or where there is considerable dense population, thus in settings where this virus more easily spreads. They are at increased risk for being underinsured and malnourished than white Americans are. This impact is tied to the socio-economic inequalities that exist within these communities. Health disparities among these minority populations, such as greater rates of pre-existing conditions like high blood pressure, heart disease, diabetes and obesity, put these populations at increased risk of experiencing complications from COVID-19. Individuals who are 65 and older are among the groups with the highest rates of mortality from the virus.



COVID-19 sign in Arlington County, Virginia. Photo by dmbosstone on Flickr.

Economically we find that African Americans, Latinx, and Native Americans are more likely to be defined as essential workers who are not allowed to work remotely from their homes, but need to work on site. These workers are disproportionately people of color and immigrants. Smithfield Foods in Sioux Falls, South Dakota, is one such meat factory that had a noteworthy outbreak of COVID-19. Concerned about maintaining the supply of meat across America, on April 29, 2020, President Trump issued an executive order citing the Defense Act of 1950 to keep meat processing plants open to delay possible shortages of beef, pork, chicken and other meats. Oddly, President Trump did not use this act to increase production of personal protective equipment (PPE) for essential workers.



Created by ProSymbols
from Noun Project

Working on the disassembly-line these workers are in close quarters, practically shoulder to shoulder from each other preventing them from socially distancing. Needed masks would be hard to wear for long periods given the strenuous fast-paced nature of their work. Consequently, meat processing plants have been among the main vectors for transmitting the COVID-19 virus.

The close proximity in which individuals live and work can easily prompt the spread of COVID-19. A number of nursing homes across the country have reported numerous deaths, while prisons, such as in Marion, Ohio, and in Pine Bluff, Arkansas, face challenges to halt the virus. For a look at which jobs place workers at greater risks, examine the excellent diagram at <https://www.visualcapitalist.com/wp-content/uploads/2020/04/covid-19-occupational-risk-scores.html>

Federal, state, and local governments continue to search for ways to balance the health and economic challenges. For instance, many hotels that are no longer booking rooms could serve as places to isolate/quarantine individuals who test positive or who have had contact with someone who is positive when they live in with others. Hotel rooms could serve as places for first responders to live temporarily, otherwise worried about bringing the virus home to their families. The government could pay a per diem for these services, thus generating income for the hospitality industry that has been so gravely impacted by the shutdown of the national economy.

International comparisons are interesting and perhaps a topic for an additional essay. Countries that are effectively controlling the COVID-19 threat have done so by demonstrating strong political leadership that stresses science in response to this pandemic. Examples include New Zealand – Prime Minister Jacinda Ardern – population of 4.8 million, Germany – Chancellor Angela Merkel – 83.0 million, South Korea – President Moon Jae-in – 51.6 million, and Taiwan – Tsai Ing-wen – 23.7 million.

Did you know?

Other countries, including the United States, have done poorly in containing the virus. The seven countries hardest hit, measured by per capita cases, are Singapore, Ireland, Spain, Belgium, the United States, Italy, and the United Kingdom.

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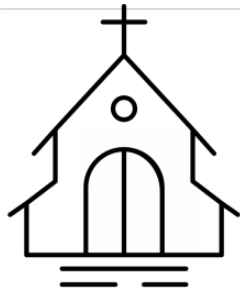
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3.11: North America- Cultural Geography II



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from Noun Project

Shifting Demographics in American Religion

The religious denominations showing the steepest declines in their overall share of the American population have been the Mainline Protestant churches. Once the dominant force in American religious life, their position has eroded steadily over the last fifty years. Not all of them are experiencing a decline in absolute numbers, but none are growing faster than the overall American population. There are four major reasons for this. First, every decade sees a slight uptick in America's non-religious population, and many of these Americans come from families that have been members of the Mainline denominations. Second, the number of Americans attending non-denominational churches has soared in recent decades, and many of those attendees have "emigrated" from the Mainline churches. Third, many Mainline Protestants are from white, middle-class America, a group that has relatively low birth rates, so each generation of Mainline Protestants is the same size, and sometimes smaller, than the generation before it. Finally, much of America's population growth in recent decades has come from immigration, and very few immigrants are Lutheran, Methodist, Presbyterian, or Episcopalian.

The number non-denominational Protestants has grown rapidly, and the number of non-religious Americans has been growing steadily for decades. Some of the fastest growing religious groups in America are Muslims, Buddhists, and Hindus, largely because of increased immigration from Asia.

The two religious groups whose share of the American population has held relatively steady are Jews and Roman Catholics. Jews in America are demographically similar to Mainline Protestants – with low birth rates, low rates of immigration, and a decrease in religious participation among younger people. That said, because the surveys that supply us with these percentages are based on identity, not activity, a good number of non-practicing Jews will still identify as Jewish, because it is an ethnic identity as well as a religious one.

Many Americans would be surprised to find that the number of Catholics in the United States is holding steady, but they would be surprised for different reasons, depending on what part of the country they're from. In some areas, the number of Catholics is declining. This is due, in part, to the slow but steady decline in the number of Americans who identify as religious. This trend has been exacerbated in the Catholic Church by long-standing and sometimes bitter debates over the Church's policies on abortion, birth control, female clergy, and gay parishioners. The abuse scandals that rocked the Church over the last two decades certainly haven't helped.

A counterbalance to this trend has been immigration. The single largest source of immigrants to the United States for the last half-century has been Latin America, an overwhelmingly Catholic region. Put simply, in regions of the country that have seen significant immigration from Latin America (or from other Catholic countries, like Poland or the Philippines), the Catholic Church has been growing. In places that have not received such immigrants, the number of Catholics is declining. Interestingly, these two dynamics have balanced out nationally, and the percentage of Americans who are Catholic has stayed about the same.

Spatial Dynamics of American Religion

At <https://www.washingtonpost.com/blogs/govbeat/wp/2013/12/12/religion-in-americas-states-and-counties-in-6-maps/>, the first map shows the largest religious group in each American county as of 2010. It is a little misleading, as many maps of this type are. It suggests the overwhelming dominance of a particular group across wide swaths of the map. In reality, most of the country is religiously diverse. There are Baptists in Boston, and Catholics in Mississippi. You'll find Muslim mosques in the Missouri Ozarks,

and Hindu temples in Salt Lake City. In large metropolitan areas like Chicago, you can find just about every religious denomination you could imagine.

With that map open, examine the colors and patterns of the highlighted religious denominations. Certain groups are pretty strongly represented in certain areas. One of the most striking is the prevalence of Baptists in the U.S. South (red on the map). Another that is not quite as obvious, but still noticeable, is the preponderance of Methodists across the lower Midwest (green). One reason for the distribution of these two groups was the nature of religion on the American frontier. Two of the largest religious groups in colonial America were Anglicans (later to be Episcopalians) and Catholics. Both of these churches have strict rules about who can be a priest, and how a parish is established. As Americans moved west of the Appalachians, these churches were ill-equipped for a fast-moving, inaccessible, and disorganized frontier. The Methodists and Baptists had, at least then, far less strict rules about who could establish a church and preach there. As such, these denominations were better equipped to move with the frontier, and quickly became the dominant groups in the South and lower Midwest.



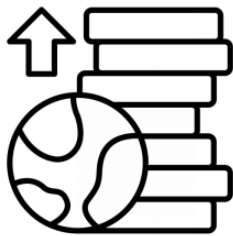
The rest of America's religious geography is also a story of migration. The orange areas on the map in the upper Midwest represent Lutherans, which is the result of historic immigration from Scandinavia and northern Germany. Above, you read about the migration of Mormons to Utah (gray on the map), from where they fanned out to dominate much of the Great Basin. The blue color on the map indicates the Catholic Church. German-Americans are the largest ethnic group in the United States, and many German immigrants to the U.S. were Catholic. That explains much of the geography of Catholicism in the U.S., particularly in places like Pennsylvania, Wisconsin, Illinois, and Michigan, which have especially large German-American populations. Many of the rest of the Catholic areas on the map are the result of immigration from other Catholic countries – think of the large number of Irish-Americans in Boston, Italian-Americans in New York, Polish-Americans in Chicago, Cuban-Americans in Miami, French-Americans in New Orleans, and Mexican-Americans throughout the southwest.

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3.12: North America - Economic Geography II



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Free trade has been one of the most hotly contested political and economic issues in the United States over the last three decades. It's an unusual debate, because it doesn't pit the usual blocs of conservatives and liberals or Republicans and Democrats against one another. Instead, the strongest proponents of free trade have been those at the political center – moderate Democrats and moderate Republicans. The greatest critics of free trade have come from the left and right – liberal Democrats and conservative Republicans, making for some rather strange political bedfellows. In this chapter, we'll look at the nature of free trade and examine the arguments of free trade's proponents and its critics.

Protectionism vs. Free Trade

To make sense of free trade, it's helpful to understand what came before it. For a long time, many countries embraced an economic policy known as **protectionism** – policies that inhibit international trade. That's not suggest that countries that embraced protectionism didn't trade with one another, because it was often necessary. If a country couldn't produce something – you can't grow cotton in Sweden, for example, and there is no coal in Japan – then that country was force to important that product from another country. However, if a country *could* produce a good, the reigning economic theory was that governments should *protect* their domestic industries from foreign competition by placing a **tariff**, or import tax, on foreign products. For example, Germany can produce steel, and in order to protect German steelmakers, the German government would place a tariff on French, British, Italian, American, or Swedish steel. In addition to providing beneficial tax revenue, this tariff would make foreign steel more expensive, and encourage German companies to buy their steel from German steelmakers. This would benefit the shareholders of those German steelmakers, and protect the jobs of German steelworkers.

The same could be done with any kind of import – wheat, cars, glass, coal, chemicals, textiles, etc. And there were other protectionist measures beyond tariffs. A government could place a **quota** on imports, saying that only so much of a given product could be imported from abroad in a given year. A government could pay **subsidies** to domestic companies to keep their products cheap, and therefore more competitive against foreign imports. A government could require foreign companies to have a **license** to sell a product, and limit the number of licenses it handed out. It could enforce **trade calendars**, banning the import of a certain product for a certain time of the year (this was a popular measure in agriculture). Governments could also manipulate **health and safety regulations** to keep foreign products out of their country.

Throughout the second half of the 20th century, many countries, including the United States, began to abandon protectionism in favor of free trade. Free trade agreements eliminated tariffs and other trade barriers between countries. In 1988, the United States signed a free trade agreement with Canada. In 1994, this agreement was expanded to include Mexico, and was known as the North American Free Trade Agreement, or NAFTA. In 2005, the United States entered into CAFTA (the Central American Free Trade Agreement) with Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua. Additionally, the United States has **bilateral** free trade agreements (agreements that involve just two countries) with Australia, Bahrain, Chile, Colombia, Israel, Jordan, South Korea, Morocco, Oman, Panama, Peru, and Singapore.

American protectionism has made something of a comeback in the last few years, particularly since the election of Donald Trump. One of Trump's first directives in office was to remove the United States from the Trans-Pacific Partnership, a landmark agreement that would have created a free trade zone that included the United States, Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam.

The Trump administration has also been particularly fond of tariffs, slapping an import tax on a wide range of foreign products, from steel and aluminum to solar panels and washing machines. Many of these tariffs have been aimed at China, with which the United States has a large trade deficit, but they've also been levied against traditional American allies, such as Canada, Mexico, South Korea, Brazil, Argentina, and the European Union. This has sparked a **trade war**, in which these countries have retaliated with tariffs on American products.



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Proponents of Free Trade

A primary argument for free trade is that it creates a larger market for companies and consumers. Even before it embraced free trade, the United States long benefited from a large **home market**. It is home to more than five million individual companies and 333 million consumers. This is beneficial for both the companies and the consumers. As is discussed in Chapter 31, the more competitive a market is, the better its products will be. Because American consumers live in such a large country, they have a wide range of producers to choose from, and therefore generally have access to a wide variety of cheap, high-quality goods and services. And businesses, of course, benefit from having access to a large base of consumers as well as a large network of suppliers.

Because of its large market, the United States was relatively slow to embrace free trade. That began to change as larger markets emerged around the world. The European Economic Community was formed in 1958, and would later evolve into the European Union, a twenty-seven member free trade area that is home to nearly 450 million people. Formed in 1992, the ASEAN Free Trade area, a bloc made of ten countries in Southeast Asia, is home to more than 660 million people. Mercosur, a five-member South American free trade area formed in 1994, has a population of nearly 300 million. These free trade agreements, coupled with the economic emergence of China and India, home to more than a billion people each, threatened the economic supremacy of the American market. So, the United States began to scramble to assemble its own free trade agreements. The combined population of NAFTA, CAFTA, and the dozen countries with which the U.S. has bilateral agreements, is greater than 800 million people. These free trade agreements have more than doubled the size of the American market, providing a broader consumer and supplier base for American companies, and greater choice for American consumers.

Proponents of free trade also argue that it leads to greater economic efficiency. Free trade theory centers on the idea that some countries have a **comparative advantage** when it comes to producing certain products. In other words, some countries are really good at producing certain things, and maybe not so good at producing other things. Advocates of free trade argue that countries should **specialize** in what they are good at producing. At the same time, they should avoid the production of goods they can't make efficiently. If Country A is in a position to efficiently produce steel, but not textiles, and Country B is in a position to efficiently produce textiles, but not steel, it makes sense that Country A should specialize in steel, Country B in textiles, and that they should offset those differences by trading with one another. By allocating more resources to the products for which they have a comparative advantage, and by freeing up resources by *not* producing goods that take too much effort, production becomes more efficient. In short, free trade means increased efficiency, which means greater profits for everyone.

Proponents of free trade also argue that it has even loftier benefits than economic efficiency. They argue that free trade prevents wars. It is definitely true that countries that are economically invested in one another (i.e., that trade extensively) are less likely to go to war with another. Advocates of free trade also argue that it is key to lifting vast segments of the earth's population out of poverty. The more places that embrace free trade, the more places will specialize in what they are comparatively good at, which will lead to greater efficiency, and greater profits. Those profits will then be reinvested into new technologies, which will lead to more innovation, which will lead to higher standards of living for everyone.



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Critics of Free Trade

A leading concern about free trade is the effect of **outsourcing**. Outsourcing is the movement of jobs (mostly in manufacturing) from higher wage countries to lower wage countries. Free trade agreements enable corporations to move these jobs with little disruption to their supply chain.

This creates environmental concerns. Production is often outsourced from countries with relatively strict environmental regulations to countries with much weaker environmental regulations. This, of course, damages the local environment in poorer countries, with increased air, water, and soil pollution. It also has negative consequences for the entire planet, since poorer countries often have fewer regulations restricting carbon emissions, which contribute to climate change. Additionally, outsourcing often moves production of manufactured goods thousands of miles away from their markets, increasing fossil fuel consumption through longer-distance transportation.

Outsourcing also creates labor issues. Manufacturers will often seek out the cheapest labor they can get away with, creating what labor activists refer to as a “race to the bottom.” Workers in high-wage countries suffer because their jobs disappear, something that Midwestern industrial cities are painfully familiar with. But their loss is not necessarily a poorer country’s gain. The same manufacturing jobs that leave a wealthy country will pay dirt-cheap wages, and often feature unsafe conditions, when they arrive in a poorer country.

When it comes to poorer countries, critics of free trade often speak of **artificial specialization**. Theoretically, each country benefits from free trade because it gets to specialize in what it does best. The reality for a lot of poorer countries, however, is that their “specialty” is having extremely low wages and a poisoned environment.

As mentioned at the start of this chapter, the leading critics of free trade tend to be either very liberal or very conservative. American liberals criticize free trade because it exploits workers both at home and abroad, and because of the environmental damage associated with it. American conservatives believe that free trade weakens the United States by making it too dependent on other countries, and often promote **economic nationalism** – policies that encourage Americans to exclusively invest in, and purchase from, American companies. It is not a coincidence that President Trump’s trade policy was named “America First.”

Did You Know?

The collective GDP of the three NAFTA countries is \$25 trillion. That’s about ten times larger than the combined GDP of every country in Africa.

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3.13: North America- Historical Geography II



In the 1930s in President Franklin Roosevelt's New Deal, the United States federal government created the "Home Owners' Loan Corporation" (HOLC). What the HOLC is perhaps most famous for today is the creation of "HOLC maps," which assigned various residential areas of cities grades for risk to mortgage lenders. Grading criteria included property values, age of properties, depreciation, and racial/ethnic makeup as well as economic class of the residents. Throughout the country, black neighborhoods were assigned D grades, meaning that they were considered hazardous for lending purposes. Though these maps were originally intended to be used for information on housing stock, they frequently also were used as guides for urban planning decisions, even for uprooting longstanding neighborhoods in favor of freeway construction.

One important example can be found in St. Paul, Minnesota. The zones D3 and D4 on the HOLC map cover two areas that were subject to extensive urban renewal and freeway building in the subsequent decades. Each zone in each city had a written description to accompany the grade. Here are some quotes from the descriptions:

D3:

- "Italians, colored people, Jews of the lower strata and other people of foreign descent of the lower classes reside here."
- "Very heavy racial encroachment throughout the entire district is prominent. The only redeeming feature is its accessibility to the downtown district."

D4 (This neighborhood was known as Rondo, a largely African-American neighborhood):

- "The laboring class with a large percentage of negroes live here."
- "The class of colored people in this area are somewhat better than other districts, many of them, due to the City of St. Paul being the General Headquarters for the Northern Pacific and Great Northern Railroads, are pullman porters who do acquire ownership of their homes."

In the following decades, Interstates 94 and 35E were routed directly through these two areas. Rondo still exists as a neighborhood to some extent, but the area covered by D3 is largely devoid of any residential neighborhoods, replaced with freeways, big box stores and light industrial zones.

These **redlining** practices and freeway construction projects served to enforce legalized racism in several ways. First, by labeling predominantly black districts as dangerous from a mortgage lending standpoint, black people who may have been able to afford a home were often not able to get a mortgage in their neighborhoods. Second, black residents of St. Paul were prevented from moving to other areas of the city by the use of racial covenants. Racial covenants are provisions in home deeds or titles that restrict sale of a property to non-white people. They were commonplace in the 1920s-1950s in what were considered the most desirable neighborhoods, the As and Bs on the HOLC maps. The University of Minnesota's "Mapping Prejudice" project is working on mapping their prevalence in the Twin Cities.

Due to these factors, black Minnesotans were both prevented from acquiring mortgages in the neighborhoods they already resided in and were boxed out of neighborhoods they could have afforded and moved to. As a result, they were prevented from enjoying the boom in home equity and wealth creation that middle-class white Americans were able to take advantage of in the 1950s and 1960s. When people look back to these decades with nostalgia, much of that comes from the home equity wealth that was new to many families at that time. The financial security present in many white families today is the direct result of economic benefits that African-Americans were not permitted to enjoy.



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In these areas of St. Paul, the discrimination went further. The HOLC maps were used to aid in the planning of the interstate highway system. The route that was chosen for I-94 through St. Paul was specifically intended to drive a literal rift through Rondo (D4). That this route was chosen can at best be described as disregarding the thousands of residents in the neighborhood and can at worst be considered a deliberate effort to push black people out. This didn't have to be, however. St. Paul city planner George Herrold expressed grave concern about the social impacts of the proposed freeway route. He suggested an alternate route using the railway corridor one mile to the North (go to <https://3kpnuwym9k04c8ilz2quku1czd-wpengine.netdna-ssl.com/wp-content/uploads/2013/09/i94.jpg> to see a map of these options). Herrold's efforts were unsuccessful. It's worth noting that everything he predicted became true. Rondo was split with huge social consequences, and the resulting creation of a concrete moat cut downtown St. Paul off from the rest of the city. Herrold's plan would have required a negotiation with the railroads to place the freeway in that zone, and railroad companies were frequently reluctant to negotiate such terms. This meant it was politically more viable to displace thousands of residents than to negotiate with a railroad.

Though these practices happened decades ago, they still matter today for multiple reasons. First, many people alive today saw what happened to Rondo and still remember what it was like before. I-94 wasn't completed between the two cities until 1968. The resulting decline of Rondo led to a loss in property wealth for its residents, prompting widespread poverty. As mentioned above, African-Americans elsewhere were legally prevented from participating in the wealth generation that white Americans utilized in the middle of the 20th century. This disparity in housing wealth is a critical reason why there is such a wealth gap between white Americans and black Americans today. The government of the United States put in place a legal framework permitting the ghettoization of black people; moreover, in some cases the system extended a step further in allowing those neighborhoods to be destroyed. In its broadest sense, racial tension in America is present today because equality has never been achieved. In a specific and profound way, this inequality has been facilitated by a complex legal and social system of discriminatory housing patterns.

Did you know?

*Josh Wilder's play *The Highwaymen* examines the politics of St. Paul's city hall in 1956, particularly regarding the planning for the I-94 highway.*

Here is a HOLC map for Chicago in 1940.

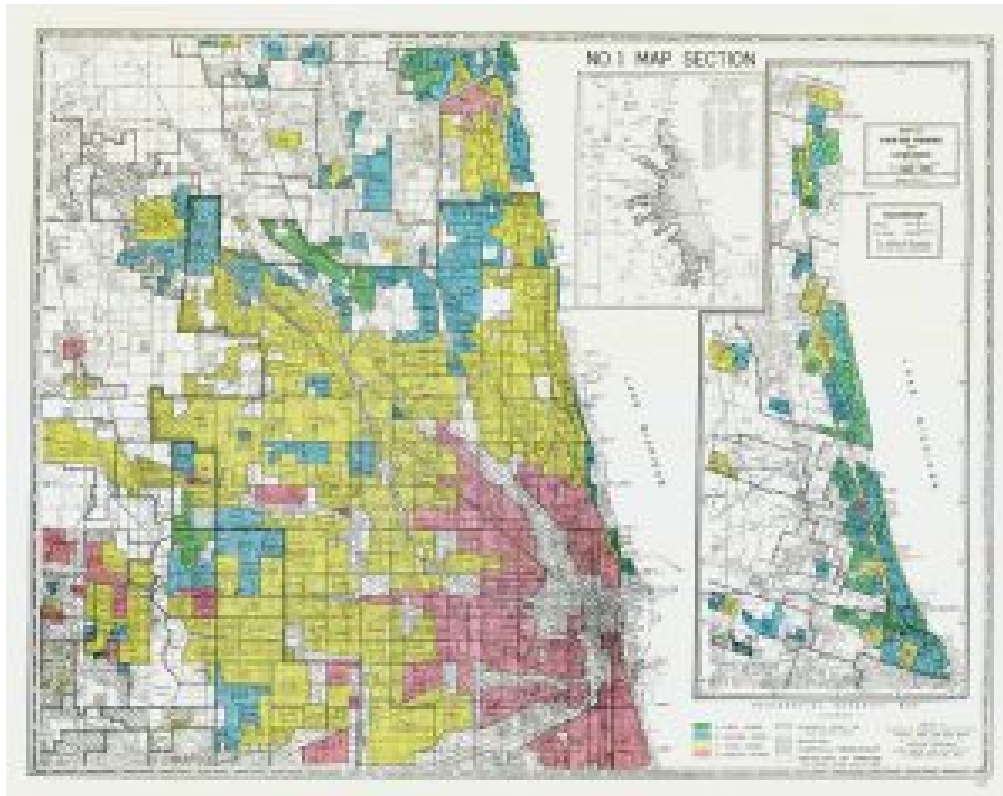


Photo by Kara Zelasko on Flickr. Public Domain.

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3.14: North America- Physical Geography II



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Two of the most important influences on the temperature of a location are discussed elsewhere in this book. In Chapter 6, we examine the relationship between latitude and temperature. Generally, places at lower latitudes (closer to the equator) tend to be warmer than places at higher latitudes (closer to the poles). In Chapter 68, we analyze the relationship between elevation and temperature. Places at higher elevations are usually cooler than places at lower elevations. There is a third important influence on temperature – whether or not a location has a continental climate or a maritime climate.

Continental climates are found in locations that take on the temperature characteristics of a large land mass. They are characterized by extreme variations in temperatures throughout the year, featuring hot summers and cold winters. **Maritime climates** are found in locations that take on the temperature characteristics of a large body of water. They are characterized by much less extreme annual temperature variations, featuring relatively mild summers and winters. Maritime climates are sometimes called “marine” climates. Both terms are derived from the Latin word *mare*, which means “sea.”



Seattle. Photo by Manuel Bahamontez H on Flickr.

To get a sense of the difference between continental and maritime climates, we’ll examine the temperature patterns of three American cities: Seattle, Fargo, and Boston. Seattle, Washington, is located in the northwestern U.S., situated on Puget Sound, just inland from the Pacific Ocean. Fargo, North Dakota, is in the north-central U.S., close to the dead center of the North American continent. Boston, Massachusetts, is located in the northeastern U.S., on the Atlantic Ocean. Seattle is the northernmost of the three cities, and Boston the southernmost, but they’re all located within a few degrees of latitude of one another. None of them are at significantly high elevations. So, based on latitude and elevation, they should have relatively similar climates. But one of them is quite different from the other two – Seattle has a maritime climate, while Fargo and Boston have continental climates.

City Temperatures

City	Avg. January Low	Record Low	Avg. July High	Record High
Seattle	36°F	16°F	75°F	96°F
Fargo	-2°F	-48°F	82°F	114°F
Boston	22°F	-30°F	82°F	104°F

In the table above, you can get a sense of Seattle’s relatively mild maritime climate. Its average January low is 36°F, which is not terribly cold, particularly given the city’s northerly location. The coldest it has *ever* gotten in Seattle is 16°F, a temperature most Midwestern cities plunge below every single winter, often for days at a time. Now, consider Fargo. On a typical January day, Fargo

drops to a frigid -2°F , usually running about 38° colder than Seattle. And Fargo can get much colder than that. Its record low is a stunning -48°F , which is 64° colder than Seattle's record. The pattern is reversed in the summer. In July, Fargo is usually running several degrees warmer than Seattle, and regularly approaches or exceeds 100°F . Seattle has never broken the 100°F mark. The difference between a typical January day in Seattle and a typical July day is only 39°F , while the difference in Fargo is 84°F . The difference between Seattle's record high and low is just 60°F , while the difference in Fargo is a whopping 162°F .

We'll consider Boston's numbers in a moment. But first, to get a sense of *why* Fargo and Seattle have such different temperature patterns, let's take trip to the beach. Imagine that you are in Chicago in May, and you head to one of the beaches along Lake Michigan. It is the first truly hot day of the year, with plenty of sunshine. You take off your shoes and start walking across the sand. Even though it's been cold for months, you find that the sand is blazing hot. You go sprinting across the sand, wade into the water, and get quite a shock. Even though it's a hot day, the water is freezing cold.

Now, imagine that you return to the beach a few months later. It's a cloudy, chilly day in late September. You take off your shoes and start walking across the sand. Even though it's been hot for months, the sand is cool. You stroll across the sand, and wade into the water. Even though it's a cool day, the water is relatively warm, much warmer than it was back in May.

What your two trips to the beach have taught you is that the sand tends to heat up very quickly in the spring, and cool down very quickly in the fall. The lake tends to heat up very slowly in the spring, and cool down very slowly in the fall. On a global scale, continents behave like the sand on the beach, and oceans behave like the water in the lake. Both Seattle and Fargo are located in the westerlies, so most of the air in these cities arrive from the west. That means that the air in Seattle arrives directly off the Pacific Ocean. The Pacific heats up very slowly in the spring and summer, keeping temperatures in Seattle relatively cool. Then, in the fall and winter, the Pacific loses its heat very slowly, keeping temperatures in Seattle relatively warm.



Main Street in Fargo, North Dakota. Photo by Jared Anders on Unsplash.

Fargo is located more than a thousand miles from the Pacific. By the time air masses arrive in North Dakota, they have lost any memory they had of the Pacific, and have taken on the temperature characteristics of the continent they've crossed. As soon as the sun starts rising higher in the sky in the spring, the North American landmass begins to heat up. It bakes in the sun all summer long. As a result, the air that arrives in Fargo is quite warm. In the fall, the continent loses heat rapidly, and turns frigid in the winter. Consequently, the air that arrives in Fargo is quite cold.

Much of the west coast of North America has a maritime climate. San Francisco, Portland, and Vancouver have climates that are much like Seattle, with mild winters and mild summers. Heat waves and snowstorms are rare in these cities. The American Midwest has a continental climate, as does much of Canada's interior. Chicago, Toronto, Detroit, St. Louis, Cincinnati, Kansas City, Minneapolis, and Montreal are all similar to Fargo, well known for hot summers and cold winters.



Boston. Photo by Lance Anderson on Unsplash.

Which brings us back to Boston. On the table above, you can see that Boston's temperature patterns, while not quite as extreme as Fargo's, more closely resemble Fargo than Seattle. Despite being located on the Atlantic Ocean, Boston still has a continental climate, as do other cities along the northeastern seaboard of the United States, such as New York, Washington, Philadelphia, and Baltimore. All of these cities experience hot summers and cold winters. That is because locations with maritime climates aren't just on the ocean, but receive their weather *from* the ocean. Because the northeastern U.S. is located in the westerlies, it still receives most of its air masses from the vast continent to its west.

Did you know?

Buried deep in the world's largest landmass, Russian Siberia possesses the world's ultimate continental climate. It is not uncommon for a Siberian city to reach temperatures in the 80s in the summertime, and then regularly reach 70 below in the depths of winter. One Siberian city, Verkhoyansk, has the distinction of having the greatest difference on earth between its record high temperature (+99°F) and its record low (-90°F).

As noted above, the Latin word mare, which means sea leads to the word maritime. The Russian word for sea is the very similar more.

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3.15: North America- Political Geography II



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In most elections, the winner is determined by the popular vote. The **popular vote** is the sum of all ballots cast by voters in an election. The word “popular,” in this sense, refers to population. The popular vote is the people’s vote. Senators, congressional representatives, governors, and nearly every other elected official in the United States is selected by popular vote. There is one major exception. Americans elect a president every four years, and it is possible for a candidate to win the popular vote, but lose the election. This has happened four times in American history, most recently in 2016, when Hillary Clinton received nearly three million more votes than Donald Trump. Trump, however, won the election because he was victorious in the electoral college. For a terrific dot-density map of the election results, go to <https://carto.maps.arcgis.com/apps/webappviewer/index.html?id=8732c91ba7a14d818cd26b776250d2c3>

The **electoral college** is a group of people chosen by voters to elect the president. Here’s how it works: Each state is assigned a certain number of electoral votes. The distribution of electoral votes is determined by congressional representation, with each state receiving one electoral vote for every member who represents them in Congress. There are 100 members of the U.S. Senate, and 435 members of the House of Representatives, for a total of 535. The District of Columbia has no representation in Congress, but is constitutionally allotted three electoral votes, bringing the total number of electors to 538.

Illinois, for example, has two senators and eighteen representatives, so it is allotted twenty electoral votes. California has the most electoral votes, with fifty-five. Since each state has two senators and at least one representative, the minimum number of electoral votes a state is allotted is three. Alaska, Montana, Wyoming, North Dakota, South Dakota, and Vermont (along with D.C.) are each are allotted the minimum. The candidate who accumulates more than half of the electoral votes, at least 270, wins the presidential election.

The states’ electoral votes are, with few exceptions, winner-take-all. If a presidential candidate wins Illinois by a million ballots, they receive all twenty of the state’s electoral votes. If a presidential candidate wins Illinois by *one* ballot, they receive all twenty of the state’s electoral votes. The margin of victory doesn’t matter.

Only two states – Maine and Nebraska – are not winner-take-all. In those states, the winner of the overall popular vote automatically receives two electoral votes. The remaining electoral votes are assigned based on which candidate wins in each congressional district. In 2016, Hillary Clinton won in Maine, but lost one of its two congressional districts, so she received three of Maine’s electoral votes, while Donald Trump received one.

The winner-take-all nature of the electoral college means that a handful of states, known as swing states, receive nearly all of the attention during presidential campaigns. A **swing state** is a state where presidential elections tend to be relatively close. Because of that, these states have a tendency to “swing” from one party to the next over the course of a few elections. Presidential candidates tend to pour most of their time and money into swing states, since they are key in determining the outcome of an election.

To better understand swing states, we’ll look briefly at the last four presidential elections. In 2004, President George W. Bush, a Republican, was running for reelection against Senator John Kerry, a Democrat. Senator Kerry won several states that were rich in

electoral votes, such as New York, Pennsylvania, Illinois, and California, but it was not enough to overcome President Bush, who won the electoral college 286 to 251.

The 2008 election pitted senators against one another – Democrat Barack Obama and Republican John McCain. Senator McCain did not have to reinvent the wheel in this election. There was no need for him to pick up any states that Democrats had won in 2004. He simply needed to recreate the electoral map that had elected George W. Bush. Likewise, Senator Obama did not need to completely rearrange the electoral map. He simply needed to swing enough states out of the Republican column and into the Democratic column. He did just that. Nine states that had voted for Bush in 2004 swung to the Democrats in 2008 – Nevada, Colorado, New Mexico, Iowa, Indiana, Ohio, Virginia, North Carolina, and Florida – giving Obama 365 electoral votes to McCain's 173.

One of the peculiarities of the electoral college can be seen in the 2008 election. The two biggest prizes in the electoral college – California, with fifty-five electoral votes, and Texas, with thirty-four electoral votes – received practically no attention from either candidate. This is because of the winner-take-all nature of the electoral college. McCain received 37% of the popular vote in California. If McCain had spent millions of dollars and done weeks of campaigning in California, and managed to raise his share of the popular vote up to 45%, how many more electoral votes would he have received? Zero. Likewise, if Obama had poured resources in Texas, and raised his popular vote share from 45% to 49%, he wouldn't have gained any additional electoral votes. If a candidate has little hope of winning a state, it makes little sense to campaign there. Time and money are better spent on states where victory is possible – that is, in the swing states.

In 2012, the Republicans nominated former Massachusetts governor Mitt Romney to take on President Obama. Obama was looking to recreate his 2008 victory map, while Romney attempted to nudge some of 2008's swing states back into the Republican column. Romney was able to swing two of them – North Carolina and Indiana – but that was not enough to get the Republicans back to 270, and Obama won reelection with a 332-206 margin in the electoral college.

In 2016, Democratic nominee Hillary Clinton was looking to maintain the Obama victory map, while Republican nominee Donald Trump sought to flip some of the Obama swing states. Trump managed to swing three of them – Iowa, Ohio, and Florida – and won upset victories in Wisconsin, Michigan, and Pennsylvania, none of which had voted for a Republican presidential candidate since the 1980s. Although he lost the popular vote, Trump won the electoral college 304-227.

As this chapter is being written, the 2020 presidential election is still several months off. President Trump is looking to recreate his 2016 victory map. The Democratic nominee, former Vice President Joseph Biden, is hoping to recreate the Obama victory map. Several states are in play, but all eyes will almost certainly be on the six swing states that voted for both Obama in 2012 and Trump in 2016 – Iowa, Ohio, Florida, Wisconsin, Michigan, and Pennsylvania.

Did you know?

When you vote for a presidential candidate, you're actually voting for a slate of electors. Each party selects these electors long before election. After the election, the electors from the winning candidate's party travel to their state capital and cast their ballots for president. In most states, the electors are required to vote for the candidate who won their state's popular vote. In some states, that is not a requirement, and occasionally electors have gone rogue. They are known as "faithless" electors, and there were seven of them in 2016. Five electors abandoned Hillary Clinton, and two abandoned Donald Trump. As a result, Colin Powell, John Kasich, Ron Paul, Bernie Sanders, and Faith Spotted Eagle each received electoral votes. It did not affect the outcome of the election. However, on July 6, 2020, the US Supreme Court unanimously ruled that these state laws are constitutional.

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3.16: North America- Population Geography II



Cartography by X. X. Xavier

In Chapter 8, we examined the **demographic transition**. That model examines the process through which societies transform from rural to urban, from preindustrial, to industrial, to postindustrial, and from an era that features high birth rates and high death rates, through a population explosion, to eras that feature low birth rates and low death rates. As a society undergoes these monumental demographic transformations, it is only natural that cultural attitudes and behaviors will transform with them. And as these attitudes and behaviors change, they give rise to culture wars. **Culture wars** are the conflicts related to things like marriage, family, sex, and gender. While these are usually “wars” only in the metaphorical sense – taking place in the social and political arena – they sometimes do devolve into actual violent conflict.

In the United States, the debate over these cultural conventions have divided governments, political parties, religious organizations, communities, and families, and remain a leading source of divisiveness in the country. These debates are by no means unique to the United States. All areas of the world that go through the demographic transition have experienced, are experiencing, or will experience these culture wars.

At the core of these conflicts is a battle between **social conservatives** – those who adhere to the traditional cultural values established in the preindustrial era – and **social liberals**, who welcome the more modern cultural values established in the industrial and postindustrial eras. In this chapter, we’ll examine traditional cultural values, the trends in society that threaten those values, and how these trends were created by the demographic transition.

A primary cultural convention in traditional societies was the idea that marriage was the central institution in society. Marriages in traditional societies typically ended only in death — divorces were rare and, in many cases, nearly impossible to obtain. Securing a spouse was considered to be the most significant moment in a person’s life. In preindustrial societies, a wife was necessary for a man’s livelihood, because most men were farmers, and children were a vital source of farm labor. In these societies, a husband was even more necessary for a woman’s livelihood, because there were so few educational and career opportunities for women. People got married at a young age – often in their late teens – and had children as soon and as often as possible.

Another cultural convention in traditional societies was an extremely conservative attitude toward sex. In these societies, the prevailing belief was that sexual activity should be confined to marriage, with reproduction as its primary goal. Premarital, extramarital, and gay sex were culturally unacceptable, as was any form of birth control. Sex was a private matter, and any overt displays of sexuality were culturally unacceptable.

Finally, a key cultural convention in traditional societies can be summarized in the old phrase, “a woman’s place is in the home.” In modern societies, such an idea seems not only old-fashioned, but offensive. In traditional societies, however, it was generally accepted as fact. Married women were expected to confine themselves to the domestic sphere. Their jobs were to be wives and mothers, and little else. Men were in charge of the public sphere. Things like business and politics were exclusively male domains.

To understand this cultural attitude, it is important to consider both the demographics and technology of the preindustrial era. In 1850, the United States’ **total fertility rate** was 7.9, meaning that the average American woman had about eight children. Being a mother is still not easy, but in the 1850s it was practically tortuous. Imagine raising eight children without the modern conveniences of supermarkets, mass-produced clothing, indoor plumbing, electricity, hot water heaters, washing machines, dryers, refrigerators, vacuum cleaners, dishwashers, disposable diapers, and microwave ovens, to name a few. If a woman’s place was in the home, it was because she had little time to be anywhere else.

By 1920, the demographic transition in the United States was in full swing. That was the first year that more Americans lived in cities than in rural areas. A century later, the lifestyles of the preindustrial era have largely faded into the past, but the cultural conventions established during that era are alive and well in the minds of many Americans. It is notable that American social

conservatives are most prominent in rural areas and small towns, where cultural connections with the preindustrial past are strongest, and social liberals are most prominent in large cities, where cultural connections with the preindustrial past are weakest.

The culture wars are complex, but four cultural trends have been particularly distressing for social conservatives: women's liberation, the increased divorce rate, premarital and extramarital sex, and the LGBTQ movement.

Women's liberation refers to the movement of women into the public sphere. Over the last century, women have increasingly carved out space for themselves in the political, economic, and social arenas traditionally dominated by men. It would be difficult to argue that this movement is complete. Women still typically earn about 20% less than their male counterparts, and the boardrooms of American corporations are still largely male. Women still make up less than a quarter of the U.S. Congress, and the United States has never had a female president or vice president. Still, that *is* progress, considering that the 19th Amendment to the Constitution – allowing women to vote throughout the United States – was not enacted until 1920. While it would be unfair to say that social conservatives universally *oppose* women's liberation, it would also be a stretch to argue that they've been the most ardent supporters of it. One of the most popular figures among social conservatives is the radio host Rush Limbaugh, who has the infamous habit of referring to feminists as “femi-Nazis.”

Social conservatives often cite the increased divorce rate as another alarming indication of the erosion of traditional cultural values in America. As mentioned above, divorces were discouraged, if not impossible, in traditional societies. In 1890, fewer than 1% of American marriages ended in divorce. By 1990, about 45% of marriages ended in divorce.

Another commonly cited sign of the decay of traditional cultural attitudes is an increased acceptance of premarital sex and extramarital sex (premarital refers to sex before marriage, and is a subset of extramarital sex, which is any sex that takes place outside of marriage). In traditional societies, people generally waited until they were married to have sex. If they didn't wait, they certainly didn't advertise that fact. Today, sex outside of marriage is much more widely discussed and accepted. In response to this, many social conservatives have promoted abstinence education, encouraging young people to abstain from premarital sex, and in some states, they've been able to make such programs part of the public-school curriculum.



Created by Nithinan Tatah
from Noun Project

Finally, many social conservatives had been alarmed by the LGBTQ rights movement (LGBTQ stands for lesbian, gay, bisexual, transgender, and queer or questioning). In traditional societies, only heterosexual sex was considered morally permissible, and a person's gender was expected to conform to their biological sex at birth. Like the women's rights movement, the LGBTQ movement has come a long way, and has a long way to go. In 1962, Illinois became the first state to decriminalize homosexuality. Eighteen more states decriminalized it by 1980, but being gay would not be technically legal throughout the United States until a 2003 Supreme Court decision. That same year, Massachusetts became the first state to legalize gay marriage. Marriage equality would not come to all states until a Supreme Court decision in 2015, and LGBTQ individuals would not be considered a protected minority under the Civil Rights Act until a Supreme Court decision in 2020. Despite these legal advances, LGBTQ rights remain a deeply divisive issue.

Americans will likely debate these cultural changes for years to come, but there is little doubt about what is driving them – the demographic transition. First, women's liberation. In traditional societies, women started having children at a very young age, and had a *lot* of children over the course of their lifetimes. Coupled with shorter life spans, this meant that women spent the bulk of their adult lives as the mother of young children.



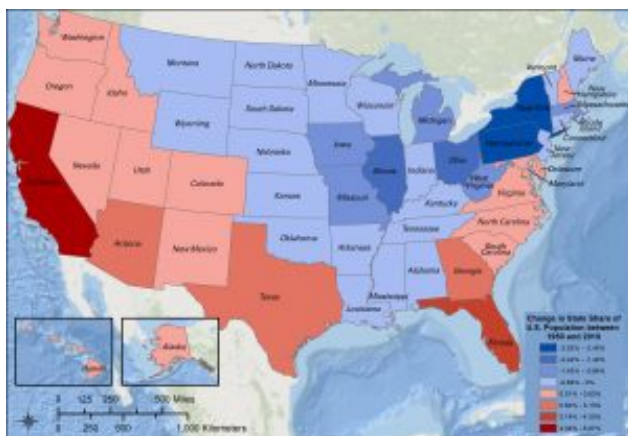
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Today's situation is quite different. To begin, women are having far fewer children. Women are also getting married later, and are much more likely to get an education and start a career before having kids. The average American woman has two children, usually about three years apart. That means that, by the time the second child enters school, only eight years have passed. That represents only 10% of the average American woman's lifespan. So, many women reenter the workforce after their second child enters school, if they ever left the workforce at all – many women continue to work as they raise small children. As mentioned above, women in traditional societies had little time to invest in anything outside of the domestic sphere. That is not true for modern women, and as a result they have staked their claim to the traditionally male-dominated public sphere as well.

The demographic transition is also behind the increased divorce rate. It is worth noting that there have always been unhappy marriages. But marriages used to be an economic necessity, particularly for women. That is not the case anymore, since women have access to educational and career opportunities that didn't exist a century ago. Those opportunities arose because of the declining birth rates associated with the demographic transition. The lack of economic necessity has removed a powerful stabilizing force from marriage.

For a century, social conservatives have attributed the increased acceptance of premarital and extramarital sex to all kinds of things – movies, jazz, rock and roll, television, the internet – but the real driving force behind this cultural change has been the demographic transition. That, and some basic math. On average, children enter puberty at the age of twelve. The process usually takes about four years, meaning that most people reach sexual maturity around the age of sixteen. In traditional societies, people often got married in their late teens, so the window between sexual maturity and marriage was often only a couple of years. As such, asking people to abstain from sex before marriage was somewhat reasonable. Today, because of the social changes created by the demographic transition, the average American gets married when they are twenty-eight years old. That means that, for most Americans, a dozen years pass between sexual maturity and marriage. That makes sexual abstinence a lot less likely.

As premarital and extramarital sex became more common – and more commonly accepted – Americans began to think and talk about sex in a different way. Sex was no longer something to be hidden away in marriage with reproduction as its primary goal. In a sense, sex was culturally “decoupled” from marriage and reproduction. This allowed for discussions of gay sex – long a taboo topic in the United States – to enter into the mainstream cultural conversation. Attitudes and conventions began to shift. As a result of that, open discussions about gender identity also began to enter into mainstream culture. And all of these conversations were sparked by the demographic transition.



Change in state share of national population. Cartography by Jeff Wandersen.

Did you know?

In 1890, Annie White Baxter of Carthage, Missouri, was elected Clerk of Jasper County. She was the first woman to hold elective office in the United States.

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3.17: North America- Urban Geography II



Many urban neighborhoods in the United States began to decline in the 1950s, and many of them have never recovered. But some have. **Gentrification** is the economic revitalization of a once troubled urban neighborhood. Lower income residents are replaced by higher income residents, and older housing is renovated or replaced. Old industrial landscapes, like warehouses and factories, are renovated as, or replaced by, condos, galleries, clubs, restaurants, theaters, offices, or similar upscale commercial activities.

All major American cities have experienced some gentrification. In Chicago, gentrification has largely been focused on the North Side, although some neighborhoods just south and west of the Loop have gentrified as well. Here is a photo from Chicago Avenue by Eric Allix Rogers.

A major cause of gentrification was simple real estate economics. By the 1980s, real estate in the suburbs had become extremely expensive. At the same time, urban real estate values had collapsed. Magnificent old buildings in the inner city could be purchased for next to nothing. It was only a matter of time before someone rolled the dice and took a chance on redeveloping a decayed inner-city neighborhood. Of course, the city and county governments of these depressed neighborhoods were more than happy to help. Governments gave economic grants and tax incentives to developers willing to revitalize an urban neighborhood. Governments also helped to fund the construction of parks, stadiums, and concert venues to serve as anchors for gentrification.



Portland, Oregon – Photo by Anna Holowetzki on Unsplash

Other important factors were new environmental laws and the deindustrialization of American cities. Many people fled to the suburbs to avoid the smoke, filth, and crowds of industrial cities. Because of stronger environmental rules, closed factories, and decades of flight to the suburbs, cities had become cleaner and less crowded. They could be a much more pleasant place to live.

Changing cultural conventions in the United States also helped to spur gentrification. One involved sexuality. Prior to the 1960s, it was uncommon for people to be openly gay. In fact, it was illegal. Gay sex was a crime in Illinois until 1962, and remained illegal in many other states for several years after that. Even after legalization, gay Americans continued to face discrimination. Gay bars and clubs were discouraged in the suburbs and in upscale urban neighborhoods, so they often located in economically depressed urban areas. These bars, clubs, and other gay-owned or gay-friendly businesses served as anchors for evolving gay neighborhoods, many of which became one of the first gentrified neighborhoods in their respective cities. New York's Chelsea, Boston's South End, Washington's DuPont Circle, and Chicago's Boystown are all examples of early gentrification, and all have strong ties to the gay community.

Another important cultural change of the last few decades has been the age at which Americans get married and have children. In the 1950s, most Americans got married shortly after finishing high school or college, and usually had their first child not too long after. The suburbs were, and still are, designed to cater to the needs of the nuclear family – a married couple with children. Compared to cities, the suburbs usually offer larger houses with larger yards. Crime rates are usually lower, and schools are generally better. These are, of course, all things that parents are interested in. So, in the 1950s, middle-class Americans typically finished school, got married, moved to the suburbs, and started a family.

By the 1990s, however, cultural conventions were changing. More people were attending college, and thus getting married later. More women were starting careers, and having children later, or having no children at all. This meant that more people were spending their 20s and early 30s, and perhaps their entire

adult life, living outside of a nuclear family. Because of that, the suburbs were become less appealing to many people. At the same time, that cities were becoming more appealing places to live. Young, college-educated Americans began moving to gentrifying urban neighborhoods.

Perhaps the most important force in gentrification were the DINKs. **DINK** is an acronym for “Double Income, No Kids,” a term that was popularized in gentrifying neighborhoods in the 1980s. A DINK is someone who lives with his or her boyfriend, girlfriend, or spouse, and does not have children. DINKs are often synonymous with “yuppies” – another 1980s term derived from “young urban professional.” They’re young college graduates with white-collar jobs and good incomes.



Created by Pelin Kahraman
from Noun Project

Because they share the cost of housing, don’t have kids, and make good money, DINKs have loads of disposable income. If you walk through a gentrifying neighborhood and glance in the windows of the trendy restaurants and shops, and wonder who on earth has money to spend on that sort of thing, it’s the DINKs. Not everyone who lives in a gentrifying neighborhood is a DINK, of course, but since the 1980s, gentrifying neighborhoods have evolved around the tastes, and wallets, of DINKs.

Traditionally, DINKs who eventually had kids would move off to the suburbs. That’s changed over the last decade or so. As gentrified neighborhoods have become cleaner and safer, many former DINKs have decided to raise their children there. Oddly, many American parents now have a **reverse commute**, working in the suburbs, but raising a family in the city, turning the suburban model on its head.

There is no denying the positives of gentrification. It’s great to see historic neighborhoods spring back to life after decades of economic decay. But gentrification has some serious downsides. As soon as a neighborhood begins to gentrify, property taxes and rents spiral upward. Many working-class families who have lived in the same neighborhood for generations suddenly find themselves priced out of it. Neighborhood institutions like churches and ethnic clubs dwindle as their members are forced to move away. Long-standing neighborhood shops, bars, and restaurants close down because rents and property values are too high, or because they don’t cater to the interests of the DINKs. These “mom and pop” shops are soon replaced by national chains. The ethnic and social characteristics that had shaped the neighborhood for generations are lost.

Did you know?

The term “gentrification” was coined by Ruth Glass, a German-born sociologist who spent her career in London. In the 1960s, she detailed the process by which wealthy Londoners – the “gentry” – displaced longtime residents of working-class neighborhoods.

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3.18: North America- Cultural Geography III



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In Chapter 3, we state that the term **culture** refers to collective, learned human behavior. Indeed, culture essentially is the way of life of a group of people. The major core components of culture are language, religion, and ethnicity, but culture also includes social relations, political systems, economic activities, and more. As a result, Canadian culture is often generalized in textbooks as English-speaking (with French dominant in Quebec), Christian (mostly Catholic and Protestant), with a parliamentary system, and a mostly service-based economy. However, this is a short list, yet a very broad summary. A similarly incomplete parallel would be characterizing the United States simply as English-speaking, Christian, democratic, and economically service-based. Therefore, let's go beyond a cursory summary to examine a few geographic aspects of Canada's culture in relation to the United States.

As defined here or elsewhere, ethnicity is strongly related to culture, but the basis of ethnicity is belonging to a group, sharing its culture or sub-culture, and identifying with it. Members of large populations may share many aspects of culture, but smaller groups within the whole will have different histories and ancestries (e.g., migrants) and therefore claim a more specific identity.

Canada has a population of nearly 38 million people, placing it 38th among countries of the world, according to www.worldometer.info. Canada is very slightly behind Poland in these numbers. Poland is the size of New Mexico in area and is 98% Polish in ethnicity.

In contrast to Poland, Canada has roughly the area of the whole United States. Unlike Poland, but similar to the United States, Canada features many ethnic groups. Some ethnicities there connect with the original French and British colonists and with later migrations of European peoples. Others are native peoples – Inuits and First Nations. There are smaller distinctive ethnic migrant groups like the Doukhobors (from Russia). Statistics Canada now recognizes over 250 ethnic groups across the country. Whereas we might be able to summarize the 38 million people of Poland into a somewhat cohesive group, it is difficult to do that for Canada.



Canmore, Alberta, Canada. Photo by Devon Hawkins on Unsplash.

With a land area the size of the United States that stretches from the Pacific Ocean to the Atlantic Ocean as does the United States, Canada features a diverse set of physical landscapes. Naturally, these landscapes affect the socioeconomic elements of those locations. Saying that Canadians are sort of like Americans is a very broad statement about both populations. It will be occasionally correct, but often incorrect. Instead, it is safer to contend that people of British Columbia are similar to the people of Washington

state. These are adjacent regions with similar climates. Asian populations tally as the largest minority populations in both regions. Also, Nova Scotia or New Brunswick may be compared to Maine as neighboring regions – small, forested, coastal lands each with modest populations somewhat near one million people.



Here are three key factors that bring Americans and Canadians together. One, geographically, ninety percent of Canadians live within 150 miles of the border with the United States. As we know from Tobler’s First Law of Geography – “Everything is related to everything else, but near things are more related than distant things,” certainly there will be characteristics that Canadians share with Americans and there will be ways that the two countries interact.

Two, these connections are aided by the longest international land border in the world. Furthermore, the border is a friendly border with few and minor conflicts. Length and cooperation make it easy for trade and travel between the two countries. In fact, the United States exports more goods (measured by \$) to Canada than it does to any other country in the world. Over half of Canada’s exports go to the USA. The United States provides 80% of all foreign visitors to Canada, while Canadians are over 25% of travelers visiting America – that ranks #1 also.

Three, both official languages of Canada are dialects of Europe-based languages. Most importantly for the American connection, over 85% of Canadians speak English. Canadian French (called *joual* in Quebec) developed from 1760’s French (after which the British conquered Canada) and has different pronunciations, contractions, and English loanwords (e.g., ski-doo) than Parisian French does. Canadian English is sometimes spelled like British English, sometimes like American English; the same holds true for pronunciation and vocabulary, although there are also “Canadianisms.” For example, Canadians use British words such as *loo* and *porridge*; American words such as *TV* and *gas*; and their own words such as *toques* – particular knitted winter caps, *loonies* – dollar coins that have a loon pictured on one side, and *ridings* – electoral districts.

Thus, it is not surprising that America and Canada share many interests, while having their own differences. Now on the very broad topic of popular culture, let’s make three more observations.



Geography clearly has influenced sports in Canada. Hockey makes sense in a cold outdoorsy setting. Canadian James Creighton is considered as the father of indoor hockey, organizing an official match indoors in 1875. By law, the country has two declared national sports: ice hockey in winter and lacrosse in summer. Canada has its own variation of American football. The Toronto Raptors won the 2019 NBA championship. Curling is less well known, but along with ice-skating is part of Canada's winter sports culture.

Canadian television and radio are supported by the government. In part, the Canadian Radio-television and Telecommunications Commission (CRTC) ensures Canadian content, but still there is tremendous overlap with American popular TV. The streaming content of the contemporary world crosses borders easily, so that American shows are seen in Canada, while Canadian series can be viewed in America. Toronto and Vancouver are vibrant sites for movie and television production and filming. Canadian actors and actresses are common in the US, often to the ignorance of American viewers who perceive the performers as being American.



A particularly geographic show on Canadian television was “The Border,” which highlighted international issues. Of course, the show (CBC, 2008-2010) referred to the USA-Canada border; thus, plots often presented contrasting American and Canadian viewpoints and strategies. Naturally, the show featured a Canadian cast, though a Homeland Security agent liaising with Canadian authorities was played by American actress Sofia Milos. “The Border” can be streamed free on Amazon Prime.

Americans in Canada will not find huge differences in cuisine; yet, some foods are distinctly Canadian. In 2013, *The Huffington Post – Canada* listed *poutine* (French fries slathered in gravy and cheese curds) first in its article on fifty of the most Canadian foods.



Poutine. Photo by Traci on Flickr.

Globe and Mail newspaper's restaurant critic Dan Clapson states, “Our country's most iconic dish internationally is, by far, the poutine.” However, poutine in Canada is not dished up in a geographically even manner, as the food is more common in eastern

regions. Having originated in Quebec province, poutine is an element of Québécois culture, so that its spatial diffusion has occurred from that eastern Canadian region.

Did you know?

Canadians are nicer than Americans. Well, at least on Twitter, a research study suggests. Geotagged tweets were compiled to create word clouds of the most commonly used words in these social media comments. The American word cloud showed more words blurred out, meaning that these were offensive words.

Equality, equity, and social justice were the top three Canadian values according to a Nanos Research survey in 2016. Politeness, informality, and tolerance are also listed in various magazine articles and news stories as being very Canadian. The acronym POGG (for Peace, Order, and Good Government) has been shorthand for Canadian values ever since the British North American Act of 1867 that established Canada. Unlike the US, Canada did not revolt from the United Kingdom, but legally separated from it and did not claim the need for “life, liberty, and the pursuit of happiness.”

The last letter in the English language is z. In Canadian English this letter is known as “zed.” That may seem strange to Americans; however, across the world in various forms of the English language that last letter is zed. American English is the oddball case, calling that letter “zee.”

The amount exported in dollars by the United States to Canada is equivalent to the amount exported to all the European Union countries combined.

Actor William Shatner is a Canadian, but his most famous character is Star Trek’s Captain James T. Kirk, who was born in Iowa.

The second longest international land border in the world is between Russia and Kazakhstan.

In 2014 Thrillist suggested that s’mores are the most American food.

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3.19: North America- Overview



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Physical Geography: The United States

Landform Regions

There are three major alpine regions in the United States, each of them running roughly north-to-south. One consists of a pair of ranges near the Pacific Ocean. The **Coast Ranges** are a relatively low mountain range that run the length of the Pacific Coast. A few hundred miles inland is a much more significant mountain range, known as the **Cascades** in central Oregon and Washington, and as the **Sierra Nevada** in eastern California. These are extremely rugged mountains with very high elevations, some of them rising above 14,000 feet. A few major valleys are interspersed between the Coast Ranges and the Sierra Nevada/Cascades, notably the Central Valley, a very flat, elongated plain occupying some 18,000 square miles of California.

A second major alpine region is the **Rocky Mountains**. The Rockies extend south out of Canada, occupying parts of Idaho, Montana, Wyoming, Colorado, Utah, and New Mexico. Like the Sierra Nevada/Cascades, elevations are high and the landscapes are dramatic.



Zion National Park. Photo by Bernard Spragg on Flickr. Public Domain.

Between the Sierra Nevada/Cascades and the Rockies, extending from eastern Washington to southern New Mexico, is a region known as the **Intermountain West**. It is an area of short, rugged mountain ranges separated by basins, plateaus, and plains. The southern part of this region is well known for the rugged beauty of its highly eroded landscapes, including the Grand Canyon of Arizona.

The United States' third major alpine region is the **Appalachians**, a mountain range that runs from New England to northern Alabama. The Appalachians are much older than the mountains of the west, and have been weathered to significantly lower elevations, with the highest peaks topping out just above 6,600 feet. Although low, the Appalachians are steep and thickly forested. Much of the region possesses a remarkably orderly sequence of ridges and valleys. Extending east from the Appalachians is a rolling plateau known as the **Piedmont**, which runs from southeastern Pennsylvania to northern Georgia.

The flattest region of the country is the **Gulf-Atlantic Coastal Plain**. It begins as a very narrow strip along the coast of New England. The plain then broadens in southern New Jersey, sweeping across the eastern thirds of Virginia, the Carolinas, and Georgia. All of Florida is on the Coastal Plain, as is southern Alabama and Arkansas, eastern Texas, and all of Louisiana and Mississippi. The coastal plain slopes very gradually toward the sea, sometimes at a rate of only a few feet, or even a few inches, per

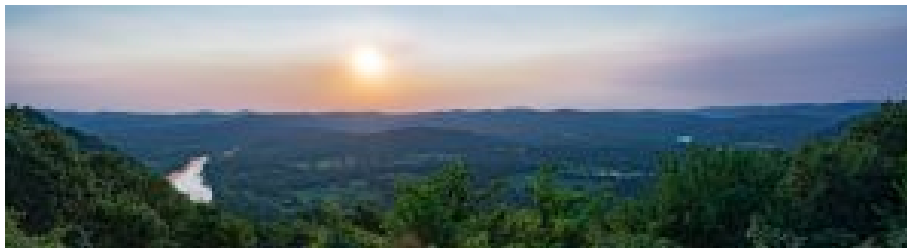
mile. Because of this, the region has historically been very swampy, since flat landscapes do not shed water very quickly. Many of those swamps have been drained by vast networks of ditches and canals. Unlike the West Coast, where mountains run right up to the ocean, the transition from land to sea along the Gulf-Atlantic Coast Plain is far more gradual, and the shoreline is dotted by bays, bayous, and flat islands.



Great Plains. Photo by Schnitzel_bank on Flickr.

Dominating the heart of the country is another flat region known as the **Interior Plains**. This vast region is bordered on the east by the Appalachians, on the south by Ohio River, on the north by the Great Lakes, and on the west by the Rockies. The dry, grassy western section of the Interior Plains is sometimes referred to as the Great Plains.

Some parts of the Interior Plains are remarkably flat, but much it has a gently rolling surface. There are a few areas of low hills scattered about the region, such as the Flint Hills of Kansas, or the Sand Hills of Nebraska. The northern sections of the Interior Plains were scoured during the last ice age, the most notable result being the presence of numerous lakes, including the Great Lakes, and the thousands of smaller lakes that dot Wisconsin and Minnesota.

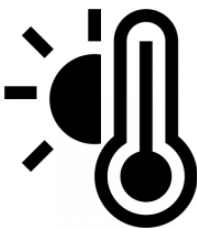


Ozark Mountains and White River. Photo by Jeff Sharp on Flickr.

There are a few highland regions in the central part of the country, including some hilly, deeply eroded plateaus in central Kentucky and Tennessee. The **Superior Uplands**, located in northern Minnesota and Wisconsin, are a hilly extension of the Canadian Shield. The most rugged landscapes in the central United States are found in the **Ozark Highlands** of southern Missouri, northern Arkansas, and eastern Oklahoma. This ancient, highly eroded landscape features a maze of ridges and valleys, with the highest peaks reaching just above 2,500 feet.

Climates

Wichita, Kansas, is a handy reference point for American climates. Areas south and east of Wichita possess a **humid subtropical** climate. This climate features a very long warm season. Summers are quite hot, and extraordinarily muggy. The cold season is comparatively short. Winters are generally mild, although the region does experience brief spells of cold weather. Precipitation is heaviest in summer, since warmer air typically contains more water vapor than cooler air, although this region is generally wet year-round.



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from Noun Project

Areas north and east of Wichita possess a **humid continental** climate. As a continental climate, its temperatures are defined by seasonal extremes. Summers tend to be quite hot, and winters tend to be quite cold. Precipitation levels are relatively high in summer. Winter precipitation rates are lower, although this area regularly receives significant snowfalls.

Much of the American West is dominated by a **steppe** climate. Steppe climates are characterized by hot summers and cold winters, but the most dominant trait is aridity. Although not quite a desert, steppe climates are significantly drier than the humid climates found in the eastern half of the United States. The transition is clearly manifested on the landscape as you head west—trees give way to grasslands, corn gives way to wheat, and the towns become fewer and far between. This climate is found in many of the lowland areas between Wichita and the Sierra Nevada, and also in California's Central Valley. These relatively arid climates are the result of rain shadows cast by the Coast Ranges, the Sierra Nevada/Cascades, and the Rockies.



Arizona. Photo by Mary Fairchild on Flickr.

Deserts can be found in the southwestern United States, from southeastern California to southwestern Texas, including much of Arizona, New Mexico, Nevada, and southern Utah. In lowland areas, this climate generally features extremely hot summers and very mild winters. At higher elevations, temperatures can get quite cold, particularly in winter. Precipitation rates are low year-round, a result of the constant presence of a subtropical high.

Alpine climates can be found throughout the Rockies, Sierra Nevada, and Cascades. This is not a climate in and of itself, but a complex region of thousands of microclimates. Generally speaking, though, these mountains tend to be colder and wetter in the north, and drier and hotter in the south.

Coastal California is home to a **Mediterranean** climate. It is a maritime climate, so temperatures are generally mild year-round. The spring and fall tend to be dry, and the summers can be virtually rainless, due to the presence of a subtropical high. Winters can be relatively rainy, as the high pressure shifts south, and the westerlies carry moisture in off the Pacific. Coastal Oregon and Washington are home to a **marine west coast** climate. This is another maritime climate, so temperatures tend to be relatively mild year-round. Since the westerlies are constantly pushing moisture in off the Pacific, this region is wet throughout the year, with maximum precipitation occurring in winter.



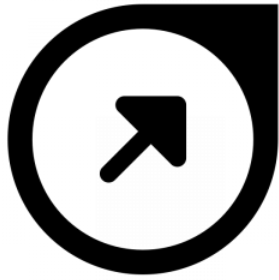
Moraine Lake, Banff, Alberta, Canada. Photo by John Lee on Unsplash.

Physical Geography: Canada

Many of Canada's landform regions are extensions of those found in the United States. The high elevations of the Pacific and Rocky Mountain systems extend northward into British Columbia and the Yukon. The flat, fertile Interior Plains extend northward into southern Ontario, Quebec, Manitoba, Saskatchewan, and Alberta. The low Appalachian Mountains extend northward into New Brunswick, eastern Quebec, and Newfoundland. Much of the rest of Canada is dominated by the Canadian Shield (see Chapter 33).

The humid continental climate dominates much of Canada, featuring moderate precipitation, warm to hot summers and cold winters, with temperatures in both summer and winter declining as latitude increases. The rainy, mild marine west coast climate is found along the coast of British Columbia. Canada's far north is characterized by arctic climates, which are generally cold year-round.

Historical Geography: The United States



Created by Jonathan Li
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The Northeast

The Northeast consists of two sub-regions—New England, which includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; and the Mid-Atlantic, which includes Delaware, Maryland, New Jersey, New York, Pennsylvania, and the District of Columbia. Although it is a relatively small region, the Northeast is densely populated, containing 20% of the country's population.

One of the most prominent features of the Northeast is the **Bos-Wash Megalopolis**, a string of nearly continuous metropolitan development along the Atlantic Coast from Boston to Washington. This is the most densely populated region of the United States. It is home to one-sixth of the U.S. population, and includes four of the country's ten largest metropolitan areas: New York, Philadelphia, Washington, and Boston. It also includes the mid-sized metropolitan areas of Baltimore, Providence, and Hartford. It is the second most heavily industrialized corridor in the U.S., and contains the country's political capital, Washington, and its unofficial economic capital, New York. As is discussed in Chapter 32, most of these cities evolved around excellent natural harbors. For years, nearly all of the country's imports, exports, and immigrants passed through these ports. They were a natural location for factories, banks, and corporations.



Manhattan, New York. Photo by Florian Wehde on Unsplash.

Because New York had the easiest connection to the interior of the country (also discussed in Chapter 32), it became the most prominent city in the Northeast, and in the country. It was already the United States' largest city in 1790, and today, with 19 million people, it remains the most populous metro area in the country by a fairly wide margin. It is the world's largest financial center, contains more corporate headquarters than any other city on earth, and is home to one of the world's busiest ports.

The Midwest

The Midwest includes Ohio, Michigan, Illinois, Indiana, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, North Dakota, and South Dakota. It is a large region, and has a large population—it is home to 22% of the American population. See Chapter 29.



Iowa. Photo by Kelcy Gatson on Unsplash.

The Midwest is one of the world's most productive agricultural regions. In the early 1800s, thousands of small-scale family farms were established from Ohio to Nebraska, in a region known as the **Corn Belt**. The dominant agricultural practice there has long been livestock fattening. Corn, and later soybeans, were grown as a feed crop for animals, which were exported to the cities of the Mississippi valley. Although this region is still carpeted with corn each summer, its rural population has declined significantly as a result of farm mechanization. During the 20th century, the Corn Belt's rural population declined by more than 80%.

Further west is the **Wheat Belt** of the Great Plains, where conditions are too dry for corn production. It is a very productive region—the yield of the annual wheat crop is more than twice the domestic demand. The rest is exported to the global market. Production is also highly mechanized, with much of the work done by migratory crews. As a result, population densities in the Wheat Belt are extremely low. The combined population of North and South Dakota is just 1.4 million—smaller than that of metropolitan Milwaukee.



Hull-Rust-Mahoning Mine, Hibbing, Minnesota. Photo by James St. John on Flickr.

The Midwest is also synonymous with manufacturing, particularly in the large cities along the Great Lakes. Between the 1870s and the 1970s, the Great Lakes **Steel Belt** emerged as one of the world's most productive manufacturing regions. The lakes provided an avenue for the cheap transport of bulky raw materials. Iron ore was mined on northwestern end of the Great Lakes, while coal was mined near the southeastern end. Coal and iron ore are the two fundamental ingredients of steel, and this made the Great Lakes an ideal setting for steel production. Steel was integral to the Industrial Revolution, used in the production of rails, industrial and agricultural machinery, buildings, transportation equipment, and much more. Steel is expensive to ship, so it made sense to manufacture things made out of steel right next to the steel mills. As a result, the Steel Belt became synonymous with American industrial might.



Chicago. Photo by Muzammil Soorma on Unsplash.

Although it contains numerous mid-sized metro areas, including Detroit, Minneapolis, Cleveland, St. Louis, Indianapolis, Columbus, Kansas City, Milwaukee, and Cincinnati, only one Midwestern metro area ranks in the country's top ten. Chicago is the country's third-largest metropolitan area. Located in an advantageous position in the center of the Midwest, and on the most direct route between the Mississippi Valley and the Great Lakes, Chicago emerged in the late 1800s as the Midwest's undisputed economic capital. It became a trade and marketing center for the Corn Belt. By 1900, about half of all the animals slaughtered in the United States met their demise in the Union Stockyards on Chicago's South Side. Chicago became a distribution point for the timber of the Great Lakes, and a major steel producer. Its economy was red hot at about the same time that immigration to the United States was peaking, and as a result Chicago became the most ethnically diverse city in the country. Today, Chicago remains the most important city in the U.S. interior. It is a major manufacturer, and an international center of trade, marketing, banking, and finance.



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The South

The South consists of Virginia, North Carolina (seen in the icon to the left), South Carolina, Georgia, Alabama, Mississippi, Louisiana, West Virginia, Kentucky, Tennessee, and Arkansas. It is another large region, and contains a large population. About 19% of Americans live in the South. The South consists of two distinct sub-regions—the Lowland South (or Deep South), which occupies the Piedmont and the Gulf-Atlantic Coastal Plain, and the Upland South, which occupies the Appalachians and Ozarks.

Some of the first white settlers in the **Lowland South** were wealthy British immigrants who acquired enormous farms known as plantations. Plantations featured the intensive production of a single luxury crop, usually tobacco or cotton. These farms were infamously associated with slavery, utilizing the forced labor of African Americans.

The slave plantation culture established three enduring traits in the Lowland South: a lack of ethnic diversity, a lack of major urban areas, and a lack of a significant middle class. As we'll discuss below, these traits have faded in recent decades, but have not disappeared altogether.

For years, most inhabitants of the Lowland South were descendants of British settlers, or of African slaves. Until recently, the region attracted very few immigrants from other places. The lack of available farmland, the lack of manufacturing jobs, and the lack of major ports and railroads made the region unattractive to immigrants, as did the social climate.

The wealthy land-owning classes of the region simply imported their manufactured goods from elsewhere, and had little incentive to invest in new economic enterprises like factories. The rest of the region's population was relatively poor, so they had no money to invest or spend. This lack of manufacturing and commercial activity stunted the growth of Southern cities.

Perhaps the most distinctive trait of the Lowland South was its lack of a significant middle class, an unusual trait in the United States, which has long been defined by a large middle class. The plantation economy produced a small, extraordinarily wealthy white ruling class, but most of the region's white residents were poor subsistence farmers eking out a living on marginal, unproductive land that had been passed over by the plantation owners. And, of course, most Black slaves were essentially moneyless. After the Civil War, the poor white subsistence farmers remained poor. The wealthy landowners remained wealthy. Emancipated slaves, lacking other economic opportunities, became sharecroppers, and largely remained poor.

The first white settlers to the **Upland South** arrived from Pennsylvania, flowing down the grain of the Appalachian valleys, then on to the hills of Kentucky and Tennessee, and eventually to the Ozarks. In this hilly country, these settlers developed an economy and culture very different from that of the Lowland South. Most of them did not own slaves, not because they were necessarily opposed to slavery, but because the poor soils and steep slopes made the land unsuitable for large-scale commercial agriculture. The

topography also made transportation difficult, further limiting economic opportunities. The Upland South became, and remains, a region of low population density, high rates of poverty, and few large cities.

One economic bright spot for the Upland South has been tourism. It is a poor region, but a beautiful one. In the 1880s, with the Industrial Revolution in full roar, many wealthy city dwellers of the Midwest and Northeast were seeking refuge in nature, particularly in the summertime. Tourism accelerated in the 1900s as a number of rivers in the Upland South were damned to create enormous artificial lakes. Vacation homes, retirement communities, marinas, and theme parks are now some of the most significant industries in the Upland South.

In the second half of the 20th century, many Southerners, anxious to leave the haunting legacies of slavery, poverty, segregation, and cultural isolation behind, began to speak of the evolution of a **New South**. The region has, indeed, undergone many changes over the past several decades. In the 1960s, the region began to develop a more diverse economy. Low wages and taxes made it an inviting place for businesses.



Woman in Atlanta. Photo by Jeffery Erhunse on Unsplash.

The region's warm climate attracted Sunbelt migrants. Some of the most important changes resulted from the Civil Rights movement, which led to an improved social climate. In the 1980s, for the first time since Emancipation, more African-Americans were moving to the South than were leaving it. Compared to the Northeast and Midwest, it is still a region of relatively few large metropolitan areas, although Charlotte, Raleigh-Durham, Nashville and, in particular, Atlanta, have experienced explosive growth in recent years.

The Interior West

The Interior West includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. Outside of Alaska, it is the most sparsely populated area of the United States. Despite its enormous size, this region contains just 7% of the U.S. population. Wyoming, which sprawls across 98,000 square miles, contains just 580,000 people. By comparison, suburban Chicago's DuPage County, which covers just 336 square miles, contains 923,000 people. Because of its relative emptiness, much of the land in the Interior West is still owned by the federal government, and the region contains numerous military bases, national parks, and national forests.

From the 1840s to the 1940s, the Interior West's economy was based almost exclusively on primary sector activities, such as ranching, mining, and forestry, and there were few substantial cities. Beginning in the 1940s, the population of the region began to grow and the economy expanded. The region has a large military presence, and as the military expanded exponentially during World War II and the Cold War, the economy of the Interior West expanded with it. Tourism also boomed in the second half of the 20th century, with scores of tourists attracted to the region's national parks and ski resorts, and to the desert playgrounds of Reno and Las Vegas, Nevada.

The Interior West's population has been growing steadily since the 1960s as the result of Sunbelt migration. It is still a relatively empty region, but some of the country's fastest-growing metropolitan areas are found here, including Phoenix, Denver, Salt Lake City, and Las Vegas.



Double rainbow and Texas sign. Photo by Alan Berning.

Texas and Oklahoma

Texas and Oklahoma collectively account for about 9% of the country's population, with the lion's share of those people in Texas, which is the second most populous state. Both of these states were settled by non-Native Americans relatively late. Texas was originally part of Mexico, and its distance from Mexico's population and economic cores limited economic opportunity there. Throughout much of the 1800s, Oklahoma was reserved for Native Americans.

In the 1820s, a newly independent Mexico opened Texas to settlement from the United States. In 1836, Texas achieved independence from Mexico. It would join the U.S. in 1845. Oklahoma was opened to white settlement in 1889, and became a state in 1907.

Through the first half of the 20th century, the economies of both states were based primarily on raw materials, particularly agriculture and the oil and gas industries, and their cities were relatively small. Beginning in the 1960s, Texas began to boom. The Dallas and Houston metro areas now rank among the United States' ten largest. San Antonio and Austin are smaller, but their populations have also expanded rapidly. Texas's economic boom resulted from a dramatic increase in trade with Mexico, a growing energy industry, the rapid expansion of high-tech industries, and Sunbelt migration. Oklahoma's growth has been more modest. Its largest metropolitan area is Oklahoma City, which ranks 41st nationally.



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The West Coast

California, Oregon (seen in the icon to the left), and Washington make up the West Coast states, which contain 15% of the country's population. White settlement in Oregon and Washington, an area often referred to as the "Pacific Northwest," began relatively early, in the 1840s with the Oregon Rush. Farmers from the east were attracted to the region's climate, which features mild winters and plentiful rainfall. Eventually, the timber industry came to dominate the rural economy of the Pacific Northwest.

California began to grow rapidly at about the same time. In 1848, control of California was transferred from Mexico to the United States, just as gold was discovered in the foothills of the Sierra Nevada. The following year, thousands of '49ers—Americans hoping to make their fortune in the gold rush—poured into California. Some made the trek overland, but most arrived by sea, and San Francisco's Golden Gate became the major point of entry.

California's economy subsequently focused on agriculture in the Central Valley. Farming there was initially limited by physical geography. As snow in the Sierras melted each spring, vast sections of the valley would flood. Then, in the summer, when the flood waters receded, there would be no rain for weeks at a time. Beginning in the 1900s, massive private, local, state, and federal water projects transformed the landscape. Dams were built to trap spring snowmelt, and the water was doled out via thousands of miles of canals during the dry summers. Agriculture rapidly expanded throughout the valley and, by the 1930s, California was the country's leading agricultural producer.

The West Coast is now home to numerous large cities, including the huge metropolitan areas of Los Angeles, San Francisco, and Seattle, and the mid-sized metros of Sacramento, Portland, and San Diego. As discussed in Chapter 32, the region's three largest cities benefited from the arrival of railroads which linked the Pacific to the eastern United States.

Another transformative event was World War II. After Japan attacked the U.S. fleet at Pearl Harbor in 1941, the ensuing war increased the flow of materials through West Coast ports, and the federal government rushed to establish a military and industrial presence along the Pacific. The West Coast's naval bases were expanded, and the aircraft and defense industries thrived. After the war, increased trade with Asia further expanded the West Coast's industrial base.

But perhaps the most important factor in the West Coast's population boom was Sunbelt migration. For a century, people have been attracted to the mild climates along the Pacific, particularly those of southern California. In the 1960s, California became the most populous state. In the 1980s, Los Angeles passed Chicago to become the country's second largest metro area. Today, nearly one in eight Americans lives in California.



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Florida

Over the course of the last century, Florida has transformed from an isolated, sparsely-populated backwater into the country's third most populous state. Today, 6% of the Americans live there. The United States purchased Florida from Spain in 1819. When it became a state in 1845, it had a population of just 70,000. Northern Florida became an extension of the Lowland South's slave plantation culture, and northern Florida remains the most "Southern" part of Florida. Swampy peninsular Florida would remain sparsely populated for decades.

In the 1920s, Florida's economy began to boom with the emergence of the tourism industry. It also became a retirement haven for Americans. Today, nearly 20% of the state's population is over sixty-five. Overall, few states exemplify Sunbelt migration quite like Florida. From 1920 to 2000, the state's population doubled every twenty years. Three of its metropolitan areas—Tampa, Miami, and Orlando—now rank among the country's twenty largest.

Alaska and Hawaii

Hawaii is small, and thus has a relatively small population. Alaska is enormous, by far the largest state in the country, but it is very sparsely populated. Collectively, the two states account for less than 1% of the country's population. Both achieved statehood in 1959. Hawaii's economy largely revolves around the military, tourism, and agriculture. Alaska's economy is dominated by raw materials extraction, such as oil and gas, mining, fishing, and timber.



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Historical Geography: Canada

Canada's indigenous population, the First Nations, arrived on the continent about 15,000 years ago. In the 1500s, the first English colonies were established in Atlantic Canada. In the 1600s, French settlers moved into the St. Lawrence valley, and more English settlements were established north of Lake Erie and Lake Ontario. In the 1700s, France ceded control of its Canadian territories to the British. In the 1840s, all of the European settlements of Canada were unified into a single British colony. At about the same time, the Oregon Treaty with the United States established Canada's southwestern border, increasing white settlement in the Prairie Provinces and British Columbia. Canada was granted home rule in 1867, and officially gained full independence in 1931, although the British monarch remains the symbolic head of state. Newfoundland would remain a British colony until joining Canada in 1949.



Nova Scotia. Photo by Joel Quam.

Atlantic Canada

Atlantic Canada consists of the provinces of Prince Edward Island, Nova Scotia, New Brunswick, and Newfound & Labrador. It is the poorest and most rural part of Canada. It has long been dominated by the logging and fishing industries, although the latter was decimated in the late 20th century by overfishing. A bright spot for Atlantic Canada is tourism, which has boomed in recent years due to the region's attractive scenery, recreational opportunities, and unique culture.

Ontario

Ontario is the most populous, urbanized, and industrialized province in Canada. The majority of its population lives in the southeast, near Lake Erie and Lake Ontario. Ontario contains the country's political capital, Ottawa, and is home to its largest metropolitan area, Toronto, which commands a huge share of the Canadian economy. Ontario is, without question, Canada's economic and demographic core.



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Quebec

Quebec is more rural and less industrialized than Ontario, and has long been defined by its French identity. 85% of Canada's French speakers live in Quebec, and 80% of the province's population speak French as their first language. The secessionist Quebecois movement, which grew rapidly in the second half of the 20th century, sought independence for Quebec. A 1995 independence referendum was narrowly defeated, 51% to 49%, and the movement has since lost momentum. The province's economic prospects are looking up, largely driven by the growth of high-tech industries in Montreal.

The Prairie Provinces

The Prairie Provinces include Alberta, Saskatchewan, and Manitoba. Historically, it has been a sparsely populated region, with an economy primarily based on mining, oil and gas, and wheat farming. It has recently experienced a high-tech boom in some of its cities, especially Calgary.



Vancouver, British Columbia, Canada. Photo by a.canvas.of.light on Flickr.

British Columbia

British Columbia was long an isolated outpost of Canada, but its economy has boomed in recent years, particularly in Vancouver, as mild climates have attracted numerous migrants. British Columbia has benefited immensely from Canada's increased trade with Asia, since Vancouver is closer to Japan, Korea, and China than any other major North American city. Its Asian connection was further enhanced when a number of wealthy migrants arrived in Vancouver from Hong Kong in 1997 after China's political takeover there. Vancouver's population is now 20% Chinese-Canadian.

Cultural Geography: The United States

Language

A person's "first" language is their household language—the language they speak with their parents, children, or spouse. English has long been the majority language of the United States, and 82% of Americans speak it as their first language. Spanish is the second most prominent language in the U.S., with 11% of Americans speaking it as their first language. All other languages account for 7% of Americans' first languages, with Chinese languages, Tagalog, Vietnamese, Arabic, French, and Korean being particularly prominent among them.

Ethnicity

The original inhabitants of what is now the United States were a diverse group of peoples commonly referred to as Native Americans. After the 1600s, this indigenous population was decimated by warfare, displacement, and disease, and they were overwhelmed by immigrants from the Old World. From the 1600s through the mid-1800s, these immigrants largely came from northern and central Europe, and also from Africa—involuntary migrants who arrived in North America via the slave trade. From the late 1800s through the mid-1900s, the largest stream of immigrants was still from Europe, although now primarily from Europe's east and south. Since the mid-1900s, immigrants have primarily arrived from Latin America and Asia.

Every ten years, the United States Census Bureau collects racial data on American citizens, and the four most prominent racial groups are white/Caucasian, Black/African-American, Asian, and Native American. Additionally, the census asks respondents of all races if they identify as Hispanic (or Latino/Latina). As of the 2010 census, 66% of Americans identify as white and Non-Hispanic.

The largest minority populations are Hispanic (15%), Black (12%), Asian (4%), and Native American (1%). About 2% of Americans identify as multi-racial.

The ten most common places of ancestral origin for Americans are Germany (15%), Africa (12%), Ireland (11%), England (9%), Scotland (8%), Mexico (7%), Italy (6%), Poland (3%), France (3%), and Scandinavia (3%).

Religion

For a detailed discussion of religion in the United States, see Chapters 30 and 38.

Cultural Geography: Canada

Like the United States, Canada was long inhabited by diverse groups of indigenous peoples, known as the First Nations in Canada. Eventually these groups were displaced by immigrants from Europe, mainly from the British Isles and France. Today, about two-thirds of Canadians trace their ancestry to those two places. Most of the remaining third of Canada's population trace their ancestry to other European countries, to the First Nations or, increasingly, to Asia and Africa.

The language patterns of Canada reflect its ethnic patterns. About 57% of Canadians speak English as their first language, while 21% speak French as their first language. A myriad of other languages—prominently Punjabi, Spanish, Tagalog, Arabic, German, Italian, Hindi, Urdu, and the languages of China—account for the first languages of 22% of Canadians.

Christians account for 67% of Canada's population, with the most prominent groups being Roman Catholic (39%), Protestant (24%), and Eastern Orthodox (2%). Other prominent religious groups include Muslims (3%), Hindus (2%), Sikhs (1%), Buddhists (1%), and Jews (1%).

Population Geography: The United States

Six major trends have defined the population geography of the United States over the course of its history: westward migration, rural-to-urban migration, declining population growth, an aging population, international immigration, and Sunbelt migration.

The westward drift of American population can be seen in the movement of the country's mean center of population. If a meridian of longitude is drawn through the population center, about half of the country lives east of that line, and about half west of it. (Likewise, if a parallel of latitude is drawn through this point, about half of the country lives north of it, and half south of it.) In 1790, the population center was in Maryland, near Chesapeake Bay, a strong indicator of how close to the Atlantic most Americans lived. Over the course of the 19th century, the population center would drift west into Virginia, then on to Ohio, Kentucky, and Indiana. By 1950, the population center was in Illinois. In 1980, the population center crossed the Mississippi River for the first time. It is currently located near Plato, Missouri, a small town in the south-central part of the state.

Another great historic shift in American demographics has been rural-to-urban migration. In 1800, just 6% of Americans lived in cities. By 1850, that number had inched up to 15%. In 1900, it was 40%. It wasn't until 1920 that the U.S. census revealed, for the first time, that a majority of Americans, 51%, lived in cities. That number has climbed steadily over the last century. As of 2010, the United States was 81% urban. This rural-to-urban shift was caused by the Industrial Revolution, when machinery replaced much of the human labor on farms, and when more factory workers were needed in cities. The United States has become not only more urban, but also more metropolitan, with large metro areas accounting for an increasing share of the country's population. As of 2010, there were twenty-nine American metropolitan areas with at least 2 million people, and they collectively accounted for 44% of the country's population.

The United States' population is about 328 million, making it the third most populous country on earth, albeit a distant third to China and India. The population continues to grow, but at a decreasing rate. Between 1800 and 1810, the country's population grew by a remarkable 38%. Between 1900 and 1910, it grew by 21%. Between 2000 and 2010, the growth rate was just 10%. Much of this has to do with a decline in birth rates. The United States' **total fertility rate**(TFR) is 1.9, below the replacement rate of 2.1. As a result, the United States increasingly relies on immigration to sustain population growth.

Americans are having fewer children, and they are also living longer. This has led to an aging population. In 1900, just one in twenty-five Americans were at least sixty-five years old. By 2000, one in eight were. By 2050, it's estimated that one in five Americans will be senior citizens.

Two more major population trends are international immigration, which is discussed in Chapter 35.

Population Geography: Canada

Canada's population is about 38 million, which is slightly smaller than California, and about one-ninth that of the United States. Like the U.S., Canada is experiencing declining birth rates and an aging population. Canada's TFR is just 1.6, but population stagnation has been offset by high rates of immigration. Canada is highly urbanized, with 80% of its population living in cities. It is also highly metropolitanized. Canada's six largest metro areas account for more than 43% of the country's population, including Toronto (5.9 million), Montreal (4.1 million), Vancouver (2.5 million), Calgary (1.4), Ottawa (1.3 million), and Edmonton (1.3 million).

Canada's population distribution has been compared to that of an island nation, with densely settled regions interrupted by vast areas that are sparsely populated. The highest population densities are found in a corridor that stretches along the northern shores of Lake Erie, Lake Ontario, and the St. Lawrence River. Much of the population lives within 200 miles of the U.S. border. Ontario is the most populous province, accounting for 38% of Canada's population, followed by Quebec, at 24%. The Prairie Provinces collectively contain 18% of Canadians, while British Columbia is home to 13%. Atlantic Canada accounts for less than 7%.

Political Geography: The United States

The United States employs a **federal** political system, in which the fifty states enjoy a good deal of autonomy—they each have their own governments and constitutions, and are essentially free to do whatever they please, provided they do not violate the U.S. constitution. Theoretically, the federal government in Washington, D.C., only holds authority over the states in matters granted to it by the constitution. Exactly how far that authority extends has long been a point of contention in the U.S.

The federal government is made up of three branches: the judicial branch, the legislative branch, and the executive branch. The judicial branch is charged with interpreting laws and hearing legal cases, with the highest court being the Supreme Court. There are ninety-four federal court districts, which are organized into twelve regional circuits. Beyond that, there is little geography to the judicial branch. Theoretically, all nine Supreme Court justices could be from the same state.

There is, on the other hand, a good deal of geography associated with the legislative branch, which is charged with making laws and shaping federal policy. The United States Congress is divided into two houses – the Senate and the House of Representatives. The Senate has a relatively simple configuration. There are 100 senators. Each of the fifty states is represented by two senators, regardless of its population size. This means that sparsely populated states wield outsized influence in the Senate.

The House of Representatives is made up of 435 members, representing 435 separate districts. The makeup in the House is based on population size, with larger states having the most representatives, such as California (53), Texas (36), Florida (27), and New York (27). Every state is guaranteed at least one representative, and seven states—Alaska, Montana, Wyoming, North Dakota, South Dakota, Vermont, and Delaware—have the minimum of one representative. Every ten years the United States conducts a census, and congressional seats are **reapportioned** based on relative population growth. States experiencing slow population growth often lose seats in the House. States experiencing rapid population growth are likely to gain seats.

Each House district is a single-representative, equal-population district. That means that each state is carved up into districts of equal population, and that residents of each district elect one representative. Illinois, for example, has eighteen representatives in the House, so Illinois is divided into eighteen districts, each electing one representative, and each containing roughly one eighteenth of the state's population.

Because some parts of a state may grow faster than others, each state (except those with only one district) must engage in **redistricting** after each census, to be sure that each district contains a relatively equal share of the state's population. The process is made more complicated when a state gains or loses a seat as a result of reapportionment.

The boundaries of the House districts often follow unusual, serpentine lines. This is because the boundaries are determined by the state governments, and the majority parties in those states often engage in a controversial practice known as gerrymandering. **Gerrymandering** is the practice of drawing House boundaries so that the majority party has an advantage over the minority party. The two primary methods of gerrymandering are known as “packing” and “cracking.” Packing involves cramming most of the voters from the minority party into one or two districts, conceding those districts to the minority party, but guaranteeing wins for the majority party in all the other districts. Cracking involves running as many districts as possible into minority party strongholds, thus cracking up those strongholds, and denying the minority party any representation in the House.

The executive branch is charged with enforcing laws and carrying out the policies of the federal government. The head of the executive branch is the president, who largely shapes the make-up of the branch. For a discussion of presidential elections, see Chapter 42.

Political Geography: Canada

Canada is a constitutional monarchy. Its official head of state is the British monarch, currently Queen Elizabeth II. Legislative power rests with the parliament, which is made up of two bodies—the Senate and the House of Commons. The monarchy and the Senate are largely symbolic. Real constitutional power resides with the House of Commons, which is made up 338 members. They are elected in single-representative, equal-population districts, commonly referred to as “ridings.” Any party, or coalition of parties, that forms a majority in the House of Commons then selects the executive officers of the federal government in Ottawa, including the prime minister, who is the chief executive. Like the United States, Canada employs a federal system, in which Canada’s ten provinces enjoy considerable autonomy.

Economic Geography: The United States

The United States possesses the world’s largest economy. It is home to 4.5% of the world’s population, but controls 23% of its wealth. It has a high overall standard of living, ranking fifteenth among the world’s countries, according to the Human Development Index.

The U.S. economy has moved through three historic phases. In the first phase, which lasted from the 1600s to the late 1800s, the economy was largely focused on the primary sector, primarily agriculture. During the second phase, which lasted from the late 1800s to around the 1970s, the American economy was largely focused on the secondary sector, manufacturing. Since the 1970s, the economy has increasingly focused on the tertiary and quaternary sectors, services and information. Here, we’ll take a brief look at American agriculture and manufacturing. The tertiary and quaternary sectors are covered in Chapter 31.

Agriculture

Agriculture was once the dominant force in American economics and society. Outside of the plantation south, most agricultural production took place on small family farms, and farming was by far the most common occupation in the country. Today, American agriculture remains very productive, and important to the domestic economy. The U.S. is world’s leading agricultural exporter by a wide margin, and the tremendous level of agricultural production keeps food exceptionally cheap for Americans, allowing them to spend money on other things, which aids other sectors of the economy. But its labor base has been shrinking for years. In 1900, 40% of the American workforce were farmers. Today, fewer than 2% are.

For years, outside of the plantation South, most American agriculture was dominated by small-scale family farms. Profits for small family farms peaked between from the 1940s through the 1960s. Rural-to-urban migration had decreased the number of farmers, but mechanization had enabled farmers to produce more with less labor. At the same time, the worldwide demand for American agricultural products skyrocketed as a result of global conflicts and the population explosion. Things could not have gone much better for America’s small family farms during those three decades. Unfortunately, in the following three decades, things couldn’t have gone much worse.

In the 1970s, the global market began to shrink as the Green Revolution reached the developing world—a lot of countries that had been very reliant on America’s farmers were becoming more self-sufficient. At the same time, American farmers were overproducing, and prices for their products began to collapse. Finally, the cost of farming—that of modern machinery, chemicals, and fuel—began to surge. By the 1980s, millions of small family farms had become unprofitable. Many farm families defaulted on their loans and lost their land. Many of the small-scale farmers who survived were forced to engage in off-farm work to stay afloat financially. Over the last four decades, American agriculture has seen a good deal consolidation and corporatization of agriculture. Increasingly, American farmland is owned by corporations or wealthy individuals, and much of the labor is done by migratory crews. Still, some family farms have hung on—there are still more than 2 million family farms in the United States.

Manufacturing

In the late 1800s, the United States emerged as the world’s leading manufacturer. Manufacturing output peaked in the middle of the 20th century. The United States remains one of the world’s leading manufacturers, second only to China in total industrial output. Since the 1970s, however, the percentage of Americans working in manufacturing has declined significantly. In 1959, 28% of the American labor force worked in factories. Fifty years later, that number had dropped to 8%. The decline in American

manufacturing employment was driven partly by the resurgence of major industrial competitors, like Germany and Japan, but primarily by the oil crisis of the early 1970s. As the cost of energy spiked and world markets slid into recession, American manufacturers searched for ways to cut expenditures, and one of the easiest ways to do that was to reduce labor costs. Manufacturers found ways to automate jobs that had previously been performed by humans. Other jobs were outsourced to countries in the developing world. The jobs most likely to be outsourced were those in “low-tech” industries, such as textiles, toys, and the final assembly of cars and appliances.

Today, American manufacturing jobs are increasingly focused on “high-tech” industries, such as heavy equipment, aircraft, chemicals, and pharmaceuticals. American manufacturing is also increasingly focused on the production of components (auto parts, computer chips, circuits, etc.), rather than on the final assembly of products, which tends to be more labor intensive.

Economic Geography: Canada

Canada possesses the world’s fifteenth largest economy, and boasts one of the world’s highest standards of living, ranking thirteenth globally according to the Human Development Index, just ahead of the United States.

Canada has an economic history similar to that of the U.S. Its economy initially focused on primary sector activities, like farming, fishing, timber, and mining. Like the U.S., employment in these activities has declined over time, although the export of raw materials remains vital to Canada’s economy. Canada is a significant manufacturer, with much of the production taking place in southern Ontario, which is an extension of the Midwest’s Steel Belt. Also like the U.S., Canada’s job market is increasingly focused on the tertiary and quaternary sectors.

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4: Europe



Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared elements over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

In some cases, the determination of a geographic region is simple. For Europe, quite a bit of the decision-making is accomplished simply by noting where the land ends and meets large bodies of water.

As we understood with our definition of the Western World, nearly all of Europe’s countries meet the three noted criteria – contiguity, Christianity, and Indo-European language. Much of Europe’s landscape is distinctive by the frequent pattern of islands, peninsulas, and mountains. In fact, how many European countries lack all three of these physical landforms? I count these (excluding micro states) – Lithuania, Belgium, Luxembourg, Bulgaria, Moldova.

Historians will recount certain patterns of shared experiences among European countries. Some elements of this history will explain how Europe has the world’s predominant share of **nation-States**.

Fundamentally though, there are some clear limitations of physical geography on what can be called Europe. To the west, there is the clear boundary of the Atlantic Ocean. The only worthwhile questions for westward inclusion in Europe are the islands of Iceland and Greenland. Iceland has obvious cultural links with much of Northern Europe; in fact, we count Iceland in Scandinavia. Greenland is an autonomous territory of Denmark and thus arguably belongs in Europe. Greenland’s landmass is physically part of the North American continent, but generally has been considered part of Europe. Or, frankly, sometimes Greenland simply is ignored.

To the north, there is the Arctic Ocean. In this direction, the European landmass terminates with the northern reach of Norway. Additionally, Norway owns the islands of Svalbard, farther north.

To the south, there is the Mediterranean Sea. Clearly, there is Europe on one side and Africa on the other. What about the islands of the Mediterranean? European countries have long owned most of these islands – Balearic (Spain), Corsica (France), Sardinia and Sicily (Italy), Crete and many (Greece). Cyprus is effectively partitioned with a Turkish north, but is a member of the European Union. Malta is an independent country with a mix of ethnicities, but also is a member of the European Union.

The eastern edge of Europe is the controversial side. As you will learn in the reading on the Russian Domain, this textbook argues that Russia belongs either as its own region or as a slightly larger region adding Ukraine, Belarus, Armenia, Georgia, and possibly Moldova. Thus, Europe ends in the east with the wall of Slavic countries – Russia, Belarus, and Ukraine.

Some may ask if Turkey could be a southern or eastern member of Europe. Indeed, Turkey has expressed interest in joining the European Union, though that inclusion is nowhere near imminent. Perhaps reluctantly, geographers would understand that Turkey belonging to the European Union would qualify Turkey as in Europe. In the meantime, however, Turkey belongs in the Middle East (or Southwest Asia). Although Turkey practices a very secular approach to Islam, its religious affiliation matches the dominant religion of the Middle East and not that of Europe. The Turkish language is not an Indo-European language, but falls in the Turkic language family, like several languages in Central Asia. A small portion of Turkey’s landmass lies across the Bosphorus Strait and

thus shares land borders with Greece and Bulgaria. Even so, the vast majority of Turkey's land is to the east and historically has been considered part of Asia.

Given these exclusions of Turkey and of the Russian Domain from Europe, this means that the Black Sea serves as a major water border for part of Southern Europe and part of Eastern Europe.

Did you know?

Spain does have two urban exclaves – Ceuta and Melilla – that are on the African coastline, otherwise within the country Morocco. Spain's Canary Islands are 62 miles west of the southern shores of Morocco. With Spanish colonial history and control, these islands are counted as part of Europe.

The Faroe Islands are roughly triangulated – east of Iceland, north of Scotland, and west of Norway. Like Greenland, these islands are an autonomous territory of Denmark. They are always considered as within Europe, though oddly they are not counted in the European Union.

The nine islands of the Azores rest in the Atlantic Ocean, 850 miles west of Portugal. As an autonomous region of Portugal, the Azores also are in Europe.

Mayotte is a French island in the Indian Ocean. As such it has status as an outermost region (OMR) of the European Union, but is not part of Europe. There are several other similar cases. France's New Caledonia in the Pacific Ocean counts in the category overseas countries and territories (OCT), similarly giving it rights in the European Union, but not making it part of Europe. Here too there are several other cases, including the former Netherlands Antilles.

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4.1: Introduction to Europe



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4.2: Europe- Regional Example



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Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared characteristics over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

In Europe, Scandinavia is one of the sub-regions. Its definition also follows the methodology of regional geography. It turns out that this is a complicated question.

Ideally, Scandinavia is a region defined by ethnicity and language, key elements of Cultural Geography. If so, then Scandinavia is not simply the same as Northern Europe or the Nordic countries, while it is related somewhat by location or proximity.



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In terms of shared language patterns and roots in the northern part of Europe, only four countries are linked – Iceland, Denmark, Sweden, and Norway – as shown in outline maps from top to bottom in this chapter. In the Indo-European language family, there are dozens of languages. Some are languages currently spoken by millions of people, some by only hundreds of people. Some are dead languages. One branch of the tree of languages goes like this – Indo-European » Germanic » Old Norse » Danish, Icelandic, Norwegian, Swedish, and Faroese. (Faroese is spoken primarily on the Faroe Islands, an autonomous territory of Denmark. The Faroe Islands could be listed as an additional piece of Scandinavia or its inclusion could be assumed as part of Denmark. Greenland too is an autonomous territory of Denmark. Both the Faroe Islands and Greenland will be assumed as part of Denmark in this essay.)

The very much smaller and entirely separate Uralic language family has only a few languages in it. The Uralic family includes the Finno-Ugric family plus Samoyedic languages of some of the numerically small peoples of Siberia. The Finno-Ugric family contains Finnish, Estonian, Hungarian, and scattered languages such as Sami.



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Thus, the Indo-European and Uralic language families are mutually exclusive. Norwegians cannot naturally understand Finnish language, but must learn it as an entirely unrelated language. Estonians cannot naturally understand Danish, but must learn it as an entirely unrelated language. Since a shared or similar language is a core element of any geographic region, in northern parts of Europe this language mismatch among these peoples works against including Finland and Estonia in Scandinavia.

Historically, there are very significant links between Norway, Sweden, Denmark, and Iceland. For most of the years from 1397 to 1523, these joined together in the Kalmar Union, joint governance under a single ruler. Denmark and Norway were together from 1537 to 1814., Sweden and Norway 1814-1905. It is true that Finland was considered part of the Swedish realm until 1809, but then Finland was taken by Russia, thus further distant culturally from Scandinavia.

The term Norseman historically refers to those from Norway, Sweden, and Denmark. Attacking Norseman, also known as Vikings, raided and expanded into Europe. These Vikings also explored westward, reaching Iceland, Greenland, and Vinland (North America), thus extended their language and culture in that direction.



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In terms of physical geography, Scandinavia can refer to the same named peninsula. This clearly includes Norway and Sweden, but what part of Finland is there remains vague. The Scandinavian Mountains (or Scandinavian Highlands) extend along the shared border of Norway and Sweden, perhaps touching Finland at the margins.

It seems best to assert that Finland is in Northern Europe, but not in Scandinavia. From Finland, Estonia sits a short distance across the Gulf of Finland. Because Estonians are closely related to Finns and because Estonia for over a quarter century has been independent of the former Soviet Union, Estonia now should be counted as part of Northern Europe as well, not in Eastern Europe.



This is Scandinavia.

Arguably, the linguistic, historical, and physical patterns of these northern sections of Europe best place Norway, Sweden, Denmark, and Iceland together as the sub-region known as Scandinavia. Add Finland and Estonia to this set of countries to delineate the region of Northern Europe. The Nordic countries would be another term for Northern Europe.

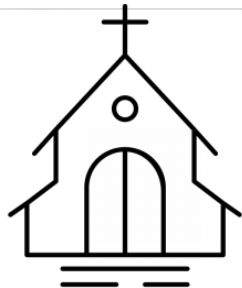
Part of the fun of Geography is the challenge of making pieces of the world fit together as regions, thereby allowing people to view the world in cohesive ways.

Did you know?

Norway has more land than pictured above. Svalbard is a set of islands that lies much farther north than the northern edge of continental Norway. Perhaps we should show it.

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4.3: Europe- Cultural Geography I



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Christianity

Armenia is the world's oldest Christian nation, but it was the Christianization of the Roman Empire that would be the decisive moment for the religion. In the 4th century, the Roman Emperor Constantine legalized Christianity, and later converted to it.

In Europe outside the Roman Empire, Christianity diffused down the socio-political hierarchy. Even after the fall of Rome, emperors, kings, and tsars recognized the political advantages of embracing what had become the region's largest faith. So, the monarch would convert to Christianity. After that, all of his subjects were expected to do the same.

For several centuries, Rome remained the center of European Christianity, and most of the region's Christians were followers of the **Roman Catholic** Church. Today, the Roman Church is still the largest Christian group in Europe, and the largest in the world. Figure XX shows the countries where Roman Catholicism is the largest religious group. Catholics are also a substantial minority in Bosnia, Latvia, and Britain.

A second major branch of Christianity emerged in the 11th century. Although **Eastern Orthodox** Christianity traces its theological roots to early Catholicism, it emerged as a separate denomination in 1054 CE when a number of Christian nations in Eastern Europe broke from Roman authority. Its structure is somewhat different from the Roman Catholic Church. The Catholic Church throughout the world is still governed from Rome, and headed by the pope. While Eastern Orthodox Christians recognize the Archbishop of Constantinople (Istanbul) as the symbolic head of their Church, the various national Eastern Orthodox Churches are largely governed separately. Most Eastern Orthodox nations possess their own branch of the Orthodox Church, including the Greek, Bulgarian, Romanian, Serbian, and Russian Orthodox Churches. Orthodox Christians are also a significant minority in Bosnia and Latvia.

The third major branch of Christianity in Europe is **Protestantism**. The Protestant Reformation began in 1521 CE, when a German theologian named Martin Luther leveled numerous criticisms at the Roman Catholic Church. Luther himself was a devout Catholic, but he believed that the Roman Church had corrupted the true nature of Christianity, having strayed too far from scripture and the mission of the church. His protests (hence the term "Protestant") led to his excommunication, and he and his followers founded a new movement that came to be known as Lutheranism. Lutherans are now the largest religious group in northern Germany and Scandinavia (Norway, Sweden, Iceland, and Denmark). Another major Protestant reformer was John Calvin, and Calvinist churches (such as the Dutch Reformed Church and Presbyterian Church) found significant numbers of followers in the Netherlands and Scotland.

An unusual hybrid between Catholicism and Protestantism can be found in England. The Church of England (also called the Anglican, or Anglo-Catholic Church) had a rather unusual beginning. England had been a predominantly Roman Catholic country until 1534, when King Henry VIII rejected Roman papal authority, largely because the pope refused to annul his marriage. Henry still considered himself Catholic, just not a *Roman* Catholic, and initially there was little change in English Christianity (to this day, an Anglican mass would look very familiar to Roman Catholics). Still, Anglicans are generally regarded as Protestants, particular after Henry's son, Edward VI, began to embrace numerous theological elements of the Protestant Reformation. That is why the Church of England officially regards itself as both Catholic and Reformed.

Non-Religious Populations

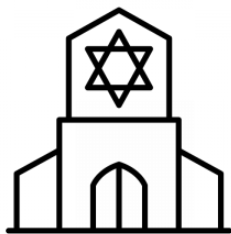
Organized religion has been declining in Europe in recent decades. In most countries, the majority of the population still have at least a nominal association with one religious denomination or another, although rates of regular participation in religious services are relatively low in Europe when compared to much of the rest of the world. Still, **non-religious** populations are the majority in just three European countries: The Netherlands, Estonia, and the Czech Republic. In Europe as a whole, about one in four people identify as non-religious, although that varies widely from country to country. For example, the Czech Republic and Poland are two traditionally Catholic countries that neighbor one another. Today, 89% of Czechs are non-religious, while 86% of Poles remain Catholic.



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Islam

Islam arrived in Europe via Ottoman rule in the 1400s. At its height, the Ottoman Empire (based in modern-day Turkey) controlled much of southeastern Europe. While under Ottoman rule, many Europeans converted to Islam. As a result, Muslims are today the largest religious group in Bosnia (50% Muslim), Albania (59%), and Kosovo (90%). Islam is also the fastest growing religion in Europe, largely as a result of immigration from Muslim countries in Africa and Asia. Today, there are sizable Muslim populations in Germany (5 million Muslims), France (5 million), Britain (3 million), and Italy (2 million).



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Judaism

In the first century CE, the **Jewish** homeland in Southwest Asia was under Roman rule. When the Jews unsuccessfully rebelled against them, the Romans exiled the Jews from their homeland – an event known as the Diaspora. The Jews were scattered to all parts of the Roman Empire, but the densest concentration would eventually be in Europe. In 1880, about 90% of the world's Jewish population was in Europe, with particularly dense concentrations in countries like Poland and Russia. Around this time, Jewish migration to the Americas began to accelerate, primarily to large American cities like New York and Chicago.

Even with significant emigration, about 60% of the world's Jewish population remained in Europe at the dawn of World War II in 1939. During the war, Jews who fell under the occupation of fascist governments, such as that of Nazi Germany, suffered horrific consequences. More than six million Jews died during the ensuing Holocaust as a result of starvation, deprivation, slavery, or systematic murder in fascist concentration camps. By the end of the war in 1945, 36% of the world's Jewish population had been killed, including nearly two-thirds of European Jews. After the war, most of Europe's remaining Jews migrated elsewhere, primarily to the United States and Israel. Today, only about 7% of the world's Jewish population lives in Europe.

Did you know?

Christianity diffused through Roman Empire in an urban-hierarchical fashion. It was first embraced in major Roman cities, then smaller cities, then villages, and then eventually in rural areas. The Latin word for a rural area is pagus, and one who lived in a rural area was a pagan – an antiquated term for a non-Christian.

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4.4: Europe- Economic Geography I



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The Netherlands is one of the smallest countries in the world by area, similar in size to New Jersey. By population, at over one thousand people per square mile, the Netherlands is Europe's most crowded country and the fifth most crowded in the world, not counting micro-States such as Monaco nor islands nor city-States. Of note, New Jersey is America's most crowded state.

In the world, there are two dozen tiny countries under one thousand square miles in area, but these are micro-States, city-States, or island countries. Not counting those countries nor other island countries, the Netherlands is the world's 26th smallest country. Anyway, it is a small place.

By population, the Netherlands is a bit over 17 million people, the 68th largest country in the world. So, not tiny, but not a large population.

Gross domestic product for the Netherlands, when adjusted for living standards (PPP – purchasing power parity) and measured by the International Monetary Fund (IMF), places it 28th best in the world. On the Human Development Index (HDI), calculated by the United Nations, the Netherlands rises to be the 10th most developed country in the world.

What about natural resources? In 1959, the vast Groningen gas field was discovered and now accounts for about 25% of the gas reserves of the whole European Union. However, other than this gas resource, the Netherlands has no significant other energy or mineral resources.

Very small area, modest population, almost no raw materials, but very highly established economically and socially. Why? Well, certainly part of the success is due to its **relative location** in Western Europe, an elite place in the world. Even so, there may be something about the Dutch that has led to their distinctive success.

The answer is that the Netherlands is a very prosperous country due to international trade. Here are a few key reasons why this works so well for the Netherlands. One, as noted above, its relative location is excellent. The country is coastal, giving it access to ocean trade, but also is proximate neighbors to numerous other prosperous European countries. In particular, the Netherlands directly borders Germany, the country with the largest economy in Europe. Germany is the Netherlands' number one trade partner. Additionally, the Netherlands is across the North Sea from Great Britain, borders Belgium, is a short distance from France. The rest of Europe, a small continent, is not so far away either.



Erasmus Bridge – Rotterdam – Photo by Harold Wijnholds on Unsplash

Two, the Netherlands has Europe's busiest port – Rotterdam. Rotterdam is an excellent **break-of-bulk** location, where ocean-going ships can dock and offload their cargoes onto smaller vessels on the Rhine River. Yes, Rotterdam is the mouth of the Rhine River, its exit point into the North Sea and thus the Atlantic Ocean.

Products shipped from anywhere in the world may be brought to Rotterdam and then down the Rhine River into Germany to cities such as Bonn and Cologne. In addition, the Rhine-Main-Danube Canal that connected these three rivers in 1992 allows cargo to

travel much farther, in fact on the Danube all the way to the Black Sea. The Danube River at times is an international border, while at other times crosses such borders; distinctively, it does so more than any other river in the world. This international access, including passing through national capitals (Bratislava, Vienna, Belgrade, Budapest), is a tremendous boon for trade in either direction. According to NationMaster, the Netherlands has the 8th densest road system in the world, thereby offering an alternative means of distribution to or from Rotterdam's port.

Three, the Dutch have an extensive history of international trade. Certainly, we recognize that the British, the French, and the Spanish had noteworthy explorations, conquests, and colonies across the world. Often though, we forget that the Dutch (and the Portuguese) also had similar broad geographic histories. The trade routes and relationships established through a few centuries of international activity have been maintained to the present day.

Thus, the Netherlands has trade connections throughout the world, bringing a variety of goods into the country as imports, but some pass through the country on the Rhine system or through the Netherlands road and rail system. A variety of products are added to these imports for distribution throughout Europe. All of this then works in the opposite direction for sending products out from Rotterdam to overseas markets.

How well do the Dutch do this? According to the Observatory for Economic Complexity (OEC), "The economy of the Netherlands has an Economic Complexity Index (ECI) of 1.3 making it the 18th most complex country. The Netherlands exports 419 products with revealed comparative advantage (meaning that its share of global exports is larger than what would be expected from the size of its export economy and from the size of a product's global market)." In other words, the Netherlands does a great job at creating and enhancing products for export.

For a diagram from Statistics Netherlands (CBS) showing a complex pattern of import, export, and transit-through trade flows, go to this website.

<https://www.cbs.nl/en-gb/news/2015/48/more-than-half-of-international-transport-in-the-netherlands-either-transit-trade-or-re-export>

Four, maintenance of all these trade relationships all across the world and with all sorts of countries and cultures comes naturally to the Dutch and their way of life. One key word describing the Dutch way of life is *gedogen*. This word means "tolerance" but is best construed to mean "active tolerance." The Dutch culture does not simply look the other way at behaviors that might be considered different or odd in other cultures, but actively allows and accepts differences. Arguably, this permits the Dutch to get along with anyone anywhere, an approach that naturally would favor cooperative trade around the world. Probably the most noticed examples of *gedogen* or active tolerance in the Netherlands is the acknowledgement that while prostitution and drug use might be considered problems and by some might be considered immoral, neither prostitution nor drug use will disappear, so it is better to create a managed, regulated context where these activities can persist in a relatively safe manner.

Overall, how well does the Netherlands do in international trade? In exports it ranks #5 in the world, in imports #8 in world, with about ¾ of these flows happening in Europe. For an excellent visual depiction of export totals from around the world, go to <https://www.visualcapitalist.com/mapped-worlds-largest-exporters-in-2018/>

The country is #2 in world in agricultural exports, only behind the United States, a vastly larger country. It is #1 in the world in the export of flowers and flower bulbs, but #2 in the world in exported tomatoes. The port of Rotterdam physically is the largest in the world. All of this is rather amazing, given the country's rather modest size both in population and in area.

Did you know?

There are two common errors that people make about the Netherlands. First, the ethnic group of the Netherlands is the Dutch. The people of Germany call themselves "Deutsch." These two peoples – the Dutch and the Deutsch – are not the same.

Second, Holland is only a part of the Netherlands, but not the whole country. There are twelve provinces of the Netherlands (the name literally means "low lands") = North Holland, South Holland, Zeeland, Friesland, and eight more. Given that Holland is the most famous area of the Netherlands, some Dutch say that Holland is the brand name for the Netherlands.

Don't forget that before it was New York, it was New Amsterdam.



Not necessarily related to trade, the other famous feature of the Netherlands is its amount of land that should be under water. The Dutch have done an amazing job of engineering to reclaim land from the sea, holding out the water with dams and dikes. This map shows where the sea would be without the engineering of recovered land.

This chapter is dedicated to my friend and academic exchange colleague Dick Van Schaik of Harderwijk, Netherlands, who died unexpectedly in 2017.

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4.5: Europe- Historical Geography I



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World War II was an enormous and complex conflict. To read all of the books that have been written about the history of the war would require a lifetime. Here, we'll focus on the geography of the war.

In many ways, World War II was a sequel to World War I, with Britain and France once again squaring off against Germany. This time around, the two warring sides became known as the “Allies” and the “Axis.” The Axis consisted of most of Europe’s fascist powers: Germany, Italy, Hungary, Romania, and Bulgaria. (Japan was another Axis member, but that’s a story for the Geography of the Eastern World). The Soviet Union was not formally part of the Axis, but did partner with Germany early in the war. The Axis also included Austria and Czechoslovakia, which had been annexed by Germany in 1938, and Albania, which had been annexed by Italy in the spring of 1939.



Europe’s Alliance in World War II. Cartography by Steve Banas.

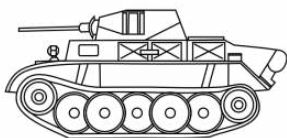
The Allies initially consisted of those countries resisting fascist expansion, primarily Britain, France, and Poland. Many other countries would later be drawn to the Allied side, notably the United States and Soviet Union. A few European countries managed to remain neutral throughout the war: Portugal, Spain, Ireland, Sweden, and Switzerland. World War II was caused by multiple factors, but the primary one was the ambition of Germany’s leader, Adolph Hitler, to extend fascist control over all of Europe, and perhaps the world.



Europe's Alliance in World War I. Cartography by Steve Banas.

Hitler's primary geographic strategy was to avoid a two-front war. The map above shows the European countries that were members of the "Allies" and "Central Powers" of World War I. The geography of these alliances meant that the Central Powers were essentially fighting two wars at the same time, one in the east, and one in the west. This two-front war had doomed Germany and its allies. At the dawn of World War II, Hitler firmly believed, with good reason, that no single country could defeat Germany on its own.

Germany's first task was to secure the eastern front. In September of 1939, Germany invaded Poland. Hitler had made a secret pact with Joseph Stalin, the leader of the Soviet Union. It was an unusual partnership, considering that communism and fascism fall about as far apart on the political spectrum as possible, but Hitler was interested in defeating Poland, and Stalin assured him that he would not check German ambitions. The Soviet Union was only interested in retaking the territory it had lost in the wake of World War I. So, Germany seized western Poland, while the Soviets invaded eastern Poland, along with Latvia, Lithuania, Estonia, and Finland. With Hungary, Romania, Bulgaria, and the Soviet Union as allies, defeating Poland would secure the eastern front. With little help from Britain and France, Poland was in no position to resist the invasion by both the Germans and Soviets, and fell within a month.



Created by Mochamad Wildan
from Noun Project

Britain and France declared war on Germany in the fall of 1939, but very little happened over the winter. Many began to speak of the conflict as a "phony war." That illusion ended in the spring of 1940, when Germany turned its attention to the western front. Germany crashed into France through the neutral countries of Belgium, the Netherlands, and Luxembourg. France and Britain were unprepared for both the direction and the lightning speed of the German advance. France fell in just forty-six days.

For much of the rest of the war, France was divided into three entities. The first was Occupied France, which was governed directly from Berlin. A second became known as “Vichy France.” This was territory in southern France that remained unoccupied when France surrendered. Governed out of the town of Vichy, this part of France was nominally independent, but was run by French generals who had agreed to partner with the Nazis, effectively making Vichy France a satellite state of Germany. A third element of France were the “Free French.” This force was led by Charles de Gaulle, a French general who had escaped, along with many other French officers and soldiers, to Britain. The Free French claimed to be the legitimate government of their country and, partnering with resistance fighters in France, would continue to battle the fascists throughout the war.



Created by Anand Prahlaad
from Noun Project

Germany also invaded and conquered Norway and Denmark. This left Britain as the lone allied country on the western Front. Hitler considered invading Britain, but deemed it too risky. Instead, German bombers began hammering British cities in massive night raids, while German U-boats (submarines) in the Atlantic began to cut Britain’s vital supply lines from the rest of the world. Hitler fully expected to bomb and starve Britain into surrender within a matter of months. Over the next year, the Axis moved to secure the southern front, invading British colonies in North Africa in 1940, and invading and defeating Yugoslavia and Greece in the spring of 1941. This left Britain as the only remaining Allied country. An Axis victory looked almost certain.

It was a very grim year for the Allies, but it also saw two significant turning points, both of which would ultimately doom Hitler’s ambitions. By the end of 1941, Germany found itself at war with the two countries that would later emerge as global superpowers – the United States and the Soviet Union.

Three weeks after Greece’s surrender, the Axis launched surprise attack on the Soviet Union. Looking back, we now know that this was a disastrous decision. At the time, however, it was not an outlandish idea. In 1941, few reasonable people believed that the Soviet Union could survive such an invasion. Even though it had a substantially larger population than any other European country, it did not have the industrial or military firepower equal to that of the Axis. Also, Germany had the element of surprise (legend has it that when initial reports of the invasion reached Stalin, he didn’t believe them). And, of course, Russia had an enormous geographic liability – an 1,800-mile border made up of lowlands that offered little obstacle to the Axis invaders. A defeat of the Soviet Union would eliminate any remaining threat on the eastern front, and its vast territory could serve as a warehouse of raw materials to further the German war effort. It also offered access to the Pacific Ocean, which was key to Hitler’s goal of world domination.



Another major turning point of 1941 was Japan’s surprise attack on the U.S. naval base at Pearl Harbor, Hawaii, drawing the United States into the war. This would later spell doom for the Axis, but at the time, it seemed like an early Christmas present for Hitler. The U.S. President, Franklin D. Roosevelt, had been trying to drum up support for Britain since 1939. But a large number of Americans were hesitant to get involved in the war in Europe. Now that Japan had attacked the United States, Hitler believed that Americans would forget about Europe entirely, and turn all of their attention to the war in the Pacific.

Again, Hitler's primary goal was to avoid a two-front war. In that regard, 1943 proved to be a disastrous year. On the western front, Germany was unable to bomb and starve Britain into surrender. Also, much to Hitler's chagrin, the United States did indeed get involved in the European war. American air crews were deployed to Britain. British bombers had been targeting Germany and its occupied territories during night raids for years. Now, American bombers were arriving during the daytime. This "round-the-clock" bombing began to take its toll on German transportation and industry, inhibiting its ability to wage war.

More troubling for Hitler, advances on the eastern front had stalled. Germany had dramatically underestimated the resolve of the Soviets, who paid an enormous price for their resistance. The Soviet Union suffered 23 million deaths during the war, about 5 million more than every other country in Europe combined. That fact, couple with German military blunders, a pair of brutal Russian winters, and the fact that German fighter planes on the eastern front had been recalled to defend against British and American bombers, would eventually doom the Axis on the eastern front.

Finally, another front – the southern front – opened in 1943. British, American, Canadian, and Free French forces seized control of North Africa, and invaded Italy. Germany was forced to send a significant force to northern Italy to stall the Allied advance.

1944 would bring a string of Allied advances. On the western front, Allied forces invaded France, beginning with the famous "D-Day" landings in Normandy. On the eastern front, Soviet troops pushed the Axis out of the Soviet Union, and began advancing into eastern Europe. On the southern front, Allied troops continued to advance north through Italy.

The war ended in 1945. Benito Mussolini, the fascist leader of Italy, was captured and executed on April 28, 1945. Hitler committed suicide two days later. Germany formally surrendered on May 7th. The end of the war also marked the end of the European era of global dominance. Europe's industrial infrastructure was in ruins, and its empires in Asia and Africa began to crumble. Europe found itself divided between governments loyal to the Soviet Union, and those affiliated with the United States. The Cold War had begun.

Did You Know?

The single deadliest battle of World War II was the Battle of Stalingrad. It lasted for five months and killed nearly 900,000 people. Germany lost the battle, a decisive turning point in the war.

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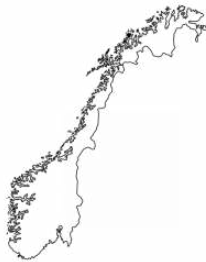
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4.6: Europe- Physical Geography I



Created by Bence Bezeready
from Noun Project

Europe has the most amazing amount of coastline in the world.

So, what creates coastline? For one thing, islands do. By definition, islands are surrounded by water and thus 100% of an island's border is coastline.

According to the *Telegraph*, there are many thousands of islands in Europe, including:

British Isles – 6806 islands

Norway – more than fifty thousand islands

Finland – almost 180 thousand islands

Sweden – over 267 thousand islands¹

How large are these islands? Wikipedia lists about 500 islands in Europe of at least 50 square kilometers in area. This is quite a difference in total numbers of islands in Europe. Apparently, very many European islands are quite small.

How big does a bit of land surrounded by water have to be in order to count as an island? This is an intriguing geographic question. Sometimes, Bishop Rock of the British Isles is considered the world's smallest island, because it has a lighthouse. The rock is less than 750 square meters in area. Its perimeter is approximately 125 meters. Clearly, this rock with a lighthouse adds only a smidgen of area and of coastline to Europe's totals.²

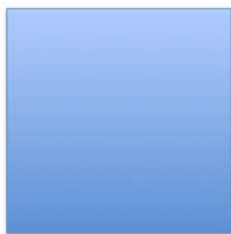
According to Eurostat, an island should meet these criteria³:

- have an area of at least one sq. km.;
- be at least one kilometre from the continent;
- have a permanent resident population of at least 50 people;
- have no permanent link with the continent;
- not house an EU capital.

When considering the islands of Europe, Eurostat also did not include far distant colonial islands, such as French Polynesia. Doing the count in 2003, thus including the United Kingdom, Eurostat numbered 286 island territories in the European Union.

So, it is complicated, but by whatever means of counting, Europe does have a lot of islands, including some very prominent islands like Great Britain.

What else creates coastline? Peninsulas. A peninsula is a piece of land the juts out into a body of water, so that the peninsula is mostly surrounded by that water, except for its connection to a large landmass. A peninsula can be a variety of irregular shapes, but could be approximated by a rectangle where one short side connects with the mainland.



In fact, let's do some geometry. The geometric shape that produces the least amount of coastline for a given area is the circle. Ironically, this means that many islands, being roughly circular, do not efficiently produce coastline length given their area, while automatically having coastline given their identities as islands.



If a rectangle is used to approximate a peninsula, what shape of the rectangle yields the largest or smallest coastline? Comparing a square to a rectangle of the same area, the rectangle always will have more perimeter or in our perspective, geographically more coastline. Look a quora.com for an interesting mathematical explanation of this.⁴ Can you see this in the shapes above? Shown here, the square and the rectangle have the same area. The perimeter of the square equals the sum of the lengths of the two widths of the rectangle. Given that the rectangle also has the measure of its height on both sides, the rectangle has a longer perimeter.

In fact, if maintaining the same area, then the longer the length and the shorter the width of the rectangle, the greater its perimeter will become. As the length of the rectangle approaches infinity and the corresponding width of the rectangle approaches zero, the perimeter is maximized. Thus, for a peninsula to maximize its coastline, it should maximize length and minimize width especially the width that connects to the mainland.

Europe has numerous peninsulas. Some of these are very large. The Iberian Peninsula encompasses Spain and Portugal. Most of Italy is a peninsula. Norway and Sweden combine as a peninsula. Denmark is a smaller mix of peninsula and islands. The Balkan peninsula includes continental Greece and a bit of neighboring lands. More modest in area, but noteworthy peninsulas include Brittany in France, North Holland in the Netherlands, and the Courland Peninsula of Latvia.

Trace your finger around the borders of European countries and you will outline numerous islands and peninsulas. So, how well does Europe stack up globally on the coastline measure. It turns out that Europe is #1 on this measure. How so? Well, it seems that the logical way of measuring the magnitude of coastline is to compare coastline to area. Remember that circles provide the lowest coastline to area ratio and that among rectangles, squares similarly have the lowest coastline to area ratio. This ought to be intuitive as well, for we can visually note that compact shapes like circles and squares favor area over coastline.

So, our measure for ranking by coastline is the ratio of miles to square miles (or kilometers to square kilometers) of area – miles:square miles (or km:km²). Probably the easiest numbers to examine are expressed as meters of coastline per square kilometer of area – m:km². Using tabular data from Wikipedia⁵, I have compiled and calculated these ratios. It turns out that Europe is #1 among world regions in this measure, as shown in the table below. By the way, Southeast Asia, ranked #2, also is replete with islands and peninsulas.

Coastline in meters per square meter

Region	m/km ²
Europe	27.8
Southeast Asia	23.6
North America	12.2
Pacific Realm	8
East Asia	4.4
LACAR	3
North Africa and the Middle East	2.6
Russian Domain	2.4
South Asia	2.1
Sub-Saharan Africa	1.3
Central Asia	0

Not counting countries that are only made up of islands, Denmark is the country with the highest coastline:area ratio at 172 m:km², while Norway (including the islands of Svalbard) is second at 167 m:km² and Croatia is third at 112 m:km².

What are the consequences of having so much coastline? Undoubtedly, there are many benefits and some costs, but certainly there are at least advantages to trade and transportation (many ports), fishing (access to the sea), exploration (Europe led the world), and tourism (beaches and scenic views). People seek these advantages. Not surprisingly, in 2017 the United Nations reported that 40% of the world's population lived within 100 km of ocean coastline.

Did you know?

Note in the table above that the coastline:area ratio for Central Asia is zero. Every country of Central Asia is landlocked; that is, every country has no ocean or sea coastline. Further note that three Central Asian countries border the Caspian Sea; nevertheless, this does not count, for the Caspian Sea actually is a lake, not connecting to the ocean at all.

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² Patowary, Kaushik. 2013. "Bishop Rock: The Smallest Island in the World." Amusing Planet. 2013. <https://www.amusingplanet.com/2013/0...-in-world.html>.

³ "Analysis of the Island Regions and Outermost Regions of the European Union: Part I The Island Regions and Territories." n.d. Planistat Europe. Accessed March 2003.

⁴ "If the Area of a Rectangle and Square Are Equal, Then Which Will Have a Greater Perimeter? – Quora." 2018. Www.Quora.Com. May 24, 2018. www.quora.com/If-the-area-of...ater-perimeter.

⁵ Wikipedia Contributors. 2019. "List of Countries by Length of Coastline." Wikipedia. Wikimedia Foundation. October 15, 2019. https://en.Wikipedia.org/wiki/List_o...h_of_coastline.

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4.7: Europe- Political Geography I



Balkanization, symbolically visualized in this photo by David Goehring on Flickr.com

Separatism, in political geography, refers to an attempt by a region of a country to separate from that country and gain independence. A related term is **Balkanization**, which describes any situation where one country dissolves into more than one country. The Cold War ended with the Balkanization of the Soviet Union, in which one country dissolved into fifteen countries. Two other countries dissolved at the end of the Cold War – Czechoslovakia and Yugoslavia.



Church in Skaldic, Slovakia, near the border with the Czech Republic. Photo by samuel on Flickr.

Both countries had formed about the same time, and for similar reasons. The Czechs and Slovaks have different cultures, identities, and languages, but they also have a lot in common. Both nations are Slavic and historically Catholic. Both had been part of Austria-Hungary. The two nations formed a union in 1918 as the result of a sort of “safety in numbers” mentality. Surrounded by larger, more powerful states, the Czechs and Slovaks figured that by unifying they would be better equipped to resist foreign domination. Yugoslavia was formed in the same year, when a number of small southern Slavic nations (Yugoslavia means “Land of the Southern Slavs”) unified out of a similar “safety in numbers” motivation.

The Czechs and Slovaks divided peacefully in 1993 – so peacefully, in fact, that the dissolution was referred to as the “Velvet Divorce.” Things didn’t go so smoothly in Yugoslavia. In 1991 and 1992, four countries declared independence from Yugoslavia – Slovenia, Croatia, Bosnia, and Macedonia. Serbia dominated much of what was left of Yugoslavia (and, in fact, kept the name “Yugoslavia” for a few years). What followed was Europe’s bloodiest conflict since World War II. The term “ethnic cleansing” was coined in the former Yugoslavia in the 1990s, as these newly separate states sought to “cleanse” their country of minorities. Those who resisted were often killed. Nowhere was the fighting fiercer than in Bosnia. The Muslim Bosniaks held a slim majority in the new country, but there were (and still are) large Serb and Croat minorities in Bosnia. All three groups fought for political and territorial control, with Croatia and Serbia backing their ethnic brethren in the fighting.

The fighting continued in different areas for about a decade, leaving more than 140,000 dead. In 2006, Montenegro voted to separate from Serbia, becoming the sixth country to emerge from Yugoslavia. Kosovo, an Albanian-dominated enclave in Serbia, declared independence in 2008, although its independence is not recognized by many countries in the international community, including, of course, Serbia.

The fragmentation of the European political map might not have ended. There are a few areas in Europe that have discussed the possibility of future independence.



Scottish vote for independence. Photo by Garry Knight on Flickr.

The most likely candidate is Scotland. For several centuries, Scotland has been united with England, Wales, and Northern Ireland in what is officially known as the United Kingdom of Great Britain and Northern Ireland (the “UK,” or “Britain” for short). Still, the Scots have long maintained a strong separate national identity. Calls for Scottish independence intensified in the 1980s after Margaret Thatcher was elected Prime Minister of Britain. Scotland is, for the most part, a very politically liberal part of Britain, and the conservative Thatcher was not popular there. In 1997, Scotland established its own parliament. It still sends representatives to the British parliament in London, but the Scottish parliament has control over many of its own domestic affairs. In 2014, Scottish voters took part in a national referendum seeking full independence. Polls showed that a number of Scots liked the idea of independence, but felt that there were too many questions about how Scotland and the rest of the UK would divide the country’s resources and liabilities. In spite of support by the man in the photo (Photo by Garry Knight on Flickr), the referendum was defeated 55% to 45%.

After Britain’s recent exit from the European Union, however, there have been renewed calls for independence, since Scottish voters overwhelmingly voted to remain part of the EU. Recent polls show that the majority of Scots now favor independence. It is possible, even probable, that Scotland will gain independence sometime in the next few years.



Created by Bence Bezeredy
from Noun Project

The second-most likely country to gain independence in Europe is Catalonia, a region in northeastern Spain centered on the city of Barcelona. Catalonia has, in the past, been free from Spanish rule and, when it hasn’t been, it has often enjoyed a good deal of autonomy. As a result, Catalonia has always had a unique and separate identity from Spain, and even has its own unique dialect of Spanish. Many Catalonians favor independence based on these cultural and historical factors alone, but economics plays a role as well. Barcelona has long been the economic dynamo of Spain, and many in the city feel that the rest of Spain is essentially economic dead weight.

In 2017, the Catalan provincial government held an independence referendum, which passed, leading the Catalan parliament to declare independence. Spain’s government declared the referendum illegal (and, in the eyes of most neutral legal experts, it was). At the moment, there is no clear path forward for Catalan independence, but there is clearly support for it.

There have been similar rumblings in northern Italy. Like Catalonia, northern Italian regions like Lombardy are the economic engines of their country, and feel limited by political corruption and economic stagnation in the rest of Italy. At this point, a genuine move for independence by northern Italy seems unlikely, but not impossible. Residents in Flanders (northern Belgium) have had similar discussions, but, similarly, independence does not seem imminent. Many residents in the Basque Country in northern Spain, and also of the French island of Corsica have made more strident calls for independence, but is unlikely that either region possesses the economic or political clout to achieve such a thing.

Did you know?

Bosniaks, Serbs, and Croats all speak the same language, and have a shared cultural history. The primary difference among them is religion – most Bosniaks are Muslim, most Serbs are Orthodox, and most Croats are Catholic.

The Czech Republic has adopted a shorter version for its country name – Czechia. This sort of thing is not unusual. The People's Republic of China is generally simply called China, after all. Even so, the BBC suggests that the new name was added primarily because it fit better on sports jerseys.

For a nifty GIF of the history of Balkanization, go to http://wordsmith.org/words/images/balkanize_large.gif

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4.8: Europe- Population Geography I



The movement of people across space is inherently geographic. At its broadest, this is called **mobility**. Mobility includes all sorts of spatial movement – daily commuting, migration, tourism, and more. Throughout the study of mobility, geographers note the movements across space, but in doing so, they examine why and how the movement happens.

One key, or actually a **law**, to mobility is the geographic concept of **distance**. Distance is a variable that is crucial to the study of Geography; in fact, it is shown in Waldo Tobler's First Law of Geography – “Everything is related to everything else, but near things are more related than distant things.”

The United States is well known for its mobility; in fact, arguably America has the most mobile society in the world. Urban Americans are active commuters, sometimes going over an hour each way to and from work in a car or bus or train. American wealth allows for extensive ownership of automobiles. Not counting microstates, the United States trails only New Zealand in number of road motor vehicles (more than two wheels) per 1000 people. The American road system is unmatched around the globe in a combined measure of quality (paved) and quantity (miles of road). America's large land area provides the spatial availability for numerous large cities. Cities are known to have a magnetic-like attraction for migrants and travelers. Additionally and key to this essay's topic, the United States has a large land area, divided into fifty states, yet existing without internal borders acting as barriers to mobility.

With the American history as a clearly viewed positive example, Europe sought to organize itself as a set of countries. (See the essay on The Development of the European Union) The European Union was established in 1993 by the Maastricht Treaty, named for the city in the Netherlands, where the treaty was signed. At that time, there were fifteen member countries, having now expanded to twenty-seven. The European Union (EU) subsumed the prior organization, the European Economic Community (EEC).

It was under the auspices of the EEC that an interest in mobility in Europe began. Likely there were observations about and comparisons to the United States. The United States is much larger than Europe (not including Russia), yet America's lack of internal border stops allowed it to produce much more efficiency transportation mobility than found in Europe. Could borders in the EEC be regulated more like American borders?



Cartography by Ian Akman.

The initial Schengen agreement was among only five of the countries of the EEC. Like the EU's Maastricht agreement, this was named for the city where it was signed (in Luxembourg). The Benelux trio of Belgium, the Netherlands, and Luxembourg were joined by West Germany and France in concurring to gradually reduce controls at common international borders. Like the EEC's broadening into the EU, the number of countries interested in joining the Schengen Agreement also expanded. Though it originally existed outside of the EEC and EU, in 1999 the Schengen Agreement officially was integrated into the laws of the European Union, though it allowed for Ireland and the United Kingdom to opt out. Countries joining the EU after 1999 were expected to become members of the Schengen Agreement as well, but were also able to postpone immediate enrollment. Thus, it is that Croatia, Bulgaria, and Romania do not yet count within the Schengen fold. The appeal of open borders brought non-EU countries to participate in the Schengen system, including Norway, Iceland, Switzerland, Liechtenstein, and the microstates of Monaco, Vatican City, and San Marino.

The Schengen Agreement has widespread support in Europe, though some populist politicians preach fear of terrorists maneuvering through Europe's open borders. Supporters counter that security is maintained and improves with integration of Europe, not with fragmentation. With over 400 million people living in Schengen countries, the benefits to trade, travel, and tourism have been significant. Even by 2010, three Schengen countries (#4 Italy, #5 France, #6 Germany) ranked in the top six countries in the world, in terms of total road passenger miles. Not surprisingly, the United States was the top country in this statistic. In 2014 in the measure of tourist trips per person, the top countries included #1 Finland, #2 United States, #3 Sweden, #4 Denmark, #5 Norway, #10 France.



Photo by Lāsma Artmane on Unsplash.

Here we see a sign at the border of Latvia, where there is no border control. Travelers simply drive into Latvia, in the same way that a Minnesotan simply would drive into Wisconsin.

Did you know?

"Where's Waldo?" Geographer Waldo Tobler, mentioned above, was not the inspiration for that popular series of books and images.

In times of great concern, Schengen countries may reestablish border controls, as some countries did during the European migrant crisis in 2016.

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4.9: Europe- Urban Geography I



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from Noun Project

Primate mammals include human beings; however, a primate city, though populated by human beings, is named for mammals, but instead the term refers to the word *primary* meaning singular and dominant. Thus, a primate city dominates its country in all urban ways.

Four factors should be evaluated to consider whether or not a country is likely to have a primate city. First, does the country have a large population? If yes, this decreases the probability that one city dominates the country's urban population, for a large population provides sufficient numbers of people to populate many large cities.

Second, does the country have a large area? If yes, then this too decreases the probability that one city dominates the country's urban population, for a large area provides sufficient territory to develop many large cities.

Third, does the country have a long history of urbanization? If yes, then again the probability of a primate city decreases, for there has been enough time for many cities to form and grow in size and importance.

If a country has none of these three characteristics, then it will not have a primate city.

If it has one of these three characteristics, then it might have a primate city.

Two of three, probably a primate city.

Three of three, guaranteed a primate city.

Let's consider these factors in regard to Europe. First, do European countries have large populations? The most populated country in Europe is Germany with about 83 million people is only the 17th largest country in the world. (Note that we are not counting Russia in Europe.) Despite this rank, we will credit Germany with a large population.

UK – 67 million

France – 65 million

Italy – 60 million

Spain – 47 million

These are the top four countries in Europe, by population size.

In contrast, there are many countries in Europe with small populations – Netherlands 17 million, Sweden 10 million, Austria 9 million, Ireland 5 million, Luxembourg 1 million, and so on.

Second, do European countries have large areas? The largest country in Europe is France. (Again, not counting Russia in Europe, but also counting Ukraine in the Russian Domain. Turkey does not yet belong in Europe.) France's 212,935 square miles is smaller than that of Texas at 268,596 square miles. While Texas is a very large state compared to the average American state, it would not count as a large country. Thus, we can say that no country in Europe is particularly large.

Third, does Europe have a long history of urbanization? Given that urbanization is associated with industrialization and that Europe is the birthplace of industrialization, we can say that most of Europe indeed has a long history of urbanization. Europe as a whole measures at 74% urban. Belgium leads the way with a 98% urban population.

After assessing these characteristics that cause primate cities to arise, we make another check to determine if the primate city is present. Does the largest city have significant percentage of the country's urban population? A reasonable threshold would be 15% of the country's urban dwellers living in just one city and dwarfing any other city.

So, do European countries have single cities with over 20% of the country's urban population? Let's take a look at the figures for metropolitan areas.

Athens 2.7 million of Greece's 11 million, tripling Thessaloniki.

Belgrade 1.65 million of Serbia's 7 million, 5x Novi Sad.

Budapest 3.3 million of Hungary's 10 million, dwarfing Debrecen's 237 thousand.

Copenhagen 2 million of Denmark's 6 million, 6x Aarhus

Dublin 1.9 million of Ireland's 5 million, nearly 5x Cork.

Helsinki 1.4 million of Finland's 6 million, 4x Tampere.

London 14 million of England's 67 million, 12x Birmingham.

Oslo 1.7 million of Norway's 5 million, 4x Bergen.

Paris 12 million of France's 65 million, but dwarfing Lyon 2.2 million.

Prague 2.1 million of Czechia's 11 million, 2+x Brno.

Reykjavik 210 thousand of Iceland's 360 thousand, dwarfing Akureyri's 19k.

Riga 1 million of Latvia's 2 million, 10x Daugavpils.

Sofia 1.6 million of Bulgaria's 7 million, 3x Plovdiv's 544 thousand.

Stockholm 2.2 million of Sweden's 10 million, 2x Gothenburg.

Tallinn 540 thousand of Estonia's 1.3 million, 5x Tartu.

Vienna 2.6 million of Austria's 9 million, 9x Graz.

Zagreb 1.1 million of Croatia's 4 million, 3x Split.

This is not an exhaustive list of primate cities in Europe, but clearly this is the pattern. European countries typically have primate cities. Only Germany counts as having a large population. None of the countries count as having a large area. A few of the countries are considered to lack a long history of urbanization. Thus, most countries will have one of our determining factors, while Germany has two of these three factors.

While these are the noted national characteristics; primate cities themselves are typified by other elements. Primate cities are the political capital cities. Primate cities are the cultural foci of their respective countries. The economic center of the country is the primate city. The primate city dominates the country's urban life in all ways.



Eiffel Tower, Paris, France. Photo by Julieta on Flickr.

Ask someone to name a city in France and their first thought will be Paris. Indeed, Paris clearly is the primate city of France, dominating it as the capital, the cultural core, and the financial center. However, in terms of the magnitude of primacy, Paris is not the leader in Europe. Budapest's degree of primacy in Hungary is greater than Paris' degree of primacy in France.

Notably absent from the list of countries with primate cities are Germany and Poland.

Berlin 3.5 million of Germany's 83 million, 2x Hamburg.

Germany's population is too great to have a European primate city. To meet the 15% threshold, Berlin would need to have a population of 12.45 million. Additionally, Berlin does not dwarf Hamburg, the second largest city.

Warsaw 1.75 million of Poland's 38 million, 2+x Krakow.

To meet the 15% threshold, Warsaw would need to have a population of 5.7 million. It does not dwarf Krakow, the second largest city.

The list of European countries without clear primate cities also includes Romania, the Netherlands, Belgium, and Portugal, to name a few.

Did you know?

The United States clearly does not have a primate city. New York is the financial center and the largest city. Washington, DC, is the political capital. Los Angeles lays claim to the cultural focus. Chicago and Houston have large populations as key cities. The United States has a large population, a large area, and a long history of urbanization. Thus, it has none of the three characteristics used to generate primate cities. In fact, the United States follows the Rank-Size Rule. Go to the essay on the Rank-Size Rule in Russia for a parallel to this topic.

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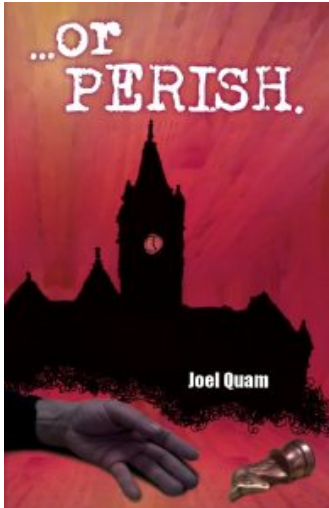
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4.10: Europe- Cultural Geography II



The murder mystery novel has long been a popular genre of literature in America, but also in countries around the world. Within this field of writing, there also exist several sub-genres. The *cozy* offers a softer approach that provides few gory descriptions of violence or explicit portrayals of sex. The *amateur sleuth* finds bodies and solves murders, while not working in the field of law enforcement, but rather being in an unrelated field like academia.¹ *Hard-boiled* novels feature a main character, typically a police officer or private detective, who employs rough and tumble tactics to work a case, often cursing and using his muscles. *Noir* (French for *dark*) crime fiction, which may overlap with *hard-boiled* novels, presents particularly dark stories, where the hero is greatly flawed and the crime graphic and heinous. In the last two decades, a popular sub-sub-genre of the murder mystery novel is *Scandinavian noir* (sometimes expanded to *Nordic noir*).

Murder mystery novelists also choose perspectives for telling the story. The classic Perry Mason mysteries by Erle Stanley Gardner are *plot-driven*. Although readers of the series gain a great affection for Perry Mason, his secretary Della Street, and his detective Paul Drake, readers know almost nothing of Mason's personal life. Instead, readers are intrigued by Mason's courtroom skills and the author's presentation of plot twists.

Other mysteries are *character-driven*. While the elements of the plot are important, the author writes detailed accounts of the characters' physical appearance, thoughts, and emotions. The reader understands the motivations of the protagonist, and often that of the killer too.

Otherwise, but in truth rarely, these novels may be *location-driven*. The author takes great effort to describe the setting, physical and cultural, of the location of the crime and the investigation. If location is the primary focus of the novel, then certainly this is a very geographic perspective. In most cases, though, the setting of the novel serves as an important, but secondary, element of the book. This is certainly true of Martin Cruz Smith's "Gorky Park," where the author's description of Moscow and of Soviet life gives the reader an excellent feel for the location – thus, a *sense of place*.² "Child 44," author Tom Rob Smith's characterization of the tense lives of Soviet peoples in the post-WWII Stalinist USSR, also demonstrates this understanding, while still being a mystery novel.

Whether a primary or secondary element of the story, locational description aids the reader in having a geographic *sense of place*. This geographic concept is a person's understanding of a place that goes beyond factual observation to include emotional attachment. An American's *sense of place* of a home state includes the factual quantities and qualities of the physical landscape (mountains, rivers, ...) and the social landscape (religion, economy, ...), but also comprises intangibles of affection (or other emotions, even dislike) for regions, towns, and other locations in that state. Internationally, this is often true for countries, certainly for nation-states common in Europe, where citizens possess a bond of nationalism as part of their *sense of place* for their country. This may be true even for specific features of the landscape, perhaps a mountain.³ In the case of *Scandinavian noir*, this *sense of place* is an prime element of the murder mystery novel.

The origin of this Northern European style of murder mystery novel can be debated. The book “The Laughing Policeman,” a police procedural featuring officer Martin Beck, was the first of ten related novels written jointly by Maj Sjöwall and Per Wahlöö. Some would cite this pair of authors as beginning a new trend, though their socially critical novels are not as harsh as later writers’ works. It is fair to cite “Smilla’s Sense of Snow” by Peter Høeg (1992) as offering a gritty plot, a conflicted protagonist, and a visit to frigid Greenland. Perhaps Henning Mankell should be listed. For the American audience, the breakthrough came with Stieg Larsson’s trilogy that began in 2005 with “The Girl with the Dragon Tattoo.” If I had to pick, I would cite these as their respective countries’ most notable writers in this sub-genre: Norway – Jo Nesbø, Sweden – Stieg Larsson, Denmark – Jussi Adler-Olsen. While across the region there now are several dozen authors who fit into this sub-genre, let us note a few examples to guide an understanding of the patterns of *sense of place* in these novels.

The irony of *Scandinavian noir* is that while the stories feature dark heinous crimes, the actual crimes rates in Scandinavia are quite low. In Stieg Larsson’s trilogy (particularly the first of the set), the key crimes are the violent torture and murder of women. Strikingly, the original Swedish title was “Män som hatar kvinnor” which translates as “Men who hate Women.” In Jussi Adler-Olsen’s “Q Department” series, the first novel “The Keeper of Lost Causes” portrays a sadistic imprisonment of a woman inside a decompression chamber, adjusted to torturous settings. Jo Nesbø’s “The Redbreast” examines neo-Nazis in Norway, while “The Nemesis” follows a gruesome serial killer. Understandably, a *noir* story is not a *cozy* mystery where the killer slays with a mildly poisoned cup of chamomile tea. These novels highlight the grisly outlier in otherwise very safe settings. See these statistics.

Intentional homicide⁴ per 100,000 per year:

Norway = 0.50

Iceland = 0.90

Sweden = 1.10

Denmark = 1.20

For comparison:

USA = 5.30

El Salvador = 61.80 (highest in the world)

Or measure by the Global Peace Index, measuring peace and safety:

Global Peace Index⁵

Iceland = 1 (most peaceful country in the world)

Denmark = 5

Sweden = 18

Norway = 20

USA = 128

Afghanistan = 163 (least peaceful)

The heroes or protagonists in these novels display numerous character flaws, physical weaknesses, and emotional baggage – sometimes all of these together. Lisbeth Salander, the girl with the dragon tattoo on her back, is a tiny young woman who survives physical confrontation only by the ferocity of her attacks. Definitely on the autism spectrum, she is a computer genius with no social skills. Beaten by her abusive father, raped by her guardian, and crushed by the system, she survives by her drive for vengeance and her computer hacking abilities. Eventually, she joins with journalist Mikael Blomkvist in an awkward, sometimes sexual, investigative pairing. Blomkvist is a serial womanizer, but is compelled to help Lisbeth Salander and to expose the horrors of sexual predation against women.

Jussi Adler-Olsen’s lead police investigator is Carl Mørck. Mørck is an antisocial slacker, traumatized by the shooting of his now paralyzed police partner Hardy Henningsen. Already on page five of “The Keeper of Lost Causes,” the reader learns that “Hardy had taken his last steps and the fire inside Carl had been extinguished.” Add a troublesome ex-wife and a good-for-nothing twenty-

something son, mix in a bit or more than a bit of alcohol; consequently, Carl doesn't much care. The boss figures that Carl can be pushed aside to take on the new Q Department, pursuing old unsolved cases that likely have no leads or solutions.

Harry Hole (what a name! – but in Norwegian, the surname is pronounced HO-leh — https://forvo.com/word/harry_hole/) is the Norwegian police investigator in the works of Jo Nesbø. Like Carl Mørck, Harry Hole is a miscreant, noted on page thirteen of “The Devil’s Star,” as “the lone wolf, the drunk, the department’s enfant terrible.”



For *Scandinavian noir*, the frequent winter setting is cold and forbidding. In “The Girl with the Dragon Tattoo,” a noteworthy portion of the novel is set on Hedeby Island in Sweden. Mikael Blomkvist, one of the two main characters, laments the cold when a January day’s temperature dropped to -35°F – “no matter how much wood he put in the stove, he was still cold.” In “The Marco Effect” by Adler-Olsen, two characters searching in the winter woods note that “Frost and wind had banished all scent from the landscape, the ice-blue glare and glittering crystals of snow conspiring to conflate all visual impressions. It was sheer hell to be out in such weather.” Yrsa Sigurdardóttir brings her heroine Thóra Gudmundsdóttir from Iceland to Greenland, going from cold and remote to even colder and even more remote; as the reader learns in the aptly named “The Day is Dark.”

Often these novels offer insights into Scandinavian society. Issues of immigration are highlighted through Adler-Olsen’s character Assad, an Arab migrant assigned to Carl Mørck’s Q Department. In “The Marco Effect,” teenage Marco seeks to leave behind his Gypsy life and become a Danish citizen. In Larsson’s book three “The Girl who Kicked the Hornet’s Nest,” Mikael Blomkvist gains a key bit of help from Kurdish immigrant Idris Ghidi. In fact, Sweden has the fourth most Kurds in Europe. In the series, Blomkvist is a regular customer at Samir’s Cauldron, a Bosnian restaurant.

Indeed, a whole book could be written on the subject of the *sense of place* in murder mysteries, as was done by geographer Gary Hausladen in 2000.² He examined novels from across the world, directed a bit of attention to Scandinavia; however, his book was published before most of the flourishing of *Scandinavian noir*.

If you read one of these novels, be sure to absorb the understandings of people and places, in other words the geographies, of their settings. For the Scandinavian setting, this usually means an atypical vicious murder, a cold and dark climate, and a progressive yet not unflawed society.

Did you know?

Remember that Finland is not in Scandinavia, so the inclusion of Finnish authors in this sub-genre would prompt the term Nordic noir.

Meanwhile, recall that Estonia is in Northern Europe. “Apothecary Melchior and the Mystery Of St Olaf’s Church” by Indrek Hargla is the first Estonian crime novel to be published in English (2016).

Is this a real-life Nordic noir? In 2019, Norwegian millionaire Tom Hagen’s wife disappeared.⁶ A ransom note was found at the couple’s home, but the wife has not been recovered. Officials fear that the wife was murdered and that the husband may have been involved. The story is a hot topic in Norway. <https://www.nytimes.com/2020/05/16/world/europe/kidnapping-murder-norway.html>

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4.11: Europe- Economic Geography II



Created by Giannis Choulakis
from the Noun Project

Which is better, capitalism or communism? The question that started the Cold War.

As a child of the Cold War, I was taught that everything about capitalism is good, and everything about communism is bad. I'm sure that someone my age who grew up in the Soviet Union was taught the opposite. In reality, there are upsides and downsides of both economic systems. In this essay, we'll examine those pros and cons.

The Upside of Capitalism

Europe's rise to global dominance was largely the result of capitalism, and proof of the power of capitalism. The material wealth of the United States, West Germany, and South Korea when compared to that of the Soviet Union, East Germany, and North Korea during the Cold War is further proof. The power of capitalism is essentially based on two fundamental forces – competition and incentive.

Capitalism is an inherently competitive economic system. Businesses compete for profits. Think of Coke vs. Pepsi, Apple vs. Microsoft, or Ford vs. Chevy. Competition generally produces goods and services that are better and cheaper. Imagine that you own a company that produces a certain product, and one of your competitors finds a way to make a better and cheaper version of that same product. You'd better improve your product. If you don't, you run the risk of losing customers and going out of business. So, you improve your product. As a result, your competitor is forced to do the same. That forces you to be improve again, which forces your competitor to improve again, and so on. Competition yields constant improvement.

Competition also exists in the workforce. Workers compete with one another for jobs, and coworkers compete with one another for promotions. It induces people to be a better job applicant – perhaps by getting additional training or education – or risk not getting a job. It induces workers to be more productive, because they want to be the person in their department that gets that promotion.

Alongside competition is incentive. Incentive is the economic force that provides owners and workers with positive and negative reinforcements that lead to innovation and hard work.

You may have heard the metaphor of the mule, the carrot, and the stick. It goes like this: If you have a stubborn mule who refuses to walk, you can do two things. The first is to dangle a carrot in front of the mule to motivate it to walk. If that doesn't work, you smack it with the stick until it starts to walk. This metaphor is about incentive. A positive reinforcement is the carrot – the reward that motivates someone to be productive. A negative reinforcement is the stick – the punishment if someone for being unproductive.

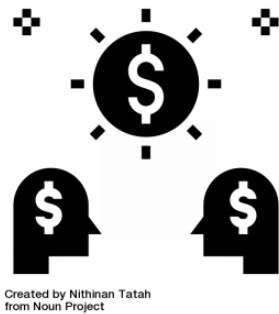
Course grades are an example of positive and negative reinforcements. You know that if you study hard, you might get an 'A' – the carrot. You also know that if you don't study hard, you might get an 'F' – the stick.

Positive reinforcements abound in capitalist economies. A business owner who sells a good product and treats her customers well is likely to make a bigger profit. An entrepreneur who takes risks and innovates might come up with the proverbial million-dollar idea. If you get your college degree, you're more likely to earn a higher wage. If a worker is productive, he is more likely to get a raise and a promotion.

Of course, negative reinforcements also exist. A business owner who sells a lousy product and treats her customers like garbage is likely to make a lower profit, or go out of business. An entrepreneur who never takes the risk never reaps the reward. If you drop

out of college, your wages will likely be lower. If you slack off at work, you probably won't get that raise or promotion, and you might get fired.

In short, incentive drives up productivity, and is a primary reason why capitalist economies generate so much wealth.



The Downside of Capitalism

Competition is one of the biggest reasons for capitalism's successes, and also a primary reason for its problems. In a competition there are, by definition, winners and losers.

Look no further than the United States. Despite residing in the wealthiest country on earth, nearly 40 million Americans live in poverty – that's greater than the total population of Canada. Consider Sam Walton, a man who lived the American dream. He was from a modest background, and became one of the wealthiest people in the world. But his innovation, Wal-Mart, destroyed tens of thousands of small, locally-owned businesses.

People get hired, and people don't. People get a raise, and people don't. Businesses succeed and businesses fail. For every successful restaurant, there is usually one that doesn't last a year. And even in ideal economic times, capitalist countries rarely see unemployment fall below 4%. In the United States, that's 7 million people. In fact, many economists argue that it's actually *bad* to have unemployment below 4%, because it makes labor too expensive. That is the downside of competition – some people lose out.

There is also the problem of incentive.

The idea that capitalism rewards hard work is usually true. You probably know people who came from working-class backgrounds and who, through hard work, became quite successful. You also probably know a few people who haven't worked particularly hard and, as a result, haven't been particularly successful. Generally speaking, hard work leads to success, and slacking off usually doesn't.

But that isn't always true. You probably know people who have worked hard their whole lives, but who still struggle to make ends meet. And we all know the story of the spoiled rich kid – the one who was born on third base and thinks he hit a triple – who slacked off but still had the connections and advantages to make plenty of money. It is certainly true that the circumstances of your birth – your social class, your place of birth, your ethnicity, your gender – will create privileges and obstacles that have nothing to do with hard work or the lack of it.

Finally, there is a flaw in assuming that all wealth comes from hard work. Oftentimes, the wealthy don't earn the majority of their wealth through salaries, but through investments. Multi-millionaires can invest a relatively small percentage of their wealth in the stock market, and earn more money from that investment in a year than many Americans earn from a lifetime of work. In a capitalist economy, the easiest way to make a lot of money is to already have a lot of money.



The Upside of Communism

The upside of communism is simple, but profound. In a communist economy, the basic necessities are guaranteed. Most citizens of communist Europe were provided with food, education, housing, health care, and employment. Homelessness, unemployment, and hunger were essentially eliminated. Universal health care was standard. College was free right up through a PhD. It is not a coincidence that successful communist revolutions happen in poor countries, not rich ones. If a large percentage of a country's population lives in poverty, they are more likely to support communist movements.

The Downside of Communism

Some of the most enduring images of the fall of the Berlin Wall were those of East Germans driving their Trabants into West Berlin. Manufactured from 1957 to 1990, and largely unchanged over those years, the Trabant was the default car for most East Germans. It was slow, loud, ugly, and had an engine better suited to a riding lawnmower. Its body was made of a plastic resin, it belched smoke, and it had no gas gauge. In fact, it had no gas door (drivers had to mix oil and gas together and pour it in under the hood). When those Trabants rolled into West Germany, the home of legendary automakers like BMW and Mercedes, they seemed to represent everything that had gone wrong under communism.



Trabant. Photo by altotemi on Flickr.

The reason so many East Germans drove Trabants is because East Germany had only one car manufacturer – the East German government. And this wasn't just true of East German cars, it was true of every manufactured good in every country in the Soviet bloc. Every product had one manufacturer – the government. And that lack of competition is why consumer products in communist economies were so legendarily bad. There was no better, cheaper option, so the products remained lousy and expensive (not to mention scarce – East Germans would wait years for the privilege of owning a Trabant).

Communism also lacked incentive. Workers were guaranteed jobs, but they also had little room for advancement. Those who rose through ranks of communist economies usually did so because they were well-connected politically, not because they were more talented or worked harder.

Imagine a steel worker in Poland in the 1970s. Each morning he woke up knowing two things. First, he knew that if he was the model employee, and worked as hard as he possibly could, he would probably still never get a raise or a promotion. Second, he knew that if he didn't work that hard at all, he wouldn't be fired. Worker productivity is key to economic growth and efficiency, and workers in the communist bloc were never terribly productive. This is not because they were lazy, but simply because they lacked incentive.

Back to the course grade analogy. As was discussed, course grades are like incentive in capitalism. You have positive reinforcement – the possibility of an 'A' – and you have negative reinforcement – the possibility of an 'F.' Imagine that, on the first day of class, your professor announced that everyone in the class was going to receive a 'C', no matter what. You would leave class that day

knowing two things. If you showed up every day, and studied harder than you've ever studied, you would get a 'C'. You would also have known that if you never studied and, in fact, never showed up again, you would still get a 'C'. It's unlikely that your professor would ever see you again. This is not because you're lazy, but simply because you would have little incentive to show up.

In a sense, communism is an economic system in which everyone gets a 'C'. Ultimately, it can eliminate the ugly aspects of capitalism – unemployment, poverty, wealth disparity, shuttered businesses – but it eliminates all of the good things about capitalism as well.

At the end of the Cold War, most people of the Soviet bloc decided that the rewards of capitalism were worth the risks. They were ready to trade in their Trabants for a shot at a BMW.

Did you know?

Romania abolished the death penalty on January 7th, 1990. The last people to be executed were Nicolae Ceaușescu – who ruled communist Romania for thirty-five years – and his wife, Elena. They were executed by firing squad on December 25th, 1989, three days after Nicolae was forced from power.

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4.12: Europe- Historical Geography II



Created by Ted Grajeda
from Noun Project

Malta is a small island country, situated in the Mediterranean Sea, southwest of Italy and north of Libya. Its geographic location, natural harbors, and limestone quarries made it a strategic geopolitical prize historically, especially at two key military times. Coincidentally, these same features have drawn talent scouts from film and television, resulting, among others, in the hosting of a number of scenes from the popular series “Game of Thrones.”

In considering Malta, the acronym FOE is useful. Let’s start with the letter O. O is for old. As a pair of islands, the country Malta is only 122 square miles in area, about double the size of Washington, DC. The main island Malta is 95 square miles with the island Gozo being 26 square miles (Comino is one square mile, a nature preserve). As such, the country Malta is the tenth smallest country in the world. For comparison, Tahiti = 403 sq. miles, Great Abaco (unknown by most people, until Hurricane Dorian in 2019) = 442, Mauritius = 720, Puerto Rico = 3500.

Given Malta’s size, when might we expect that it would first be peopled? What about other small islands, in comparison? Tahiti’s first settlers, Polynesians, arrived about 1000 CE; however, that is the Pacific Ocean. Great Abaco 500-800 CE and Puerto Rico 2000 BCE, but in the Atlantic Ocean. Mauritius 1500 CE in the Indian Ocean. As it is with geography, location matters. Malta’s location in the Mediterranean Sea, allowed its discovery and settlement to come much earlier than these other modestly sized islands, for Malta sits in a much smaller sea and in the midst of many of history’s early seafarers.



Malta – Photo by Ferenc Horvath on Unsplash

Though Malta was not settled as early as much larger Mediterranean island such as Cyprus, Sicily, and Sardinia, this too makes geographic sense that these large islands would be discovered and utilized before tiny Malta. However, Malta has been settled since 5900 BCE. It has been considered a strategic location, controlled at times by Mediterranean groups including the Phoenicians, Romans, Arabs and later by European countries such as Great Britain and France. While these numerous peoples brought varied religions to the island, it is noteworthy that the apostle Paul, a major Christian figure, was shipwrecked on Malta around the year 60 CE. Although other points in history could have led to other religious patterns, Malta is now a largely Catholic country.



Photo by Matheus Frade on Unsplash

F is for Fortified. Limestone quarries abound on Malta; in fact, the islands Malta and Gozo essentially are slabs of limestone. As a relatively soft stone, limestone can be cut into blocks use as building materials. Although soft may sound weak for construction, actually limestone is prized for its strength, resistance to corrosion, durability, and non-slip and heat-resistant qualities. It is readily obvious to any visitor of Malta that nearly every human structure there is built of limestone. From ancient structures to modern urban residences, from cathedrals to fortifications, from coastal landscapes to burial catacombs, in Malta it is all limestone.



Physical landscape of Malta.

As more and more peoples came to Malta, more and more limestone was quarried. However, with human migration to Malta, there came conquests and dangers. The demand for simple shelter evolved into the need for fortified dwellings and urban areas. Thus, in the 8th century on Malta, limestone built the walled city now known as Mdina. At that time, it was the Phoenicians who developed this as the capital city, thus serving for nearly a thousand years. On Gozo, the walled Citadel was developed much later, beginning as a limestone castle in the 1500s.

Although there have been many peoples and many invaders arriving at Malta, two points in its military history stand out. First, in 1565 forces of the Ottoman Empire under the leadership of Suleiman the Magnificent sailed in nearly two hundred ships to Malta with a large invading force. Under siege and led by the Knights Hospitaller, Malta resisted the attack. According to the Knight order's historian, the numbers clearly favored the Ottoman forces, who greatly valued Malta's strategic location in Islam's quest to gain more territory in Europe.

Malta vs. Ottoman Empire in 1565

The Knights Hospitaller	The Ottomans
500 Knights Hospitaller	600 Spahis (cavalry)
400 Spanish soldiers	500 Spahis from Karamania
800 Italian soldiers	6000 Janissaries
500 soldiers from the galleys (Spanish Empire)	400 adventurers from Mytiline
200 Greek and Sicilian soldiers	2500 Spahis from Rumelia
100 soldiers of Fort St. Elmo	3500 adventurers from Rumelia
100 servants of the knights	4000 "religious" servants
500 galley slaves	6000 other volunteers
3000 soldiers from the Maltese population	various corsairs from Tripoli and Algiers
Total: 6100	Total: 28500 from the East, 40000 in all

Although Ottoman forces earlier had taken Gozo and while Suleiman had won numerous battles elsewhere to expand the Ottoman Empire, the nearly four-month siege of Malta was unsuccessful for the invaders. The invasion though repelled by Maltese forces prompted additional use of limestone, as the new port city Valletta was founded in 1566, featuring towering limestone fortified walls.

The siege proved to be a singular turning point in the history of Malta, securing a strategic location in the defense of Europe. Malta's cultural, economic, and military foci then never strayed from Europe, eventually extending to Malta's entrance into the

European Union in 2004 and the Eurozone in 2008. Additionally, the role of knights, prominent in Europe, gained prominence in Malta, with Europe's Knights of St. John (the *Order of Knights of the Hospital of Saint John of Jerusalem* or the *Knights Hospitaller*) being headquartered there from 1530 to 1798.

Europe's hold on Malta continued, but altered course with Napoleonic takeover of Malta in 1798, only to be quickly supplanted by British rule, starting in 1800. Malta remained a British colony until independence in 1964 with subsequent conversion to a republic in 1974.

The second key point in Malta's military history was World War II. As a British colony, obviously, Malta fought on the side of the Allies. This siege, 1940-1942, of course involved attacks by air as well as by sea. German and Italian aircraft bombed Malta repeatedly, as Allied forces sought to withstand and to repel the attackers. Winston Churchill likened Malta to "an unsinkable aircraft carrier." Malta's strategic value was at its highest during the war's campaigns in North Africa. Overall, in three years of attacks, Malta's military and civilians were put on alert over 3000 times. In fact, Maltese and Allied forces withstood the siege and defended Malta successfully. Malta's usefulness as a base for navy and air force was important for the overall Allied victory in the war. British King George awarded the Maltese people in general the George Cross as a recognition of heroism. This George Cross became part of Malta's national flag.



Photo by Zoltan Masi on Unsplash

E is for European. As a result of Malta's victory over Ottoman invaders in 1565, Malta's regional focus remained centered on Europe and did not turn toward the Muslim world. Subsequent rule by French and then British before eventually independence held that European perspective. One aspect of European culture in Malta is seen in language. Although the native language is Maltese, almost everyone can speak English. Two-thirds of the population can speak Italian and one-sixth French. Maltese language itself is a curious mix that reflects the island's geographic position. Maltese is a Semitic language in the same family as Arabic, but a majority of its words have Latin derivations and it uses a modified Latin alphabet. Of the top ten countries sending tourists to Malta, the United Kingdom is number one, while the USA at number nine is the only non-European country in the top ten. Britain's influence is seen in a variety of ways, including driving on the left side of the road.

FOE. Fortified Old European. Malta.

Did you know?

The famous rock arch on Gozo known as the Azure Window collapsed in 2017 during a big storm.

*The local soft drink is **Kinnie**, a bitter orange soda.*



Mdina, Malta – Photo by Karl Paul Baldacchino on Unsplash.

On Malta, the walled city Mdina takes its name from the Arabic word "medina" which means "city." This is a reminder that Arabs were one of many groups to live on the island.

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4.13: Europe- Physical Geography II



Created by Bence Bezerezy
from Noun Project

Iceland is a small island country, situated in the North Atlantic Ocean, west of Norway and east of Greenland. The name of the country is suggestive of ice, obviously. Indeed, over 10% of the surface is glacier. However, the island was created and still is being built by volcanic eruptions, so “ice” doesn’t tell the whole story.

The story or tale of its naming goes back to the arrival of Flóki Vilgerðarsonin about the year 870. Flóki was greatly disappointed in the harshness and travails of that year’s frigid winter, so he spitefully named the place Iceland.

The popular series of books collectively titled “A Song of Ice and Fire” found great success as the TV series “Game of Thrones.” Iceland has long been called “land of fire and ice.” Appropriately, some of the scenes in “Game of Thrones” were filmed in Iceland.



Iceland. Image by Richard Petry on Flickr.

Indeed, the complicated physical geography of Iceland is a mixture of fire and ice. Iceland’s geographic location as an island almost reaching the Arctic Circle certainly produces cold weather. The main island of Iceland sits barely south of the line of 66.5° north latitude, while some smaller islands of the country do extend above that line. Truly, in winter Iceland can be quite snowy, as seen in the satellite photo to the left.

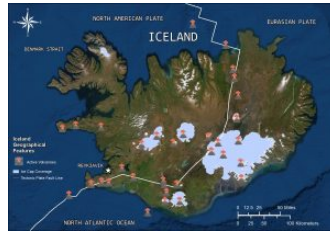
However, the North Atlantic Current (or Drift), as an extension of the warm Gulf Stream, brings temperate Atlantic waters to the coastlines of Iceland. In this way Iceland isn’t as icy as it otherwise would be.

Clearly icy at times and in places, it is Iceland’s volcanic nature that belies the icy name. Iceland sits astride the Mid-Atlantic Ridge that stretches the length of the Atlantic Ocean, north to south. In the North Atlantic, the ridge marks the meeting of the edges of the North American and Eurasian tectonic plates. These volatile edges produce dramatic geologic changes; in this case, as a divergent plate boundary. As these tectonic plates slowly move apart, molten rock material is released between them. Throughout the Atlantic Ocean this process has built numerous seamounts, rock formations that would be hills, mountains, and volcanoes if on land. Seamounts, however, do not reach the surface of the ocean.



Cartography by Jeff Wandersen.

Apparently, Iceland is different than these seamounts. In fact, Iceland adds a second geologic process to its development. The generally understood process of *hot spot* or *mantle plume* occurs where a weak spot in the Earth's mantle releases molten material. The process illustrates the building blocks of the Hawaiian Islands. When under oceans, these long-lasting hot regions contribute such large quantities of molten material that islands are formed, in contrast to the sub-surface seamounts.



Iceland. Cartography by Ian Scroggs.

Place Iceland on the Mid-Atlantic Ridge to start the creation of seamounts at that location. Add a *hot spot* to the same location to enhance by substantial amounts that quantity of molten rock, thereby building a fine volcanic island in the North Atlantic Ocean. It is noteworthy that the Hawaiian Islands combine the movement of continental drift over a *hot spot* that over a few million recent years has switched on and off. Thus, the fixed *hot spot* has produced several Hawaiian Islands as continental drift has moved them along. In contrast, apparently due to the conditions of the Mid-Atlantic Ridge, Iceland has remained in a fixed location even as the ocean floor spreads apart. For instance, note that the Faroe Islands to the east have moved progressively in that direction.



Photo by Jeff Sheldon on Unsplash

Along with volcanoes, Iceland has several other geothermal landscape features. The most famous thermal site, the Blue Lagoon, actually is a manmade pool created from water out of the adjacent geothermal heating plant. The country's five geothermal heating plants produce about $\frac{1}{4}$ of the island's electricity. Furthermore, these plants contribute heating and hot water for about $\frac{7}{8}$ of the country's needs.

The term *geyser* is derived from the Icelandic word *geysir*. Hot springs, geysers, and mud pools are found in Iceland. Overall though, volcanoes are the big dynamic features of this country. There are about 130 volcanoes on the island with several being active still. Eighteen volcanoes there have erupted since the year 871. Lakagigar erupted in 1873 causing devastation and killing 10,000 people. Eyjafjallajökull blasted in 2010, sending so much ash into the atmosphere that air travel through the region was canceled for several weeks.

And yet, Iceland has glaciers. In fact, its largest glacier or ice cap is Vatnajökull, the area of which is three times the size of Rhode Island. The island has 269 named glaciers. It does snow in Iceland. Glaciers are formed by large amounts of snow, compressing into ice over long periods of time. In February 2017, the capital city Reykjavik took in twenty inches of snow, a record for that month. Generally, more snow occurs in the northern regions of the island and in higher altitudes. Some areas, often including Reykjavik, receive only modest snowfalls. However, over the centuries snowfall and cold weather did allow the creation of numerous glaciers.

Add a volcanic eruption to a glacier and you may get a *jökulhlaup*, an abrupt torrent of water like a river that moves with great speed and force. When a volcano has been capped by a glacier, but returns to activity, an eruption will suddenly melt the glacier,

releasing vast amounts of water to flow downhill.



Photo by Trevor Cole on Unsplash

Glaciers and flowing water have created waterfalls in Iceland, such as Goðafoss, seen in this photo. Click below for a brief look at Skogafoss, noting the dark volcanic rock. Do you now realize that *foss* means *waterfall* in Icelandic?

A video element has been excluded from this version of the text. You can watch it online here: <https://cod.pressbooks.pub/westernworlddailyreadingsgeography/?p=194>

So, should Iceland be named as it is? Sort of. Maybe the author George R. R. Martin came closer with the phrase “ice and fire.” Or fire and ice. Just so it’s not named *Greenland*, for there is very little green in Iceland. But then Greenland, that’s another story.

Did you know?

Both Star Trek and Star Wars films have used locations in Iceland for filming.

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4.14: Europe- Political Geography II



Reducing something as complex as political ideology to labels is problematic. Still, if someone identifies as “liberal,” or “moderate,” or “conservative,” you can probably make a few guesses about his or her political ideals. Traditionally, academics speak of political ideology with the terms left (liberal), center (moderate), and right (conservative). We can add nuances to that political spectrum. Someone who is “far right” is very conservative, while someone who is “far left” is very liberal. And sometimes the prefix “ultra” is applied to extremists (the Nazis were “ultraright,” and the Bolsheviks were “ultraleft”). Someone who is center-left is a moderate who leans liberal; someone who is center-right is a moderate who leans conservative.

To give you a sense of the spectrum, consider the following American politicians: Bernie Sanders perhaps best exemplifies the political left. Hillary Clinton and Joe Biden are examples of the center-left. Barack Obama was on the left as a senator, but as president he governed more from the center-left. Jeb Bush and Mitt Romney are examples of center-right, while Donald Trump and Ted Cruz are examples of the right.

For the second half of the 20th century, Europe was dominated by left and center-left governments (and, of course, the Soviet bloc in Eastern Europe was dominated by far-left governments). This move to the left was stimulated by a few factors. One was a reaction against the far-right fascists governments that had launched World War II, and who were responsible for the atrocities of the Holocaust. Another was a reaction against a social class system that had been relatively rigid for centuries. And the move to the left was further fueled by the anti-establishment, youth-driven countercultural movements that swept through much of the world in the 1960s, including the United States.

Left and center-left governments were hardly uniform in nature but, in general, they promoted the following:

- Higher wages for the working class, and other labor rights.
- Increased environmental responsibility, such as reducing pollution, sustainable development, and shifts to renewable energy sources.
- Increased immigration to offset the consequences of an aging population.
- Better social safeguards for the general population, including generous public pensions, free or low-cost health care and education, and expansive social welfare benefits.
- Increased taxes on corporations and the wealthy to pay for these social programs.
- A commitment to solving political crises with diplomatic solutions, rather than military solutions.
- Stronger integration into the Common Market and, later, the European Union.

The left has not completely disappeared in Europe, of course, but beginning in the 1980s, and dramatically accelerating in the 2000s, the left and center-left began to face some serious challenges, including:

- A fear of mounting public debt, coupled with a perception that the right’s policy of cutting government spending would solve the debt issue.
- A fear that increased immigration was taking jobs away from native citizens, and that immigration was destroying the unique national cultures of individual countries.
- The automation and outsourcing of manufacturing and primary sector jobs. This eroded membership in labor unions, which were traditionally major supporters of the left.

- An aging population. As people get older, usually their political ideology grows more conservative. Europe has a lot of old people. It has comparatively few young people.
- A backlash against high taxes and strong government regulation of the economy. This is similar to “Reaganomics” in the United States and its political descendant, the Tea Party.
- A backlash against the increased power of the European Union.

As a result, many countries in Europe have seen the rise of right and center-right governments, which promote:

- Relaxed environmental, labor, and financial regulations.
- Strong restrictions on immigration.
- “Austerity” measures, such as lower taxes and lower government spending
- Stronger militaries
- Euro-skepticism: a desire to limit the power of the European Union or, in the case of Britain, a campaign to leave the EU entirely.

Perhaps the biggest factor in the rise of the right has been anti-immigrant sentiment. This is not dissimilar to the political groundswell that sent Donald Trump to the White House. President Trump had many different policies and proposals, of course, but certainly his pledge to “Build the Wall” was one of the most resonant. Anti-immigration voters overwhelmingly lean right, and some of Europe’s emerging far-right parties, such as France’s National Front, are almost entirely fixated on reducing immigration.

Did you know?

Margaret Thatcher was the longest-serving British prime minister in the 20th century, and was the first woman to hold that position.

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4.15: Europe- Population Geography II



Created by Aenne Briemann
from Noun Project

In the fifth stage of the Demographic Transition – wait the fifth stage! Yes, remember that some scholars add a fifth stage to the Demographic Transition while others consider **negative population change** to be an especially matured portion of the fourth stage or **post-industrial stage** of the Demographic Transition. Probably the crux of this distinction between late fourth stage and new fifth stage rests on the permanence or length of time that countries spend with naturally declining birth rates. Note that natural increase refers to differences between birth rates and death rates, but does not include migration. When including migration, it is possible for a country with more deaths than births to increase in overall population, as long as in-migration sufficiently exceeds out-migration.

How does a country reach this point of negative population change? Throughout history there have been numerous occasions where a country or a kingdom or a duchy or a principality or a tribal land (whatever the territory) suffered short term losses. A hard-fought war with the deaths of many soldiers and even civilians may tally so many deaths that these losses outnumber the births in the society. When over twenty million people died on the Soviet side of World War II, the population of the USSR dropped from 196 million in 1941 to 170 million in 1946. During war time, births may be artificially suppressed as well. Do you recall the young American woman's famous response to the question, "Why did births increase after World War II?" She simply said, "The men came home."



Created by Ayub Irawan
from Noun Project

Grave medical circumstances may be sufficient to cause deaths to exceed births, though like war these conditions generally are short term. The Black Death in Europe definitely caused kingdoms and cities and everywhere to decline in population, overall in Europe by about 50% in 1347-1351. These countries and regions of Europe recovered, eventually regaining this population by adding more births than subtracting deaths. In Sub-Saharan Africa, AIDS has killed millions of people, where in some countries 25% of adults were HIV+. Even so, in these African countries, births outnumbered deaths.

Short term economic or political crises may jam a country's population. In the 1990s after the breakup of the USSR, socioeconomic chaos in Russia prompted couples to defer births while at the same time death rates rose. This produced negative population change in Russia.

While these factors may intervene in a country's natural demographic progress, eventually it is the population's structure – age and gender/sex – that develop the conditions that produce fewer births than deaths. Specifically, the age structure of the population has direct effects on births and deaths.

With the decline in death rates in Stage 2 of the Demographic Transition, we begin to keep people alive longer. As advancements in medicine and agriculture continue, sometimes at startling rates, life expectancy increase throughout Stage 3 and 4 and in Stage 5 of

the Demographic Transition. With the decline of birth rates in Stage 3 of the Demographic Transition, modern, urban, industrial societies prompt lower and lower birth rates in Stages 4 and 5.



Created by Adrien Coquet
from Noun Project

Thus, we find that countries currently in the fifth stage of the Demographic Transition have population structures holding numerous older people and relative fewer young people. This pattern is revealed in the inverted population pyramid that is standard for this stage. Women in their retirement years no longer are physically able to conceive and bear children. Old men can sire children, but must have considerably younger female partners to do so. Older populations are likely to have particularly lower birth rates.

While medicine and food supply are sufficient, even plentiful, in Stage 5 counties, the elderly populations eventually do die. Although these deaths do not challenge the high numbers of war or plague, the deaths do outnumber births in these settings.

Advanced, modern, urban, industrial countries that long have worked through the normal development of countries – where are these places? Having been first to the Industrial Revolution, Europe has most of the countries in Stage 5 of the Demographic Transition. As the chart below indicates, of the countries in the world (not counting microstates nor territories) that have negative natural population change, all but Japan are in Europe or the Russian Domain.^{1,2}

Negative Population Change

Country	Natural Population Change
Bulgaria	-6.00%
Lithuania	-5.00%
Latvia	-4.90%
Serbia	-4.70%
Ukraine	-4.20%
Hungary	-3.90%
Croatia	-3.60%
Romania	-3.30%
Germany	-3.20%
Belarus	-3.20%
Greece	-3.10%
Estonia	-2.80%
Russia	-2.70%
Japan	-2.40%
Portugal	-2.40%
Italy	-2.00%
Bosnia and Herzegovina	-1.40%
Moldova	-1.40%
Czech Republic	-1.30%
Poland	-1.20%
Slovenia	-0.70%
Slovakia	-0.30%
Austria	-0.20%
Spain	-0.20%

Will it last? This is a key question for Stage 5 of the Demographic Transition. Perhaps this simply is a variation of Stage 4 that someday will return to the more normal situation of births outnumbering deaths. Population scholars do anticipate that the world's overall population will slow and likely hit a plateau near the end of the 21st century. Total fertility rates have been declining. How low will these rates go? A fascinating study in the British medical journal *The Lancet* projects population totals to the end of this century. It suggests that total world population will peak in the year 2064 at 9.732 billion people. It asserts that a number of countries already have met their population apex for the century and perhaps forever. Here are European examples.

Apex

Country	Apex Year	Population that year (in millions)	Population in 2100
Estonia	2017	1.31	0.82
Poland	2017	38.39	15.42
Greece	2017	10.4	5.48
Spain	2019	46.39	22.91

Again, population structure may intervene. Countries that long have had low birth rates, with or without higher death rates, have small numbers of women now in their main childbearing ages. Low birth rates twenty-five years ago mean small numbers of men and women now twenty-five years old. Even if these women showed higher than expected total fertility, the raw numbers of births might be insufficient to offset the deaths of the older population. Consider the math. One million women having 2.1 births a piece makes 2.1 million births replaces that generation and may offset a low death rate, indeed 2.1 million deaths. Three hundred thousand women having 4.0 births a piece makes 1,200,000 births, but fails to offset the same 2.1 million deaths. The less numerous cohort will be replaced, but in the meantime, the much older population dies and the overall population declines.

Did you know?

On a joint television broadcast between Boston and Leningrad (now St. Petersburg) in 1986, Lyudmila Ivanova replied to a question about sex by saying, “There is no sex in the USSR” The rest of her sentence was cut off by laughter. Perhaps she said “on television” or “only love,” but the moment was unforgettable. In the Soviet Union on television, there was no sex depicted or even inferred. Society was artificially straitlaced. When the Soviet Union dissolved, there was an explosion of sexual content in media and society.

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4.16: Europe- Urban Geography II



Kiek-in-de-Kök, Tallinn – Photo by Julius Jansson on Unsplash

Tallinn is the capital city of Estonia, a small Baltic country with a striking historical mix in recent decades of communism followed by capitalism and Russia/USSR followed by independence. Tallinn itself displays a remarkable contrast between its well-preserved Old Town and its modern European city center.

Anthropologically, we know that settlement in this strategic coastal location in Northern Europe began before 3000BC; however, historical reference to a named town did not occur until 1219AD. Until the 20th century, the town and eventually the city was known as *Reval*, originally a Danish-language place name reflecting Danish territorial control.

When Estonia became independent in 1918 (for the years between world wars), the city was re-named *Tallinn*, an Estonian language reference to its fortified walls, as *-linnais* a suffix meaning castle or fortification.

The medieval fortifications began in the 10th or 11th century on the city's limestone plateau (or hill) known as *Toompea*. Early on, these fortifications provided shelter and defense as needed, but were not used for habitation. The structures that now define Tallinn's Old Town mainly were built originally in the 15th and 16th centuries.



Tallinn Town Square. Photo by Jorge Franganillo on Flickr.

Reval (again, the early name for Tallinn) was primarily under Danish control from 1219 forward one century. In the late 13th century, Reval joined the profitable and influential Hanseatic Trading League (*Hansa* meaning *fleet*), where Estonian trade peaked in the prosperous 15th century. However, Denmark sold some of its northern European lands, including Reval, to the German Order (also known as the Teutonic Knights). This brought German influence and culture to Reval.

The Livonian War of 1558-1583 brought Russian, Swedish, and Polish interests into the region. In the early part of the war in 1561, Tallinn sided with Sweden. This allegiance remained true until 1710. During the Livonian War, those buildings inside the fortification remained intact, while many structures outside the wall and in the lower town were destroyed. Although saved from war, much inside the protection of the upper town walls was ruined by the Great Fire of 1684.

The Northern War of 1700-1721 again brought Russian forces to Reval, as the city capitulated in 1710. Under tsarist rule initially by Peter the Great, the city developed industrially and renewed its harbor's role in trade. In 1870 rail service between Reval and St. Petersburg was established, increasing Reval's economic links with the Russian Empire.

World War I and the Bolshevik Revolution signaled the end of the empire's hold on Reval and the region. Brief intra-war German presence passed with the German failure to win the war. In the post-war diplomatic arrangements, Estonia became an independent country. One of the first steps of independence was the change of the capital city's name from *Reval* to *Tallinn*. During the years of Soviet rule after World War II, Estonians viewed this interwar independence as a golden age. By 1939 the population of Tallinn reached 145 thousand, amidst avid days of Estonian cultural expression.

In the secret protocol attached to the Molotov-Rippentrop Pact (non-aggression pact between the Soviet Union and Nazi Germany), the Baltic States were placed within the Soviet sphere of influence. This set up the Soviet annexation of Estonia, Latvia, and Lithuania in 1940. However, in 1941 the Nazis attacked the USSR anyway and in August of that year they occupied Tallinn. Eventually in September 1944, Soviet forces regained the city. While there was war damage to Tallinn, most of the Old Town remained intact.

During Soviet days, Tallinn benefitted from the close ethnic links between Finns and Estonians. Their Finno-Ugric language family, shared with Hungarian and scattered small ethnic groups like Sami peoples, brings the ability to understand both languages. Easy transport from Helsinki, Finland, to Tallinn brought exposure to Western culture, as did Finnish TV broadcasts, understood and received in Tallinn. The Baltic States were at the forefront of the movement to end the Soviet Union and to create multiple new independent countries. Through the Singing Revolution (non-violent opposition to Soviet rule and censorship), Estonians propelled this drive for independence and attained it in 1991.



Old Town of Tallinn – Photo by Ilya Orehov on Unsplash

Since gained sovereignty, Estonia and Tallinn as its capital city and focal point have pushed freedom, liberty, democracy, and capitalism forward quickly and forcefully. Tallinn is visited by over four million tourists yearly. The medieval setting of the Old Town, city walls, stone towers, and cobblestone streets is a delight for visitors and has earned UNESCO's designation as a World Heritage City.

Even so, Tallinn has modernized quickly, adding skyscrapers and technology. The modern Tallinn is a **global city** that features e-commerce and digital lifestyles. Check this video for a quick look —https://www.youtube.com/watch?time_continue=1&v=w8OmvV7d5yI



Tallinn at night – Photo by Denis Schlenduhhov on Unsplash

Overall, Tallinn is a remarkable city, blending historical and cultural influences from varied centuries and effects of Danish, German, Russian, Soviet control mixed with two stretches of independence, plus shared linguistic and ethnic roots with Finns. Tallinn's population now is about 434 thousand, ethnically mixed with 51% Estonian and 36% Russian.

Did you know?

It would have been highly fitting if World Chess Champion (1960-61) Mikhail Tal had been from Tallinn, but actually he was born in Riga, the capital of neighboring Latvia.

According to Estonian lore, the structures built on Toompea cover the burial site of the Estonian (and Finnish) mythical hero Kalev.

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4.17: Europe- Population Geography III



Created by Valerio Poltrini
from Noun Project

The European Union (EU) was officially established in 1993 from the merger of the EEC, ECSC, and several other acronyms. By establishing standard laws allowing goods, services, and money to move easily across borders, the EU created more and more linkages among its members. Though news about Brexit (the United Kingdom (UK) leaving the EU) has dominated recent headlines, the EU still functions to unify much of Europe – particularly with regard to economics, although social, security, and political ties are also important.

The movement of people within the EU has also been freer, though this has been a more deliberate and complicated process. Migration changes the demographics and economics of both countries involved and therefore always involves nationalist political issues. Twenty-two of the EU's twenty-seven members participate in the Schengen Area where border controls and passports are not required and consequently there is greater international mobility. See Chapter 53 for more on the Schengen Agreement. Poland is a member of this Area and is a good example of the complications of migration within the EU.

The international migration of Poles (intra-EU specifically) involves crossing boundaries and therefore needs the permission of both governments. Poland's boundaries have changed tremendously over the centuries. In the mid-1500s, a Poland-Lithuania government controlled the lands from the Baltic Sea almost to the Crimean Peninsula in the Black Sea. Later, after invasions from surrounding countries, there was no 'Poland' on the map from 1795 to 1918. Following World War II (WWII), Poland's modern boundaries were established and, equally important, Poles themselves were relocated (from countries to the east) into the new Poland while Germans were evicted from the western area. Now still, Poland borders Germany, Czechia, Slovakia, Ukraine, Belarus, Lithuania, and Russia.

During the Cold War years after WWII, Polish mobility was severely limited, as was the case in other countries behind (to the east of) the Iron Curtain. Relatively few Poles were able to migrate for economic or political reasons, many fewer reached western Europe. When Germany reunified in 1989 as the Berlin Wall came down, some immigrants were allowed to help in rebuilding the country and over the next decade Poles made up the majority of these seasonal and contract workers (technically temporary). National political issues in Germany (West Germany was a founding member of the EU) later caused this migration to drop dramatically.



Created by Liuisa Iborra
from Noun Project

Poland joined the EU in 2004, ten years after applying. Nine other countries joined at the same time, including seven from East Europe, all with poorer economies than the EU average. Most of the existing members of the EU had concerns about allowing free mobility for Poland and the other new members lest it adversely affect their own employment and economies. Indeed, for years, a hypothetical "Polish plumber" was pushed by nationalists as a symbol of the loss of jobs to migrants.

Only three members of the EU – Sweden, Ireland, and the UK – immediately allowed immigration to the new member countries, in large part because laborers were needed. Poles began to migrate in large numbers to Ireland but especially to the UK, since job conditions were very favorable. Not surprisingly, most of the Poles were male and in their twenties; surprisingly, many were well-educated yet accepted jobs in the construction and the hospitality sector. As a side effect, the number of students in Poland who studied English as a second language doubled. (Almost all Poles are bilingual or polylingual; English replaced Russian as a common second language, although German remains popular.)

Polish mobility to European countries has remained high for the most part after joining the EU; during the first decade of the 21st Century Eurostatistics listed Poles as the nationality of the most migrants within the EU. While the largest group of Poles was located in the UK (Germany was second), significant numbers were working in France, Ireland, and Italy. National surveys in Poland found that one out of eight adult Poles had worked abroad and that over two million Poles had lived outside the country in the ten years after joining the EU. While some Poles sought permanent residence in these countries, the vast majority returned to Poland.



Border of Czech Republic (Czechia) and Poland. Photo by insidious and subtle M on Flickr.

Within Poland, workers leaving for elsewhere in the EU have both helped the finances of some regions but harmed the economic situations of others. Particularly in the earlier stages, more Poles emigrated from the southern and eastern border areas of the country, especially from Opole (bordering Czechia) and Podlaskie (bordering Belarus.) The loss of laborers was compensated by the increase in remittances that the Poles sent back home from their higher paychecks. Overall, in the five years following EU membership, the amount of remittances doubled (and also shifted from jobs in Germany to jobs in Ireland and the UK.)

National and international issues also affect Polish mobility. The 2007-8 recession both increased the number of Poles seeking positions elsewhere in the EU and at least temporarily decreased the amount of positions available. On the whole, Poles worked in job sectors that did not threaten the larger populations. However, as Brexit showed, in times of stress foreign workers (specifically Poles in the UK) are seen as enemies and occasionally attacked as such. International migration is a divisive political issue across the globe. The Schengen Agreement and Polish migration under that pact present interesting opportunities for geographic study.

Did you know?

Curiously, Poland also receives many migrants. Among European Union member countries in 2018, Poland took in more migrants from outside the EU than any other EU country did. This included migrants from Nepal, India, and Bangladesh. Poland is beginning to look less ethnically homogeneous.

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4.18: Europe- Overview



Physical Geography

The idea of Europe as a continent separate from Asia is a somewhat arbitrary European concept. In reality, Europe is a series of peninsulas on the western edge of a large landmass called “Eurasia.” Europe’s southern, northern, and western boundaries are relatively easy to detect. The southern boundary is the Mediterranean Sea; the northern boundary is the Arctic Ocean, and the western boundary is the Atlantic Ocean. Europe’s eastern boundary is more difficult to define. The boundary between Europe and Asia is really more of a cultural/historical distinction than a physical one. Conventionally, Europe’s southeastern boundary with Asia is marked by the Aegean Sea, the Black Sea, and the small sliver of water that links the two – a waterway that passes through Turkey known as the Bosphorus (technically speaking, the small triangle of land west of Istanbul is in Europe, while the rest of Turkey is in Asia). The rest of Europe’s boundary with Asia is usually defined, moving from south to north, by the Caucasus Mountains, the Caspian Sea, the Ural River, and the Ural Mountains. Notice that our discussion of how this fits with Russia will be in our chapters on the Russian Domain.

Landforms

Europe’s physical regions are generally placed in three categories: lowlands, uplands, alpine regions. Lowlands, as you might guess, are flat areas of low elevation. Alpine regions are mountainous areas with very high elevations. Uplands are something in between – areas that are at significantly lower elevations than the alpine regions, but that are by no means flat, containing areas of hills, low mountains, and eroded plateaus.



Sunrise on the rock of Gibraltar. Photo by Mark Freeth on Flickr.

Europe’s upland regions are concentrated in three major areas – the northern European uplands, the central European uplands, and the southern European uplands. The northern European uplands are found in the northern British Isles, primarily in Scotland, and on the Scandinavian peninsula, which is shared by Norway and Sweden. Although the elevations are relatively low here, the northern uplands contain some of Europe’s most spectacular scenery. Europe’s central uplands extend in an arc from southeastern France, across southern Belgium and Germany, and into the Czech Republic. Europe’s southern uplands are found on the major peninsulas that extend south into the Mediterranean Sea: The Iberian Peninsula, occupied by Spain and Portugal; the Italian Peninsula; the Balkan Peninsula, which extends across southeastern Europe from the Black Sea to the Adriatic Sea; and the Greek Peninsula, which extends southward from the Balkan Peninsula. Like the northern and central uplands, these are areas of relatively modest elevations, but which are dominated by rugged landscapes.



Pyrenees. Photo by Iris Vallejo on Pixabay.

Europe's alpine regions are divided into three primary mountain ranges, each running roughly east-to-west across the heart of Europe. These are areas of extremely rugged landscapes and very high elevations, some extending above 18,000 feet. They include the Pyrenees, which run along the border between France and Spain; the Alps, which dominate the landscapes of Switzerland and Austria, and which also spill over into Italy, France, Germany, and Slovenia; and the Carpathians, a crescent-shaped mountain range that runs from the Polish-Slovak border, through western Ukraine, and across much of northern Romania.

Lowland regions can be found scattered throughout Europe – particularly along its major rivers, but Europe's largest lowland region, and its most extensive landform region overall, is the North European Plain. The North European Plain is a huge triangle of lowlands running from the Atlantic Ocean, across northern Europe, and all the way to the Ural Mountains. Part of it is north of the English Channel and Baltic Sea, including the southern British Isles, southern Sweden, and nearly all of Finland. It runs continuously across northern France, northern Belgium, the Netherlands, Denmark, and northern Germany, and includes nearly all of Poland, Latvia, Lithuania, and Estonia. It then broadens to include nearly all of the European part of the Russian Domain. Its physical landscapes would be familiar to any Midwesterner. Like the Midwest, some of it is remarkably flat, while other sections have a gently rolling landscape. There are a few hills scattered throughout the region, but elevations are generally very low. The North European Plain contains Europe's most important industrial cities and its most densely populated rural areas. Unfortunately, because its flatness offers few natural defenses, it has also been the setting for some of the most vicious fighting of Europe's wars.

Climate

Europe's climate patterns are relatively simple. There are only three major climate regions, and all three are similar to climates found in the United States. The first is the Marine West Coast climate. It dominates northwestern Europe, including Ireland, Britain, Belgium, the Netherlands, most of France, the western coasts of mid-latitude Scandinavia, and the northern coast of Spain. It is a somewhat colder version of the climate found in the United States' Pacific Northwest. The temperature patterns feature warm to mild summers. The winters range from cool to cold, but these places are warm relative to other places at such high latitudes. London, for example, is located about 700 miles farther north than Chicago, but it rarely experiences winters that are nearly as cold. That is because this is a maritime climate (see Chapter 41). The temperatures are moderated year-round by air masses that are driven off the Atlantic by the westerlies. As for precipitation, this part of Europe is generally wet year-round, with slightly higher precipitation in summer. This is also because of the westerlies, which drive moisture in off the Atlantic Ocean year-round, giving places like London a deservedly soggy reputation.



Porto Katsiki, Greece. Photo by Paul Gilmore on Unsplash.

A second major climate region is the Mediterranean climate, which is named for the Mediterranean Sea. This is the climate of southern Europe, and is similar to the climate of southern California. It is the dominant climate of Portugal, Greece, and most of Spain and Italy. This climate can also be found all along the Mediterranean coast, such as the southern coast of France. The temperature patterns of this region feature warm to hot summers, and cool but generally mild winters, with temperatures moderated by the influence of the Mediterranean Sea. Perhaps the most distinctive feature of this climate is its precipitation pattern. Summers are dry, and sometimes virtually cloudless. (It is no coincidence that the Italian and French Riviera is one of the most popular tourist destinations on earth.) The dry summers are caused by the huge sub-tropical high that dominates the Sahara Desert. It shifts

north in the summer and settles on this region. Like California, winters are noticeably wetter, as the subtropical high shifts back off to the south, and the westerlies sink south to bring moisture in from the Atlantic.

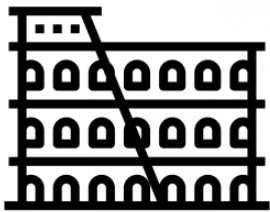
Europe's third major climate is humid continental, which is the same climate found in the Midwestern United States. This climate dominates central and eastern Europe, including most of Germany and Scandinavia, and eastern Europe from Poland to Bulgaria. This climate features warm summers and cold winters, with temperature extremes increasing with distance from the moderating influence of the Atlantic Ocean. This area is not quite as rainy as northwestern Europe, but is generally wet year-round, with maximum precipitation in summer.

There are a few smaller climate regions in Europe, including a semi-arid steppe climate in central Spain. Sub-arctic and arctic climates are found in northern Scandinavia, featuring brief, cool summers and long, bitter winters. Finally, there is a thin band of humid-subtropical climate from northern Italy to Serbia, which is similar to the U.S. South, featuring hot summers, cool winters, and high precipitation year-round.

Historical Geography

The Rise, Fall, and Rebirth of Europe

The earliest evidence of human activity in Europe dates back about 40,000 years, and some of the first urban-based civilizations evolved there around 3000 BCE. In many ways, though, Europe traces its cultural roots to the Classical Period. Focused on ancient Greek civilizations (which peaked in the 400s to 300s BCE) and ancient Rome (which peaked between the 200s BCE and 400s CE), the Classical Period was an era of rapid development. In many ways, these cultures poured the foundations for Western civilization, and can be viewed as the beginning point for European ideas about engineering, politics, art, warfare, religion, and language.



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For centuries, Rome largely dictated the economic and political order of Europe. When Rome declined and fell, Europe plunged into economic and political chaos. What followed was a period known as the Middle Ages (or Medieval Period – medieval meaning “middle”), which lasted from around the 500s to the 1300s. This period is also sometimes referred to as the “Dark Ages.” That term implies that, after centuries of enlightenment, Europe plunged into cultural darkness. That is overstating it a little, but certainly Europe experienced a stagnation in technological, economic, and cultural progress.

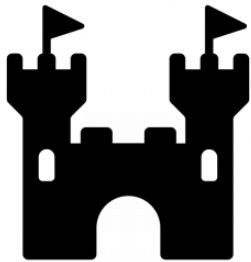
The political and economic system that dominated the Middle Ages was known as the **feudal system**. Europeans, desperate for security, delivered their fate into the hands of a warrior class, known as the aristocracy (or nobility). Europe fragmented into hundreds of small feudal estates. On these estates, all of the land was owned by, and the political system controlled by, a member of the aristocracy. The aristocracy held ultimate power over the vast majority of the rural farming population, who were known as serfs (or peasants). The aristocratic ruler and his army provided security for the serfs. In exchange, the serfs toiled in the fields and pledged their loyalty to the feudal aristocrat. The aristocracy often led lavish lives within their castle strongholds, while most serfs lived short, miserable lives in abject poverty.

In some cases, a feudal estate was totally independent from any higher authority, notably in Germany and Italy, which were made up hundreds of small baronies and principalities (the tiny modern-day countries of Liechtenstein, Monaco, San Marino, and Andorra are all holdovers from the period). In other cases, these feudal estates would bind together into larger kingdoms, often with a complex hierarchy of aristocrats aligned beneath a monarch.

The term **Renaissance** means “rebirth,” and the period that followed the Middle Ages has long been characterized as a rebirth of the ideals and ambitions of the Classical Period. This movement, which began in Italian cities like Florence, Milan, Rome, and

Venice in the 1300s, involved the rapid acceleration in technological and economic development. The spirit of the Renaissance soon spread from Italy to much of the rest of southern Europe – notably to Spain and Portugal – and then soon to much of the rest of the continent. It was a revolutionary time for European science, politics, commerce, and the arts. Europe entered the 1300s as a second-rate region. Over the next few centuries, it would emerge as a center of global power, partly because of the evolution of a new economic system.

Capitalism slowly replaced feudalism in the late Middle Ages. Feudalism, based on the aristocracy's ownership of pretty much everything of value, and the obligation of the serfs to work for them, was replaced by a system where private property abounded, and individuals competed with one another for profit. Capitalism stemmed from dramatic improvements in European agriculture, manufacturing, and transportation, and from the rise of the merchant class.



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During Europe's Middle Ages, merchants were a group of modest wealth. They purchased whatever excess goods the farmers and artisans produced, and sold them for a profit. These profits were meager, however, because most of Europe's population was poor, and limited transportation restricted the pool of potential customers. That changed around the 1300s. Now, farmers and artisans had more to sell, the population had more money to spend, and improving transportation greatly expanded prospects for imports and exports. The merchants of European cities coordinated and profited from local, then regional and, eventually, global trade. Soon, some of Europe's merchants were becoming as wealthy and powerful as the aristocracy.

The merchant class were not a cooperative group, but a competitive one. So, a merchant was always on the lookout for new goods to buy and new customers to sell them to. This is an important element of capitalism. It is both a very powerful and very "hungry" economic system. Competition forced each merchant to supply more, better, and cheaper goods. Capitalism is not without its flaws (see Chapter 56), but there is no doubting its power. This new economic system contributed to the growth of European technology, commerce, and trade, and is fundamentally responsible for the region's emergence as a global power.

Exploration, Colonization, and Industrialization

In the 1400s, Portuguese ships began sailing down the coast of Africa, establishing trading outposts along the way. By 1488, Portuguese ships had rounded the southern tip of Africa, and were establishing sea trade with India, and many points beyond, like Malaysia, Indonesia, and China. Portuguese ships were soon transporting a huge volume of goods from Africa and Asia to Europe. Europe was on its way to dominating global sea trade.

In 1492, Christopher Columbus, an Italian navigator working for the Spanish government, proposed the idea of reaching Asia by sailing west across the Atlantic. This, famously, led to the "discovery" of the Americas. Soon, Portuguese, French, British, and Dutch ships were also exploring this "New World."

Europe's first colonial period, which began around the early 1500s, involved the colonization of the Americas. Brazil was colonized by Portugal, and Spain colonized most of the rest of mainland Latin America. North America was colonized by Spain, Britain, and France, and the Caribbean was colonized by numerous European countries. The first colonial period resulted in a flood of wealth for the European colonizers, and helped speed the region toward the Industrial Revolution.

In the late 1700s, the United States became the first European colony to gain its independence, followed by most of the other major colonies in the Americas during the 1800s. Despite this independence, most of the Americas remained dependent upon European markets, investors, and factories for a century. And no country in the Americas, even the United States, could rival the military and economic might of the great European empires until the 20th century.



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The most important event that led to Europe's global dominance was the **Industrial Revolution**. Beginning in Britain in the early 1700s, the Industrial Revolution was the birth of mass production – the rise of the factory. It was made possible by advances in science and technology, the wealth created by exploration and colonization, and the appetite for products created by capitalism. Soon, Britain was producing goods with a speed and abundance previously unimaginable, and the country was on its way to becoming the world's first global economic superpower. It reinvested much of its profits into creating the world's most powerful navy, which aided its further colonial expansion. The Industrial Revolution soon spread to much of the rest of western Europe.

Industrialization gave Europe the desire and ability to launch a second colonial push, this time focused on Africa and Asia. The Industrial Revolution exponentially increased the capitalist economies appetite for raw materials and markets. The Industrial Revolution also gave Europe the wealth, technology, and military firepower to seize those raw materials and markets.

It is not coincidental that the world's first industrial power would become the world's largest empire. Britain set out to colonize much of Africa and Asia. At the height of the British Empire, one in four people on earth were ruled directly from London. Many more countries would fall into the British sphere of influence, and were informally colonized. A prominent example is China, which saw huge amounts of its territory and population fall under de facto British rule for more than a half-century. It is remarkable to consider that, of the world's ten most populous countries, five of them – India, the United States, Pakistan, Nigeria, and Bangladesh – were once formally ruled by Britain. At one point, it was possible to travel from Cape Town, South Africa, all the way to Baghdad, Iraq, and never leave a British colony. That's a journey of over 7,000 miles (it's only about 3,000 miles from Boston to Los Angeles).

Other major imperial powers of this era included the Netherlands, which colonized Indonesia; France, which colonized much of Africa and Indochina (modern-day Vietnam, Cambodia, and Laos); and Russia, which expanded across Asia to the Pacific. Belgium, Germany, and Italy also had significant colonial possessions in Africa.

In 1900, Europe was the center of global power. Nearly all of Africa and Asia was controlled directly or indirectly by a European empire. Nearly all global trade took place on European ships. With the exception of emerging industrial powers like Japan and the United States, Europe had a near monopoly on manufacturing. No country could challenge the military supremacy of the major European powers. Now, more than a century later, Europe is still a wealthy, influential region, but it is no longer dominates the world. This is not because some other region conquered Europe, but because Europe conquered itself in two devastating world wars.

Conflict, Division, and Unification

World War I began in 1914. It was, at first, a regional conflict between Serbia and the Austro-Hungarian Empire. However, a complex web of military alliances, geopolitical ambitions, old grudges, and rising nationalism soon plunged the entire continent into war. Germany and the Ottoman Empire sided with Austria-Hungary, while Britain, France, and Russia sided with Serbia.

World War I was the first major conflict to fully employ industrial technology. Machine guns, poison gas, tanks, and aircraft were used extensively for the first time. The "Allies," those countries aligned with Britain and France, emerged victorious in 1918. The war ended on November 11th (a date that was, for many years, commemorated in the United States as "Armistice Day," now called "Veterans Day"). More than 19 million people were killed in the war, and it substantially rearranged the map of Europe. Germany was defeated, suffering a significant loss of territory and economic ruin. Austria-Hungary and the Ottoman Empire collapsed. From the ruins of the Ottoman Empire emerged the modern state of Turkey. Both Greece and Bulgaria gained territory from the Ottomans, and Albania gained its independence. Austria and Hungary split into two independent countries, and lost territory to Italy

and Romania. The newly independent state of Czechoslovakia also emerged from former Austro-Hungarian territory. Another newly independent state was Yugoslavia. Meaning the “Land of the Southern Slavs,” Yugoslavia consisted of Serbia and the small Slavic nations of Bosnia, Slovenia, Croatia, Macedonia, and Montenegro.

In the closing days of the war, the Russian tsar was overthrown by revolutionaries, and would become Europe’s first communist state, later called the “Soviet Union.” In the chaos, Russia lost control of Finland, Latvia, Lithuania, and Estonia, all of which became independent. Finally, a newly independent Poland emerged from former Russian and German territory.

In the 1920s, many countries in Europe, particularly the imperial powers of the west, returned to prosperity. A few countries, particularly Germany, Italy, and some of the newer states in eastern Europe, were not so fortunate. When the Great Depression struck in 1929, the economic and political situation in those countries declined even further.

Out of this chaos rose a new political movement known as fascism. Europe’s first fascist leader was Benito Mussolini of Italy. He popularized the term fascism, which is derived from “fascis,” an axe that served in ancient Rome as a symbol of power and unity.

Fascism arose because of, and not in spite of, the political and economic chaos in some European countries. In fact, fascist movements (and those like them) always arise in times of crisis. In a time of great insecurity and weakness, leaders who promise stability and strength, even at the cost of democracy and freedom, are often viewed favorably. Mussolini was one such leader. He promised to restore the glory of Italy as he chipped away at Italian democracy. Mussolini’s success in Italy inspired the rise of Adolf Hitler and the fascist Nazi Party in Germany who, likewise, promised to bring order and strength to their country. In the 1930s, fascist movements also seized power in Hungary, Romania, Bulgaria, and Spain.

Fascism is characterized by authoritarianism, oppression, and militarism. But perhaps its most notorious characteristics are ultra-nationalism and racism. Nationalism, when taken to extremes, can go to some very dark places, and no fascist party took nationalism to a more disturbing place than the Nazi Party. Hitler characterized the German people as part of a supposed Aryan race, the supreme beings on the planet. Anyone else – Asians, Africans, Slavs, Roma, and Jews – were characterized as *untermenschen*, or inferior humans.

The Jews, in particular, suffered greatly under Nazi rule. Hitler was looking for someone to blame for Germany’s economic troubles, and because Jews were strongly represented in Germany’s financial and banking sectors, they became a handy target. Ultimately, six million Jews – nearly two-thirds of Europe’s Jewish population – would be systematically murdered by the Nazis and other fascists. Large numbers of other supposed *untermenschen* – Roma, Slavs, gay people, political dissidents, and the mentally and physical disabled – were also murdered.

The Nazis believed that Germany was the supreme nation on the planet, and “logic” followed that Germans should therefore control the planet. Hitler aspired to nothing less than global domination. World War II would formally begin on September 1, 1939. For a detailed look at the geography of World War II, see Chapter 50.

The United States and the Soviet Union, allies during World War II, suddenly became adversaries. In the early days of the **Cold War**, British prime minister Winston Churchill referred to a metaphorical “iron curtain” that had descended across Europe, dividing it between East and West.

When World War II ended, Soviet troops occupied eastern Germany, Poland, Czechoslovakia, Hungary, Romania, and Bulgaria. They all became satellite states of the Soviet Union, and were considered part of the “East.” They were members of a Soviet-dominated military alliance known as the Warsaw Pact, and their governments embraced Soviet-style communism. Although nominally independent, they were largely under the control of the Soviets. Any notions of real independence were crushed in Hungary in the 1950s, and again in Czechoslovakia in the 1960s. On both occasions, protestors demanding economic and political reforms were brutally suppressed by Soviet forces. These countries would not escape the grip of Moscow until the late 1980s.

Yugoslavia and Albania found themselves in an unusual position during the Cold War. They were both communist states, having been controlled by communist revolutionaries at the end of World War II. Their economies and governments modeled after the Soviet Union, but they hadn’t been occupied by Soviet troops when the war ended. As a result, they were not satellite states, and their governments enjoyed more sovereignty than those of the Warsaw Pact. Still, because of their adherence to communism, they were usually regarded as part of the East.

The rest of Europe, including major economic powers like Britain, France, Italy, and West Germany, made up the “West.” They were all capitalist countries, and most of them were democracies. Much of western Europe would join the United States and

Canada in a military partnership known as the North Atlantic Treaty Organization (NATO). The NATO countries were declared opponents of Soviet communism. Some states in the West – Ireland, Sweden, Finland, Spain, Switzerland, and Austria – did not join NATO, but were generally more supportive of American policies than Soviet ones.

Germany was divided into two states throughout the Cold War. When World War II ended, British, French, and American troops occupied the western two-thirds of Germany. These areas would become the capitalist country of West Germany. The Soviet Union occupied the eastern third of the country, which became the communist satellite state of East Germany. Berlin was a microcosm of Germany. Although it was located deep in the communist east, the western half of the city was a tiny enclave of capitalist West Germany. To prevent East Germans from escaping to the West, the Soviets quickly built a series of heavily guarded barriers around West Berlin. In the early 1960s, these smaller barriers were replaced by a massive wall, called by the Soviets the “Anti-Fascist Protective Rampart,” better known simply as the “Berlin Wall.” It was a physical manifestation of Churchill’s iron curtain and, for many, came to symbolize the Cold War.

In 1989, the Soviet Union’s satellite states began to break from Soviet control. The Berlin Wall was torn down, and Germany reunified. In 1990, the Baltic States of the Soviet Union (Latvia, Lithuania, and Estonia) began to openly defy Moscow. In 1991, the Soviet Union collapsed, bringing an end to the Cold War.

The World Wars dominated much of the first half of the 20th century, and the Cold War dominated much of the second half. 2021 will mark the 30th anniversary of the end of the Cold War. The last three decades have been generally peaceful in Europe, and probably the most significant event has been the trend toward European unification.

In 1951, six European countries – West Germany, France, Italy, Belgium, the Netherlands, and Luxembourg – founded the European Coal and Steel Community. It eliminated tariffs (import and export taxes) on coal and steel among the member states. This free trade agreement was so successful that in 1958, the same six countries formed the European Economic Community, better known as the Common Market. The Common Market took the idea behind the coal and steel agreement, and expanded it to include all products. Now, anything could be imported or exported among the member states without tariffs. The Common Market proved to be so beneficial that many other countries moved to join. Denmark, Ireland, and Britain joined in the 1970s. Greece, Portugal, and Spain joined in the 1980s.

In 1993, the Common Market was replaced by the European Union (EU). The Common Market’s goal of economic integration continued, but its mission was expanded to include political unification. In the 1990s, Austria, Switzerland, and Finland joined, followed in the 2000s and 2010s by all of the former Soviet satellite states in eastern Europe, as well as three former Soviet republics – Estonia, Latvia, and Lithuania. Cyprus, Malta, Slovenia, and Croatia also joined.

Cultural Geography

Language

Most of the languages in Europe are part of the Indo-European **language family**, and are derived from the same linguistic source as the languages of Iran, Afghanistan, Pakistan, northern India, and Bangladesh. Within the Indo-European family are several subfamilies – languages that are relatively close “cousins,” and have much in common.

The “big three” language subfamilies in Europe are Romance, Germanic, and Slavic. The languages of the Romance subfamily evolved from the language of the Romans – Latin. Romanian, Spanish, Italian, French, and Portuguese are all Romance languages. The Germanic languages include German, Dutch, English, Danish, Swedish, Icelandic, and Norwegian. The Slavic subfamily includes Serbo-Croatian, Bulgarian, Slovenian, Russian, Ukrainian, Belarusian, Polish, Macedonian, and Czech.

There are a few smaller subfamilies of Indo-European in Europe. The Baltic subfamily includes Latvian and Lithuanian. The last holdouts of the Celtic language subfamily are found in Brittany (northwestern France), Cornwall (southwestern England), Wales, Ireland, and Scotland. A few people in these places speak Breton, Cornish, Welsh, Irish, or Scottish as their first language, but nearly everyone in those areas also speaks English (or in Brittany, French). Greek and Albanian are also Indo-European, and are the only languages in their individual subfamilies.

The only other major language family in Europe is the Uralic family. Finnish, Estonian, and Hungarian are all Uralic languages, and are similar to one another, but very different from the Indo-European languages, since they originated from a different source.

Ethnicity

Most European countries are **nation-states**, dominated by one national group, but there are a few multi-national states in the region. Belgium consists of two primary national groups. The Flemings, who speak a dialect of Dutch, occupy the northern half of the country, called Flanders. The Walloons, who speak a dialect of French, occupy the southern half of Belgium, called Wallonia. Bosnia has three major national groups. The largest are the Bosniaks, Muslim Slavs who account for about 48% of the country's population. The other two groups, the Serbs (37%) and Croats (14%), are culturally related to the peoples of neighboring Serbia and Croatia. Montenegro has a similar mixture of Montenegrin, Serb, Bosniak, and Albanian. Britain consists of an English majority, and the smaller nations of Scotland, Wales, Northern Ireland, and Cornwall.

Many of Europe's nation-states contain significant minority populations. This is partly due to the shifting political map of Europe. Countries have unified and dissolved, and war has shifted boundaries. As a result, some individual locations pass from country's control to another, often leaving members of a European nation cut off from their nation-state.

There are also some ethnic groups who have been minorities in Europe for centuries, but who have retained their distinctiveness – their own languages, cultural customs, and separate ethnic identity. Examples include the Saami, about 80,000 people who live in northern Norway, Sweden, Finland, and Russia; and the Basques, about 2 million people who live in northeastern Spain and southwestern France. Many European countries used to have significant Jewish populations, but today there are only about 2 million Jews in Europe, mainly in France and Britain.

The Roma are an ethnic group that can be found in many, if not most, European countries. Informally called “Gypsies” (although that term is usually regarded as derogatory), the Roma trace their ancestry to northern India, and began to arrive in Europe in the 1400s. Because they were not permitted to own property in many European countries, they developed a tradition of being itinerant – that is, moving from place to place in family caravans to settle temporarily. Today, there are about 7 million Roma in Europe. They are dispersed throughout the continent, but are especially prevalent in southeastern Europe.

Finally, Europe's ethnic patterns are becoming more complex as a result of immigration, primarily from Africa and Asia. Europeans sometimes joke about “colonization in reverse,” since many immigrants move to the European country that had once colonized their home country. Indeed, there are many Algerians in France, Indonesians in the Netherlands, and Indians in Britain, to name a few.

(For a discussion of European religion, see Chapter 48).

Population

Excluding Turkey and the Russian Domain, Europe's total population is approximately 544 million. The six largest countries account for two-thirds of the region's population: Germany (81 million), France (66 million), Britain (65 million), Italy (61 million), Spain (46 million), and Poland (38 million). Thirty-six smaller countries account for the remaining third of the region's population.

Europe's regional TFR (**total fertility rate**) is 1.6, meaning the average European woman has one or two children in her lifetime. That is well below the replacement rate of 2.1. In fact, every country in Europe is below replacement rate. The highest TFR in Europe is in France (2.0), and the lowest is in Portugal (1.3). As a result, the region has an overall rate of natural increase that is negative. Factoring out migration, Europe's net population change, based strictly on births and deaths, is -0.2% per year.

Such numbers are typical of a region that is deep into the final stage of the **Demographic Transition**. Europe's population is wealthy, highly urbanized, and very well-educated, so people tend to get married later in life, and have few, if any, children. There are significant consequences of such population stagnation and decline. One is that Europe's population is aging rapidly, so the countries of the region must devote more resources to elder care and pension funds. Another consequence of population decline is the threat of economic stagnation. Every time a European couple decides not to have a child, that is another future worker, consumer, and tax payer that is not being produced. Put simply, it is very difficult to maintain economic growth without population growth.

European countries have attempted to offset population decline with increased immigration, but it has not always gone smoothly. The backlash against immigration in Europe has sometimes been quite severe, and has led to rising social tensions and political crises in some countries.

Political Geography

Democracy

Full democracies are countries where free elections are the norm, where dissent against the government is tolerated, and a free press is active. Full democracies also feature the “rule of law,” where a set of laws, approved by the people, apply equally to everyone. Partial democracies are countries that have democratic features, such as elections, but also some serious flaws in the democratic process. Such flaws often include suspect elections, government intimidation of the press and opposition politicians, and frequent constitutional changes meant to benefit the ruling party.

Europe is one of the most democratic regions in the world. The vast majority of countries are full democracies, where free elections and rule of law are the norm. The Scandinavian countries of Sweden, Norway, Denmark, and Iceland, in particular, are often cited as the world’s most democratic countries. For now, only two European countries – Albania and Bosnia – are broadly considered to be partial democracies. It is worth noting, however, that recent political trends in Hungary and Poland have some fearing they may drop off of the “full” democracy list, and onto the “partial” democracy list.

The European Constitution

The ultimate goal of the European Union is political unification. If that is ever accomplished, the EU will be a sort of “United States of Europe.” In the United States of America, each of the fifty states has its own government, local laws, and constitution, and enjoys a good deal of independence. Still, each state is bound by the rules of the U.S. Constitution, is subject to the decisions of the Supreme Court, and is subordinate to the federal government in matters where the constitution grants it power over the states. If the EU reached full political unification, it would be something quite similar. The individual member countries would still exist, would have their own governments, local laws, and constitutions, but they would be bound by the rules of the European Constitution, the European Court, and subordinate to the European Parliament in Brussels.



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In 2004, it appeared that Europe was well on its way to achieving these goals. An enormous step forward was supposed to be the adoption of a common European Constitution. Some of the goals of the constitution were practical – the EU was governed by a complex web of treaties, which would have been replaced by a single, simpler document. It also allowed for more legislation to pass through the European Parliament by simple majority, rather than unanimous consent, streamlining the process. But there was an important symbolic goal, as well. If voters in all member states ratified the constitution, it was seen as a huge milestone in the journey toward genuine political unification.

After it was drafted, the constitution needed to be ratified by all of the member states. The countries that joined the EU after 1993 had already ratified the constitution as part of their membership process. By 2004, it had been ratified in national referendums in Spain and Luxembourg. In 2005, however, voters in both France and the Netherlands stunned Europe by voting “no” on the adoption of the constitution. Because unanimous consent of all member states was required to ratify the constitution, it was effectively dead in the water. All the remaining member states cancelled their ratification votes.

In 2007, representatives from the EU’s member states unanimously adopted the Treaty of Lisbon, which largely accomplished all of the practical goals of the constitution. Still, the symbolic importance of the constitution’s failure with French and Dutch voters was the first sign that not everyone in Europe was happy with the EU’s goal of an “ever closer union.”

EU Membership

Currently, there are twenty-seven member states of the European Union (there had been twenty-eight prior to Britain’s exit in 2020). Six additional countries have applied for membership, and are currently under consideration: Serbia, Montenegro, Iceland, Macedonia, Turkey, and Albania. A seventh, Bosnia, has applied to join, but is not yet officially under review.

After countries have applied for membership, and are officially recognized as candidates, they must go through a review process that can take years. Poland, for example, applied to join the EU in 1994, and was not admitted until 2004. To become a member, countries must demonstrate a commitment to democracy, the rule of law, and human rights. They must also have a stable free-market economy.

It is worth noting that every time a country has joined the EU, some citizens in each country opposed the move. While there are clear benefits to being a member, a country that joins the EU is handing a lot of control over its political and economic destiny to the EU. In fact, a pair of countries that could easily become members have declined to join. Norway and Switzerland are both prosperous, capitalist democracies, but they have elected not to join. At the same time, some countries are desperate to join the EU, and have not met with success. Turkey actually applied to join the EU in 1987 (back when it was still the Common Market), and still hasn't been admitted. There may be some legitimate political and economic reasons for Turkey's failure to be admitted. If Turkey did join the EU, it would be, by far, the bloc's poorest country. Turkey also hasn't exactly demonstrated the commitment to democracy and human rights that the EU demands. Still, Turkey is suspicious that there is a more nefarious reason why it hasn't been admitted.

No country can become an EU member without unanimous consent. That means that, to join the EU, a candidate country must meet the approval of every single existing member. One "no" vote, and that country does not get in. It is quite probable that at least one country in the EU privately opposes Turkish membership, most likely Greece or Bulgaria, which were ruled for centuries by the Turks, and still harbor some hostility toward them. Given the lingering animosity between Croats and Serbs, Serbia has every reason to be nervous about the same outcome now that Croatia is a member.

The Future of the European Union

For years, the Common Market and its successor, the European Union, seemed like almost flawless ideas. The economies of member states were surging. The core values of the EU – political unification, free trade, open borders, and equal rights – seemed to be accepted by most voters in Europe. Then, in 2004, the constitution was rejected by French and Dutch voters. In 2008, an economic crisis in Greece demonstrated some of the EU's economic flaws.

Today, the EU is facing crises in almost every corner of the union. Russia has ramped up efforts to shatter the EU through political and economic gamesmanship. In southern Europe, economies are stagnating, and many countries have required economic bailouts from the EU. In eastern Europe, democratic institutions are eroding – Hungary's to the point that some argue it no longer qualifies as a democracy. In northern and northwestern Europe, a backlash against immigration has given rise to political parties that oppose the EU. Even supporters of the EU have acknowledged that the union may have been too ambitious, and gotten too big too fast.

Of course, the greatest blow to the EU has been Brexit – the exit of Britain, the EU's second-largest economy, from the union. The Brexit process began back in 2016, when the country held a referendum on the country's future in the EU. Voters had two choices – they could select "Remain" or "Leave." It was a political gamble by then-Prime Minister David Cameron. Cameron wanted Britain to remain in the EU, but the chorus of euro-skeptics had grown so loud that he decided to let the British voters voice their opinion (feeling fairly confident that they would elect to "Remain").

Those who supported the "Leave" campaign argued that the EU was crumbling economically, while the British economy was thriving. They argued that Britain should redirect its political and economic alliances away from Europe and toward the United States. They railed against EU bureaucracy as bloated and ineffective. They argued that the EU Parliament and European Court were undermining British sovereignty. And, most effectively, the "Leave" campaign said that EU membership left Britain unable to control immigration.

In a shocking result, British voters narrowly supported "Leave" over "Remain," by a 52% to 48% margin. It was a non-binding referendum, and a political circus ensued over what Britain should actually do. In the end, though, the British government respected the decision of the voters, and Britain formally exited the EU on January 31, 2020. It has until the end of 2020 to negotiate what its future relationship with the EU will be.

Time will tell what those negotiations bear out. Britain would very much like to retain all of the economic benefits of membership, such as remaining in a free-trade zone with the EU, without any of the financial or political responsibilities of being a member. It is unlikely that the EU will be so generous. Many British business owners and politicians are deeply fearful for Britain's economic future. If it cannot hammer out a trade deal with the EU, then the prices of products imported to Britain from EU countries will

increase dramatically. At the same time, and for the same reasons, demand for British products in Europe could collapse, creating an economic catastrophe for Britain. Still, Britain's economy could thrive. If it does, then it might inspire other countries to exit the EU. If Britain falls on its face, economically speaking, it could reinforce for EU members the importance of remaining part of the union.

Economic Geography

Development

Europe enjoys one of the world's highest standards of living. Of the region's thirty-seven major countries, thirty-one have overall standards of living that are well above the global average. Six countries – Montenegro, Bulgaria, Serbia, Macedonia, Bosnia, and Albania – have more modest overall standards of living, but even those countries are wealthy by global standards.

A Post-Industrial Economy

Like the United States, Europe is evolving into a post-industrial society. Agriculture and manufacturing are still important to the European economy, but those industries are employing fewer people than in generations past. Of the world's ten leading agricultural exporters, six of them (Germany, Britain, France, the Netherlands, Belgium, and Italy) are located in Europe. Agriculture in Europe, however, is highly mechanized, so it employs a relatively small percentage of the workforce.

Europe is also a major manufacturing region. Germany, Britain, France, and Italy all rank in the top ten globally in manufacturing output. European manufacturing tends to be high-tech, such as electronics, automobiles, computer hardware, robotics, telecommunications, aerospace, chemicals, and pharmaceuticals. These sorts of industries are highly lucrative, but not terribly labor-intensive. As a result, a dwindling percentage of Europeans work in manufacturing.

Also like the United States, more and more European jobs are found in the tertiary (service) and quaternary (information) sectors, such as transportation, health care, banking, sales, advertising, legal services, consulting, research, media, education, tourism, and social services. As in the United States, the new economy has created a large number of high-paying white-collar jobs, but it has also decimated a lot of well-paying blue-collar jobs in manufacturing and agriculture. As a result, the middle class is declining as the wealthier and poorer classes grow.

The Economy of the European Union

The primary economic goal of the European Union remains the same as that of the old Common Market when it was founded back in the 1950s: economic integration. In other words, the EU is trying to take twenty-seven individual national economies and integrate them into one large economic market. Once again, it is helpful to consider the United States. The U.S. may have fifty individual state governments, but generally speaking, there are very few mechanisms that prevent the movement of goods, people, and money across state borders. The EU's ambition is to have a similarly integrated market.

One of the great economic liabilities of many European countries is a relatively small population. Of the twenty-seven member states of the EU, twelve have populations that are smaller than that of the Chicago metropolitan area. Ireland, for example, has about half as many people as Chicagoland. The *combined* populations of all five of the EU's biggest countries – Germany, France, Britain, Italy, and Spain – is still smaller than that of the United States.

For European countries, that means a small domestic market. Consider Sweden, which is home to about 10 million people. Sweden has long been a major manufacturer, but its small population is a liability. There is simply no way that major Swedish manufacturers can survive only selling their products to the 10 million people who live in Sweden. So, Sweden relies on the export market – especially in Europe. The problem was that, prior to Sweden's joining the EU, as soon as Swedish products were exported to another country, the exporter had to pay a tariff (an import tax) to that country's government. That made Swedish manufactured goods more expensive, which meant fewer of them sold. This was the primary reason why Sweden joined EU.

The EU's market is massive. Its economy is worth \$19 trillion annually (second only to the United States), and it has a population of nearly 450 million people (behind only China and India). By joining the EU, Sweden could avoid tariffs when exporting products to other EU countries. When Sweden finally joined in 1995, its home market was suddenly forty-five times larger, and it had a lot of money to spend.

That's why many countries were eager to join the EU. Membership in the EU meant that a country's banks could now loan money to a larger pool of people. Businesses could sell to a much larger market. Consumers had a much wider range of options to choose

from, which usually meant products of higher quality and lower cost. And the EU encouraged Europeans to buy products from other European companies (rather than, say, Japanese or American ones), so European wealth stayed in the European market.

Another appealing thing about EU membership is a common currency. Before 1999, every EU country used its own national currency. France had the franc, Germany had the mark, Italy had the lira, and so on. In 1999, the euro became the official currency of eleven EU countries. Any country that had joined the EU after 1993 was required to adopt the euro once they hit certain monetary benchmarks. (Those that joined before 1993 were allowed to opt out – only Britain and Denmark chose to do so). Today, nineteen countries have adopted the euro. Another seven members are expected to adopt it eventually.

Using multiple currencies in a single market is impractical, and tends to reduce trade volume. By adopting a uniform currency, trade within Europe was not only more practical, but it began to increase. Having a larger pool of currency also tends to reduce interest rates and inflation rates, both of which are economically beneficial. And, by adopting the euro, the European Union created a rival for the U.S. dollar, which had dominated global currency markets for decades. That had given the U.S. enormous leverage over the global economy, a benefit the EU now enjoys as well.

Finally, the EU attracted new members because of its willingness to invest in economic development throughout the region. The EU funds infrastructure and economic development programs in Europe's poorer regions, investments in transportation, communication, utilities, technology, schools, and banks.

The EU's Reality Check

Even after the constitution failed in 2005 and the political future of the EU became unsettled, the economic future of the EU still looked bright. Then, in the wake of the global financial crisis of 2008, the EU began to face a serious economic crisis. In 2009, Greece announced that it was in danger of defaulting on its loans. For years, the Greek government had been borrowing heavily, ostensibly for economic development programs. In reality, Greece was plugging holes in its budget. Greece had kept taxes low, and had a serious problem with tax evasion, yet it had increased spending. At first, this was not a serious problem because, like much of the rest of the EU, the Greek economy was booming. Then, when the global financial crisis hit, Greece's economy collapsed, and the Greek government found that it couldn't make its loan payments.

Had the EU allowed Greece to default on its loans, it likely would have destabilized the euro, caused massive bank failures, driven up interest rates, and made an already gloomy European economic situation even worse. So, the EU agreed to provide Greece with a bailout to keep it from defaulting. In exchange, the Greek government agreed to enact drastic spending cuts and tax increases – a move which punished working class Greeks far more than it punished the politicians and business owners who had caused the crisis.

As you can imagine, the bailout was not terribly popular in the countries that provided most of the funds for the bailout, like Germany, France, Britain, the Netherlands, and Sweden. And, to the horror of the taxpayers in those countries, they soon learned that Cyprus, Ireland, Portugal, and Spain were in a situation similar to Greece, and would eventually require bailouts themselves.

This was the EU's "reality check." Despite the high degree of economic unification that had come with the EU, the individual governments within the union were still able to borrow and budget as they wished. It was clear that, for the EU to avoid another round of bailouts, it would need to enact stricter rules for member countries. But that is something few countries have been willing to embrace, since it represents an erosion of their sovereignty.

Did You Know?

Prior to the evolution of the nation-state, most European countries were ruled by a monarch, and many European monarchs were related to one another, and often ruled countries where they weren't born. One example is Catherine the Great. Catherine is now remembered as Empress of Russia, and one of the most successful and longest-tenured rulers of that country. But Catherine wasn't actually Russian. She was a German princess who married into the Russian royal family (and then orchestrated her husband's overthrow). Her cousin was the King of Sweden. Catherine's direct descendants include Prince Charles, the current heir to the British throne; Queen Margrethe II, the current queen of Denmark; King Willem-Alexander, the current king of the Netherlands; and King Felipe VI, the current king of Spain.

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5: Latin America and the Caribbean (LACAR)

Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared characteristics over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

In some cases, the determination of a geographic region is simple. South America obviously is an intact continent, but also possesses many shared features in a variety of geographic categories. In contrast, the region of North Africa and the Middle East (or Southwest Asia and North Africa) is very problematic to create, define, and limit.

At first glance, the Caribbean may appear to be straightforward to compile as a region. There are logical ways to define Latin America as a region. How do we put them together?

America. To be blunt, that narrows the region quite a bit. We are not talking about Europe or Asia or wherever. Historically, the New World, the Americas.

Latin. The Latin language has long been a dead language; that is, a language that is no longer spoken. However, there are several modern languages that are heavily based on that earlier Latin language. Principally, these modern languages include French, Spanish, Portuguese, Italian, and Romanian. These are European languages, so they must be brought to the Americas. Historically, Italy had colonies, but in Africa, not in the Americas. Romania did not have colonies. France, Spain, and Portugal had colonies around the world, including in the Americas. So, where in the Americas do we currently find French, Spanish, or Portuguese as national languages?



Cartography by Steve Banas.

South America:

Portugal – Brazil

French Guiana – France

Spanish – Venezuela, Colombia, Chile, Ecuador, Peru, Argentina, Bolivia, Paraguay, Uruguay

Exceptions – Dutch in Suriname, English in Guyana

Central America:

Spanish – Mexico, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama

Exception – English in Belize

Caribbean islands –

Spanish – Cuba, Dominican Republic, Puerto Rico (partly)

French – Haiti, Martinique, Guadalupe, St. Barts, St. Martin, Dominica, St. Lucia

Exceptions – English in the Commonwealth Caribbean (Antigua and Barbuda, the Bahamas, Barbados, Grenada, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago), in British Overseas Territories (Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Montserrat, and the Turks and Caicos), in Sint Maarten, and in US territories (US Virgin Islands and partly in Puerto Rico) and Dutch (and Papiamentu) in Aruba, Bonaire, Curacao, Saba, Sint Eustatius, and parts of Sint Maarten.

Of course, along with language, the French, Spanish, and Portuguese conquerors and settlers brought many other aspects of culture, economy, and politics with them. We see these elements, mixed to varying degrees with native cultures, throughout Latin America.

Contiguity. For the South American landmass, it is simple to count it as part of Latin America. For the Latin-based languages, there are only two exceptions – Dutch in Suriname and English in Guyana. Can either of those small countries be placed in any other region? Europe? Obviously not. Europe is on the other side of the Atlantic Ocean. In any sense Caribbean? No, both border the Atlantic Ocean directly, not the Caribbean Sea. As both countries are contiguous within South America, while not being contiguous with any other region, both must be counted as part of Latin America, thereby making all of South America to belong in South America.

In Central America, we have a similar situation. Only Belize, an English-speaking country, fails to fit the Latin heritage. Belize too fails the contiguity test. There is no other region for Belize to fit. All of Central America goes into Latin America.

All right then, what about the Caribbean islands? This is a more difficult situation to assess. Other than some contributions to the Papiamentu language, the Portuguese played almost no role in the Caribbean. The islands controlled by the Spanish and the French easily are outnumbered by the islands colonized by the English and the Dutch. Would we want to designate some of the Caribbean islands into Latin America, while excluding other Caribbean islands? That would be awkward. If some Caribbean islands are excluded, then into what region are they placed? Could Jamaica and the Bahamas be included in North America? With North America being defined as the United States and Canada, two huge land areas, it would seem awkward to add small island countries to that exclusive group.

What else can be done with these islands? The compromise is expressed in how we state the name of the region – Latin America **and** the Caribbean (LACAR). The word “and” indicates that these two regions are not the same single region, while the grouping into one phrase infers that there is a broader connection between these two regions. Outside of North America, together these regions are the lands of the New World that were explored, conquered, and settled by European colonial powers, of both Latin-based and other languages, while mixing with native populations to a significant degree (unlike in the United States and Canada, where the concept of *mestizo*, a person of mixed native and European parentage, is unfamiliar).

Overall then, Latin America and the Caribbean comprise two related sub-regions that are expressed well together. The countries and territories of this combination are gathered together based on contiguity, Latin-based languages, and European colonial acquisitions in the New World.

Did you know?

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Cited and additional bibliography:

Banas, Steven. 2020. “European Colonies in South America, 1763.” College of DuPage GIS class. Instructor Joseph Adduci.

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5.2: Latin America and the Caribbean (LACAR)- Regional Example

Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared characteristics over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

In Latin America and the Caribbean (LACAR), the Netherlands Antilles has been one of the sub-regions. Its definition also follows the methodology of regional geography. It turns out that this is a complicated question. In addition to the question of region, consideration of the Netherlands Antilles is made more complex by its colonial history and politics.

First of all, Caribbean islands are divided into two regions – the Great Antilles and the Lesser Antilles, as based on area (though population is correlated to area). Then within the many islands of the Lesser Antilles, there are several that have a colonial history and a current affiliation with the Netherlands. This sub-region was the Netherlands Antilles.

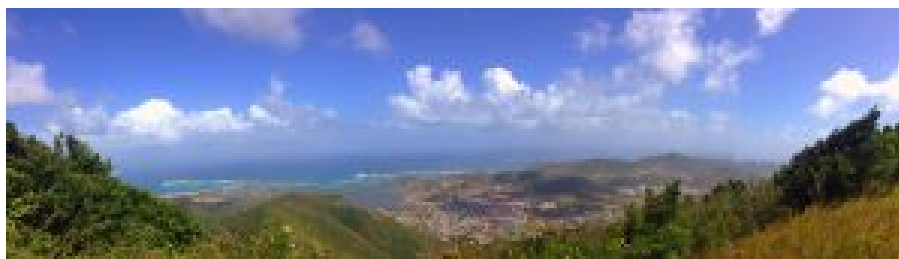
Additionally, Americans forget that the Dutch, who are the people of the Netherlands, were significant explorers, traders, and colonizers. Americans surely recognize the exploration, trade, and colonization done by the British, the French, and the Spanish. Perhaps noting that Brazilians speak Portuguese, Americans may observe that the Portuguese were big in these fields as well (in Africa and elsewhere too). Many Americans do not know or forget that before New York was part of the British colonies of America, New York was a Dutch colony named New Amsterdam. In fact, the Dutch sailed to many corners of the world – naming New Zealand, developing the city Batavia (that is now the capital city Jakarta in Indonesia), taking islands in the Caribbean, and more. Thus, it is that many people are unaware of the Dutch presence in the Caribbean.

The Dutch came to the Caribbean Sea and to the nearby mainland of South America where they also secured the territories cited as the Dutch Guianas. Eventually, the Netherlands lost some of these lands to the British, retaining only Suriname that much later became an independent country in 1975.



Netherlands Antilles 1986. Public domain.

The set of islands of the Netherlands Antilles progressively changed political status in relationship with the Netherlands. OK, this set of islands consisted of Aruba, Bonaire, and Curaçao (the so-called ABC islands), as well as Sint Maarten, Saba, and Sint Eustatius. (*Sint* is the Dutch word for *Saint*.) The island St. Maarten is shared with the French and also known as St. Martin. Let’s call these the 3S islands. The Dutch briefly held a few other islands, like Tobago, but lost control, mainly to the British.



St. Maarten Island. Photo by Chad Sparks on Flickr.

These two groups of three islands are clustered together but not adjacent to the other. This presents one of the problems of maintaining the Netherlands Antilles. The two groups are over 600 miles apart. (Though in a much smaller way, this separation is reminiscent of the spatial gap between West Pakistan and East Pakistan before they became Pakistan and Bangladesh respectively.)

The ABC islands sit off the coast of South America. In fact, Aruba is only nine miles from the Venezuelan Paraguana Peninsula. These islands naturally pick up some of the elements of South American culture.

The 3S islands are located on the northern end of the Lesser Antilles, near islands bearing English and French colonial histories.

While the ABC islands are only of modest size, the 3S islands are tiny.

Small Caribbean Islands

Island	Square Miles	Population
		in thousands
ABC		
Aruba	69	105
Bonaire	113	19
Curaçao	171	161
3 S		
Saba	5	2
St. Eustatius	8	3
St. Maarten*	13	41
* Dutch half only		

For at least these two reasons, it is a bit awkward to place these six islands together as a sub-region. The next challenge is that Aruba and Curaçao have large enough populations to consider independence. As many colonies around the world and from various colonial empires sought independence, especially in the 1960s, it is reasonable that Aruba and Curaçao would examine this choice too.

Aruba was the first to go. Although the issue of independence was broached in the 1930s, a local referendum on the issue did not take place until 1977. After several years of consideration, Aruba reached a deal with the Netherlands that in 1986 Aruba would achieve the status of a *country within the Kingdom of the Netherlands*. This is a curious designation with some similarities to the British Commonwealth. The original agreement held the condition that Aruba would become a fully independent country in 1996, but this provision later was eliminated.

Noting that Curaçao is bigger than Aruba both in area and in population, it is understandable that Curaçao also would consider its options. However, in 1993 an island referendum resulted in declining both options that Aruba had taken. In 2005, in a new referendum, islanders voted to have Curaçao gain the status of *country within the Kingdom*.

As the third most populated of these Dutch islands, St. Maarten too sought the designation of *country within the Kingdom*. Negotiations amid all six islands and the Dutch kingdom persisted until in 2010 constitutional changes were made official. The current situation remains the same as that final agreement. As made in the official statement of the Dutch Ministry of Foreign Affairs:

“The Kingdom of the Netherlands consists of four autonomous countries: the Netherlands, Aruba, Curaçao and St Maarten. The latter three are located in the Caribbean. The country of the Netherlands consists of a territory in Europe and the islands of Bonaire, Saba and St Eustatius in the Caribbean. The Kingdom of the Netherlands therefore has a European part and a Caribbean part.”¹

It is a complex settlement that seems to be working adequately. There are odd circumstances that remain. Bonaire, Saba and St. Eustatius all use the American dollar as their currency, instead of the Euro. Aruba has its own Aruban florin for currency, while Curaçao and St. Maarten use the Netherlands Antillean guilder. Rights within the European Union for all six islands and their residents is still another story.

Overall then, the Netherlands Antilles is no more, though the term often is used popularly to describe the subset of the Lesser Antilles.

Did you know?

The disappearance and apparent murder of American Natalee Holloway (age 18) in 2005 in Aruba was a hot media topic and conspiracy theory for several years. She was in Aruba for a high school graduation trip, reflecting Aruba's prominence as a tropical resort island.

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5.3: Latin America and the Caribbean (LACAR)- Cultural Geography I



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Language is a core element of culture. Without shared language, the ability to communicate is impossible, thus eliminating the opportunity for people to belong together as a group or as a nationality (or in the terms of political geography, as a **nation**). Often new languages are learned in order for people to communicate in different countries, for purposes of travel, trade, and diplomacy. A second language that is favored for these purposes is known as a **lingua franca**; in fact, English commonly works in this way internationally.

In other settings, languages evolve or even merge elements in order for different peoples to live together in the same location. Examples here include Creole languages that are mixtures of African languages and usually European languages. Typically, these Creole languages were developed as the result of colonialism. Papiamentu is one such Creole language.

Papiamentu (sometimes *Papiamentu*) is a Creole language spoken in the **Netherlands Antilles**. (Note the Regional Geography discussion of the political standing of Caribbean islands of the Netherlands Antilles.)

While Spanish presence in the Caribbean began with the voyages of Christopher Columbus, other countries soon followed in seeking land and riches. Portuguese involvement here is clear, perhaps a bit of British involvement; however, Dutch presence began with possession in 1634 and was maintained through to the current flexible political and economic connections.

The term *Papiamentu* is derived from the Portuguese and Spanish shared casual term *papia* or *papear*, meaning *to talk*.

Contributions to Papiamentu language are numerous. In Curaçao for instance, the native Caquetio peoples were present in modest numbers when Spanish explorers first arrived in 1499. As often was the case, exploration brought conquest. Undoubtedly, elements of the native language were used in initial conversation between Caquetio and Spanish people; however, there is little of this native tongue in modern Papiamentu.

In 1634 Dutch forces captured Curaçao, bringing control, as the Dutch West Indies Company, that also entailed linguistic and cultural elements. The Dutch soon lost their territories in Brazil, increasing Curaçao's importance for Dutch presence in the region. In fact, there was some migration of people from Dutch Brazil to Curaçao. A curious bit of history is that this flow of people included numerous Sephardic Jews.

For this merger of languages to fall into the Creole category, African languages must be part of the mix. Historically, this occurred through the slave trade. The European slave trade from Africa to the New World has been estimated a 12.5 million people. Over those many years, perhaps a half million of these slaves were brought by the Dutch to Curaçao, some to pass on to other locations, but some to stay. Thus, we have the introduction of African languages to Curaçao, filtering as well to other Dutch sites in the Caribbean. These Dutch transits as well as slaves from areas of Portuguese influence in the Cape Verde islands and the continental Guinea-Bissau region contributed substantially to the development of Papiamentu.

Modern-day Curaçao uses Papiamentu as one of its official languages, along with Dutch and English. In Aruba, it is Papiamentu and Dutch. In Bonaire, Dutch with regional Papiamentu. The Aruban version of Papiamentu is considered one dialect, as slightly different than that used in Bonaire and Curaçao.



Aruban market. Flickr photo by mroczknj.

Take a chunk each from Spanish, Portuguese, and Dutch. Add a sprinkle of English, Bantu, Wolof, Arawak, and other languages. Blend over a few hundred years. Season to make it tasty and useful for residents of the ABC islands of that original Netherlands Antilles. It is Papiamentu. It is fun for linguists.

Did you know?

A key word in Papiamentu language is dushi. This word has several meanings and is used frequently in the islands. When you refer to food, sushi means tasty. However, sushi also can mean babe, a slang term of affection for a man's woman or even casually to refer to a woman. This may be more common if the woman is sexy, but curiously it can also be applied to an attractive man. Affectionately, Dushi Korsou is a proud reference to the island Curaçao and its way of life.

Look it up. How would dushi in Curaçao be alike or different from Dutch words gezellig, leuk, lekker, and mooi? Perhaps some of each, but certainly some leuk and mooi.

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5.4: Latin America and the Caribbean (LACAR)- Economic Geography I



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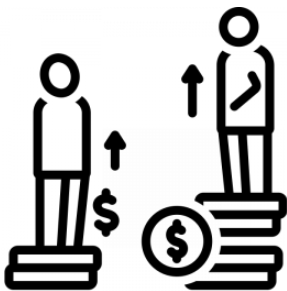
One of the defining characteristics of Latin America is the enormous income gap that exists between the region's wealthy and the region's poor. One way that geographers measure disparity is with the 20/20 income ratio. That ratio takes the average income of the wealthiest 20% of a country's population, and compares it to the average income of the country's poorest 20%. Here are some 20/20 ratios for a selection of countries around the world:

- China 12:1
- United States 8:1
- France 6:1
- Turkey 5:1
- Japan 3:1

If you take the average incomes of Japan's wealthiest 20% and their poorest 20%, the wealthy earn about three times more than the poor. The gap in the United States is much wider – the wealthiest 20% are eight times wealthier than the poorest 20%. Still, between 3:1 and 12:1 is a typical ratio for many countries around the world. But not in Latin America. Here are the 20/20 ratios for a selection of the region's countries:

- Colombia 25:1
- Brazil 22:1
- Guatemala 20:1
- Chile 16:1
- Mexico 13:1

These are pretty typical numbers for Latin America. So, is Brazil a wealthy country? Yes. Brazil is home to a lot of very wealthy people. Is Brazil a poor country? Yes. Brazil is home to a lot of very poor people. And the middle class that falls between the rich and the poor is very small. The same can be said for most countries in Latin America.



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from Noun Project

This disparity exists for three primary reasons. One is the historic lack of industrialization. The foundation of the European and American urban middle classes in the 20th century were millions of well-paying manufacturing jobs. Since Latin America didn't industrialize much during the 20th century, that middle class never materialized. Another reason for Latin America's economic disparity is the historic lack of democracy. Consider the United States. In 1932, Americans suffering in the Great Depression swept Franklin D. Roosevelt to power in hopes that his New Deal would rescue the economy. In 1980, voters suffering from the recession

of the 1970s elected Ronald Reagan with similar hopes. Republicans and Democrats still debate the merits of the New Deal and Reaganomics, but the simple fact that Americans can elect governments that listen to their economic concerns is significant. In many Latin American countries, that was not the case until the 1990s, and in some countries, it's still not the case.

The primary reason for economic disparity in Latin America, however, is the legacy of economic institutions established during the colonial period. The primary goal of colonization was to extract as many raw materials as possible. Spanish and Portuguese colonizers wanted to harvest minerals, timber, and agricultural products in Latin America and ship them back home. This was by no means a partnership with the indigenous people. Native Americans either moved onto very marginal land, or served as labor on farms and mines.

A fundamentally important trait of the colonial economies were large rural estates. Wealthy Spanish and Portuguese colonizers acquired vast tracts of land – particularly land that had the best soil and/or most available resources. Poorer European migrants were, like the Native Americans, either forced onto marginal land or worked the land owned by the wealthy. The colonial economy revolved around three different economic institutions – haciendas, plantations, and mines.

The word **hacienda** refers to a large rural estate, or to the large house occupied by the owner of such an estate. Haciendas were usually located in the interior highlands, such as the Brazilian Highlands, the Andes, Mexico's Central Plateau, or the Central American Highlands. These farms grew a variety of grains and raised livestock to feed the people of Latin America's cities, missions, plantations, and mines. A hallmark of a hacienda was **sharecropping**.



Created by Gan Khoo Lay
from Noun Project

The owners of the haciendas rarely worked the land themselves – sometimes they didn't even live on the land they owned. These large rural estates were divided into dozens, or even hundreds, of smaller plots farmed by sharecroppers. The sharecroppers worked the land, and got to keep part of their crop to feed their families. The remainder of the crop went to the hacienda owner, who would sell it for a profit. The end result was that the hacienda owner became wealthy (or, more accurately, *wealthier*), while the sharecroppers remained poor.

Plantations were a very different kind of agriculture. First, they were generally located on what is known as the Atlantic Rimland – the tropical areas of coastal Brazil, the Guyanas, the Caribbean side of Central America, the east coast of Mexico, and the Caribbean islands. Instead of producing food for domestic consumption, plantations usually produced a luxury crop for export back to Europe – usually things like sugar cane, coffee, tobacco, or rubber. Most plantations practiced monoculture, meaning they grew only one crop (a coffee plantation grew only coffee, a sugar cane plantation grew only sugar cane, etc.). The labor differed from haciendas as well. The plantation workers didn't live on their own small plot, but worked in crews, much like factory workers.

There are plenty of plantations in Latin America to this very day, and wages on plantations are extremely low. But, years ago, the situation was even worse. Initially, Native Americans were enslaved and forced to work on the plantations. As the native populations plummeted because of disease, Spanish and Portuguese colonizers began to import slaves from Africa. The first enslaved Africans arrived in the Americas in 1502 – just a decade after Columbus's discovery. Slaves would serve as the main source of labor on the plantations for nearly four centuries.

The third major colonial economic institution were mines. Mining was the most profitable element of the colonial economy, and mines were located throughout Latin America, but were especially prevalent in the Andes, Mexico, and the Brazilian Highlands. The mine owners became very wealthy. The miners themselves, usually poorer immigrants or Native Americans, were paid meager wages, and remained poor.

These colonial economic institutions created a two-class system in Latin America. The region's merchants, hacienda owners, plantation owners, and mine owners became very rich. The sharecroppers, the miners, and especially the slaves, lived in poverty. And these colonial institutions outlived colonization.

Most Latin American countries gained their independence in the early 1800s. The leaders of the wars for independence were largely members of the colonial elite – people of European descent who had been born in the Americas, and who owned the haciendas, plantations, mines, and businesses. They staged these revolutions because, after three centuries of colonization, they'd largely lost their allegiance to the Spanish and Portuguese crowns. More to the point, they resented the high taxes they paid to the colonizing countries, and the trade restrictions that forced them to sell all of their products to Spanish or Portuguese merchants.

After the countries of Latin America gained their independence, not much changed in the day-to-day lives of most of the region's population. The wealthy classes controlled the new governments, and still controlled the land and the economy. In short, those who were wealthy during the colonial days remained wealthy after independence, and those who were poor during the colonial days remained poor after independence. Over the next century and beyond, the ruling class did little to extend economic opportunity to the poor. In the United States, the Jeffersonian Ideal created the small family farm, and a thriving rural middle class. No such thing happened in Latin America.

These historic institutions continue to haunt Latin America even as more and more people are living in cities. Someone who lives in a luxury high-rise in Sao Paulo, Brazil, is likely the descendant of a wealthy merchant or landowner. Someone who lives in one Sao Paulo's slums is likely the descendant of a miner, a sharecropper, or a slave.

Did you know?

The last country in the Americas to abolish slavery was Brazil in 1888.

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5.5: Latin America and the Caribbean (LACAR)- Historical Geography I



The **Columbian Exchange** refers to the transfer of culture, technology, people, and products between these two regions. Before Columbus's discovery, the people of the "Old World" (Europe, Africa, and Asia) and the "New World" (the Americas) had not been in contact with one another for thousands of years. These two regions had developed different cultures and technologies, had domesticated different plants and animals, and had suffered from different diseases. Here is a list of some of the things that were part of the exchange:

- **Old World to New World**

- *Culture*: Christianity, European languages, European political and economic systems
- *Animals*: chickens, cows, donkeys, goats, honey bees, horses, pigs, sheep
- *Plants*: rice, wheat, apples, bananas, barley, carrots, coffee, oranges, lemons, lettuce, olives, onions, peaches
- *Diseases*: smallpox, measles, influenza, malaria, chicken pox, cholera, diphtheria

- **New World to Old World**

- *Animals*: llamas, turkeys
- *Plants*: peppers, cacao, potatoes, tomatoes, corn (maize), rubber, tobacco, peanuts, lager yeast
- *Diseases*: syphilis

As you can see, the cultural exchange largely went one way. Every country in Latin America is now predominantly Christian, Spanish and Portuguese are now the majority languages, and the economic and political systems of every country are based on European systems. Along with this came people – millions of Europeans resettled in the Americas, along with enslaved Africans and, later, migrants from Asia. Few cultural traits or people went the other direction.

The agricultural components of the Columbian Exchange also permanently altered the cultures of the New World. It is difficult to imagine, for example, Native Americans cultures like the Lakota Sioux not having horses, but horses didn't arrive in North America until the 1500s, when they were introduced by the Spanish. Subsequently, a "cowboy" culture of horses and cattle ranching became engrained in the national identity of the United States, Mexico, and Argentina, among others. And many of the basic food crops of the Americas were first domesticated in the Old World.



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from Noun Project

The effect of the Columbian Exchange on Old World agriculture and eating habits was no less profound. If you like Italian food (and who doesn't), it's tough to imagine it without tomato sauce, but the tomato was unseen in Italy until the 1500s. Potatoes, so integral to the cuisines of countries like Germany and Ireland, were first domesticated in Peru, and arrived in Europe around the

same time. Corn (known as maize outside North America) has become a staple food crop in Africa. Cacao, which is used to make chocolate, is one of Africa's leading exports. And the yeast used to ferment lager – that wonderful beer that was perfected by the Germans, Austrians, and Czechs – was discovered in Argentina. Another New World product was the chili pepper. Integral to cuisines throughout the world – and famously important in Indian, Thai, Vietnamese, and Chinese food – chili peppers were not spicing up the Old World until about five centuries ago.

Perhaps the most significant, and certainly the most devastating impact of the Columbian Exchange was the introduction of Old-World diseases to the Americas. For thousands of years, various diseases had evolved in the Old World, including smallpox, measles, influenza, malaria, chicken pox, cholera, diphtheria. As we've seen with the coronavirus pandemic, diseases can be particularly devastating when they are first introduced to the human population, because no one has developed an immunity to it. By the 1400s, measles, smallpox, and the flu had killed scores of people in the Old World, but over the course of many centuries, a lot of Europeans, Africans, and Asians had developed immune systems that were resistant to those diseases. In 1492, nobody in the Americas had ever been exposed to them, so there was no "herd immunity." When these diseases were introduced by Europeans, they swept through the population like wildfire, killing millions. By 1650, the population of Native Americans in Latin America, which had perhaps been as large as 100 million, had dwindled to under 6 million.

As far we know, only one disease went the other way – syphilis. Syphilis is venereal disease, and outbreaks would spread throughout the Old World in the centuries after the Conquest. There is some evidence that many members of Columbus's crew actually died of syphilis after they returned to Spain, something that some Native Americans view as a form of poetic justice. And, of course, Native Americans also unleashed a scourge in the Columbian Exchange that would kill millions of people in the Old World – tobacco.

Did you know?

Although the potato is indigenous to Latin America, none of the world's ten largest potato producing countries – China, India, Russia, Ukraine, the United States, Germany, Bangladesh, Poland, France, and the Netherlands – are located there. Brazil comes closest, in 20th place.

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5.6: Latin America and the Caribbean (LACAR)- Physical Geography I

In Latin America's lowlands, temperature patterns are relatively simple. Most of the region falls in the tropics and subtropics. The Tropic of Cancer (23.5°N) cuts across the heart of Mexico, and the Tropic of Capricorn (23.5°S) runs just south of Rio de Janeiro, in southern Brazil. That means that southern Mexico, Central America, and the northern three-quarters of South America all fall within the tropics. Temperature varies little from month to month in the tropics, so these locations experience warm temperature year-round (at least at low elevations).

The lowland areas of Latin America outside the tropics are pretty warm, too. All of Mexico is farther south than Dallas, Texas, meaning that even the midlatitudes of lowland northern Mexico rarely get cold. Montevideo, Uruguay – the southernmost major metropolis in Latin America – is at 34°S latitude, about the same distance from the equator as Atlanta, Georgia, which isn't exactly a cold place.

The only low elevations in Latin America that truly get cold are the southern sections of Chile and Argentina, where few people live. Cape Horn, the southern tip of South America, is located at 56°S latitude, approximately the same distance from the South Pole as Moscow is from the North Pole.

It's in Latin America's highlands where temperature patterns become more complex, and this is a region with plenty of highland areas.

Imagine you're standing in a mountain valley, at 3,500 feet above sea level. You look up at the top of a mountain that is 14,000 feet above sea level. If it's 67°F where you are, at the top of the mountain, it will be about 29°F. That's why some very tall mountains maintain their snowcaps in the summer – those high elevations rarely get above freezing. This is because of something called the **environmental lapse rate**– temperatures tend to drop about 3.6°F for every 1,000 feet gained in elevation.

The lapse rate is not a daily concern for most Americans. The elevations of many large U.S. cities, like New York (33 feet), Los Angeles (285 feet), Chicago (597 feet), Philadelphia (39 feet), and Dallas (430 feet), are unlikely to give anyone altitude sickness. There are, of course, a few major American cities at high elevations. The highest mid-sized American city is Santa Fe, New Mexico, which is located at 7,199 feet above sea level. The highest major American city is Denver – the famously “mile high” city is located at 5,280 feet.

Denver's elevation is modest by the standards of many Latin American cities. La Paz, the capital city of Bolivia, checks in at a stunning 11,975 feet. Many other major Latin American cities are located at very high altitudes as well, including Quito, Peru (9,350 feet), Bogota, Colombia (8,660 feet), and Mexico City (7,382 feet).



Photo by Smallest Forest on Flickr.

So, for many Latin Americans, altitude has just as much influence on local temperature as latitude. Altitudinal zonation is the examination of how geographic traits change from lower elevations to higher elevations. As temperature drops, other things change as well, such as economic patterns, population patterns, and even ethnic patterns. Traditionally, geographers have divided tropical Latin America up into four temperature-altitude zones: the *tierra caliente*, the *tierra templada*, the *tierra fria*, and the *tierra helada*.



Cartagena, Colombia. Photo by Jerry and Pat Donaho on Flickr.

The **tierra caliente**, or “hot lands,” are located from sea level up to 3,000 feet. Temperatures in this zone tend to be quite hot. Population densities are high near major seaports like Cartagena (seen to the left) and Guayaquil, or near inland ports like Manaus on the Amazon River. Population densities also tend to be high in zones of plantation agriculture, which are typically located along the floodplains of major rivers. Hot-weather crops, like bananas and sugar cane, thrive at these tropical elevation locations.

Elsewhere, population densities of the tierra caliente tend to be relatively low. The economy often focuses on industries like logging and mining, which don’t lend themselves to large, permanent populations. Another factor limiting population density in Latin America’s tropical lowlands is disease – disease vectors, like mosquitoes, tend to breed prolifically in flat, hot, wet environments.

The primary reason for the low population density in Latin America’s tropical lowlands, however, is poor soil. Much of the tierra caliente is either very wet or very dry, and all of it is hot. Hot, dry environments contain relatively little vegetation, and thus the soils tend to lack organic material, making them infertile. Hot, wet environments also tend to have poor soils.

Looking at a tropical rainforest, an ecosystem that features a superabundance of organisms, one might assume that such an environment would lend itself to robust agriculture. That’s not the case. In hot, wet environments, organic material decays very rapidly. Littering the floor of rainforests is layer of humus – rapidly decaying organic material supplied by the forest. The trees – the foundation of the rainforest ecosystem – rapidly “recycle” the organic material through their root systems. To farm the land, these trees must be removed so that sunlight can reach the crops. Once the trees are cut and burned, the ash and humus provide extremely fertile farmland for a few years. But the forest that provided the source of that fertility – the ash and humus – has been removed. The near-constant rainfall then leaches the nutrients out of the soil, and the land rapidly becomes unproductive. So, agriculture is possible in areas that have been cleared of rainforests, but that agriculture will not be permanent, leading to low population densities.

There is also a distinct ethnic pattern in the tierra caliente. The area features relatively few people of Native American ancestry. When the first Europeans arrived, the densest concentration of Native Americans lived in Latin America’s highlands, so populations were already relatively low in the tierra caliente. Those Native Americans who did live there were quickly subjugated and displaced by the European colonizers, and many died in the process. There are quite a few people of European ancestry in Latin America’s tropical lowlands, particularly in the major cities, but the most distinctive ethnic trait of tierra caliente is the dense concentration of people of African ancestry. This is the legacy of slave labor on tierra caliente plantations. In Brazil, which accounts for much of South America’s tierra caliente, about half the population is of at least partial African ancestry. In mountainous Bolivia, which accounts for very little of South America’s tierra caliente, only about 1% of the population is of African ancestry.

The **tierra templada**, or “temperate lands,” are located between 3,000 and 6,500 feet. Temperatures in the tierra templada average about 14°F cooler than those at sea level. If it’s 90°F on the coast, a city in the tierra templada would be a far more comfortable 76°F. Because temperatures vary little from month to month in the tropics, this zone enjoys mild temperatures year-round – the climate has been described as “eternal spring.” The pre-Columbian natives, and the Europeans who followed, both found this to be a far more salubrious environment than the sweltering tierra caliente, so population densities in this zone have always been quite high.

The tierra templada is an agriculturally productive region, partly because of fertile volcanic soils. At this elevation, the hot-weather crops associated with tierra caliente don’t grow well, so much of the agriculture is dedicated to domestic food crops like corn. There are some plantations in the tierra templada, and most of them are dedicated to the production of coffee, a crop that grows well in the cooler air of this zone. That said, plantations are less common in the tierra templada, and thus so was slavery. There are fewer people of African ancestry here than in the tierra caliente. Most people of this region are descended from the two groups who heavily settled this zone over the centuries – they are largely of European ancestry, Native American ancestry, or a mixture of the two.



La Paz, Bolivia. Photo by Guillermo A. Durán on Flickr.

The **tierra fria**, or “cool lands,” are located between 6,500 and 12,000 feet. Temperatures in the tierra fria will average about 33°F cooler than those at sea level. If it’s 90°F on the coast, a city in the tierra templada would be a much cooler 57°F. In the tierra fria, agriculture mainly revolves around animal grazing and crops that tolerate cool weather, like wheat. Population density is generally lower in this zone than in the tierra templada, although, as mentioned above, there are some very large cities here, including Mexico City, Quito, La Paz, and Bogota.

The ethnic pattern is still largely a mix of European and Native American ancestry, but in the highest elevations of this zone, the ethnic mix tilts largely toward Native Americans. As elevations increase in the tierra fria, temperatures drop and the air gets thin, so the land becomes less desirable. As discussed previously, Europeans were the beneficiaries of colonization, and Native Americans were the victims. So, Native Americans was often displaced to the least desirable locations during the conquest, including those places at high elevations.

The **tierra helada**, or “frozen lands,” are located between 12,000 and 22,000 feet. Temperatures in the tierra fria will average about 61°F cooler than those at sea level. If it’s 90°F on the coast, a location in the tierra templada would be a frigid 29°F. That is why, remarkably, glaciers exist right at the equator in the Andes. The economy in this zone is largely limited to mining and occasional grazing or grain cultivation at its lowest elevations, but population densities tend to be very low. The few scattered communities of the tierra helada tend to be almost exclusively Native American.

Did you know?

The highest mountain on earth is Everest, located on the border between China and Nepal. That is, it is the highest above sea level. But because the planet bulges out near the equator, the peak of Chimborazo, Ecuador’s highest mountain, is actually the farthest point from the center of the earth.

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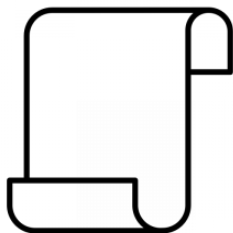
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5.7: Latin America and the Caribbean (LACAR)- Political Geography I



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The Monroe Doctrine

By 1823, many Latin American countries had gained their independence from Spain and Portugal, or were in the process of doing so. That year, in his State of the Union address, United States President James Monroe issued a proclamation that would later come to be known as the Monroe Doctrine. It stated that once a colony in the Americas gained its independence, the U.S. would not permit a European power to attempt to colonize it. For example, once Mexico was independent from Spain, the U.S. would help defend Mexico, not only from Spanish recolonization, but also from British or French attempts to colonize it.

If you're an optimist, you could put a positive spin on the Monroe Doctrine – that Monroe was recognizing the shared history of all former colonies of Europe, and that he was sticking up for his brethren in the Americas. And there is some truth to that. If you're a pessimist, you could put a negative spin on the Monroe Doctrine – that Monroe was intent on replacing European dominance over Latin America with the United States' dominance over Latin America. There is also some truth to that.

Most presidents who followed Monroe adhered strictly to his doctrine of limiting European influence in Latin America, but one dramatically expanded U.S. influence in the region. In 1898, the United States went to war with Spain, seizing Puerto Rico and Cuba, and several other small islands.



“Go away, little man, and don’t bother me.” President Theodore Roosevelt is portrayed directing Colombia. By Charles Green Bush – New York World. Public Domain.

A hero of that war, Theodore Roosevelt, would be thrust to national prominence, and serve as the U.S. president from 1901 to 1909. Roosevelt believed that the United States had the right to intervene in the internal affairs of Latin American countries any time the economic or political interests of the U.S. were threatened. This philosophy is often called the Roosevelt Corollary to the Monroe Doctrine.

In 1903, the United States supported Panamanian rebels in their war for independence from Colombia. Not coincidentally, one of the first actions of the newly independent Panama was to cede land to the United States that allowed for the construction of the Panama Canal. Between 1903 and 1925, the United States invaded Cuba twice, and Honduras on seven different occasions. The U.S. essentially occupied Nicaragua from 1912 to 1933, Haiti from 1915 to 1934, and the Dominican Republic from 1916 to 1924. In all cases, the United States was protecting authoritarian regimes who were friendly to American business interests – that is, regimes that kept wages and taxes low on plantations and mines that supplied American companies.

This era of U.S. interventions would end in 1934 when Theodore Roosevelt's distant cousin, President Franklin Roosevelt, instituted the Good Neighbor Policy, which pledged American respect for the sovereignty of Latin American countries. This was not, however, the end of U.S. meddling in the region.

The Cold War

By the early 1900s, there was growing frustration among Latin America's landless and poor populations. People were frustrated with the increasing concentration of wealth and political power in the hands of the ruling class. They were frustrated by the lack of democracy in the region, and by increasing U.S. influence. Many began to embrace a communist philosophy.

Unfortunately for many would-be communist revolutionaries of the early 1900s, they had little chance of overthrowing the authoritarian governments that controlled the region. These governments were usually either dictatorships or one-party "democracies." They were supportive of, and supported by, foreign corporations and Latin America's wealthy. These authoritarian regimes were propped up by large militaries with huge budgets, often subsidized by the United States.

Everything changed with the dawn of the Cold War. Now, communist revolutionaries in Latin America had a significant benefactor. The Soviet Union was willing to finance and arm insurgencies throughout the region. Conflicts between American-backed governments and Soviet-backed rebels flared in Argentina, Bolivia, Brazil, Chile, Colombia, the Dominican Republic, El Salvador, Grenada, Guatemala, Nicaragua, Panama, and Peru. The United States was generally on the winning side of this Cold War chess match. Only two communist revolutions were successful – in Cuba in 1959, and Nicaragua in 1979.

The United States' success in curbing communist expansion in Latin America came at a cost. During the Cold War, the United States adhered to what is sometimes called the "Our Dictator" philosophy. The thought was that the United States should support anti-communist dictators, because if we didn't support "our dictator," he would be replaced by "their dictator" – a ruler loyal to the Soviet Union.

The United States did indeed support a rogue's gallery of dictators in Latin America. Some particularly notorious examples include Augusto Pinochet of Chile, Manuel Noriega of Panama, and the Somoza regime of Nicaragua. Pinochet came to power in a 1974 military coup that was orchestrated by the United States. He then ruled the country until 1990, killing thousands of political opponents, and torturing tens of thousands more. Manuel Noriega was an anti-communist intelligence officer trained by the United States. He ruled Panama with U.S. support in the 1980s, and had a very shady human rights record. His regime ended in 1989, when he was indicted by the United States on drug trafficking charges, and removed from power by a U.S. invasion. The Somoza family and their allies ruled Nicaragua for forty-three years, torturing and murdering political opponents, silencing the media, violating human rights, and robbing the country blind. But they were ardently anti-communist, so they were supported by the United States.

It is not coincidental that Pinochet, Noriega, and many more Latin American dictators were forced from power in the late 1980s and early 1990s. As the Soviet Union collapsed, it was no longer willing or able to support communist rebellions in Latin America, so the United States largely abandoned the "Our Dictator" policy. As U.S. support for these regimes crumbled, so did the regimes.

U.S.-Cuban Relations

Perhaps the strangest example of the United States' relationship with Latin American can be found in Cuba. The United States granted Cuba nominal independence in 1902. In reality, Cuba was a satellite state of the U.S. for the next several decades, with a series of authoritarian regimes governing the island under the watchful eye of the American government. American companies had major stakes in Cuba's two leading industries – plantation agriculture and tourism. Cuba exported sugar and tobacco to the U.S., and Havana was a major American playground – it was like today's Miami and Las Vegas rolled into one. The U.S. wanted to keep taxes and wages in Cuba low to maximize profits. This led to a discontented working class, many of whom began to support a rebellion led by Fidel Castro in the 1950s.



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On New Year's Day, 1959, Castro's militia overthrew the government of Fulgencio Batista, the U.S.-backed dictator. A large number of upper-class Cubans fled the island and established residence in other Caribbean islands, or in Florida. Castro's regime soon aligned with the Soviet Union, much to the horror of the United States. Communism had arrived on America's doorstep – 80 miles off the coast of Florida. To the U.S., Cuba represented an unsinkable Soviet aircraft carrier.

Since then, the U.S. and Cuba have had a strained, and often bizarre, relationship. Two of the biggest flashpoints came early on. In 1961, the CIA orchestrated the Bay of Pigs invasion (named for its landing site). The invasion was carried out by Cuban exiles hoping to retake their country from Castro. It was a spectacular failure. In 1962, the world endured the Cuban Missile Crisis. U.S. spy planes had discovered sites meant for the installation of Soviet nuclear missiles. President Kennedy ordered a naval quarantine of Cuba, insisting that the Soviets remove all missile silos from the island. Tensions mounted for several days, and many feared it would escalate into a nuclear war between the U.S. and the Soviet Union. The Soviet Union eventually flinched, and agreed to remove the missile batteries in Cuba. Secretly, the United States had also agreed to remove missiles from Turkey. Reportedly, the CIA made several attempts to assassinate Castro during the 1960s (including one attempt involving an exploding cigar). None of them were successful.

Perhaps the most prominent example of the sour relationship between the two countries is the travel and trade embargo. For more than five decades, it was illegal for Americans to sell any products to Cuba, or to buy any products from Cuba. That's why Cuban cigars became so highly prized – they are illegal in the United States. Americans were also forbidden, with few exceptions, from travelling to Cuba. Journalists, academics, religious leaders, and humanitarian workers were permitted to go there, but not tourists. (Of course, American tourists continued to travel there, they just had to go by way of another country). Prior to 1959, American agricultural markets and tourists had been, by far, the leading source of revenue for Cuba, so the embargo had shattering consequences for the country's economy.

The U.S. had similar embargoes against other communist states during the Cold War, but nearly all of them were lifted in the early 1990s. The U.S. had an embargo, for example, on Vietnam. The U.S. had fought a devastating war in Vietnam in the 1960s and 1970s, one that killed more than 58,000 U.S. military personnel. The same communist government that had fought the U.S. was still in power when the Vietnam embargo was lifted in 1993. If the U.S. had managed to bury the hatchet with Vietnam, surely it would with Cuba. But it didn't. As the Cold War faded into the past, the United States kept its Cuban embargo in place.



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This has everything to do with Florida. Florida is a classic swing state, divided evenly between Republicans and Democrats. Its two senate seats are almost always in play and, more importantly, it has 29 votes in the electoral college. In the last fourteen presidential elections, a candidate has won the general election without carrying Florida just one time. The state is nearly indispensable when it comes to a winning presidential campaign.

As mentioned above, many of the wealthy Cubans who fled Castro's revolution settled in Florida. They and their descendants harbored bitter resentment toward the Castro regime, who had confiscated their property and forced them to flee their homeland. These Cuban-Americans are deeply influential in Florida politics, both as voters and political donors.

Nevertheless, in 2015, the U.S. and Cuba made moved to normalize relations. The United States and Cuba opened their respective embassies in Havana and Washington for the first time in five decades. In 2016, Barack Obama became the first American president to visit Cuba in nearly nine decades. The two countries began negotiations to end the embargo.

The United States eased some trade and travel restrictions during President Obama's last months in office, but the full embargo has not been lifted. There are still issues to work out. The United States insists that Cuba ease restrictions on freedom of speech and information, which Cuba is not inclined to do. There are also disagreements on economic damage claims. Cuban-Americans hold judgments from U.S. courts entitling them to \$2 billion in reparations for property seized by the Castro regime back in 1959. Cuba insists that the United States pay \$150 billion in damages for the hardships Cuba has suffered as a result of the embargo. Since taking office in 2017, President Trump has shown no inclination to continue negotiations with Cuba.

Did you know?

In a 2012 magazine interview, Miami Marlins baseball manager Ozzie Guillen expressed admiration for Fidel Castro. Although the Venezuelan-born Guillen was admiring Castro's longevity, and not his politics, the Marlins' Florida fan-base was outraged. Guillen was suspended by the team for five games, and fired later that season.

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5.8: Latin America and the Caribbean (LACAR)- Population Geography I



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The **Total Fertility Rate (TFR)** is the average number of births that a woman bears over her lifetime. This is an important demographic statistic, for it anticipates how sufficiently a population will replace one generation after another.

Clearly, to replace a generation a woman needs to have at least two children, conceptually a boy and a girl. Of course, not every woman needs to give birth to both a boy and a girl, for over a large population the numbers of each sex average out, so that a total fertility rate of 2.0 will produce roughly one boy and one girl for each woman and man. As you will read about the **sex ratio** in this textbook, you also will understand that there actually are more boys born than girls born; therefore, a total fertility rate of 2.0 in reality will produce more boys than girls.

Additionally, some children will die before reaching adulthood and before producing their own offspring. A few more of these dying children will be boys relative to girls. So, to compensate for the loss of these small numbers of deaths, the replacement figure used in demography is 2.1. There need to be 2.1 children born to one generation of women (and men) in order for that new generation to replace the previous generation numerically.

As you read about the Demographic Transition in this textbook, you learn that birth rates (births per thousand people per year) and the statistically correlated total fertility rates begin to decline in Stage 2. Numbers of births and the corresponding statistics show a general decline for the remainder of the Demographic Transition. There are many significant causes for this decline, but principally these factors are greater food supply and better medical care that together boost child survival rates, as well as lower demand for children in the settings of the modern industrial world.

In the Caribbean, we find low figures for total fertility. These Caribbean islands indeed have benefitted from advances in modern medicine and stable availability of food supply. Significantly because of tourism, the islands have gained in wealth and average income. Thus, for the same reasons as elsewhere across the globe, it makes sense that the islands should have somewhat lower rates of fertility. Nevertheless, there is one additional factor that directly affects the fertility on Caribbean islands. These islands are islands! Indeed, many of the islands are small islands. The space for large families is limited because the area of the islands is inherently limited.



2019 Cariwest Parade – Caribbean Arts Festival – Photo by Sangudo on Flickr.

Of course, there are small islands all across the world. Yes, we can see this demographic trend across the world too. Let's look at the numbers, according to the CIA Factbook's estimates for 2020 for 228 countries and territories.

Among these countries and territories, the lowest total fertility is found on five islands. The city-State of Singapore is has the lowest total fertility in the world. Similarly densely crowded urban territories of Macau and Hong Kong follow closely. The highly urban and also Asian country of Taiwan has remarkably low fertility for a decent-sized island country.

Island Fertility

Rank	Country	Total Fertility
#228	Singapore	0.87
#227	Macau	0.96
#226	Taiwan	1.14
#225	Hong Kong	1.21
	Caribbean Islands	
#224	Puerto Rico	1.26
#220	Montserrat	1.36
#181	St. Barts	1.64
#178	Barbados	1.68
#175	Turks and Caicos	1.7
#174	Trinidad	1.7
#169	Cuba	1.71
#166	Mauritius	1.73
#161	Anguilla	1.74
#158	St. Vincent and the Grenadines	1.76
#155	St. Kitts and Nevis	1.77
#150	St. Martin	1.81
#144	Cayman Islands	1.83
#143	Aruba	1.83
#128	Bermuda	1.91
#126	Bahamas	1.92
#116	Grenada	1.96
#114	Antigua and Barbuda	1.97
#113	Curacao	2
#111	Sint Maarten	2.02
#110	Dominica	2.02
#109	U. S. Virgin Islands	2.03
#103	Jamaica	2.07
#89	Dominican Republic	2.24
#72	Haiti	2.52

Next is the American territory of Puerto Rico with a total fertility rate of 1.26, obviously much lower than the standard replacement rate of 2.1. The rest of the table below does not list all island countries/territories with low fertility (such as #205 Malta at 1.49), but does enumerate qualifying Caribbean islands. Note that the only Caribbean countries not having below replacement fertility are Haiti and the Dominican Republic, adjacent countries sharing one island – Hispaniola. Perhaps this presence above replacement is partly due to their respective larger areas; however, other island in the Greater Antilles – Cuba, Jamaica, Puerto Rico – do not share their higher numbers. In fact, Puerto Rico has precisely half the total fertility of Haiti. Instead it would seem that Haiti's failure to join even the most prosperity common throughout the Caribbean prompts parents there to continue to view larger families as necessary to seek economic advantages.

Did you know?

At the other end of the list, Niger leads the world with a total fertility rate of 7.0. In fact, it is the only country with a total fertility rate of greater than 6.0. In comparison, TFR for the United States is 1.84.

The wild card in the discussion of total fertility rate is migration. Population loss or gain from fertility can be offset or enhanced by migration flows.

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5.9: Latin America and the Caribbean (LACAR)- Urban Geography I



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In Latin America, rural-to-urban migration has been a major demographic motor over the last few decades. This geographic movement of people caused considerable urban change. The Brazilian favela or, in general terms, the shantytown, is a consequence of that migratory surge to cities.

Migration in Brazil, as with human migration anywhere on the planet, is prompted by **push** and by **pull** factors. Push factors compel people to leave (pushed away) where they are living, for that location has become hazardous due to a natural disaster (e.g., hurricane) or a societal constraint (e.g., political oppression). In contrast, pull factors bring people toward (pull to) a new destination, for that location offers or seems to offer a better living situation.

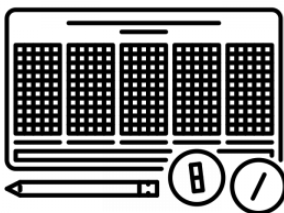
Rural-to-urban migration in Brazil dominantly occurs due to pull factors. Certainly, sometimes there are negative elements of rural life. Those who are large landowners in rural Brazil typically do quite well economically. However, landless peasants and anyone doing wage labor in rural Brazil may live in relatively poverty. Drought or other weather factors may contribute to economic difficulties. When these rural conditions are severe, this may force rural-to-urban migration, thus placing these human flows in the push category.

Frequently though, the pull of the city is the major portion of motivation for the countryside dweller to move to the city. Principally the city offers job opportunities that if secured would multiply a migrant's earnings substantially. Additionally, the city's multiple attractions and features (sometimes characterized as "the bright lights") may uproot a rural resident and draw him to urban life.

Geographers often are interested in studying migration patterns. Pull migration reveals a fascinating comparison of different geographic locations, where the preferred or better location secures the resident.

Naturally then, geographers have studied the patterns of rural-to-urban migration in Brazil. As in much of Latin America, these migration flows in Brazil have transformed the country from a rural society to an urban land. In comparison to the migration experiences of North American and European countries, this transformation has been distinctly more rapid. In 1940, Brazil held only about 30% of its citizens in urban areas. Less than eight decades later, in 2018 Brazil was 86.6% urbanized. In contrast, the USA had 30% urban levels in 1885, but was at 82.2% in 2018. American urbanization proceeded at a slower pace than in Brazil, whereas Brazil actually is more urban than the United States is now.

In addition, geographers have been interested in the logic and motivations of potential migrants in Brazil. One interesting approach in these queries is the mathematical logic of **expected return**.



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A simple way of examining the concept of expected return is the Powerball lottery. The odds of winning the jackpot in Powerball are 1 in 292,201,338, but for simplicity, let's call that one in three hundred million. A Powerball ticket costs \$2. Should you buy a Powerball ticket? That depends on the size of the jackpot to be won. Let's say that the jackpot is \$150 million.

Jackpot X Odds = Expected Return

$$\$150 \text{ million} \times (1 / 300 \text{ million}) = \$0.50.$$

In that case, your expected return is fifty cents, but you paid \$2 for the ticket. Bad strategy, paying for less than you mathematically expect to win.

What if the jackpot is \$750 million? Use the same formula.

$$\$750 \text{ million} \times (1 / 300 \text{ million}) = \$2.50.$$

In this scenario, your expected return is \$2.50, but you paid only \$2 for the ticket. Mathematically, this is a good strategy for your expected return is more than your cost.

We can consider rural-to-urban migration in Brazil in the same fashion. What would be paid or given up if trading rural life for urban life? Many things, but we are talking about income to begin. So, the migrant is giving up known patterns of rural income. What is to be gained? Urban income. How much urban income? That is unknown, but estimated. The potential migrant typically does not have a job lined up in the big city, but would be practicing **speculative migration** by moving to the city in the hopes of getting a job. What are the chances of getting employment in the urban area? That too is unsure, but estimated.

So what is our formula?

Estimated urban income X the estimated odds of that happening = the expected return.

Compare that estimated expected return with the known rural income. If the estimated expected return exceeds by more than a little the known rural income, then the rural dweller should move to the city. If not, then stay in the countryside.

For instance, if the average monthly urban wage¹ in Minas Gerais state of Brazil is R\$2138 (where R\$ the Brazilian currency, *thereal*), should the rural worker move to the city? What is the rural income? What are the estimated odds of getting the urban income? Let's say that the odds are fifty/fifty or one out of two chances. Let's say that rural worker is making the minimum wage there at R\$876 monthly. Do the math.

Estimated urban income X the estimated odds of that happening = the expected return.

$$\text{R\$}2138 \times 0.50 = \text{R\$}1069$$

Since R\$1069 is more than the known income of R\$876, the migration to the city should happen. It is mathematically logical.

Throughout Latin America, millions of people have undertaken this rural-to-urban migration. Generally, studies have shown that this migration is mathematically logical. In a sense this is good news. Geographers like it when people behave in geographically rational ways.

However, there are complications.

When purchasing a Powerball ticket, it may be mathematically logical if the jackpot is sizeable enough. However, there is no guarantee of winning the jackpot! In fact, the overwhelming odds are that any given ticket purchaser will win \$0.00. For the casual purchaser of a lottery ticket or two, this is not a big deal, but can be spent to create a little bit of fun anticipation.

When choosing to migrate to a city in Brazil, the person leaving the countryside is not guaranteed a job, for that is the nature of speculative migration. In fact, often the migrant fails to secure a regular job, by subsists on irregular, informal income. The move to the city and the challenge of trying to secure unpromised income may be mathematically sound, but is not casual or just a little bit of fun.



Rosinha favela in Rio de Janeiro, Brazil. Photo by Chensiyuan on Flickr.

The cities of Brazil, in particular the giants of Sao Paulo and Rio de Janeiro, faced a number of problems due to the flood of migrants from the countryside over the past few decades. The singular urban problem is the favela or shantytown. The consequence of thousands, even millions, of rural folk arriving in cities, but having very little money and no proof of guaranteed wage income, necessarily generate a vast host of DIY shelters/shacks/homes that are jammed next to each other or even in stacks upon each other. The Brazilian favela features primitive to simple housing, little or no municipal services like water, paths more than streets, and high rates of crime. Because unclaimed land or at least places of unclear ownership usually are on the edges or peripheries of the urban areas, favelas rapidly grow in size and number in those outer sectors of the urban land. Unused hillsides become meccas for the vertical favelas, popping upward in stacked varieties along the hills' slopes.



Favela in Rio de Janeiro. Photo by Chris Jones on Flickr.

The Latin America city has been modeled by Ernest Griffin and Larry Ford, originally in 1980 and modified as these cities evolved over time. An interactive diagram of this model can be seen here — <https://www.thinglink.com/scene/741386144226213889>.

In a sense like the purchaser of a Powerball ticket, seeking a gigantic jackpot, the rural-to-urban migrant in Brazil apparently reacts mathematically to perceived opportunities in the metropolitan realm. However, just as the Powerball ticket isn't guaranteed winnings, the migrant isn't assured of a good job, but often lives an economically precarious life, frequently by lodging in the favelas on the edges of the city.

Did you know?

Let's acknowledge that the scenarios presented above are intentionally simplified. The expected return of winning the lottery are complicated by a number of issues. Does the winner accept an annuity over thirty years or take a lesser lump sum payment now? How much of the winnings will be handed over through federal and state taxes? Including these factors will create a more complicated equation than that noted above.

Similarly, the choice of moving or not moving to the Brazilian city is not only predicated on average income. What are tax differences? How do cost of living levels vary between rural and urban settings? Indeed, there are other factors that likewise create a more complicated formula than that noted above.

However, the fundamental notion of economic comparison is the basis for logically determining whether or not to purchase a Powerball ticket and often for deciding whether or not to move to the city.

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5.10: Latin America and the Caribbean (LACAR)- Cultural Geography II



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Officially named United Mexican States, a name very rarely used by its inhabitants, today Mexico is a country of nearly 129 million people. Sports there are an important part of the daily life, economy and culture with Mexicans as spectators, consumers, and participants. A relatively youthful population, Mexicans (average age 29, for Americans 38) often are enthusiastic sports fans. The most popular sports in Mexico are football (soccer), boxing, baseball and basketball, in that order.



Created by DEMOGRAPH
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Football/Soccer

You might have guessed already that soccer, football or “futbol” is the most popular sport in most of the country. Since the majority of the world call this sport football even in English, it will be termed as football in this essay. From little villages to big cities, football is the sport with the most spectators, most covered by the media, and the most played.

Football was first introduced at the very end of the 1800s by English mining companies in the city of Pachuca, in the central region, then in Mexico City and in Orizaba, in the state of Veracruz. Organized competition remained only for the affluent in sport clubs until the early 1920s, in which Spaniard immigrant businessmen formed the first professional leagues.

There are almost 325,000 registered players and more than 8,000,000 unregistered ones playing weekly throughout the country.¹ Professional leagues of different levels are regulated by the Mexican Football Federation, affiliated with the International Football Federation (FIFA). The greatest successes for Mexican soccer in international competition have been winning the FIFA-U 17 World Cup in 2005 and again in 2011 and capturing the Gold Medal at the 2012 Summer Olympics. Regions contributing the greatest number of players to the first division league and to the national teams are Jalisco State, Mexico City and Michoacan State, although a talented player could emerge from anywhere in the country.

Since the 1970s, there have been a few attempts at organized women’s soccer, but these endeavors did not last. However, a promising future started in 2017 with the Liga MX Femenil as the highest division of women’s football in Mexico. Supervised by the Mexican Football Federation, this professional league has 18 teams, each coinciding with a Liga MX (men’s) squad.



Basketball

Basketball is the second most practiced sport in Mexico, although fourth in popularity behind football, boxing, and baseball. The first documented basketball activity dates from the first decade of the 20th century, at a private school in the city of Puebla. By the Olympic Games in 1936, Mexico had a strong team, winning a bronze medal in the competition.

Chihuahua is the largest Mexican state in the country and borders the United States. This state has a good overall economy based on agriculture and manufacturing. Regions within the Chihuahua state experience rough winter seasons that inhibit outdoor sports such as football or baseball. In Chihuahua and other northern states, due to ethnic heritage, on average people are taller than in other regions of the country. All of these factors have contributed to a long basketball tradition in Chihuahua. This state boasts the most success in national championships at all levels, as well as being the main contributor (alongside Mexico City) of players for national teams. In the decade of the 1980s, the broadcast of National Basketball Association (NBA) games from the United States greatly increased the interest in basketball among the youth in Mexico. The NBA currently schedules a couple pre-season and regular-season games in Mexico City every year.

Unlike organized professional football, basketball in Mexico has been plagued by mismanagement, conflicting factions, emerging and soon folding leagues, and overall lack of continuity. These have been obstacles that hindered the formation of a solid base for development of young players for a sport that is very much liked in large regions of the country.



Boxing

Boxing is much practiced in Mexico, both amateur and professionally. It is also the second most watched sport, after football. Initially, in the 1930s and 1940s, large metropolitan areas like Mexico City and Guadalajara produced regional boxing figures. It was in the decade of the 1960s when Mexican fighters began to have a consistent and ever increasing international presence, especially in the lower weight categories. Fifteen Mexican boxers are already in the International Boxing Hall of Fame. Although Mexican male boxers have had relatively modest success in Olympic competition, winning twelve medals so far, most of the success have been in the professional arena within each of the several international boxing organizations.² States with a large boxing tradition and many champions are Baja California Norte, Sinaloa, Sonora, Yucatan, Jalisco, State of Mexico and, as mentioned, Mexico City. The country has given birth to more than 200 professional world champions, second only to the number of champions from the United States.



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Baseball

Organized baseball is the most popular sport in regions of the Northwest as well as in southern coastal areas along the Gulf of Mexico. The geographic proximity of Major League Baseball teams near northwestern Mexico clearly is a major force behind baseball's regional popularity there. For instance, California's teams in San Diego and in Los Angeles have fan support in Mexico.

There are several stories about how baseball was first introduced in Mexico. Whether by American soldiers in Veracruz or American railroad workers in the northern state of Nuevo Leon, the game became known in the second half of the 19th century. It was not until 1925 when the first professional league was founded with a few teams in Mexico City and surrounding regions. The Mexican Baseball League has expanded, undergone years of great success and popularity, followed by financial struggles, splits into competing leagues and successful reorganization. The presence of American and Caribbean players on each of the Mexican teams has been a constant since the early years. Around World War II, the league attracted very good players from the Negro Leagues in the United States, where these players' opportunities were very limited by the social system in place. Since the late 1960s, the Mexican baseball league has been a class Triple-A league in organized Minor League Baseball, one grade below Major League Baseball (MLB).³

Baseball is enormously popular in Northern states such as Sonora, Sinaloa, Chihuahua and Nuevo Leon, as well as the whole peninsula of Baja California. These are fertile grounds for the very successful winter league named La Liga Mexicana del Pacifico (Mexican Pacific League). This league is currently considered the highest quality of baseball in the country, although also in a Triple-A league class. The league attracts some major league players during the off season in the United States and its fans are passionate and quite knowledgeable about the sport. The ten current franchises are distributed within the Pacific Northwest states, in the large cities of Guadalajara, Jalisco, and Monterrey, and in the state of Nuevo Leon. Every year, the league's champion represents Mexico in the Caribbean Series, the highest tournament for professional baseball teams in Latin America.

Did you know?

Two countries, one team. The professional baseball team Tecolotes de los Dos Laredos (Owls of the Two Laredos) in the Northern Division of the Mexican Baseball League (Triple-A class) is the only known baseball team in the world that plays its home games split in two countries. Half of home games are played in their stadium in the city of Nuevo Laredo, in the state of Tamaulipas, Mexico, and half are played across the river in Laredo, Texas. The team has arrangements with different firms in each side of the border, therefore home uniforms, team merchandise and stadium concessions are somewhat different on each side the border.

Arguably the greatest Mexican baseball player ever, pitcher Fernando Valenzuela starred for the Los Angeles Dodgers, pitching eleven of his seventeen major league seasons there. "Fernandomania" showed his popularity in Mexico and in Los Angeles in the 1980s.

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5.11: Latin America and the Caribbean (LACAR)- Economic Geography II

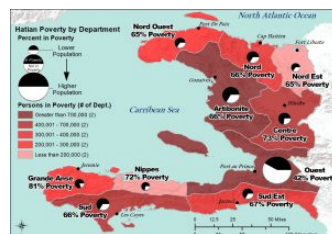


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Haiti is the most impoverished country in the Western Hemisphere and, in our terminology, thus of the Western World.

Haiti shares the island of Hispaniola with the Dominican Republic. Although there are two countries on the same island, Haiti's portion (36.4% of the area of Hispaniola) is strikingly poorer than the Dominican east.

For 2020 Focus Economics ranks Haiti as the 6th poorest country in the world and the only Western World country in the bottom ten. This ranking marks Haiti with a GDP per capita of \$923. For a chart showing these bottom ten countries, go to <https://tinyurl.com/haitianpoverty> In contrast, the GDP per capita across the border in the Dominican Republic is \$8050 (2018), about 8½ times higher than in Haiti.



Cartography by Steve Banas.

On the Human Development Index (HDI – 2018) Haiti ranks 169th out of 189 countries. The next lowest in development in the Western World lists as the Solomon Islands, ranked at 153rd.

Worldwide what are the characteristics and the causes of poverty? How well do they apply to Haiti?

What is correlated with poverty? Let us consider these factors – landlocked, violent conflict, debt, disease, natural disasters, corruption, and inequality.



Photo by Claudia Altamimi on Unsplash.

1 – Landlocked. This lack of ocean borders often is a criterion for poverty, but of course, Haiti is an island country, so this does not apply. The six countries ranking lowest on HDI are landlocked countries in Africa. Haiti achieves poverty without the handicap of being landlocked.

2 – Conflict, violence, and war. An interesting concept is the Conflict Trap, a variation of the Poverty Trap. Violent conflict and poverty can be linked in a negative feedback loop where conflict leads to poverty which leads to conflict which leads to poverty, and so on. Violent conflict can cause “a reversal of economic development, which in turn increases the likelihood of future violent conflict. ... Agreeing with the Conflict Trap, a country ranked at the bottom 10% on a global poverty scale is six times more likely to see violent civil conflict than a country at the top 10%.”¹

This makes sense historically and contemporarily here. Haiti was founded out of native poverty that led to violent revolution in 1791-1804. Haiti won its independence from France, but took on large debt in doing so. France forcefully demanded reparations for the loss of its slave colony, agreeing in 1825 and then revising payment lower in 1838 to 90 million francs (the equivalent of \$21 billion now). Haiti paid off this debt in 1947, but this historical debt burdened all of Haiti's independent nationhood.

In recent years, violence has been an issue. United Nations peacekeeping forces helped maintain order from 2003-2017. In 2019, violent outbreaks in Haitian slums prompted the term “anarchy” in Reuters reporting. In the Global Peace Index for 2019, Haiti ranks 83rd out of 163 countries. It may be that being an island State is helpful for peace, as Iceland ranks 1st and New Zealand 2nd in this index; however, Haiti is an island and ranks average in violence. There is no civil war in Haiti. Arguably, violence has some impact on poverty there.



Photo by Bill Hamway on Unsplash

Another example of a Poverty Trap involves disease. Sick people produce less income which means less money for medical care which means staying sick which again means less income and so on. Haiti ranks second in LACAR to the Bahamas in terms of the highest percentages of population that is HIV+; moreover, Haiti scores third in LACAR in terms of total numbers of HIV+ cases, after the much more populous Brazil and Mexico.

Following the 2010 earthquake in Haiti, there was a major cholera outbreak (ironically, brought accidentally by United Nations peacekeepers). Only by January 2020, ten years later, was cholera eliminated from Haiti. Haiti ranks worst in LACAR in potable water supply with 35% lacking basic drinking water.

So, yes, the feedback loop of disease and poverty in Haiti is significant.

3 – Natural Disasters. Haiti and the island of Hispaniola lie on a tectonic plate boundary, positioning the island in the type of location that produces earthquakes. The 2010 earthquake causes massive property damage and catastrophic loss of life.



Photo by Trocaire from Ireland.

The epicenter of the 7.0 magnitude quake was only sixteen miles from Port-au-Prince, the national capital. As seen here, the National Palace was one of thousands of heavily damaged buildings

Haiti's location is in the Atlantic Ocean's hurricane belt. Significant hurricane damage occurred there in 2016 – Hurricane Matthew, 2010 – Hurricane Tomas, and 2008 – Hurricanes Gustav, Hanna, and Ike. Earthquakes, along with hurricanes and associated flooding, regularly cause significant property damage and some loss of life in Haiti.

4 – Political Corruption. In 2008, Transparency International, a global coalition against corruption, ranked Haiti as the fourth most corrupt country in the world. Since then, Haiti has improved to 161th best out of 180 countries in 2018. For instance, the Petrocaribe policy with Venezuela was intended to reduce the price of oil purchases for Haiti; however, Haitian auditors have revealed that about \$2 billion of these savings are missing, thus not available for their intended use in social development. These sorts of things are not new, probably peaking under the regime of President Jean-Claude Duvalier – 1971-1986.

In the 2020 Index of Economic Freedom, Haiti ranked 153rd out of 180 in the world, in LACAR marking ahead of only Ecuador, Suriname, Bolivia, Cuba, and Venezuela.

5 – Inequality. Haiti scored 41.1 on the GINI index for 2018. In this statistic of wealth inequality, a rating of zero would be perfect equality, while a rating of 100 would have one person owning everything. This is 56th highest inequality of 153 countries. Inequality often prompts dissatisfaction and sometimes violence.



Photo by Susan More on Unsplash

There are a number of factors that affect poverty in countries worldwide. Haiti does not feature all of these factors, for it is not landlocked; however, the other elements explained here do find resonance in Haiti. The socioeconomic factors are not independent of each other, but have interrelationships that make poverty more complex and more intractable. The Haitian people suffer the consequences.

Did you know?

Following the earthquake of 2010, musicians recorded a new version of “We are the World” in order to bring attention to the dire needs of the people of Haiti. See the official music video on Youtube at <https://www.youtube.com/watch?v=Glny4jSciVI>

In the Peace Index, the United States ranks a dismal 128th.

In terms of violence and poverty, note that South Sudan ranks 161st out of 163 in the Peace Index, while ranking 186th out of 189 in the Human Development Index. Civil war in Sudan and South Sudan clearly tallies with poverty there.

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Trocaire from Ireland. 2012. *Ruins of the Cathedral in the Centre of Port Au Prince.* https://commons.wikimedia.org/wiki/F..._au_Prince.jpg. Creative Commons Attribution 2.0 Generic.

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5.12: Latin America and the Caribbean (LACAR)- Historical Geography II

There are fourteen British Overseas Territories (BOT), sometimes known as United Kingdom Overseas Territories (UKOT). Indeed, these lands are part of the United Kingdom and as such feature Queen Elizabeth II as their monarch and head of state.



British Colonies in Latin America and the Caribbean (LACAR). Cartography by Jeff Wandersen.

It has been said in different ways and at different times that the sun never set on the British Empire. Truly, the British colonial system spanned the globe, in various decades and centuries holding vast lands such as America, Canada, and Australia, as well as many islands of varied sizes and shapes. Some of these lands are former colonies that maintain links through the British Commonwealth, a voluntary association of 54 countries, including Australia, Canada, India, Malta, New Zealand, Singapore, and others. The United States has no such ties to the United Kingdom, but remains a strong ally and trading partner with Britain. Additionally, there are the Crown dependencies – the islands of Guernsey and Jersey and the Isle of Man. These islands nearby to Great Britain are not independent countries and thus are not in the Commonwealth, but have their own political relationships with the United Kingdom.

In this essay, we specifically consider the British Overseas Territories that are within the Caribbean. This excludes the BOT members outside the Atlantic Ocean – the Sovereign Base Areas of Akrotiri and Dhekelia that are on the Mediterranean island of Cyprus, the British Antarctic Territory, the British Indian Ocean Territory (also a military base), Gibraltar (whose strait connects the Atlantic Ocean to the Mediterranean Sea), and the Pitcairn Islands in the Pacific Ocean. Additionally not near the Caribbean, there are Atlantic Ocean islands that are British Overseas Territories. The islands of St. Helena, Ascension, and Tristan da Cunha are located far distant from anywhere, sitting in the center of the southern Atlantic Ocean. The Falkland Islands and the somewhat nearby South Georgia and South Sandwich Islands belong to the United Kingdom, but are claimed by Argentina, their nearest continental neighbor.

The remaining six British Overseas Territories count in the Caribbean tally.

Section I – Actually, in the Atlantic Ocean, but near the Caribbean Sea

1 – Bermuda

Bermuda is in the Atlantic Ocean, east of North and South Carolina. As such, it really isn't in the Caribbean Sea, but often is grouped with those islands. (See the essay on defining the LACAR region.) The first British sailors to reach Bermuda, actually arrived by shipwreck in 1609; nevertheless, Britain has controlled the island ever since. Strikingly, the island is famed for the

adjacent Bermuda Triangle, a region bounded by Miami, Puerto Rico, and Bermuda. This Bermuda Triangle is a legendary zone where airplanes and ships are said to have wrecked and/or disappeared mysteriously. Computative analysis indicates that the number of planes and ships lost there is not statistically different than would occur by random chance for the large number of vessels passing through the region.

2 – Turks and Caicos Islands

These islands are immediately north of the Windward Passage, the strait that separates Cuba from Haiti. Originally settled by Taino and Lucayan natives, the islands were visited by Christopher Columbus' ships in 1492. Subsequently, the islands were ruled under French, Spanish, and British control respectively, but left to Britain with the Treaty of Versailles. Under British rule, the islands at times were paired with the Bahamas and with Jamaica, but the Turks and Caicos have been separate since 1973. "Turks" refers to a cactus that features a red top, reminiscent of the Turkish hat – the fez.

X – the Bahamas

The Bahamas are not included as a British Overseas Territory, despite the fact that the islands were included as a colony of the United Kingdom. Of course, now the Bahamas is an independent country. Thus, the X for the Bahamas in this list.

However, the islands listed here as 1-2-X create the British insular triangle of historical control over these Atlantic, not truly Caribbean, island sets.

Section II – Within the Lesser Antilles

3 – British Virgin Islands (BVI)

The islands, grouped with the U.S. Virgin Islands, were named in honor of St. Ursula, whose legendary and many varied accounts feature her martyrdom along with that of her group of virgin maiden followers. There are more than four dozen islands in this group, but the larger populated islands are Tortola, Virgin Gorda, and Anegada. Anguilla is to the southeast of BVI.

4 – Anguilla

At only 35 square miles in area, Anguilla is the 59th largest island in the Caribbean. In 1967 Anguilla marked the 300th anniversary of British colonial control. For approximately the second half of those three centuries, Anguilla was in a British partnership with nearby islands St. Kitts and Nevis. Often unhappy with that arrangement, Anguilla eventually broke away, securing its independence in 1967; however, the actual goal of this move instead was alone to be a British colony. Thus, after two years of independence, Anguilla was happy to have its request granted, rejoining the British Empire. This move from independence to colonial land would seem to be the only such voluntary act in history.

Y – St. Kitts and Nevis

St. Kitts (technically St. Christopher, but always the nickname is used) and Nevis lie next from BVI in this southeastern arc of islands. These islands were the last British islands in the Caribbean to gain independence. Thus, we add the letter Y to this list of British territories, as St. Kitts and Nevis no longer are included as a British Overseas Territory.

Z – Antigua and Barbuda

Antigua in 1632 and Barbuda in 1678 were secured as British colonies, not gaining independence until 1981. They now belong in the British Commonwealth. In 2017, Hurricane Irma essentially destroyed everything on Barbuda, compelling survivors to relocate to Antigua.

5 – Montserrat

Some say that Montserrat greatly resembles Ireland, except for the volcano. Hmm, that would seem to be a big difference! In July 1995, the volcano Soufrière Hills erupted, devastating the southern half of the island. The volcano remained active to varying degrees on through 2010. The capital city Plymouth was destroyed. The southern half of the island remains in an exclusion zone, uninhabitable and with very restricted access.

So, this part of the insular chain is listed here as 3-4-Y-Z-5. These are the more northern British islands of the Caribbean chain of smaller islands – the Lesser Antilles. Skipping a few islands such as the historically French islands of Guadeloupe and Martinique, the traditionally British islands of the Caribbean continue. These now independent countries, but former British colonies, include Dominica, St. Lucia, St. Vincent and the Grenadines, Barbados, Grenada, and Trinidad and Tobago.

Section III – In the Caribbean, but an odd fit

6 – Cayman Islands

Located south of Cuba and west of Jamaica, in a sense the Cayman Islands are out of place. They are small, like the Lesser Antilles, but they do not lie in that chain of islands separating the east side of the Caribbean Sea from the open Atlantic Ocean. Like the Turks and Caicos, the Cayman Islands once was paired with Jamaica in British administration, but now have status as a BOT. Given the nearby presence of Jamaica in the Greater Antilles, the Cayman Islands could fit into that sub-group of the Caribbean, except that its area is insufficient to be counted as “Greater.”

The name *Cayman* comes from the Spanish word *caiman* that means *alligator*. In the Cayman Islands, there are two species of crocodiles – the American and the Cuban. The caiman, a smaller relative of alligators and crocodiles, does not live in the Cayman Islands, though their habitat does include Cuba, Puerto Rico and several continental countries of Central and South America.

Overall, the British Overseas Territories fit into three categories. The technically Atlantic islands of Bermuda and the paired Turks and Caicos fall there along with the independent Bahamas. BVI, Anguilla, and Montserrat are amidst numerous former British colonies in that eastern set of Caribbean islands known as the Lesser Antilles. The Cayman Islands are found near Jamaica, thus historically cohesive, but not so in size.

The British Overseas Territories also each have a unique element. Bermuda is infamous of the perhaps myth of the dangerous Bermuda Triangle. The Turks were named for a cactus that looks like it has a red hat. The British Virgin Islands have a strange naming legend. Anguilla is the colony that became independent only to request and receive reversion to colonial status. Montserrat is a half-destroyed volcanic island. The Cayman Islands don’t have caimans, but are named for alligators, yet have crocodiles.

Did you know?

The 1982 war between the United Kingdom and Argentina was fought over the Falkland Islands primarily, though Argentina forces briefly did take over South Georgia. The British Navy prevailed in this war.

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5.13: Latin America and the Caribbean (LACAR)- Physical Geography II



Rain in Sao Paulo, Brazil. Photo by Rafael Vianna Croffi on Flickr.

While the temperature patterns in Latin America are relatively simple, the precipitation patterns are incredibly complex. Part of this is because Latin America covers nearly 90° of latitude from north to south—half the planet. As a result, it passes through many of the different global pressure systems that help to determine the world's precipitation patterns. Complicating matters is the wall of mountains that runs the length of the region from north to south.

As is discussed in Chapter 6, the subtropical highs are located in various places around the world at about 30° north and south. The subtropical highs create dry conditions. The subtropical highs also generate the westerlies – winds that move poleward from the subtropical highs, but deflect because of the Coriolis effect and blow from west to east across the midlatitudes. The subtropical highs also generate the trade winds, which head toward the equator, blowing from the northeast in the northern hemisphere, and from the southeast in the southern hemisphere. Finally, the trade winds converge near the equator, creating the very wet intertropical convergence zone (ITCZ). All of these features shift throughout the year, sliding north in June, July, and August, and sliding south in December, January, and February.

Here, we'll have a look at the four basic kinds of precipitation patterns – those places that are wet year-round, those places with wet summers and dry winters, those places with dry summers and wet winters, and those places that are dry year-round. We'll conclude with a brief look at another complicating precipitation factor: El Niño.

1. Places that are wet year-round:

- **The Amazon Basin.** Most of the Amazon Basin is wet year-round, largely because it is right along the equator, the home of the ITCZ. Rainfall is heavy in all months. This is why the Amazon River is world's biggest river (It's not the world's longest river – that distinction belongs to the Nile – but it does carry more water than any other river on earth, and by a very wide margin).
- **The Caribbean Side of Central America.** The northeast trade winds that arrive in this area blow across the Caribbean Sea, and those warm air mass pick up enormous amounts of water vapor year-round.
- **Southeastern Brazil, Paraguay, northeastern Argentina, and Uruguay.** The southeast trade winds bring plenty of moisture off the Atlantic and drop it in the midlatitudes of South America.
- **Southern Chile.** Here, the westerlies consistently bring moisture in off the Pacific Ocean.

2. Places that have wet summers and dry winters:

- **Southern Venezuela and Southwestern Brazil.** As mentioned above, the ITCZ shifts north from the equator in June, July, and August, and shifts south of the equator in December, January, and February. This means it arrives in southern Venezuela during its summer, bringing lots of rainfall. The ITCZ then arrives in southwestern Brazil during its summer (keep in mind, summer in the southern hemisphere happens six months after it does in the northern hemisphere).
- **Southern Mexico and the Pacific Side of Central America:** The main source of moisture at this latitude are the trade winds, which are blocked in a rain shadow effect by the mountains of southern Mexico and Central America. Still, the heating of the earth in the summertime causes air to rise off the land, causing low pressure at the surface. This draws moist air masses in off the Pacific Ocean, generating summertime precipitation. It's a sort of miniature version of the monsoons that bring rain to India in the summer.

3. Places that have dry summers and wet winters:

- **Central Chile.** This area has a Mediterranean climate, just like California and southern Europe. In the summer, the subtropical high over northern Chile shifts south over central Chile, causing dry conditions. In the winter, the subtropical high shifts north, as do the westerlies, which bring moisture in off the Pacific, causing wet conditions.

4. Places that are dry year-round:

- **Northern Mexico.** Just like the southwestern U.S., the near constant presence of the subtropical high keeps this region dry most of the year.
- **Northern Central Venezuela.** The Andes Mountains generally run north-south, but they curve east-west in northern Venezuela. As the trade winds blow in off the Caribbean, they dump moisture on the northern side of those mountains, but there is a small rain shadow effect on the southern side.
- **The Patagonia:** Southern Argentina lies in the westerlies, but it is also west of the Andes, so the Patagonia falls in a rain shadow of those mountains.



Atacama Desert, Chile. Photo by Guilherme Bustamante on Unsplash

- **The Atacama Desert:** The Atacama Desert of northern Chile is the world's driest place. Weather stations in the Atacama have sometimes gone multiple years without recording a single drop of precipitation. Some parts of this desert are so dry that bacteria don't even live there. There are three major causes of deserts around the world – subtropical highs, rain shadows, and cold coasts – and the Atacama Desert, remarkably, is caused by all three. It is under a subtropical high year-round, which would make it dry anyway. One potential source for moisture is from the trade winds coming in from the Atlantic, but the Atacama is in a rain shadow of the Andes Mountains. The only other potential source of moisture is the Pacific, but the waters off the coast of Chile are extremely cold, the result of the Peru Current, which runs from Antarctica and up the coast of South America. That cold water chills the breezes that flow off the ocean, and that cold air cannot contain much water vapor.

Complicating matters is an unusual weather phenomenon known as El Niño. As mentioned above, the waters off the Pacific Coast of Latin America are usually quite cold, causing the coastal areas to be relatively dry. Every two to seven years, however, a temperature inversion occurs in the eastern Pacific, causing the waters off the coast of Latin America to become unusually warm. This warm water heats up the air that passes over it, allowing those air masses to absorb large volumes of water vapor. The result is several months of unusually wet weather. Under particularly severe El Niño conditions, much of Pacific Latin America suffers flooding and mudslides. Usually, El Niño events begin in the late months of a year, and then last through the following year's spring and summer. The last major El Niño event occurred in 2015-2016.

Did you know?

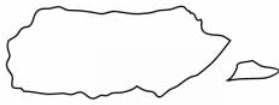
The El Niño phenomenon was named by Peruvian fishermen. They noticed that heavy rains would follow the warming of ocean water. The water often began warming up at the beginning of Advent – the weeks in December on the Christian liturgical calendar that lead up to Christmas. So, they named the approaching phenomenon after the approach of the Christ Child – El Niño.

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Croffi, Rafael Vianna. 2016. *Chuva Em São Paulo*. <https://tinyurl.com/rainySaoP>. Attribution 2.0 Generic (CC BY 2.0).

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5.14: Latin America and the Caribbean (LACAR)- Political Geography II



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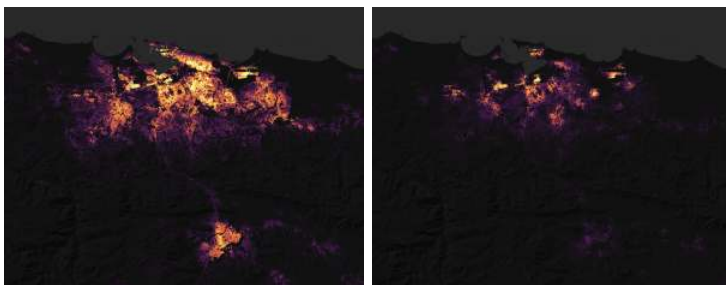
The Commonwealth of Puerto Rico is located in the northeast Caribbean Sea, about 1000 miles southeast of Miami. With a total area of 5320 square miles, it is the smallest of the Greater Antilles islands, just about 100 miles long and 50 miles wide. While the 3.2 million inhabitants of Puerto Rico are U.S. citizens, Puerto Rico is not a U.S. state but is considered an associated or unincorporated territory to the U.S. The U.S. Congress holds the ultimate power over Puerto Rico but Puerto Ricans cannot vote in U.S. elections and the UN Special Committee on Decolonization has frequently called on the U.S. government to initiate a process “that would allow Puerto Ricans to fully exercise their inalienable right to self-determination and independence.”¹

While the Puerto Rican standard of living is among the highest in Latin America, the island has struggled for many years with economic decline and rising debt. In 2016 this came to a head and the U.S. Congress passed into law the Puerto Rico Oversight, Management, and Economic Stability Act or PROMESA.² The law tries to address the debt by establishing an oversight board and a process for restructuring the debt but also has the power to approve infrastructure projects. Known in Puerto Rico as “la junta de control fiscal” the board was very unpopular from the start as another reminder of Puerto Rico’s quasi-colonial status.



Hurricane Maria. NASA Earth Observatory

Just when the opposition to PROMESA gained strength, an even more devastating natural event hit the island. On Wednesday, September 20th, 2017, the category 5 hurricane Maria struck the southern side of Puerto Rico and crossed the entire island, leaving behind massive devastation. While the original death toll was reported as 64, later studies found that close to 3,000 people lost their lives as a result of Maria. Tens of thousands lost their home, while the entire island was without fresh water and electricity for weeks and sometimes months. Water, food, medicine and fuel were all in very short supply. Over 100,000 people left the island for good to resettle elsewhere. The total damage to the island has been estimated to be close to \$100 billion. Thus, Maria was the deadliest natural disaster in U.S. history.



The above images are from the NASA Earth Observatory. On the left is a view of the light pattern of a night at San Juan, Puerto Rico. On the right is the same location, but as a composite of the nights of September 27-28, 2017, after Hurricane Maria struck the

island.

In 2019, after two years of intense efforts of rebuilding the infrastructure, life on the island was slowly returning to a resemblance of normal when a new wave of political and natural disturbances hit Puerto Rico. In July, a series of text messages between Governor Ricardo Rosselló, members of his cabinet, and lobbyists became public. In those chats, the men were mocking women and victims of hurricane Maria using crass and vulgar language. In addition, a scandal erupted, accusing Rosselló and others of a multi-billion-dollar corruption scheme. Massive street protests ensued, calling for Rosselló's removal. By some estimates close to 500,000 people gathered in San Juan, for one of the largest protests in the island's history. Rosselló resigned on August 2nd, 2019.³

Based on the Puerto Rican Constitution, the person in line to take over if a governor dies or resigns is the secretary of state. Shortly before stepping down, Rosselló had appointed a congressional representative Pedro Pierluisi, a close ally, to that post and he was indeed sworn in on August 2nd. However, cries of foul play emerged immediately. The president of the Senate, Thomas Rivera Schatz, filed a challenge with the Supreme Court of Puerto Rico, arguing that Pierluisi's appointment was invalid, since he had only been approved by the House but not the Senate. The Supreme Court concurred and Pierluisi was removed from office on August 7th and replaced by the Minister of Justice, Wanda Vazquez. Vazquez, who at first was reluctant to take the position, was constitutionally next in line, since the secretary of state position was vacant. Thus, Puerto Rico has the dubious distinction of having three different governors within one week.

While the new governor was struggling to clean up the mess left behind by the previous administration, nature created a new shock for Puerto Rico – literally. At 2:24 am local time on January 7th, 2020, a magnitude 6.4 earthquake hit the southwest region of Puerto Rico. In the cities of Ponce and Guanica, thousands of people ran into the streets searching for safety. This was the strongest earthquake to hit Puerto Rico in over 100 years and the government declared a state of emergency. Small shocks had started to occur in December and continued in the aftermath of the 6.4 quake. Around 800 buildings were damaged and approximately 8000 people were displaced. For weeks entire families were sleeping in the streets and in public parks due to their fear of another big quake. The quakes also led to an outpouring of support by people around the island who delivered supplies and support for the local population. Between December 2019 and June 2020 close to 10,000 earthquakes have been registered in and around Puerto Rico, mostly on the south side. Most of them are minor quakes between 2.0 and 3.0 on the Richter scale. So why all this shaking? The U.S. Geological Survey explains that Puerto Rico is located between the North American and the Caribbean tectonic plates which has an active plate boundary. In addition, Puerto Rico is surrounded by deep ocean trenches including the Puerto Rico trench with a depth of 8,400 meters (27,000 ft).⁴

The first cases of COVID-19 – two Italian tourists – were confirmed in Puerto Rico on March 13, 2020. However, the new governor Wanda Vazquez had acted pre-emptively and created a COVID-19 task force at the end of February to deal with the emerging threat. She declared a state of emergency on March 12th – with zero local cases – and enacted strict rules to stop the spread of the virus. The whole island was under curfew from 7:00 pm to 5:00 am. All businesses were closed except for pharmacies, gas stations and grocery stores. No one was to leave the house except for emergencies and food shopping. No social gatherings of any kind were permitted. Businesses who violated the rules faced a fine of \$5000 or 6 months in jail. Even the beaches were off limits.

Governor Vasquez supposedly modeled her response after that of Singapore, another island nation. However, Puerto Rico did not benefit much from its island status since there was a steady stream of expatriates returning to San Juan airport, many of them from Corona hotspots New York and Miami. In addition, cruise ships had delivered the first cases of COVID-19 to Puerto Rico. While the government was able to stop the docking of cruise ships early on, it took Vazquez until April 8th to request that the FAA (Federal Aviation Agency) stop flights from U.S. hotspots. The number of flights was reduced, but it never came to a full stop and it is safe to assume that Puerto Rico received most of its initial cases from the outside. Overall, Puerto Rico's strict – some would say draconian – measures have been successful. At the beginning of June, the total number of affected people is still below 5000 and the number of deaths stands at 142. That constitutes a rate of about 45 death per million in Puerto Rico, compared to about 300 death per million in the U.S.



San Juan, Puerto Rico. Photo by Chad Sparkes on Flickr.

The 12-month period from June 2019 to June 2020 has been one of the most challenging this small island has had to face. However, political turmoil, natural disaster and pandemic did not bring Puerto Rico to its knees. It is a tribute to the resilience and resourcefulness of Puerto Ricans that this continues to be “La Isla del Encanto” – the island of enchantment.

Did you know?

Puerto Rico is home to the only tropical rain forest on U.S. soil, specifically El Yunque National Forest.

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5.15: Latin America and the Caribbean (LACAR)- Population Geography II



Created by Bence Bezeready
from Noun Project

Brazil is a huge country that ranks highly in many different categories. Let's take a look at Brazil's Top Five rankings.

First of all, for nearly three decades Brazil stood fifth in the world in total population. Whereas China and India both have over 1.3 billion people, far ahead of any other countries, Brazil houses 212 million people in 2020. Upon the breakup of the Soviet Union and Russia's corresponding drop out of the top five countries by population, Brazil took over fifth place. However, Brazil's **total fertility rate** has been declining for a number of years, so that Brazil's hold on fifth place did not last. Pakistan now has passed Brazil for fifth place. Additionally, Nigeria is slated to pass Brazil, at least by 2030. In fact, some sources suggest that Nigeria already has passed Brazil; however, with the vagaries of calculating population size, especially in a dynamic country like Nigeria, it is difficult to gain a precise count. Nigeria is increasing rapidly, so while Brazil has a birth rate of 13.6 and a death rate of 6.6, Brazil's natural population increase this year should be about 0.7%, definitely lower than that of Nigeria.

Due to the Treaty of Tordesillas of 1494, Portugal secured territorial rights to Brazil. Although Brazil gained independence in 1822, the Portuguese language has remained its official language through the current day. Portugal has ten million people speaking Portuguese. People in its former colonies do speak Portuguese as well – 30 million in Angola, 27 million in Mozambique, and a scattered several million elsewhere. Obviously then, Brazil is the most populated country that speaks Portuguese.

#5

Second, Brazil holds the fifth most area in the world with a bit under 3.3 million square miles. This fifth position will hold for the foreseeable future, as change would require land losses or acquisitions by war or treaty. Changes such as these are very unlikely.

This large area naturally has major landscape features. For Brazil, the most obvious is the Amazon Rainforest that is the largest forest in the world. The corresponding Amazon River is the largest in the world in terms of volume of discharge. While some cite the Amazon as the longest river in the world, most commonly the Nile River is considered #1 and the Amazon #2 in length.



Amazon River. Photo by Nareeta Martin on Unsplash

Brazil's vast area also is productive for agriculture, though there are significant environmental concerns over the destruction of rainforest for conversion into crop fields or grazing land. In any case Brazil's farmland is productive, leading to large volumes of agricultural exports. Brazil is famed for coffee, rightly so, for it is the world's largest producer and exporter of coffee, accounting for 30% of the planet's coffee market. Coffee is not Brazil's only huge contribution to the Earth's beverage supply. As with coffee, orange juice ranks #1 worldwide in production in and export from Brazil.

In other crops Brazil scores a Top Five ranking, including cane sugar, soybeans, corn, cotton, and tobacco. Sugar cane also is used for the production of ethanol fuels, where again Brazil ranks number one in the world.

Significant agricultural lands are used for grazing herds, not just for growing crops. In Brazil the total head of beef cattle nearly matches the number of people in the country. Across the globe, Brazil is the number one exporter of beef and chicken.

Brazil's large territory contains a variety of natural resources. In worldwide exports, Brazil ranks #2 in iron ore, #3 in bauxite (for aluminum), and #5 in tin.

Additionally, Brazil has the second greatest amount of installed hydroelectric capacity.

In an unfortunate new category, as of June 13, 2020, Brazil ranked #2 in total numbers of COVID-19 deaths, surpassing the United Kingdom, but trailing the United States by a wide margin.

Overall, Brazil #5 area gives it enough land to excel in the production of a variety of agricultural products and natural resources. The country's #5 population provides enough people to do the work to propel Brazil's exports.

Did you know?

Brazilian steakhouses such as Fogo de Chão have gained considerable popularity across the United States, particularly in larger cities and in Texas.

Considering adventure tourism, US News and World Report ranks Brazil as the world's number one adventure destination.

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5.16: Latin America and the Caribbean (LACAR)- Urban Geography II



Created by supalerk laipawat
from Noun Project

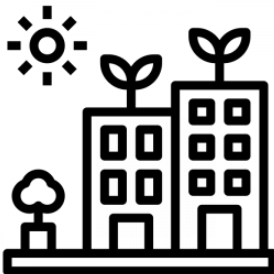
In 2012, scholar Boyd Cohen designed the Smart City Wheel to examine the features of the modern digital city. In this context, “smart” does mean intelligent, but especially in the sense of using technology to produce safe, productive, and transparent environments for those who dwell in these cities. Let’s consider Cohen’s model and look at his rankings for Latin American cities, for he did consult for cities and countries in LACAR regarding urban life. We can note the worldwide context too. In addition, let’s look at other reports ranking cities worldwide and see how well cities in LACAR fare.

Though Boyd Cohen created the Smart City Wheel, he is not a graphic artist, so his design was a bit crude. Thankfully, a colleague Manuchis redesigned the model in a visual appealing form. Here — https://www.researchgate.net/figure/The-Smart-city-wheel-by-Boyd-Cohen_fig3_317269039

The Smart City Wheel had six main dimensions, all addressing elements of a modern technological city.

1 – Smart economy

An element of the smart economy is the digital startup company. Often these companies are dynamic elements of the modern economy and when successful are a boon to any urban area. In 2020 for the Global Startup Ecosystem ranking of cities for their economic climates open to digital startup companies, Sao Paulo, Brazil, at #30 was the only LACAR city in the top forty. In the related Emerging Ecosystem ranking of cities, only Santiago, Chile (top 81-90) and Curitiba, Brazil (top 91-100) were in the top 100.



Created by Manthana Chaiwong
from Noun Project

2 – Smart environment

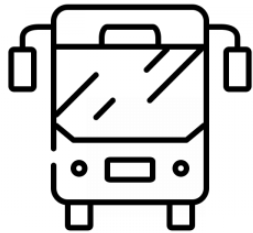
In this dimension, the city needs to be green. This includes smart buildings that meet **LEED** standards. City government uses big data and GIS in urban planning. The city’s resources are developed and expended in efficient and fair methods. Vienna, Austria, is looking to use blockchain technology in managing renewable energy.

3 – Smart government

A modern smart city government utilizes the efficiencies of online services. Bureaucratic snarls and red tape are reduced as digital forms and online processing speeds procedures. Government reports and meetings can be viewed online, so that transparency of urban politics reduces corruption.

4 – Smart living

Through improvements in health and safety, quality of life is enhanced. Healthier and safer people are more capable of utilizing their own human capital to create more successful and happier lives. In 2020, we look to emphasize how transparency in police work is beneficial for urban populations.



Created by nauracon
from Noun Project

5 – Smart mobility

Transportation geography is served well by big data and GIS, developing efficient transportation networks, setting up variable cost toll roads, and integrating different modes of transportation. Pairing with the smart environment dimension, smart mobility includes green public transportation that runs on electricity or natural gas.

6 – Smart people

Education is essential for smart people. Social sciences, like Geography, promote inclusive societies that understand that creativity and synergy multiply when the ideas, talents, and skills of diverse populations are encouraged and rewarded.

Furthermore, Cohen views smart cities as moving in phases – 1.0) technology-driven, 2.0) technology-enabled, city-led, and 3.0) citizen co-creation. In 3.0, Medellin, Colombia, stands out as the Urban Land Institute's Innovative City of the Year Award in 2013.

Although difficult to measure these dimensions statistically, in 2013 Cohen did list the top eight smartest cities in Latin America. These were:

- 1 – Santiago, Chile
- 2 – Mexico City
- 3 – Bogota, Colombia
- 4 – Buenos Aires, Argentina
- 5 – Rio de Janeiro, Brazil
- 6 – Curitiba, Brazil
- 7 – Medellin, Colombia
- 8 – Montevideo, Uruguay,

The multinational consulting firm Mercer annually ranks cities worldwide in terms of quality of life. For the tenth year in a row, their 2019 report placed Vienna, Austria as the #1 city. For LACAR, the highest-ranking city was Montevideo, Uruguay, at #78.

- 78 – Montevideo, Uruguay
- 91 – Buenos Aires, Argentina
- 93 – Santiago, Chile
- 113 – Monterrey, Mexico
- 118 – Rio de Janeiro, Brazil
- 129 – Mexico City

228 out of 231 cities ranked – Port-au-Prince, Haiti.

It makes sense that there is some overlap between the best LACAR cities on these two ranked lists.

These are challenges that urban geographers love – ranking, modeling, and explaining urban forms and activities. While LACAR cities do not rank near the top of worldwide standards in many urban measures, the high urban percentages in LACAR cities combined with a drive to move from the economic periphery to the economic core of the world propel many of this region's cities to noteworthy smart gains.

Did you know?

In 2014, Cohen listed these 25 cities as the smartest in LACAR. São Paulo, Rio De Janeiro, Mexico City, Buenos Aires, Medellin, Curitiba, Monterrey, Brasilia, Bogotá, Panama City, Salvador, Belo Horizonte, Puebla, Recife, Cordoba, San Salvador, Porto Alegre, San Jose (Costa Rica), Guadalajara, Valparaíso, Caracas, Santo Domingo (Dominican Republic), Montevideo, Santiago, Lima.

Also in 2014, the mayor of Barcelona, Spain, created the Fab City Global Initiative, challenging cities by the year 2054 to produce everything they consume. The Fab City Network now includes Santiago in Chile, Mexico City, Puebla, and the Yucatan region of Mexico, and Belo-Horizonte, Recife, Sorocaba, and Sao Paulo in Brazil.

For 2019, Mercer ranked Vancouver, British Columbia, tied for #3 in the world for quality of life.

The European Digital City Index in 2016 ranked London as Europe's most attractive city for digital entrepreneurs. Tallinn, Estonia – see Chapter 61 – was ranked #18 out of 60 noted cities. In the startupgenome.com survey of the top 100 emerging ecosystem regions for startup companies, Estonia ranked #14.

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5.17: Latin America and the Caribbean (LACAR)- Political Geography III



Created by Setyo Ari Wibowo
from Noun Project

Although the continent of South America is a relatively compact shape and not a substantially **insular** region (compared to Europe or Southeast Asia), there are several noteworthy islands that belong to South American countries. Intriguingly, several of these islands are very remote from the mainland.

Easter Island is renowned for the large stone statues – moai – that were carved by native peoples on the island between 1200 and 1500 CE. The native Rapa Nui reached the island as part of the Austronesian Expansion that is addressed in Chapter 15. Genetic evidence also shows mixing of populations from South America and Polynesia.



Photo by Thomas Griggs on Unsplash

Apparently, Rapa Nui sailed to and from Easter Island and the mainland, even bringing people from the mainland home with them. European explorers arrived at the island on Easter Sunday in 1722, thus bestowing the island's modern name to it. Chile annexed the island in 1888. Easter Island is one of the most isolated places in the world. It is nearly 1300 miles to the nearest inhabited island – Pitcairn Island, population roughly fifty people. As seen in this map, Easter Island is vastly separated from just about anywhere.



Photo by Alexander Schimmeck on Unsplash

Ecuador is famous for its Galapagos Islands, where Charles Darwin studied wildlife in 1835 while developing his theory of evolution. These islands are in the Pacific Ocean over 550 miles west of Ecuador. Tourists enjoy the distinctiveness of the islands; however, natural preservation is crucial. UNESCO has designated the location as a World Heritage Site and a biosphere reserve. The islands were discovered in 1535 on a chance observation during a voyage from Panama to Peru.



Cachorro Beach, Fernando de Noronha – Photo by Eduardo Muruci on Flickr.

Fernando de Noronha is Brazil's volcanic archipelago. Located in the Atlantic Ocean, about 270 miles east of the mainland, the islands were discovered by Portuguese sailors, though the initial discovery is disputed, perhaps 1501 or 1502 or 1503. It too is a World Heritage Site. It is a visually stunning location, a exciting tourist destination; however, while tourism is important to the local economy, the number of tourists allowed has a daily limit in order to preserve the natural setting.

Having coastline on both the Pacific Ocean and the Caribbean Sea, Colombia naturally has islands in both waters. Its Rosario Islands (Islas del Rosario) comprise a natural park designated to preserve Caribbean coral reefs. Tourists are allowed at the park; indeed, the islands are only 62 miles from the Colombian port city of Cartagena.



Photo by Vijay Chander on Unsplash

Argentina lays claim to the Falkland Islands (and to South Georgia and the South Sandwich Islands too), though the islands have been under British control since 1834, except for several weeks of occupation by Argentinian military forces in 1982. The Islas Malvinas, as known in Argentina, are 184 miles from the mainland, but of course are a vast distance from the England. Clearly, it is another example of the vast British Empire.

The former French penal colony known as Devil's Island stood on the Salvation Islands of French Guiana, about seven miles off the coast. Conditions at the facility were abysmal; prisoners often suffered from poor sanitation, risk of tropical disease, and brutal violence. The location gained fame from the 1969 novel and 1973 film *Papillon*, a probably exaggerated memoir of escapee [Henri Charrière](#). There have been numerous film and literary references to the location. The prison camp was closed in 1953.

The countries of Guyana, Uruguay, Suriname has small stretches of coastline and lack noteworthy islands. Both Venezuela and Peru have lengthier coastlines, but also feature few islands of importance. Both Bolivia and Paraguay are landlocked, obviously having no island territories.

Did you know?

China supports Argentina's claim to the Falkland Islands (Islas Malvinas), while Argentina backs China's assertion that Taiwan is an integral part of China. Meanwhile, Taiwan agrees that the Falkland Islands belong in the United Kingdom, while the UK supports Taiwan's claims of independence from China.

The 1973 film Papillon was a box office success, featuring stars Dustin Hoffman and Steve McQueen, but the 2017 reboot generally was considered a mediocre remake.

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5.18: Latin America and the Caribbean (LACAR)- Overview

In the various essays about Latin America and the Caribbean (LACAR) in this textbook, there are many facts presented and many ways of life understood. After reading the textbook, students or other readers should know and understand many things about LACAR. Also, as has been stated, it is not the point of this textbook to attempt to convey every possible bit of knowledge about LACAR. However, there are a few basics about Latin America and the Caribbean that the reader should know, whether picked up in previous chapters or not.

As explained in Chapter 63, delineating this region, let's recall that we are defining this region based mainly on three factors – Americas, Latin languages, and contiguity. Accepting those factors, what else should we know about the region, in general?

Latin America and the Caribbean essentially is all of the Western Hemisphere, except for the two huge pieces, the United States and Canada, which comprise North America. South America is clearly defined by its physical landscape as a continent. As highlighted in Chapter 77, Brazil is the major country of South America. Similarly, Mexico is the major player in Central or Middle America, the mainland section of countries between North and South America. The Caribbean region consists of the numerous islands that create the borders of the Caribbean Sea. These Caribbean islands are categorized largely by areal size – Greater and Lesser Antilles; even so, there isn't really a dominant island among the set.

The modern history of LACAR is heavily affected by colonialism. Mainland territories mostly were controlled by Spain and Portugal, while island colonies also showed British, Dutch, and French presence (plus a few mainland locations, such as British Honduras (now Belize) and Suriname. Colonial control throughout the region established primary sector economics, so that large-scale farming and mining of natural resources were routine and widespread. These economies greatly benefitted the colonial powers, while failing to produce wealth among the local populations. The term “banana republic” was coined to refer to countries of backwards politics and colonial economics. Although colonial control often ended in the 1960s and indeed most of LACAR consists of independent countries, raw materials such as copper in Chile and oil in Venezuela are still crucial to economic success, while agriculture even expands into cleared former forests of the Amazon region. Trade associations such as NAFTA and Mercosur offer means for equitable and efficient import and export flows in and beyond the region. Due to Spanish (and Portuguese in Brazil) influence throughout the region, Spanish language and Christian religion are dominant cultural elements.

Throughout LACAR and before European exploration, there were large populations of Amerindians throughout the region. Like the Inca, Maya, and Aztec nations, several of these populations have well-known histories and relics. The Mayan languages still are spoken by about six million people in Honduras, Belize, and Mexico's Yucatan Peninsula. Perhaps as many as ten million people speak a Quechuan language, primarily in Peru, where it is the language of one-quarter of the population. Famous anthropologic sites such as Machu Picchu in Peru, Mayan pyramids in Mexico, and Nazca lines (geoglyphs) also in Peru point to historically vibrant societies.

Modern LACAR is highly urbanized, matching North America as the most urban regions in the world at over 80% of the populations living in urban areas. LACAR has accomplished this in a hurry, moving to cities in a rapid pace, thereby catching up with North America. Often LACAR is considered to be in the developing world on a par with Asia and Africa. In fact, LACAR's urban percentage nearly doubles that of Africa and far outpaces that of Asia. In development, except for Haiti (169th out of 189 countries in the Human Development Index – HDI), Latin American and Caribbean countries compare well to Asian countries and usually are far ahead of African countries. In HDI, Peru and Ecuador match China; Mexico, Brazil, and Colombia are level with Thailand; Costa Rica and Panama are there with Iran; and Chile at #42 trails only Japan, Israel, and South Korea (and special cases of Qatar, Singapore, and Hong Kong) among Asian countries.

South America features two major landforms that comprise vast areas. The Andes Mountains stretch the length of the continent, running along the western edge. These mountains dominate all of Chile. The Amazon River and corresponding basin and rainforest span a vast expanse of northern Brazil, while with its tributaries also branching into several neighboring countries. Broad grasslands reach across Colombia and Venezuela (the Llanos) and Argentina (the Pampas).



Pantanal. Photo by Raphael Milani on Flickr.

The Pantanal, the world's largest tropical wetland, is mainly in Brazil, but crosses borders into Bolivia and Paraguay.



Atacama Desert. Photo by Jen Morgan on Flickr.

Chile's Atacama Desert is the driest desert in the world.

Modern LACAR displays rich cultures, diverse in arts (dance and music) and sports (soccer, especially). Reggae music in Jamaica and the tango dance in Argentina are two of many examples of popular and talented cultural elements in the region.

Overall, LACAR spans the tropical regions of the Western Hemisphere, but continues southward to include countries like Argentina in South America. It is a region diverse in landscape, climate, culture, and economy.

Did you know?

There are four thousand varieties of potatoes in Peru.

Chile is one of the world's top producers of wine.

Guinea pigs are eaten in Peru and parts of Ecuador and Colombia. Statistically, guinea pigs consume less food per pound of meat yielded than cattle do, so perhaps it is more efficient to raise guinea pigs than it is to raise cattle. Don't argue that point in Argentina and Brazil where cattle ranching is a huge agricultural industry.

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6: Russian Domain



Created by Nikita Kozin
from Noun Project

Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared elements over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

In some cases, the determination of a geographic region is simple. South America obviously is an intact continent, but also possesses many shared features in a variety of geographic categories. In contrast, the region of North Africa and the Middle East (or Southwest Asia and North Africa) is very problematic to create, define, and limit.

Seen in the map above, Russia presents its own set of challenges to the regional geographer. Its sheer immensity as a land area causes Russia to straddle two continents – Europe and Asia. Some people contend that Russia should be a part of Europe. Indeed, Russia to the west of the Ural Mountains is termed “European Russia.” In this part of the country, Russians have tended to look to Europe for inspiration and for a common outlook. In some cases, Russian leadership, particularly Tsar Peter the Great, intensified this focus, even bringing skilled Europeans to Russia to promote European ideals and culture. Additionally, a dominant majority of Russia’s population lives west of the Urals. Though the daily life and setting of Soviet cities Moscow and Leningrad little resembled that of European cities outside the Eastern bloc, contemporary Moscow and the now renamed St. Petersburg dramatically do feature much of that found in cities throughout Europe.



Unfortunately, this European categorization fails to account for the substantial majority of Russia’s land that is east of the Urals and stretches to the Pacific Ocean. Visibly nonsensical to include Pacific coastal areas in Europe, this approach also does not account for a variety of Asiatic peoples in Siberia, including the descendants of the historically significant Mongols who once controlled huge sections of what is now Russia.

The option to construct Russia as an Asian region is a poorer choice. While the landmass of Russia mostly is positioned north of areas recognized as Asia, its Asiatic peoples are a distinct minority population. The dominant majority population of Russians clearly is neither racially nor culturally Asian. With this Asian option, it can be noted that over 75% of Russia’s area is considered to be in Asia.

A third option is to split the country in two pieces regionally; however, this choice presents an onerous position to geographers. The modern political world is fully patterned in the State model, with specifically delineated international borders. Taking one State and then dividing it into two pieces for separate placement into regional schemes is like compelling a married couple to take jobs living separately in cities far distant from each other. There may seem to be some usefulness at the start, but as a lasting choice, it is intrinsically flawed. But, if you want to go with this choice of splitting up Russia, then the common tactic is to divide Russia at the Ural Mountains.

Yet another option is the establishment of Russia as a region itself. For some this may seem intuitively wrong. How can a single country be a region? Although Russia would be the only such region in the world, other regions do come close to this pattern. Australia dominates the region called Oceania, though New Zealand and a host of small Pacific islands also fit in the region. North America, as separate from Latin America (which includes Mexico), is a region of just two countries – the United States and Canada. Additionally, Russia’s colossal area is larger than many of the world’s established regions. In fact, Siberia itself is more than twice as large as Europe (not counting any of Russia as belonging to Europe). While Russia is a multinational State with dozens of ethnic minorities, one nation, Russians, has dominated these minorities for a long period of history; thereby embedding Russian culture as the dominant social element throughout the country. With Russia as the dominant successor State to the USSR in area, population, and clout, there is further logic in defining Russia as a region.

In a 2019 survey done by the Levada Center, Russians were asked, “To what extent do you presently identify yourself with Western culture?” The data for this study was collected in May and June 2019 from 1,600 respondents aged 14–29. Only twenty percent of the respondents answered in a positive way, choosing either “I always remember it” or “It is quite important to me.” The survey also inquired, “Do you fully agree, rather agree, rather disagree, or strongly disagree with the statement ‘Russia is a European country?’” Only 36% agreed. Note that young people are the ones who are least connected to Soviet days, being born after or as the Soviet Union dissolved. These young Russians are the people who should be the most likely to connect Russia to the relative prosperity and freedom of Europe. Their limited connection to Europe suggests that the choice of selecting Russia as its own region still remains better than placing part of Russia in Europe.



Russia map by Larry Koester on Flickr.

Or, Russia could be the core of a slightly larger region that could include ethnic partners Ukraine and Belarus and/or historical linked partners Georgia and Armenia. Given the dominant Slavic ethnic composition of Ukraine and Belarus, this is an easy fit with Russia. Though Georgians and Armenians fit in distinctly separate ethnic groups not connected to Russians, both groups have modern historical connections with Russia. Neither Christian country could fit with southern neighbors in the Islamic Middle East, yet both are separated from Europe by long stretches of land in Russia and Ukraine, as well as by the Black Sea. Given these difficulties, the placement of Georgia and Armenia with Russia is not unreasonable. Similarly, sometimes Moldova is added to this region, though others will note Moldova’s links with Romania in order to place Moldova in Europe. This broader region could be called the Russian Domain.



Russian Domain.

In evaluating these choices, the evidence is weighted to favor either of the last two choices – Russia as its own region or Russia as the main section of the Russian Domain.

Did you know?

During the Soviet period the question of region was more easily answered. Due to its communist format, the USSR often was defined as a single region. The end of the USSR brought the creation of fifteen countries and their placement into different regions.

Europe – Estonia, Latvia, Lithuania, Moldova

Central Asia – Azerbaijan, Turkmenistan, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan

Russian Domain – Ukraine, Belarus, Armenia, Georgia

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6.1: Introduction to the Russian Domain



Created by Nikita Kozin
from Noun Project

Regional geography studies the people and places of a cohesive region. A “region” is defined to be an area with multiple shared elements over a range of categories, including both physical and human geographic characteristics. The secret of creating a region, which is a human construct not a naturally begotten unit, is to cluster together as many similarities as possible, while excluding geographic differences.

In some cases, the determination of a geographic region is simple. South America obviously is an intact continent, but also possesses many shared features in a variety of geographic categories. In contrast, the region of North Africa and the Middle East (or Southwest Asia and North Africa) is very problematic to create, define, and limit.

Seen in the map above, Russia presents its own set of challenges to the regional geographer. Its sheer immensity as a land area causes Russia to straddle two continents – Europe and Asia. Some people contend that Russia should be a part of Europe. Indeed, Russia to the west of the Ural Mountains is termed “European Russia.” In this part of the country, Russians have tended to look to Europe for inspiration and for a common outlook. In some cases, Russian leadership, particularly Tsar Peter the Great, intensified this focus, even bringing skilled Europeans to Russia to promote European ideals and culture. Additionally, a dominant majority of Russia’s population lives west of the Urals. Though the daily life and setting of Soviet cities Moscow and Leningrad little resembled that of European cities outside the Eastern bloc, contemporary Moscow and the now renamed St. Petersburg dramatically do feature much of that found in cities throughout Europe.



Unfortunately, this European categorization fails to account for the substantial majority of Russia’s land that is east of the Urals and stretches to the Pacific Ocean. Visibly nonsensical to include Pacific coastal areas in Europe, this approach also does not account for a variety of Asiatic peoples in Siberia, including the descendants of the historically significant Mongols who once controlled huge sections of what is now Russia.

The option to construct Russia as an Asian region is a poorer choice. While the landmass of Russia mostly is positioned north of areas recognized as Asia, its Asiatic peoples are a distinct minority population. The dominant majority population of Russians clearly is neither racially nor culturally Asian. With this Asian option, it can be noted that over 75% of Russia’s area is considered to be in Asia.

A third option is to split the country in two pieces regionally; however, this choice presents an onerous position to geographers. The modern political world is fully patterned in the State model, with specifically delineated international borders. Taking one State and then dividing it into two pieces for separate placement into regional schemes is like compelling a married couple to take jobs living separately in cities far distant from each other. There may seem to be some usefulness at the start, but as a lasting choice, it is

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6.2: Russian Domain- Regional Example



Northern Siberia from Above — Photo by Klaus Stiefel

Cold, vast, and unpopulated except for convicts and reindeer herders. This popular conception of Siberia has elements of truth to it, but begs for a more complete understanding. Siberia is the enormous Russian landmass east of the Ural Mountains. Larger than any country in the world (except obviously Russia), Siberia covers five million square miles.

In popular terminology and from its earliest noted history, Siberia refers to all of the land east of the Urals, stretching to the Pacific Ocean. (In this essay the use of the term “Siberia” will be in this broadest sense, unless otherwise noted.) In Russia, however, this territory often is sub-divided for practicality. During the Soviet period, Siberia was divided into West Siberia, East Siberia, and the Far East. Currently, under the Russian Federation’s format of federal districts, Siberia consists of the Urals federal district, the Siberian federal district, and Far Eastern federal district. Yet another geographic delineation of Siberia marks the eastern boundary as the watershed between Pacific and Arctic drainage, thus leaving Siberia to fall short of the Pacific Ocean. In its broadest sense Siberia represents over $\frac{3}{4}$ of Russia’s area.

For all its vast territory Siberia remains sparsely populated. A major cause of this low population density is the challenging climate, that of northern cold. Overall, Siberia holds about eight people per square mile, though many of the farther northern lands average only one or two people per square mile. Southern lands linked by the Trans-Siberian Railway have the highest population density. Population trends for areas not privy either to rail or river transportation are subject to a negative feedback loop. Due to the lack of transportation, these locations do not increase in population; however, due to the lack of population, they do not become connected to the network of transportation. Although Siberia is this vast natural landmass, over $\frac{2}{3}$ of the population of Siberia lives in urban settings.

Siberia has long been Russian territory, though the precise origin of its name has been muddled or lost over the centuries. While many accept the Turkic word for “sleeping land” as the historical and logically appropriate origin for the toponym, others maintain that the region is named for one or another tribe native to the region.

The earliest settlement of Siberia came from small ethnic groups that progressively found themselves displaced by more numerous and/or more powerful nations. By migrating to the Siberian frontier, clearly a less desirable location with much lower agricultural production, these ethnic groups escaped confrontation. Although these nationalities are multiple, their populations are small. The majority population in virtually every sub-region is Russian (or Russian + Ukrainian). This minority status for natives is the result of Russian exploration, exile, and migration. Russian traders and Cossacks entered Siberia in the 16th century, eventually prompting the construction of Russian forts progressively eastward, with Russian settlers reaching the Pacific Ocean by the end of the 17th century. Siberia’s isolation made it an attractive setting for Russian and later for Soviet authorities to exile political opposition or to imprison criminals. And then, the completion of the Trans-Siberian Railroad in 1916 linked laborers and raw materials with European Russia.



Lower Shavla Lake, Siberia — Photo by Gael Varoquaux

The dominant landscape of Siberia is taiga, the predominantly coniferous forest. Northern locations feature tundra, while much of the region contains permafrost soils. The West Siberian Lowland is the world's largest section of continuous lowland, whereas mixed elevations and occasional mountain ranges are found in the rest of Siberia.

The key importance of Siberia is its vast diversity and rich quantities of minerals and energy resources. Oil and natural gas reserves are immense in West Siberia, particularly in the Tyumen region. Considerable development of these energy deposits was accomplished during the Soviet era, including an area of pipelines directed to Russian cities as well as far beyond Russia into Western Europe.



Siberian birch at Prokopyevsk, Russia. Photo by Ursula Drake on Unsplash.

Extraction of raw materials – nickel, gold, coal, diamonds, timber, water power, and much more – was begun in the tsarist years, but was greatly accelerated during Stalinist industrialization and propelled by vast numbers of prison laborers. Even fisheries off the eastern edges of Siberia in the Sea of Okhotsk produce large returns. While the great storehouses of resources remain in Siberia, the demise of the Soviet subsidies and the elimination of prison and directed laborers have diminished the rates of resource utilization. Issues of labor and of pollution, but most prominently of profit, have closed mines and factories in various Siberian locations.

Overall, Siberia is abundant in land area, natural resources, permafrost, and cold; in contrast, it is short on people and roads.

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6.3: Russian Domain- Cultural Geography I



Language is a vital part of culture and thus of cultural geography. As geographers study the world, knowledge of foreign languages can be helpful.

For native English speakers, learning other languages that feature Latin-based alphabets is not necessarily easy, but at least does include familiarity with the script. Some Latin-based languages do have letters that are not in the English language alphabet. For instance, Norwegian and Danish language includes the letters æ, ø, and å.

Typically, English speakers find certain foreign languages more challenging when they do not feature a Latin-based alphabet. Definitely, character-based languages such as Chinese and Japanese may be difficult for Americans to learn. Arabic offers letters such as ﺝ. Here let us consider the Cyrillic alphabet, common in Slavic languages, though not in all.

The Cyrillic alphabet is named for St. Cyril. Along with his brother Methodius, Cyril was a Christian missionary who worked among Slavic peoples. Significantly, in the 9th century the brothers created the Glagolitic script to help with translation of religious books. Their disciples helped establish this alphabet in the Bulgarian empire, where it was edited to become the Cyrillic alphabet and adopted by the ruler Simeon I in 893.

The alphabet was incorporated into the related Russian language and evolved somewhat over the centuries. Some letters were dropped completely from the list. Others, like the so-called hard sign ъ, found less common use. Tsar Peter the Great actively sought to bring European elements into Russian society and prompted reform of the Cyrillic alphabet, including some drift toward a more Latin appearance for some letters. Variation in the script between different Slavic languages developed.

Russia's form of the Cyrillic alphabet features 33 letters. Note that there are slight variations of the Cyrillic alphabet, for instance in Ukrainian. For a visual explanation, watch this short video – <https://www.youtube.com/watch?v=mJz8RrKEHlw>. In any case, some Cyrillic letters match their Latin counterparts in form and pronunciation. For instance, the letter k is the same in English as in Russian, as is true for the vowel a.

Other Cyrillic Russian letters appear to match Latin letters, but are pronounced differently. For example, the Cyrillic letter c is pronounced like the Latin letter s. The Cyrillic letter p is pronounced as a rolled r.

Still other Cyrillic Russian letters do not have Latin partners at all. These letters create interesting versions for transliteration, the process of spelling a foreign word to match its pronunciation but not to reflect its meaning. So, the Cyrillic letter щ is transliterated as the letters shch, while the letter ж is spelled zh. In American marketing, sometimes the letter я is used to be a trendy letter r, such as in the company name Toys я Us. However, in Russian this letter я is pronounced and transliterated as ya. One consequence of these Cyrillic letters matching multiple Latin letters is that some Russian words appear much shorter in Russian than when spelled in English. Former Soviet leader Nikita Khrushchev's last name is Хрущёв in Russian. Chechnya, a troublesome republic of Russia, is spelled чечня in Russian.

Some Cyrillic letters show influence from other lands certainly including Greece, like the letter ф which is the same as the Greek letter, sounded in English as ph or f.

An oddity in the Cyrillic is the so-called soft sign ь. This letter sort of isn't a letter, for it has no sound. Instead the soft sign ь softens the pronunciation of the letter that comes before it. A common example is the letter т which is pronounced as a soft т when combined as тъ. Typically, these combinations occur at the end of syllables or at the end of words. The Russian administrative region область is an example of this soft т at the end of a word. Similarly, the Russian word tsar is spelled царь. The word tsar offers a lesson in transliteration, as the correct choice for the letter ц is ts, while a trendy but poorer American approach is cz, creating the word czar.

During the years of the Soviet Union, government policy toward language and more broadly toward culture was Russification. Given that the Russian Republic (the Russian Soviet Federated Socialist Republic or RSFSR (РСФСР)) was overwhelmingly the largest portion of the land mass and that Russians were the majority of the country's population, the government actively promoted

Russian language and culture as the normative approach throughout the country. Russian language was taught everywhere. Given the distinctive alphabets in Armenia and in Georgia, these republics were allowed to use their own languages, though Russian was taught there too. Although the Turkic languages of Central Asia used Arabic-based or Latin-based alphabets, these were converted into Cyrillic scripts. The breakup of the Soviet Union brought an end to Russification and prompted gradual linguistic reforms away from Cyrillic. For instance, in Uzbekistan in 2021, the Uzbek national language will complete a reform to a fully Latin alphabet. The same will be true for the Kazakh language in 2025. Languages of the native republics of contemporary Russia often still use the Cyrillic script adopted during Soviet days. This is true for Tatar, Mari, Bashkir, and many other languages in Russia.



Citibank. Photo by Bruno Girin on Flickr.

As key Russian cities become more Western, an odd trend is the transliteration of English words or brand names into Cyrillic script on store signs and billboards. Citibank to the left.

Overall, the Cyrillic alphabet is the natural script for Russian, Ukrainian, Bulgarian, Belarussian, Macedonian, and Serbian languages.

Did you know?

Note this Moscow photo from sheepman on Flickr – <https://tinyurl.com/CyrillicButNotRussianWords>. Here this sign has the Russian word for restaurant above two non-Russian words that are the transliterations for the words billiards and bowling.



Photo by Jorge Láscar on Flickr.

Here is a poster from Soviet days. The USSR or Union of Soviet Socialist Republics was written as СССР in Cyrillic, standing for Союз Советских Социалистических Республик.

The poster sends the message of “Glory to heroic October!” References to October recall the October Revolution of 1917 that ended Tsarist rule in Russia. Curiously, this poster uses the Ukrainian word Жовтень for October (as expressed in the dative case); apparently, the poster was used in the Ukrainian Republic of the Soviet Union.

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6.4: Russian Domain- Economic Geography I



Created by Nikita Kozin
from Noun Project

Russia is by far the largest country in the world by land area. Even by simple probability, it is likely that Russia would hold a variety of natural resources, some in high quantities. Indeed, that is true, as Russia has a vast supply of natural resources, especially in the expansive areas of Siberia.

Energy resources are included in very large reserves in Russia, both oil and natural gas. Given that reserves by definition are not yet extracted, they are estimates, though generally well calculated. By most estimates, Russia is the world's leader in natural gas reserves with proven reserves of 1668 trillion cubic feet (47 trillion cubic meters). This is about $\frac{1}{4}$ of the world's reserves and is approximately 3.5 times that of the United States (#4 in the world (Iran #2, Qatar #3)).

An excellent map of Russia's top ten oilfields and top ten natural gas fields can be seen at:

<http://shop.theoilandgasyear.com/major-producing-fields-in-russia-2013/>. The Urengoy (or Urengoi) gas field in western Siberia has been Russia's key gas field for many years, after being discovered in 1966 with production being initiated in 1978. Urengoy is the second largest gas field and the most productive in the world. There are natural gas fields in numerous locations in Russia, but clearly Siberia holds the greatest reserves.

The challenge for the economic exploitation of this energy resource was significant, given its location in a frigid climate. Even though western Siberia is the nearest portion of Siberia to the populated portions of Russia and to industry there and in the Ural Mountains, transportation of the gas to those locations still required construction and installation of extensive pipelines across difficult landscapes. As climate change affects Russia, construction and maintenance of infrastructure in Siberia becomes more and more tricky. Much of Siberia, especially so the northern locations, features permafrost soils. Every summer the active layer, the top meter or more, melts. This causes anything built on these surfaces – houses, pipelines, railroad lines – to risk instability by shifting or moving. Engineers compensate for this risk in different ways; for instance, by pinning supports deeper through the permafrost into the unchanged strata below the active layer. However, as global warming heats Siberia, the active layer is extended deeper. Structures that once were secure may now become movable. Construction of new infrastructure must account for these greater risks. Pipelines and the structural supports holding the pipelines are at risk of shifting or breaking. New pipelines and maintenance of old pipelines necessarily must adjust.

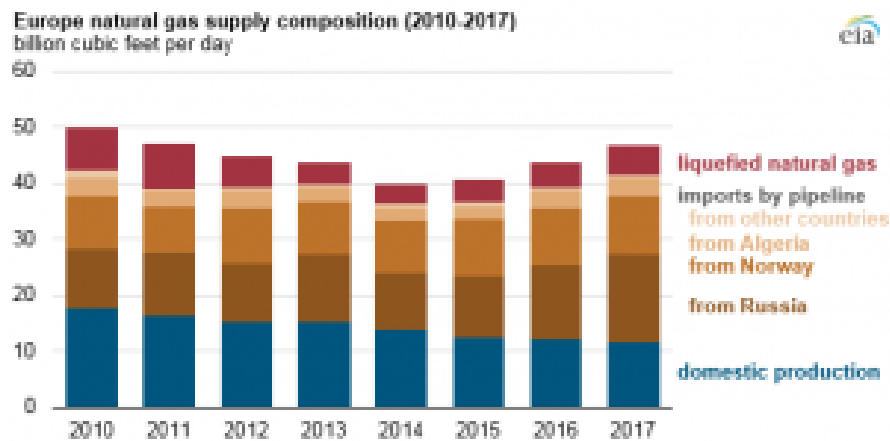
The Soviet Union's interest in developing its natural gas potential began during World War II, when wartime disruption of coal supplies, its main source of heat and energy, caused hardships. Discovery of vast natural gas fields in western Siberia in the 1960s demonstrated the potential for this choice of energy. Utilizing these fields demanded considerable investment and labor, but proved to be worthwhile for domestic use. Subsequently as the Soviet Union and then Russia sought to deliver the gas even farther, that is, to Eastern Europe and beyond into countries like Germany, these pipelines stretched greater and greater distances. The international sales of Russian natural gas proved to be more than simple economic transactions, but became geopolitical topics of concern as well.

An excellent map of Russian gas pipelines can be seen at: <https://shop.theoilandgasyear.com/russia-map/>

The breakup of the Soviet Union fractured the country into fifteen new countries. The former republics, particularly to the west of Russia, had been domestic consumers of Soviet natural gas from Siberia. As these new countries, they remained customers of Russian gas from Siberia, but now with geopolitical aspects to this energy trade. For instance, Ukraine became a new country with mixed feelings toward the new Russia. Ukrainians shared linguistic, ethnic, and historical connections with Russia, yet also often sought to break the post-Soviet links by looking westward to Europe for trade and politics. The new Russia strongly opposed these

pro-Western aspects of new Ukrainian ideas. One lever used by Russia to influence Ukrainian geopolitical leanings was the natural gas dependency. For instance, in January 2009, for thirteen cold winter days in Ukraine, Russia suspended the flow of gas to pipelines into Ukraine, while renegotiating the economic terms of their energy trade. Although the terms may have been economic, the framework of the crisis was the political reminder that Russia controls Ukraine's winter heating and can turn that off when it feels the geopolitical need.

Similarly, as of 2013, former Soviet republics and now independent Baltic countries – Estonia, Latvia, Lithuania – were 100% dependent on Russia for natural gas. While Russia certainly utilizes natural gas in its industrial and residential sectors, it also exports a considerable share to several European countries, as seen in overall totals in the chart below.



These too have geopolitical implications. In 2013, Germany bought 46% of its natural gas supply from Russia. The United States currently is applying political pressure on Germany to reduce its purchases of natural gas from Russia, arguing that this economic link benefits Russia at a time that Europe and America should seek to weaken Russia.

Geopolitical factors now are affecting two major Russian pipeline expansions. Nord Stream 2 is a proposed doubling of an existing undersea pipeline that would bring natural gas from near St. Petersburg, under the Baltic Sea, to northern Germany. Although American economic sanctions against Russia and against companies doing certain types of business with Russia have hindered the project, it appears that Russia will complete the work by winter 2021.

To the south, Russia has faced obstacles as well. The political backlash from its annexation of Crimea from Ukraine in 2014 effectively scuttled Russia's proposed South Stream. Those plans were replaced by the successful Turk Stream that runs under the Black Sea from Russia to Kiyikoy, Turkey, initiating gas flows to Bulgaria at the start of 2020.

Gazprom is the world's largest natural gas corporation. A majority of its stock is owned by the Russian government. Its corporate website is <https://www.gazprom.com>.



Natural gas can be used and transported for a variety of uses and products. Here is a small section of pipeline transporting ammonia from Tolyatti, Russia, to Odessa, Ukraine.

Did you know?

The novel “Red Snow” by Edward Topol is a fictional crime novel that accurately described the challenges of Soviet extraction of natural gas in the Urengoy gas field. Along with the economic gains, there was extensive exploitation of the native Nenets people as well as degradation of the Siberian landscape. The original English translation in hardback featured a clear plastic protective book shield that enclosed a number of small white imitation snowflakes.

An American strategy to lessen European dependence on Russian natural gas is to sell American natural gas to Europe. However, it is impossible to build a gas pipeline from the United States to Europe. Instead, these sales would be of liquefied natural gas (LNG). Of course, sale of LNG is far from simple, requiring liquefaction in American ports, transportation across the Atlantic Ocean, and gasification in European port facilities.

Russia also has oil pipelines coming out of Siberia and other Russian oilfields. The Druzhba (Friendship) pipeline is the world’s longest pipeline.

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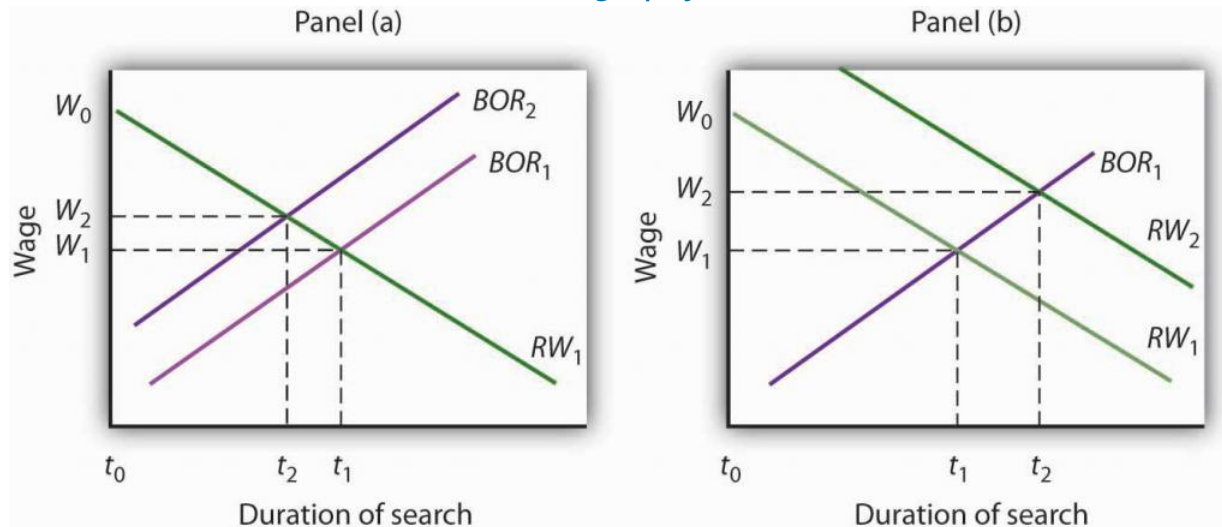
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6.5: Russian Domain- Historical Geography I



A YouTube element has been excluded from this version of the text. You can view it online here: <https://cod.pressbooks.pub/westernworlddailyreadingsgeography/?p=244>

Let's begin with this visual look at Russia's lands, an animated progression of expansion and contraction. The animation above effectively looks at this expansion. Let's consider how this historical and geographic expansion took place. At present, Russia is by far the largest country in the world, as measured by area. This has been true for more than a century. The Soviet Union was even larger, by two million square miles; however, the breakup left Russia as the main surviving piece and indeed as the largest country in the world. How did this all happen?

By 800 BCE, there was no country Russia, but there were scattered clusters of Slavic peoples in the region north of the Black Sea and east of the Baltic Sea. However, there were numerous other peoples in the region and passing in and out of the region. Over the several following centuries, different peoples entered the area, even as Slavs became somewhat more organized. Asiatic tribes crossed the Ural Mountains from the east. Goths and Huns expanded their territories in the early CE years. Subsequently, Avars, Khazars, and Bulgars each took turns of prominence in the region, even with a Slavic recovery in the 600s CE.

The first significant organized Slavic territory was prompted by Viking (in Russia, cited as Varangian) trading interest in the region. Viking raiders and traders sought to use the southern-flowing Dnieper and Volga Rivers in order to greatly expand their trading networks to the corresponding Black and Caspian Seas. As these Norse developed these trading routes, some of them settled in the areas along the routes. In 880, the capital became Kiev (now Kyiv, the capital of Ukraine), thus starting the rule of Oleg over what then gained the name Kievan Rus.

As this essay is interested simply in the expansion and contraction of Russian lands, we begin with Kievan Rus, but do not cover all the historical details. Indeed, after the beginning of Kievan Rus, there was period of prominence for the city of Novgorod and its surrounding territory, as well as the ascendance of Moscow. However, all of these territorial holdings remained west of the Ural Mountains and were historically constrained by German expansion, Lithuanian conquest, and the famous Mongol invasion. From 1359 to 1425, Moscow was able to increase its holdings between other competing powers. By 1533 Moscow's lands extended to the Arctic Ocean.

The significant eastward expansion of Russia arrived with the reign of Ivan IV (Ivan the Terrible) in 1547. In 1552 Ivan's troops ousted the Mongols from Kazan, then in 1556 from Astrakhan. The elimination of these Khanate's holds on Russia allowed Ivan IV to push across the Ural Mountains. Cossack forces under their leader Yermak brought western Siberian lands under Moscow's control. The breadth of Russia's western holdings would vary over time, though in net terms gaining; however, the eastward expansion was an inexorable push to the Pacific Ocean and a slide into Central Asia.

The conquest of Siberia demanded little in terms of battle against native peoples, but a great deal in the movement of settlers across vast distances and through miles and miles of cold and forest. Russians, Cossacks, and Ukrainians established these and other

towns as they moved eastward.

Irkutsk 1652 (on the western shore of Lake Baikal)

Okhotsk 1649 (on the Pacific's Sea of Okhotsk)

Anadyr 1649 (near the Bering Strait)

Yakutsk 1632 (among the coldest places on the planet)

Under a series of female leaders – Anne (1730-1740), Elizabeth (1741-1761), and Catherine the Great (1762-1796), Russia sought to expand its lands west of the Urals Mountains, pushing against the Ottoman Empire to the south, moving westward toward Poland, and edging northeastward looking to Sweden. Eventually, Russia secured territory in each direction, for instance, taking Finland from Sweden in 1809.

Russia pushed southward into the Caucasus Mountains, between the Black and Caspian Seas. Russia's current borders there are similar to the Russian Empire's reach in 1763, but the empire continued a back and forth with western borders. Advances through Georgia and Azerbaijan brought the empire again to abut Persia in 1813, while movement into Armenia again reached the borders of the Ottoman Empire in 1828 and more so in 1878.

Similarly, the Russian Empire expanded throughout Central Asia from 1763 to 1914. Conquest of the region known then as Bokhara, as centered by the now city Bukhara brought the Russian Empire perilously close to the British Empire in India. The two empires agreed to the establishment of the Wakhan Corridor, a narrow strip of land designed as part of Afghanistan, to keep the two powers separate.

Upon the dawn of World War I, the Russian Empire had reached its farthest extent, slightly larger than its heir, the Soviet Union. Holdings in Finland and Poland were lost in the war, never to be recovered. Russia's convincing defeat in the war, followed by its civil war to determine political but not royal successors to the monarchy, led to noteworthy losses of territory. In addition to the losses of Finland and Polish territory, Russia dropped control of Estonia, Latvia, and Lithuania – the Baltic States that gained their independence. Ukraine and the Caucasus region's Georgia, Armenia, and Azerbaijan also secured independence; however, they were subdued and incorporated into the new Soviet Union. Bessarabia, a portion of modern-day Moldova, was annexed by ethnically similar Romania.



In World War II, the Soviet Union's victory in Eastern Europe allowed them to reclaim the Baltic States, part of Poland, Bessarabia, and a corner of Finland. This brought the USSR to its fullest state, nearly matching the land holding of the fullest version of the Russian Empire.

Of course, the collapse of the Soviet Union cracked this vast land into fifteen pieces, fifteen new countries. While Russia remains the world's largest country by area (6.6 million square miles), the other fourteen new countries chopped off two million square miles for their own territories. By seeking its own post-Soviet independence, tiny Chechnya sought to create a precedent for the many ethnic regions of Russia. The Russian military twice slammed Chechnya in civil wars, forcing the upstart land to remain in Russia.

It appeared that Russia would maintain its size without territorial gains or losses; however, Russia's annexation of Crimea in 2014 changed that view. Russia's fight in eastern Ukraine and its apparent interest in lands in Estonia and Georgia indicate that Russia's land size may change again.

Did you know?

Russia's Siberian expansion reached the Bering Strait, but Russians moved across the water to claim Alaska. The United States bought Alaska from Russia in 1867. Many Americans considered this purchase to be foolhardy, characterizing it as "Seward's

Folly,” referencing the American Secretary of State who led the negotiations.

For a short time, Russia had a fort in Hawaii, as built in 1817.

The Trans-Siberian Railway reached Irkutsk in 1899. By 1917 track stretched from Moscow to Vladivostok (on the Pacific Ocean) without needing passage through China.

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6.6: Russian Domain- Physical Geography I

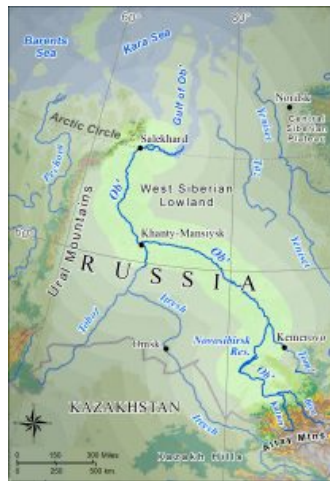


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from Noun Project

Water rolls downhill. We all know that. Rivers flow downward. Of course.

In America, the mighty Mississippi flows southward from Minnesota to Louisiana and into the Gulf of Mexico. Somehow this last fact subconsciously has prompted many Americans to feel intuitively that rivers progress southward. That intuition is incorrect.

In Siberia, most rivers flow downward. Of course. However, in Siberia downward generally is to the north. Three of the four giant rivers of Siberia drain northwards.



Ob' River. Cartography by Steve Wiertz.

Starting in western Siberia and the Ural Federal District of Russia, there is the Ob' River. (Note the spelling of the word **Ob'** is a feature of the Cyrillic alphabet.) In the Altay Mountains, the smaller streams of the Biya and Katun Rivers begin, later to merge to become the Ob' River. The significant Irtysh River forms in China also in the Altay Mountains and then roughly parallels the Ob', usually over 100 miles to the west. When the two rivers join, near the city Khanty-Mansiysk, the surviving name is Ob'. This is a bit curious, given that up to that juncture, the Irtysh River is longer than the Ob' River. The length of the Ob' is 2270 miles, but the combined Irtysh-Ob' River system is measured as the world's seventh longest. Eventually, the stream widens into Gulf of Ob' when it reaches the Kara Sea, a portion of the Arctic Ocean. The Gulf of Ob' is the world's largest estuary.



Yenisei River. Cartography by Steve Wiertz.

In the Eastern Federal District of Russia, there is the next huge river of Siberia – the Yenisei. The combined Yenisei-Angara system is considered the world's fifth longest. The source of the Yenisei is in the mountains of northern Mongolia, its major tributary, the Angara River, flows from Lake Baikal.

Both the Ob' and the Yenisei have major hydroelectric dams built across their southern tracts, respectively in Novosibirsk and Krasnoyarsk. The Novosibirsk Reservoir is Siberia's largest artificial lake.

In the Far East Federal District of Russia, the Lena River begins in the mountains along the western side of Lake Baikal. The Lena River (Lé na) is the giant stream of Siberia, stretching 2734 miles. Huge on global standards as well, the Lena is the world's 11th longest river and draws from the world's 7th largest watershed, including from its biggest tributary, the Vilyuy River. Mammoth in a variety of dimensions, the Lena reaches a width of twenty miles across and at the Laptev Sea creates a delta over 250 miles wide. The Lena River and its tributaries are entirely within the borders of Russia, unlike the Ob' and Yenisei.



Lena River. Cartography by Steve Wiertz.

Siberia in general and the region of the Lena River as well is a treasure trove of natural resources and a setting of scarce population distribution. The primary city along the Lena River is Yakutsk with approximately 200,000 people.

During tsarist times in Russia, after Cossack adventurers reached the Lena River in 1623, for many years political and criminal exiles were sent to this region (as well as to many other locations in Siberia and in the Far North). This pattern was followed and expanded during the Soviet period, in particular in the years of Stalin's rule. In addition, workers were enticed to come to the region to develop the region's resources (gold, diamonds, even mammoth tusks, and more). Workers were paid double or triple wages and even remote locations were developed with infrastructure, transportation links, and social and cultural subsidies. Now in post-Soviet and oligarchic capitalist Russia, these economic infusions have been eliminated, leaving towns and villages along the

Lena to diminish in population but increase in social problems and structural ruin. An ironic consequence is that many in the region feel that communism gave them a better life, in some views even better under the terror of Stalin's times.



Delta of Lena River. False color satellite imagery. NASA.

The influx of Russian migrants, by exile or voluntary migration, eventually outnumbered the small populations of native people. The Sakha people, or Yakut as the Russians named them, are the largest group, with Evenk and even the Even making up small shares. For the natives, Russian or Soviet influence and domination brought social change both in terms of urbanization and alcoholism, dramatically reducing original culture and ways of life.



Siberian Rivers. Cartography by Steve Wiertz.

Siberia is the home to a multitude of rivers, from those that sweep vast territories to hundreds of small streams. The overall pattern is that these rivers flow from south to north exiting into any of four major seas (from west to east – Barents, Kara, Laptev, and East Siberian) that are subsets of the Arctic Ocean. Given the legendary cold of Siberia, rivers such as the Lena are frozen for many weeks annually. Naturally, the southern portions of the river thaw first, sending its liquid flowing into the still frozen northern sections. This results in yearly flooding. Abrupt or exaggerated breakup of ice jams caused by this flooding can result in large sections of ice being pushed across land, sometimes devastating towns and villages. Eventually, and again from south to north, the river thaws completely, including the extensive delta which is frozen about seven months of every year. Flooded lowlands become sources of breeding for vast numbers of mosquitoes, horseflies, and other insects. The West Siberian Lowland, the world's largest section of continuously flat land, is bisected by the Ob' River and is extensively flooded most every spring.

Did you know?

The unusual physical and biogeography of the Lena delta has caused it to become a protected area within Russia and to be nominated as a UNESCO Heritage Site.

Pioneer of Soviet communism and the Soviet Union's first leader, Vladimir Ilych Lenin was born Vladimir Ilych Ulyanov, but took the pseudonym Lenin from the Lena River, drawing inferences from the power and magnitude of the river.

In the Komi language, the word “ob” means “river.”

For 38 photos, often spectacular, of the Yenesei River, its lands, and its peoples, go to:
<https://www.theatlantic.com/photo/2013/08/a-year-on-the-yenisei-river/100580/>

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6.7: Russian Domain- Political Geography I



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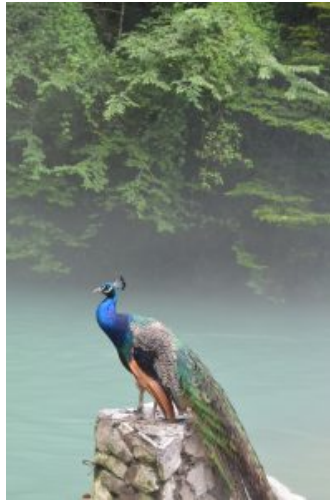
The country Georgia, definitely not to be confused or conflated with the American state of Georgia, is part of this textbook's region called the Russian Domain. Georgia also is part of the Caucasus regions, a mountainous area that includes Georgia, Armenia, Azerbaijan, and a bit of Russia. The internal governance of Georgia offers insightful examples of national self-determination and the post-Soviet implications of Soviet ethnoterritorialism.

As a little bit of historical framework, the pattern for Georgia was one of frequent struggle. Certainly, this can be said of many, many parts of the world, but perhaps the region of Georgia has been particularly suited for strife. A portion of what now is Georgia adopted Christianity as its official religion in the early 4th century, becoming one of the first in the world to do so. However, its neighbors historically included Muslim populations often of some magnitude. Historically, the Islamic Ottoman Empire ruled westward of Georgia. To the south the Persian Empire also featured Islam. Modern day Islamic countries Turkey, Iran, and Azerbaijan lie to the west, south, and east respectively.

Georgia's location in the Caucasus Mountains offered land routes between Persia and Russia and on to Europe, as well as between Turkey and Russia. Trade and conquest sought these passages. The modern sense of the country Georgia came as a kingdom in the 11th to 13th centuries under the rule of King David IV and Queen Tamar the Great, but both before and after those years, it struggled with invaders and empires.

Russian imperial interest in Georgia was viewed more favorably than that from the Ottoman or Persian empires. Russians were fellow Orthodox Christians, though the Georgian Orthodox Christian Church does stand alone; however, this fellowship was better than the Islamic pressures of the Ottomans and Persians. A late 18th century alliance devolved into an early 19th century annexation of Georgia by Russia. When the Russian Revolution of 1917 ended the Romanov dynasty there, Georgia found an opportunity for independence, taking that step in 1918. The Russian Civil War brought victory by the communist Bolshevik Party and secured recovery of Georgia back into the Russian fold. Georgia remained part of the Soviet Union, as a republic beginning in 1936, until the breakup of the USSR in 1991.

Like all of the republics of the Soviet Union, Georgia was a region (like an American state) based on ethnicity. This was the Georgian ethnic homeland and Georgians surpassed the one-million-person threshold to become a republic. However, at the same time, Georgian territory included other land that was the ethnic homeland of smaller nationalities. In the northeast corner of Georgia, there was the region of Abkhazia. Abkhazia (or Apsny to the natives) was the next ethnoterritorial level down – an Autonomous Soviet Socialist Republic or ASSR. Nevertheless, the majority ethnic group in Abkhazia was Georgian (roughly 50%), not Abkhaz (about 20%).



Peacock by Abkhazian lake – Photo by Viktor Shimin on Unsplash

Upon the breakup of the Soviet Union, Abkhazia sought to become an independent country. While all the republics of the USSR became independent countries, the ASSR regions in Russia were upgraded to the republic level in the new Russia. Chechnya, one of these smaller ethnic regions, sought what could be termed a double upgrade to country. Russia denied this request, twice smashing Chechnya in brief civil wars. In Georgia, the Abkhaz minority population of this ethnic region also sought the double upgrade. Naturally, Georgia opposed this move; however, Georgian forces fared poorly in a civil war in 1992-1993. Abkhazia gained de facto independence, while Georgia meekly maintained a claim to the territory. In the aftermath, several thousand Georgian were killed in Abkhazia, while a quarter million Georgians were expelled from their homes and from Abkhazia. In over two decades following, Russian military and political support increased, so that in 2008 Georgia declared Abkhazia to be a “Russian-occupied territory.” Abkhazia considers itself an independent country, but it is recognized by very few recognized countries, though it is endorsed by Artsakh, Transnistria, and South Ossetia, which are similar post-Soviet territories of limited recognition.

South Ossetia also is an ethnic territory within Georgia. Of rather modest population, South Ossetia ranked lower as the South Ossetian Autonomous Oblast’ (AO). Also of note is the existence of North Ossetia directly across the border in Russia. Logically, by national self-determination North and South Ossetia should be one region; instead, Soviet machinations with borders and ethnic groups found advantage in splitting this little region in two.

Like Abkhazia, South Ossetia formerly had a higher number of Georgians living there, not so much anymore. In 1989 as the Soviet Union neared its end, Georgians held 29% of South Ossetia’s nearly one hundred thousand residents, while Ossetians were 66%. By 2015, the numbers had altered to Georgians 7%, Ossetians 90%. Again, as with Abkhazia, this change resulted from military conflict and Russian assistance. Violence broke out in 1991-1992 between South Ossetian and Georgian forces, but to no resolution.



Georgian man grieves after bombs hit city of Gori in 2008. Photo by Alexander Plushev on Flickr.

In August 2008 skirmishes commenced between the sides, but in the case the stakes were heightened when Russian forces attacked Georgia. As it was in Abkhazia, here too thousands of Georgians were displaced. Although a ceasefire was established and Russian military backed off, South Ossetia asserted its sovereignty and independence, seeking what could be called a triple upgrade from its former status as an AO within Georgia. Russia recognized South Ossetia and Abkhazia as independent countries. Of course, the quasi-states of Artsakh, Transnistria, and Abkhazia also recognized South Ossetia’s claim.



Ethnic Groups in the Caucasus. Cartography by James McGinty.

Both these regional cases in Georgia are in part the result of Soviet ethnoterritorialism, the pattern of creating a hierarchy of governmental regions sometimes based on the ethnic peoples living there. (Other regions such as the *krai* were simply administrative regions.) Given the opportunities following the dissolution of the Soviet Union, it is understandable that some of these ethnic regions stretched the limits in seeking national independence. While this plan failed for Chechnya inside Russia, it has created autonomy at the least for Abkhazia and South Ossetia.

Did you know?

Stalin was ethnically Georgian. Born Josef Vissarionovich Dzhugashvili, he changed his surname to Stalin, reflecting the power in the Russian word for steel being сталь or stal. Thus, Stalin is the man of steel.

To be a Soviet republic and not a lesser region, there must have been 1) at least one million people in the ethnic group, 2) living on the ethnic homeland, and 3) a region that had an international border. Fifteen regional ethnic groups met these qualifications with Russians and the Russian Federated Soviet Socialist Republic being the largest by far.

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6.8: Russian Domain- Population Geography I



Created by Nithinan Tatah
from Noun Project

In the sub-field of Geography that is called Population Geography, the focus very much is on births, deaths, and migration. Clearly, abortion directly reduces the number of births that occur. In this essay, we examine the role and history of abortion in Russia.

Under the tsarist regime and influenced by the Orthodox Church, abortion was illegal in Russia. The Bolshevik Revolution repudiated both of these traditional Russian institutions, bringing numerous and far reaching changes. One of these changes was the legalization of abortion, by Lenin's decree in 1920, becoming the first country to do so. Unlike the situation in Russia now, there was no shortage of births; in fact, allowing abortion to bring about a reduction in births was satisfactory for the new communist leadership. The building of socialism required the efforts not only of men, but also of women. The constraints and responsibilities inherent to a large family would restrict mothers' contributions to societal change. Small family size, even if at the cost of state-funded abortion, would allow women, emancipated women, to participate significantly in socialism. The practice of the government in building undersized urban apartments as the city norm also was more than a hint of desired family size.

In a truly ironic twist, Stalin reversed Lenin's decree in 1936, becoming pro-life at the same time that his policies were having millions executed or sent to Siberian labor camps. Yes, the population losses of the Stalinist Terror needed to be offset by a higher birth rate. The subsequent onset of World War II shortly afterward magnified the need for more births to offset war losses. However, since family planning services and the availability of contraceptives were very limited, significant demand for abortion remained, resulting in a black market for abortions.

Following Stalin's death, the 1950s brought a reevaluation of many of his policies, including the ban on abortion. In 1956 abortion once again became legal, apparently due in part to the need to reduce the more dangerous black market abortions. By then a more and more urban population in crowded living spaces and with modest incomes far preferred the small family size. In 1957 abortions numbered over three million and accounted for a majority of all pregnancies in the USSR. (The Central Asian republics of the USSR contributed few of these abortions, inhibited by Islamic repudiation of abortion, traditions of large family size, and higher rural population shares.) Abortions in the USSR peaked in the 1960s, became commonplace. For instance, in 1965 sixteen of every 100 women of childbearing age had an abortion. As a comparison, note that under the current legal status of abortion in the United States, there has never been a year in which more than one out of every thirty women of childbearing age had an abortion.

Abortion was the standard method of birth control throughout the Soviet period. As in other countries with legal abortion, in the USSR working women were more likely to have abortions than were stay-at-home moms.

While the Soviet Union did produce weaponry and heavy machinery in noteworthy quantity and quality, the manufacture of consumer products commonly was both limited and sub-standard. Access to foreign goods was restricted, as imports from capitalist countries were not favored by the government. This was true too for contraceptives. Few and poor quality were made in the USSR, while few were imported. Soviet men lamented this circumstance by joking that using Soviet condoms was like wearing cement overshoes.

The breakup of the USSR brought revolutionary changes to life in Russia, and some change to the practice of abortion. While still legal, abortions became simpler and less arduous due to the introduction of the vacuum aspiration technique. Contraceptives gained some access to the marketplace, though priced by capitalist market forces. In 1990 a majority of Russian women had never used any form of contraception other than abortion. At that time abortions doubled the number of live births.

A serious consequence of multiple abortions is an increased level of infertility among women. At a time when Russia's birth rate is low and the national population in many recent years have declined, it is disturbing that many women find it difficult to conceive,

at least in part due to the effects of previous abortions.

In 2003 the Russian government passed a law banning abortion after the 12th week of pregnancy, except for special circumstances. By 2007 live births finally superseded the number of abortions. Given concerns over population size, for a number of years now the Russian government has set forth pro-natalist policies, such as financial incentives for parents who add second and third children to their families. Indeed, the number of births in Russia rose year by year from 2005 to 2012 with corresponding year by year declines in the numbers of abortions. Even so, Russia has struggled to have enough births to offset yearly deaths.

Did you know?

Spontaneous abortions (biologically occurring, generally due to the inviability of the embryo or fetus) in Dzerzhinsk, a city with a major chemical industry and now cited as one of the ten worst polluted places in the world, are three times higher than the Russian average and for the 1990s averaged over 15% of all pregnancies.

Another study shows that for 1998-2000 abortions were less common for women with higher education, more common as family size increased, less common with use of high quality contraceptives and more common for cohabitating couples than for married couples.

For tabular data on abortions in the USSR/Russia, especially since 1957, go to:

<http://www.johnstonsarchive.net/policy/abortion/ab-russia.html>

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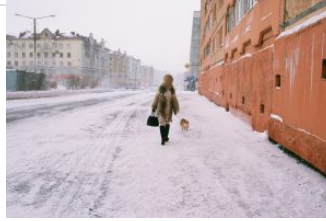
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6.9: Russian Domain- Urban Geography I



Norilsk at -32°C. Photo by Евгений Ерыгин on Flickr.

Settled with dual roles as a penal colony in the Soviet gulag and as the ultimate mineral extraction and processing site, Norilsk was an ideal location for both roles. Though some very modest settlement occurred in the 1920s, Norilsk grew rapidly in the late 1930s with an influx of convicts and extraction of mineral deposits. The city now is the world's northernmost city of at least 100,000 people (177 thousand as of 2012).

The adjacent Taymyr Peninsula had long been known to hold valuable natural resources. A massive and protracted prehistoric eruption of basaltic lava covered the region with minerals, especially in the nickel, copper, and palladium categories. The severe northern location, which at its extreme includes the world's northernmost continental location, possesses a bitterly cold and harsh climate, essentially nine months of winter, that significantly inhibited settlement of the region. At its worst, the polar winter includes 45 consecutive days when the sun does not rise above the horizon. Not surprisingly even by the early 1930s, the population of the region was dominated by small numbers of native peoples, specifically reindeer herders.



Norilsk area. Cartography by Steve Wiertz.

Under Stalin, the 1930s brought a massive surge in the numbers of convicts in the Soviet Union, from political prisoners to petty criminals. Given the historic push for industrial advancement in the USSR, the need for raw materials, including heavy metals, soared. In a sort of perverse logic of supply and demand, the vast supply of prison labor was tapped to fill the demand for the construction of Norilsk and its industry and for the extraction of its minerals. Norilsk's isolation, hundreds of miles from Moscow, also was ideal for a prison camp. If the prisoners escaped, where would they go? In fact, every other place seems so distant that Norilsk residents often refer to other places in Russia as "the mainland."

Twelve hundred prisoners arrived in October 1935, but much larger numbers were to follow, such as another 35,000 in 1938. The camp population reached its maximum in 1951 with 72,500 inmates. Given the harsh and sometimes sadistic living conditions in

the Soviet gulag and the forbidding climates of prison camps locations, it is ironic that here in Norilsk prisoners received better than average treatment. The vital economic and strategic importance of the development of Norilsk's resources created a need for great efforts on the parts of the convicts and the need to keep these forced laborers working. Nevertheless, thousands of prisoners died in the building of the city and in the extracting of minerals from open pit mines; however, with the seemingly almost unlimited national pool of prisoners, dead inmates easily were replaced with fresh bodies. Gulag records count 16,806 convict deaths, but other estimates reach 80,000. In all, perhaps a half million convicts passed through Norilsk. Consequently, Norilsk was constructed by convicts, some of whom lived and developed a sense of pride in their accomplishments, choosing to stay in Norilsk even after their prison sentences were completed. After the gulag was closed in 1956, industrial expansion of the city continued, but newly by means of laborers who were paid wages two or three times higher than those earned in less challenging locations.

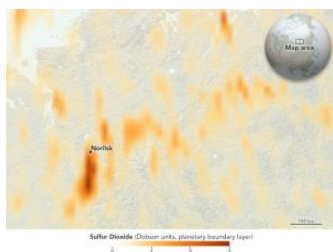
Norilsk became the world's largest heavy metal smelting complex. The city is dominated by the corporation **Nornickel** (Norilsk Nickel up to 2016), now the world's largest producer of nickel and palladium, as well as a major producer of copper and platinum.



Norilsk. Photo by Ninara on Flickr.

At present the difficulty of living in Norilsk is not related to prison labor, but instead is caused by extraordinary levels of pollution. In fact, the **Blacksmith Institute** (now **PureEarth**) named Norilsk to its top ten list of the worst polluted places in the world.

Essentially all of the industrial construction and subsequent industrial output was undertaken with little or no pollution controls. Partly this was due to the frequent pattern of Soviet disregard for individuals in pursuit of advancement of society as a whole. Partly this was due to the also frequent pattern of Soviet industry discounting investment that didn't lead to additional output.



Sulfur dioxide emissions detected by satellite. Image from NASA Earth Observatory 2017.

While open pit mining leads to degradation of the land, the contamination most affecting the local population is air pollution. The 24/7 expulsion of gasses, especially sulfur dioxide (SO_2), from smelting centers, where the raw ore is separated by type and away from useless waste material (slag), causes Norilsk to be the world's most polluted city, when measured by tons of air pollutants per capita. Strikingly, Norilsk's plumes of SO_2 are visible by satellite. At nearly double the SO_2 output of any other anthropogenic sources, Norilsk has acted more like volcanoes. From 2005 to 2017, only the Ambrym volcano in Vanuatu released more SO_2 than Norilsk did.

A combination of acid rain created from these emissions and liquid and solid waste dumping outside the city has formed a dead zone of a roughly thirty-mile radius around the city where nothing grows.

Snowfall may be black from soot or even yellow from sulfur dioxide. Though Russia has numerous locations that have air pollution problems, Norilsk alone produces 20% of Russia's air pollution. The low volatility of the typically cold air often creates temperature inversions in the atmosphere around Norilsk, leaving the air stable and the pollution stagnant.

Numerous health woes are a consequence, especially in terms of respiratory disease. An overall measure is that life expectancy in Norilsk is ten years below the Russian average.

Perhaps things will get better in Norilsk. Mine operators have set forth a plan to reduce SO₂ emission by 75% by 2023. Or maybe not. On May 29, 2020, a power plant at Norilsk accidentally leaked 20,000 tons of diesel fuel into nearby rivers. Learned of this a belated two days later, Russian President Vladimir Putin was enraged by the accident and by local authorities' reluctance to report the spill. The diesel fuel colored the affected waterways an orange/red hue. It is possible that the oil will reach the Arctic Ocean.

On June 28th, 2020, Norilsk Nickel acknowledged that over several hours workers had pumped six thousand cubic meters of waste water into the tundra.

For a video report on the perplexities of Norilsk, go to this website:

<https://www.theatlantic.com/video/index/545228/my-deadly-beautiful-city-norilsk/>

Did you know?

Red too! On the 5th of September 2016, overflow from an industrial dike in Norilsk turned the nearby Daldykan River blood red. NASA imagery notes that this sort of red stain happened other times as well.

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6.10: Russian Domain- Cultural Geography II



Created by Andrey Vasiliev
from Noun Project

The Russian Orthodox Church is a geographically and politically hierarchical Christian church with a geographic distribution of members all across Russia. As the diffusion of Christianity across space occurred historically, the closer proximity of Kiev to Constantinople (658 miles) relative to the distance from Kiev to Rome (1039 miles) simply increased the inherent probability that it would be Orthodoxy and not Catholicism that would reach Kiev. As the Russian state expanded to Moscow as the new center and to Siberia as the new periphery, the Orthodox Church came along too.

In 988, Vladimir I, ruler of Kievan Rus, officially established the Orthodox Church as the religion of the land. At that time the Church was a branch of the Eastern Orthodox Church coming out of Byzantium.

Curiously, for all of the dynamics and shifts that would come to pass in the power relationship between church and state, one of the periods of the least state control or authority over the church came during the Mongol conquest. While the Mongols exerted territorial control, they expressed very little interest in the religious life of Russia, though of course the Mongols themselves were not Orthodox.

As political power progressively moved to Moscow, so too did the church's authority and in 1325 the official residence. In 1448 the Russian Church broke from the Eastern Church, a break that was made permanent with the 1453 fall of Constantinople, the center of Orthodoxy.

Moscow became the "Third Rome," a separate holder of religious truth and authority. Within Russia, however, the Orthodox Church's degree of authority vacillated, depending on the attitude of the political elite – first the attitude of the tsars, later that of the communist party, and now mainly that of Vladimir Putin.

For instance, when Patriarch Nikon sought to reform the Orthodox Church in the 17th century, he also endeavored to place the church's authority over that of the state. His church reforms held, but his political moves failed and led to him being deposed in 1666.



Russian Orthodox Church at Peter and Paul Fortress in St. Petersburg, Russia. Photo by Joel Weigand

Tsar Peter the Great during his reign (1682-1725) eliminated the Patriarchate and established a political link to the church that required his own authorization for church decisions. Though monasticism is a key element of the Orthodox tradition, Peter established an age limit of 50 as the minimum age for men to join monastic orders, thereby sharply reducing the number of new monks (but keeping the supply of potential soldiers high).

Unusual and charismatic religious figures have appeared in Russia, though perhaps none more noteworthy or curious than Grigori Rasputin, the mad monk. Under the last tsar, Rasputin earned the favor of the royal court by apparently healing the tsar's son Alexis of hemophilia. Eventually Rasputin's wild debauched behavior and growing influence prompted a group of Russian nobles to kill him. Rasputin's legendary position gained fame when these nobles seemingly had to kill him over and over, before he actually did die. A somewhat glossy dramatization of his role appeared in Netflix's 2019 six-part series "The Last of the Czars."

Whatever the exact relationship between Tsar and Orthodox Church, there was a relationship and an understanding that the Russian Orthodox Church was the faith of the state and of the people. This ended with the Bolshevik Revolution, when the new communist government instituted a policy of separation of church and state.



Photo by Joel Weigand

Under communism, this separation was neither benign nor passive. In fact, the Soviet government pursued a policy of atheism, tolerating a minimum of religious faith, though what existed was very dominantly Russian Orthodoxy. Soviet authorities closed thousands of churches, turning them into neutral facilities such as warehouses or into facilities wholly inappropriate for holy buildings – into swimming pools or even into museums of atheism. Many churches simply were demolished. Soviet officials imprisoned and killed both priests and believers. At least 200,000 died specifically for their religious beliefs, reminiscent of the early Christian martyrs, though truly in much higher numbers in Russia than in other historical or geographic settings. In addition to this deadly tactic, the Soviet infiltration of the priesthood, making some priests into spies and informants for the state, was an approach that perhaps was more insidious than martyrdom.

A major policy shift occurred during World War II. In dire need to popular support for the war effort, Stalin appealed to nationalism and love of the homeland. Understanding love for the church as an aspect of love of the country, Stalin greatly relaxed government pressures on the church. In fact, some 25,000 churches were allowed to open and hold services. This open policy was reversed in the subsequent Khrushchev era.

Upon the end of communism, the Russian Orthodox Church was thrust into a new position. Gone was the oppression of state atheism. A strong majority of the roughly 150 million citizens of Russia are Russians, and thus, intrinsically belong to Russian Orthodox Church. No longer subject to the dictates of the Tsar or of communism, the faithful now can worship in peace. However, seventy years of Soviet atheism left its mark; at the breakup of the Soviet Union, many Russians had no sense of connection to the renewed church.

Numerous other denominations have stepped into this religious void. In particular, missionaries from the United States have endeavored to bring non-believers to Christian faith. While meeting with some success in guiding new converts, these denominations face the hostility of both the Russian government and the Russian Orthodox Church, largely because these groups are viewed as Western interventions that hurt Russian national unity. Some religious recruiters were authentically American – Mormons riding trains with boxes of Bibles – while others had a more widespread background. Whatever their religious heritage, these missionaries entered a Russia that held a spiritual schism – a strong national heritage in the Russian Orthodox Church

surrounded by a population raised in atheism and often viewing the church as traitorous or collaborative with Soviet authority. Without much difficulty, these new missionary arrivals made significant numbers of converts.

This success, done predominantly by foreigners, was viewed with great trepidation by the Russian Orthodox Church. The church even categorized some incoming religious groups, such as the Mormons, as “totalitarian sects.” Similar concerns were shared by Russian politicians whose pride often was stung by the foreigners who apparently viewed Russia as needing improvement, even at this very personal level.

The national government’s response of church and state was a 1997 law restricting religion. To avoid major restrictions on their activities, these religious organizations had to show proof of their existence in Russia for the preceding fifteen years. Since that time frame included nearly a decade of the Soviet period during which foreign missionaries were completely excluded from entering the country, this restriction applied to almost all new religious efforts in Russia. A few groups, such as Russian Pentecostals and Baptists, could pass this test. Over two thousand religious groups were dissolved. The 1997 law was followed in 2006 by new legislation addressing the roles of non-governmental organizations (NGOs), including foreign religious missions. In the 2012 national presidential election, the Russian Orthodox Church’s Patriarch Kirill endorsed Vladimir Putin.

Conventionally obscure and cultish is the following of Sergei Torop, known as “Jesus of Siberia.” Formerly a factory worker and traffic cop in the Krasnodar region, Torop returned to the Siberia of his youth, having experienced a religious awakening in the new Russia. Now with over four thousand followers in the Church of the Last Testament and set in the wilds of Siberia, he also is known as “Vissarion Jesus” to his flock and is viewed by outsiders as a charlatan and brainwasher. *VICE* did a video report on him – <https://www.youtube.com/watch?v=W2Cv5hZfOmk>



A YouTube element has been excluded from this version of the text. You can view it online here: <https://cod.pressbooks.pub/westernworlddailyreadingsgeography/?p=254>

Did you know?

Traditionally, Russian Orthodox churches have no pews or chairs. Worshippers stand for the services.

A schism in the 17th century divided Russian believers. A minority of believers rejected Patriarch Nikon’s reforms, including a dispute on the issue of how many fingers should be used to make the sign of the cross (old way – two fingers, new way – three fingers). The so-called “Old Believers” preserved the historic rituals; the group remains a small minority on Russia’s current religious landscape.

*The Russian Orthodox Church is famous for its iconography. Many individual believers own icons, holy images painted usually on wood and done in a format and style approved by the Church. In the Russian language, creators of an icon (or other advanced art) are said to **write** the icon.*

In January 2019, as a result of Russia’s war with Ukraine, a new Ukrainian Orthodox Church officially broke away from the larger Russian Orthodox Church.

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6.11: Russian Domain- Economic Geography II



Created by Nikita Kozin
from Noun Project

What is an **oligarchy**? The philosopher Aristotle coined this term centuries ago, explaining that it meant rule by a few. Those few elite in the ruling class would be the oligarchs. Although this concept has been used to define different societies, in recent years it is directed mainly to Russia.

In Russia, the oligarchs often do not have a specific political position, but have such incredible wealth that their economic power brings outsized political influence as well. Or as Russian President Vladimir Putin has explained, “Oligarchs are those who use their proximity to the authorities to receive super profits.”¹

It is curious that Russia should have these circumstances at present, when Russian history does not recall similar situations. During the tsarist period of Russia, indeed the tsars ruled with autocratic powers. Certainly there were other rich people, but their authority was dependent upon their respective tsar’s good favor and benevolence. Under Soviet communism, the expressed goal was a classless society. Instead, there was a vast lower-middle class, imbalanced by a few elite political figures. The political elite had comfortable lives with perks, such as better housing and access to restricted goods. However, even at the pinnacle, there was not fantastic wealth. Stalin was not a billionaire.

Upon the end of the Soviet Union, a great transformation of society began without a comprehensive plan. The pathway to political power shifted from the Communist Party to, well to something else. The political control of the economy faltered, as the transition to capitalism began. Under communism, the State owned all the significant means of production, except for personal property and small private plots of rural land. The State owned all the factories, all the resources, all the forests and fields, and just about everything. How to shift to capitalism with private ownership of property and resources?

A major and utilized approach argued that as the State had owned all the natural resources, inherently the people of Russia owned all the natural resources. As the State had owned all the factories, inherently the people of Russia owned all the factories. Therefore, the government issued vouchers, in a sense like shares of stock, to the citizens of Russia for ownership of various resources and factories. For many Russians, having lived all their lives under communism, these vouchers seemed alien and of uncertain value. For a savvy few, the vouchers were one means to wealth. Many Russians were delighted to be paid small sums for their vouchers, but the torrent of sales of vouchers to small numbers of speculators led to a short list of buyers owning huge quantities of vouchers. The individual vouchers were purchased for piddling sums, indeed below face value, whereas when totaled these shares accomplished control over massive fortunes of raw materials in particular. This was simply one of many means that a few people used to create incredible wealth in Russia, while the average lower-middle class person stayed lower-middle class or fell into poverty. These forms of wealth acquisition typically were opaque and corrupt.



Oligarch yacht. Photo by mhobl on Flickr.

These billionaires have a taste for ostentatious expression of their wealth. They build extravagant homes and show off luxurious toys. They buy sports teams. For instance, Mikhail Prokhorov owns the yacht *Palladium* (seen in the photo to the left), as the name

reflected his wealth in minerals, in particular from the company Norilsk Nickel. Pictured here, the yacht is the world's second largest, purchased for \$400 million. From 2010 to 2019, he owned a controlling interest in the NBA team – the New Jersey Nets (in 2012 the team moved to New York City, becoming the Brooklyn Nets). Oligarch Roman Abramovich is the owner of the Chelsea Football club.

The oligarchs of Russia began their accumulation of wealth and power during the presidency of Boris Yeltsin in the 1990s, but continued through the two decades of rule by Vladimir Putin. Under Putin, it is clear that the continued wealth of the oligarchs is linked to Putin's political patronage. A clear example is the case of Mikhail Khodorkovsky. Khodorkovsky became a billionaire, largely through ownership of the oil company Yukos. Overly emboldened by his wealth, he became an outspoken critic of Putin, so that in 2003 he was arrested for tax evasion. He was convicted and in 2005 was jailed, at first to a Soviet-style prison camp in the Chita region of Siberia. Putin pardoned him in 2013, upon his promise to stay out of politics.

Oligarch Boris Berezovsky also was a vocal critic of Putin. Berezovsky left Russia and was convicted in absentia of fraud and embezzlement. He never returned to Russia. After two cases of alleged and failed assassination attempts, Berezovsky was found dead at home in England in 2013, hanged under circumstances that a British inquest could neither verify as murder nor as suicide.

Putin now has been quoted as saying the oligarchs no longer exist in Russia, but this is silly. In 2018, the United States government released a list of Russian billionaires, labeling 96 of them as oligarchs. Putin himself clearly is a billionaire, though calculating his wealth is difficult.

The oligarchs of Russia are the consequence of a chaotic and runaway transition from communism to capitalism. It could be said that communist pioneer and the first leader of the Soviet Union, Vladimir Lenin is spinning in his grave, except that his preserved body literally still lies on display in the tomb in Red Square in Moscow.

Did you know?

Andrea Bernstein's new book American Oligarchs: The Kushners, the Trumps, and the Marriage of Money and Power suggests that the current American administration features oligarchs too.

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6.12: Russian Domain- Historical Geography II



Created by Fuse Studio
from Noun Project

Who was the first king in the world? Probably we do not have an answer to that question, for it is likely that such a ruler existed before recorded history. Additionally, we might debate the question of what characteristics are needed for someone to be recognized as a king.

However, we do know who was the first Tsar of Russia. Still, the first rulers of Russia were not known as tsars, nor were the original ruled lands the same as the lands of Russia now. Of course, as we go backwards in time and in historical geography, eventually we find small sections of land that were controlled by powerful men (occasionally women?) of the time. Control, power, size, inheritance, wealth, life expectancy, and other factors produced an ebb and flow of authority or at times the lack thereof.

As it was around the world, eventually somewhere in what now we are calling the Russian Domain, enlarged and recognized central authority was consolidated. In the case of the Russian Domain, this first was Kievan Rus. A group of Slavic lands centralized around Kiev were ruled by Prince Oleg from 892 to 912. Other notable rulers of that time were Grand Prince Vladimir the Great (980-1015) and Grand Prince Yaroslav the Wise (1019-1054). This state broke into pieces throughout the 11th century, saw its authority decreased by a rise in the status of rival city Vladimir, and finally was conquered by the Mongols in the 1240s.

The rise of Vladimir found its apex with the rule of Grand Prince Alexander Nevsky, 1252-1263. Following Nevsky, the Vladimir region also fragmented, eventually creating a new opening to be filled by the rise of Moscow. Through several rulers of the Moscow region, it too paid tribute to the Mongols for numerous years.



Portrait of Ivan IV by Viktor Vasnetsov, 1897 (Tretyakov Gallery, Moscow). Public Domain.

In 1533 at the age of three and upon his father's death, Ivan IV was declared the Grand Prince of Moscow, though regents represented him until 1547. At age sixteen, Ivan was crowned as Tsar of All the Russias, thereby consolidating authority over the lands of Novgorod, Kiev, Vladimir, and Moscow – all the Russian lands.

It was this Ivan whose armies conquered the Mongol forces of the city Kazan in 1552, triggering the end of Mongol control of Russian lands. Ivan sought to expand Russia's territory, including moving into Siberia. Because of the fearsomeness of Ivan's rule, he gained the name Ivan the Terrible.

Ivan IV was the first Tsar of Russia, among some thirty such rulers. Some of these Tsars were noteworthy, some barely a footnote in the historical record. But from where did this title come? The word "Tsar" often has been Americanized into the word "Czar." However, Czar is a poor transliteration of the Russian word and in particular of the Cyrillic letter ц. The Cyrillic word for this royal title is царь. For experts in Russian or Slavic Studies, the Cyrillic letter ц routinely is spelled ts in English. (This is transliteration, the transference of letters or words of one language into the letters or words of a different language, as different than translation, which confers the meaning of words from one language to another.) Thus, in English the word should be spelled "Tsar." The original derivation of this word goes back to the Roman title "Caesar."



Photo by Vivian Quam.

Peter I, known to us as Peter the Great, ruled as Tsar from 1682-1725. Both great in physical size and in accomplishments, Peter declared Russia as an empire, thus beginning the use of the term "Emperor" as well as "Tsar." Standing 6'8" Peter was a giant of the era, at least a foot taller than the average male. In numerous ways, Peter transformed Russia. Peter built the city St. Petersburg on the Baltic Sea and transferred the national capital there from Moscow. He reformed, modernized, and Europeanized his Russian empire. He built the first Russian navy and greatly expanded the territory of the empire.

Catherine II was one of few female Russian monarchs. Catherine the Great ruled from 1762 to 1796, one of the longest reigns of a queen anywhere. Hers was a golden age for Russia, often called the Russian Enlightenment.

Alexander II was in power from 1855 to 1881. His reign was marked by the revolutionary change of the freeing of the serfs from their landlords, giving some 23 million their rights as full citizens of Russia. Ironically, he was assassinated by revolutionaries who felt that he was not progressive enough.

Nicholas II was the last Russian Tsar. Assuming the throne in 1894, he served as Tsar until 1917, when the monarchy was abolished by the Russian Revolution. Nicholas and his family were executed in 1918 by the Bolshevik Communists.

Did you know?

The German word "Kaiser" also comes from the Roman title Caesar.

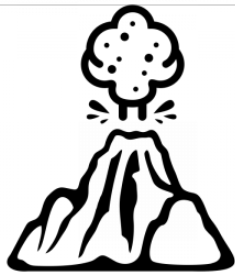
The novel "Icon" by Frederick Forsyth features the premise of the return of the position of the Tsar as a tactic of disinformation in modern day Russia.

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6.13: Russian Domain- Physical Geography II



Created by Oleksandr Panasovskiy
from Noun Project

The Oxford dictionary defines a **peninsula** as “a piece of land almost surrounded by water or projecting out into a body of water.” Kamchatka is a Russian peninsula with volcanoes.

The Kamchatka Peninsula extends 900 miles southward from the nearly easternmost part of Russia. With over 350,000 people in an area over 182 thousand square miles, Kamchatka averages about two people per square mile. In truth, over half (187 thousand) of those people are in its provincial capital city Petropavlosk-Kamchatsky.

Fire and Ice. While Russia is well known for its cold weather, Russia’s Kamchatka Peninsula, along with the adjacent Kuril Islands, provides the country with a unique combination of fire and ice. As part of the Pacific Ocean’s “Ring of Fire,” Kamchatka contains volcanoes, both ancient (dating to the Pleistocene Era) and active (30). At the same time Kamchatka’s high latitude and often high elevation bring snowfall and cold to the region. Preservation of region has been promoted by establishment of nature preserves, combined as a UNESCO World Heritage Site. Due to its remote location, the peninsula had relatively late exploration and remains notably little affected by human interaction.



The Kamchatka Peninsula is in the Russian Far East and extends into the Pacific Ocean, separating the Sea of Okhotsk from the Bering Sea portion of the ocean. The Kuril Islands dip southward from the tip of Kamchatka. Astride the edges of tectonic plates, Kamchatka benefits from the geological forces of subduction that release molten material from the Earth’s mantle. The resulting rise of this magma creates not only volcanoes and eruptions, but also a variety of thermal activity in Kamchatka, including hot springs and geysers. Eurasia’s largest active volcano is Kamchatka’s Mount Kluchevskoi, while Mount Karymsky has been erupting continuously since 1996.



Created by Nick Bluth
from Noun Project

Only four locations planetwide have geysers that shoot sprays of water and steam from the ground, typically on a predictable schedule. Along with the geysers of Yellowstone National Park in the United States and similar sites in Iceland and New Zealand, Kamchatka’s “Valley of Geysers” contained twenty large geysers and some 200 smaller thermal springs. However, on June 3, 2007, the structural collapse of an adjacent mountainside delivered an immense tonnage of rock material into the Valley of Geysers

covering geysers and damming water flow from the Geyser River. For excellent coverage (explanation and photography) of the event go to:

http://www.kscnet.ru/ivs/expeditions/2007/Geyser_Valley-06-2007/Geyser_Valley-06.htm

The largest of the geysers, Velikan Geyser, was not buried and is active. Will the rest of the valley eventually restore itself or will a new physical regime be established? Undoubtedly the post-Soviet flow of scientists and sightseers will continue to arrive to view the valley and other remarkable pieces of Kamchatka. For a spectacular 360° view, go to <https://www.airpano.com/360photo/Kamchatka-Geyser-Valley/>



While tourists love viewing the remarkable geologic sites, travelers also enjoy watching the diverse wildlife in Kamchatka. Opportunities to view the Kamchatka brown bear excite tourists. The concentration, or population density, of brown bears there is among the highest anywhere in the world. The heavy concentration (millions!) of salmon in the region's streams provides the bears' main source of food. Other noteworthy mammals in Kamchatka include elk, fox, and sable, as well as marine mammals such as walrus, seal, and sea lion. Among birds of note is Steller's sea eagle, unique to Kamchatka.

While the geologic processes that created Kamchatka are ancient, human activity on the peninsula has been relatively recent. Although native populations of Itelman and Koryak already existed on the peninsula, Russian discovery of Kamchatka came only in the late 17th century, with subsequent Cossack settlements being founded in 1704 and 1706. Russian explorer Vitus Bering founded the city Petropavlovsk-Kamchatsky in 1740. Itelman and Koryak populations were diminished through struggles with Russians, but most significantly by smallpox.

Russian discovery of Kamchatka's varied thermal phenomena came only in 1941. Prior to that, the volcanoes were a bold feature of the landscape, but geysers and hot springs were not so evident. Scientific evaluation and charting of these thermal sites began in the 1970s.

Kamchatka's economy has long been focused on fishing, with pollack, salmon, and crab being the most important catches. The lumber industry has played a secondary role, mainly exporting raw timber to Japan and Korea. Of late and certainly only since the removal of "closed" status for Kamchatka, ecotourism has become an important contributor to the regional economy.

Because of its strategic location, Kamchatka was a highly secret and tightly secured region, even closed to Soviet citizens. While Kamchatka remains the base for the Russian Pacific submarine fleet, the region now is open to Russian and foreign travelers. Due to difficult times in the Russian economy, military spending has decreased in Kamchatka as compared to Soviet times.

Did you know?



Georg Wilhelm Steller accompanied Vitus Bering on an expedition to the region, a voyage ordered by Tsar Peter the Great. Steller studied fauna and flora in the region, getting his name attached to the eagle.

Kamchatka is featured in one of the episodes of "Wild Russia," the popular TV show on the National Geographic Channel.

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6.14: Russian Domain- Political Geography II



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The political history of the Russian people largely is subjugation under a series of autocrats. The chronology of strongmen/strongwomen leading the country with great power began with the reign of Ivan IV (Ivan the Terrible) in 1547. With singular figures such as Peter the Great and Catherine the Great, as well as bumps along the historical road of authority, Russian history brings us to the current autocrat Vladimir Vladimirovich Putin.

Of course, throughout the world and throughout history, peoples and lands have been ruled by powerful figures – tsars, kings, caesars, queens, princes, etc. At other times these autocrats have been elected figures, generally through fraudulent, coercive, or meaningless elections. It would seem that Russia has had at least its fair share of autocrats, perhaps more so than most countries.

Ivan the Terrible was the first Russian ruler to take the title “Tsar.” His moniker “Terrible” uses the Russian word грозный; however, the word may be translated as “formidable” or “fearsome” as well as “terrible.” In the case of Ivan IV, all of these meanings fit. Ivan created a feared force of Oprichniki – Опричники, essentially his own personal army, empowered to eliminate his enemies. Over a decade, these forces killed about 4000 Russians. On top of all this, Ivan, in a fitful rage, himself killed his namesake son Ivan.



Statue of Peter the Great, expressing his maritime interests. St. Petersburg, Russia. Photo by Vivian Quam.

Peter the Great was the next prominent Tsar of Russia. Peter’s reign featured many great accomplishments, including Westernizing and modernizing Russia. His construction of the city of St. Petersburg was part of this Westernization, but cost the lives of many employed in the rugged circumstances of building this city. Peter’s tax on beards was a sticking point of opposition, but the revolt by the Streltsi, an elite Russian guard, was crushed and over a thousand executed, while others were banished to Siberia. Peter too had his own son killed.

Tsar Nicholas II, the last Russian tsar, also had his own secret police – the Okhrana.

The accomplishments of the Russian tsars along with their abuses of power, sometimes violent, were facilitated by the magnitude of their power, even as often their power was viewed as directly given by God.

Curiously or perhaps ironically not, while the 1917 Russian Revolution ended the Romanov dynasty, it did not bring the end to autocratic rule in Russia. Instead, the lands of the Russian Empire morphed into a somewhat similar landmass as the Soviet Union.

Vladimir Lenin, once exiled to Siberia by the tsarist government and having had brother executed by the Russian government in 1886, became the initial leader of vicious and oppressive Soviet Union. Although Lenin's rule was brief due to his premature death at age 53, posthumously he was treated with an almost religious cult-like obsession, so that his body has been preserved in a public tomb in Red Square even to this date.



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Joseph Stalin donned the mantle of absolute power and authority, twisting it into an obsession of cleansing the citizenry of any hint of opposition, real or imaginary, toward him or the idealized Soviet society. Under Stalin, millions of Russians and other Soviet ethnicities were killed and/or sent to labor camps (often in Siberia). During Soviet communism, the secret police forces changed in name but served largely the same purposes of intimidation and investigation. They included the Cheka, the NKVD, the KGB, and others.

After Stalin there were several different leaders of the Soviet Union from the inimical Nikita Khrushchev to the final Mikhail Gorbachev. All of these were powerful figures, but within a group of leadership in the governing Politburo.

Upon the breakup of the Soviet Union, Gorbachev was succeeded in power by Boris Yeltsin in the new Russia, the largest remnant of the USSR. Yeltsin was President of Russia from 1991 to 1999, at times seen as a hero and at times an alcoholic buffoon.



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The return of the autocrat began slowly, but with the arrival of Vladimir Putin, handpicked by Yeltsin as his successor. The savvy Putin had worked as a KGB operative (eventually Lt. Colonel) from 1975 to 1991, but with the collapse of the Soviet Union, he sought to find a new career in politics. Putin worked within the St. Petersburg city government from 1991-1996, before moving to Moscow and moving up in political authority, gaining the favor of Yeltsin. In August 1999, the national parliament or duma elected him as Prime Minister, ranking second in national authority to the president. However, at the end of December Boris Yeltsin resigned. Following constitutional procedure, Putin the prime minister succeeded Yeltsin to begin 2000 as Russia's president.

Although a relatively unknown figure upon his move to Moscow in 1996, Putin was President of Russia by 2000. This is a spectacular rise in power that foretold a similarly steep increase in authority, as Putin became Russia's autocrat. Yet, this was a different sort of autocrat. Tsars were part of hereditary dynasties, chosen by God. Stalin held autocratic control in a Soviet Union where elections were held but were limited to a single party that typically received 99% of the vote. Putin became president in a new Russia that had experienced less than a decade of striving for a true democratic government. Soon, Putin maneuvered within that new system to become the dominant ruler. Although the Russian constitution limited presidents to two consecutive four-year terms, Putin found a loophole. After serving as President of Russia for eight years – 2000-2008, Putin stepped sideways becoming Prime Minister, while his Prime Minister Dmitri Medvedev was elected President. For 2008-2012, Putin still remained the de facto ruler, simply doing so from the role of prime minister. In 2012 Putin was elected president once again, but now for a six-year term.

He was re-elected in 2018 and will serve until 2024. In January 2020, Putin announced a reshuffling of the government and constitution. This shuffle introduced a new Prime Minister Mikhail Mishustin, among other changes. It was understood that these rewritten rules of government would allow Putin to remain in power after his term and term limits expire in 2024. Indeed, in July 2020 the Russian government held a referendum that proposed adding 206 amendments (Has any country ever done this?) to the Russian constitution. Although the newly amended constitution was printed and available for sale in bookstores BEFORE voting was held, votes were cast and collected in traditional locations, but also in trunks of cars, in parked buses, and at other odd settings. Officially, nearly 79% of the votes approved the constitutional changes, though widespread fraud was alleged. Putin's current term as president will end in 2024, but under the new constitution he will be able to run for two additional six-year terms of office. If he remains as president for all those years and if we count his four years as prime minister, he will have served as Russia's ruler for 36 years. This would surpass the records of Joseph Stalin (29 years) and Catherine the Great (34 years).

In addition to Putin's maneuvering power grabs, his autocratic rule can be seen in the arrests and/or deaths of rival politicians, wealthy opponents or potential opponents, and investigative journalists. In 2017 the Washington Post published a list of ten prominent critics of Putin who died in suspicious ways. Among them was former KGB officer Alexander Litvinenko who died in London in 2006, poisoned by radioactive polonium-210. Journalist Anna Politkovskaia was shot and killed in Moscow also in 2006. In 2018 a major scandal formed after Russia emigrants Sergei and Yulia Skripal were poisoned with a chemical nerve agent in Salisbury, England. These patterns of arrests and killings are certainly part of the pattern of authority that Putin knew in his KGB days, autocratic control that was the way of life under Stalin, and in fact in Tsarist Russia too.

The wealth of the tsars was on public display and can now be seen in museums and historic buildings in Russia. Vladimir Putin's private wealth is less obvious, but observation of his homes, clothing, watches, and other examples of wealth has prompted Western journalists to estimate his wealth in the billions of dollars. Hedge fund manager Bill Browder suggests that Putin's net worth may be \$200 billion, which would make Putin the wealthiest person in the world. Whatever the great wealth, it would not come from Putin's modest salary of a few hundred thousand dollars a year. Instead the wealth would be gained from forms of corruption, essentially taking money from Russia, its resources, and its people.

Vladimir Putin is the latest in a long history of Russian autocrats, now placed in the context of an intendedly democratic and resource rich Russia. In this long history of autocrats and secret police, it is noteworthy to observe that the former KGB officer has become the autocrat.

Did you know?

The killing of Ivan's son by his own hand is depicted in a famous painting by renowned Russian artist Ilya Repin.

*The board game **Kremlin** offers a satirical look at the power structure of Soviet days.*

Even if Putin rules Russia for 36 years, he will fall far short of the 70 years that the late King Bhumibol Adulyadej ruled Thailand. Queen Elizabeth II has reigned in the United Kingdom for 68 years and still counting. Sobhuza II became the king of Swaziland as an infant and remained king for 82 years.

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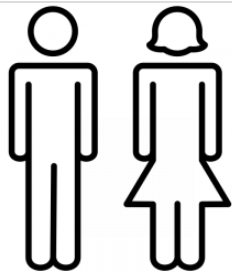
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6.15: Russian Domain- Population Geography II



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The **sex ratio** is a very useful and flexible demographic statistic. This measurement considers the balance between males and females in a population, usually expressed as males per 100 females. A low sex ratio is fewer than 100 males for each 100 females, while a high sex ratio shows more than 100 males for each 100 females.

There are numerous factors that affect the sex ratio. Although non-intuitive to contemplate, due to human biology, the sex ratio at birth is normally 105-107. Again, that would mean 105-107 boys born for every 100 girls born. While it seems that the sex ratio at birth ought to be 100 (it's a boy or a girl, thus seemingly even odds), this is not the case. Given that males die at every age more often than females, males need the head start in the biological run. Actually, the race begins even before conception, as the sex ratio at conception is about 115. This means that countries with high birth rates will have a higher share of children (more boys than girls, because of the birth head start) in their populations, thus a high sex ratio. Given Russia's current long trend of low birth rates (12.2 in 2020), the boys' head start does not produce a high sex ratio in Russia.

Significant factors influencing sex ratios and life expectancy include risk levels of male jobs, behavior, and war. Clearly military service is performed by more men than women; in some countries, women are not allowed in the military. Military service creates risks, obviously magnified greatest in actual military conflicts, skirmishes, and wars. True throughout the world, more male soldiers die than women soldiers. Definitely, this factor has influenced Russia's sex ratio, primarily decades ago with World War II and to a modest extent in Russia's invasion of Afghanistan and its civil wars with Chechnya. Russia's low sex ratio after World War II has failed to recover in any significant ways.

Russia has many rugged lands where resource extraction is important. Typically, workers in these harsh settings are men. Definitely inherited from Soviet days, Russia's industrial cities face significant levels of pollution. More men than women work in these dangerously toxic settings, thereby reducing life expectancy and the sex ratio. Indeed, these factors contribute to a lower sex ratio in Russia.



Drunk man in St. Petersburg, Russia. Photo by Ralf Steinberger on Flickr.

Lifestyle choices affect sex ratios, particularly when risks are not shared evenly between men and women. Levels of alcohol consumption in Russia are vastly different for men than for women. Very high levels of alcohol abuse by men in Russia has led to significantly high ranges of illness and death. Addiction in Russia has expanded beyond alcohol to a variety of drugs, but particularly to heroin. Russia is now the world's largest user of heroin, as brought across former Soviet Central Asia from Afghanistan. Like anywhere else, more men are addicted users than women are. Smoking long has been known to reduce life expectancy, but in Russia and throughout the world, more men smoke than do women. These and other lifestyle choices reduce male life expectancy sharply in Russia, while only marginally affecting the female population. Many more male deaths than female deaths have distinctly lowered the sex ratio in Russia.

Since 1985, Russia ranks number one in the world in total number of suicides. For an interesting animated graphic comparing countries on this measure go to – <https://tinyurl.com/suicides1985> . Russia and the United States are the only two countries with over one million suicides in that time frame. France and Ukraine (also in the Russian Domain) are neck and neck for fourth and fifth place, while Japan is third. Suicide rates and totals in China and India are disputed.

Which countries have the highest rates of suicide (that is different than total numbers)? Several of the top rates are revealed in countries formerly in the Soviet Union. #1 – Lithuania, 2 – Russia (31 per 100,000 people – but 56 male, 9 female), 5 – Belarus, 7 – Kazakhstan, 8 – Ukraine, 9 – Latvia. Numbers 2, 5, and 8 are in our region defined as the Russian Domain. Note that globally men kills themselves more than women kill themselves. Obviously, that trend affects the sex ratio.

Aging of a population lowers its sex ratio, as biologically women live longer than men, hence the head start given to baby boys. With Russia being in Stage 5 (or the extended Stage 4) of the Demographic Transition, Russia has had many years for declining birth rates and declining death rates. With lower death rates come longer life expectancies that produce relatively more older women than older men. Compared to countries around the world, Russia and several other post-Soviet countries have some of the largest gaps between male and female life expectancies.

Life Expectancy - Male and Female in Post-Soviet Countries

World Rank in Gap Years	Post Soviet Country	Male Life Expectancy	Female Life Expectancy	Gap in Years
2	Belarus	65.3	77	11.7
3 - tied	Russia	64.2	75.6	11.4
3 - tied	Lithuania	67.4	78.8	11.4
5	Ukraine	65.7	75.7	10
6	Latvia	68.9	78.7	9.8
7	Kazakhstan	64.3	73.9	9.6
9	Estonia	71.6	81.1	9.5
13	Turkmenistan	61.3	69.7	8.4
15	Moldova	67.2	75.4	8.2
	World - 2010-2015	68.3	72.7	4.5
	USA	76.3	81.1	4.8

Besides these noted above, there are other factors that may affect sex ratios (e.g., male migration into Middle Eastern countries), but these are not significant in Russia. Or war, as #1 is Syria.

As a result of these many factors, Russia has one of the lowest sex ratios in the world. Given that societal elements inherited from the communist period had wide distribution across the USSR, it is not surprising that other former Soviet republics, now independent countries, also feature very low sex ratios. Of note, the other locations in the top ten are small Caribbean islands.

Sex Ratio in Post-Soviet Countries

Ranked in World	Post-Soviet Country	Sex Ratio
2	Latvia	84.8
3	Lithuania	85.3
6	Ukraine	86.3
7	Armenia	86.5
8 - tied	Russia	86.8
8 - tied	Belarus	86.8
10	Estonia	88
	World in 2015	101.8
	USA	98.3

Did you know?

Sex ratios in China are skewed from the norm, significantly due to the country's former One-Child Policy that heightened existing levels of son preference, thereby leading to noteworthy levels of gender-based abortion and higher levels of female mortality.

A curious finding among a few studies suggests that during wars, the sex ratio at birth may rise slightly, as if in biological response and adjustment for male lives lost in the war.

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6.16: Russian Domain- Urban Geography II

$$P_n = \frac{P_1}{n}$$

The Rank-Size Rule was derived by Harvard Professor George Kingsley Zipf. When used to express the relationship between ranked urban population size within a single region or country, it has the mathematical equation shown to the left,

where P equals population of a given city, while n equals the ranked order of that city among all cities in that region or country. Thus, P_1 is the population of the number one or largest city. When applied to countries across the globe, few countries show a distribution that matches the Rank-Size Rule.

It can be asserted that countries that fulfill three specific characteristics are likely to have a population distribution that can be modeled at least to some extent by the Rank-Size Rule. Keep in mind that such a country will have numerous large cities with a progressively declining population distribution by ranked order.

First, countries that have large areas may have a rank-size distribution, for a large area allows many cities to grow significantly in size. Ever since the progressive annexation of Siberian territory, Russia has been the largest land of the world. Even before the Russian Revolution, the Russian Empire held vast lands across Siberia and over Central Asia, so that the new Soviet Union also was a huge country. The breakup of the USSR created fifteen new countries, with Russia still by far the largest. As the largest country in the world by land area, clearly Russia meets this first criterion.

Second, countries that have large populations may have a rank-size distribution, for a large population provides enough people to inhabit many cities of significant size. In 1900 Russia held a population of about 125 million people, certainly large enough to meet this criterion. However, while Moscow had gained urban preeminence from early Russian history, under Tsar Peter the Great a new city St. Petersburg was built and designated as the new capital city. With this change, St. Petersburg challenged Moscow for importance and population size. Until Moscow regained its role as capital city under Bolshevik rule in the Soviet Union, St. Petersburg's rivalry prevented Russia from matching the rank-size distribution. The two major cities were too close together in population; for under the rank-size rule, the population of the second largest city is projected to be only half that of the largest city.

Third, countries that have a long history of urbanization and industrialization may have a rank-size distribution. In this case a sufficient amount of time is necessary for the development of a number of large cities. For this criterion tsarist rulers of Russia had brought industrialization and urbanization patterns from Europe; however, these trends were far behind those of Europe, and especially those of Western Europe. While Russia may have been ahead of countries and regions that we now often designate as in the Third World, Russia was not advanced in terms of industrialization and urbanization. This was to change, however, under Soviet rule. The dominance of heavy industry and the planned socialist economy in the Soviet Union prompted substantial industrialization and urbanization.

Thus, in the USSR all three of these criteria were met, strongly suggesting that a rank-size distribution of urban population may be present. The USSR had the large area, the large population, and sufficient years of urbanization to develop many large cities. Additionally, the secondary importance of capital cities of Soviet republics protected against the single dominance of Moscow, while the ascendancy of Moscow over St. Petersburg left Moscow as the single top city.

An examination of the 1989 population figures for the largest seven cities of the USSR indeed does show a rank-size distribution. Of course, it must be noted that the Rank-Size Rule cannot possibly predict actual urban populations down to the last man, woman, and child. Some error is expected of the magnitudes shown here. It is the general pattern and the geographic causes of that pattern that are important to understand. Indeed, using the Rank-Size Rule for 1989, St. Petersburg is projected or predicted to be 4.4 million when it actually was 4.5 million; thus, the projection was only wide by about 2%. These small variations are acceptable in demonstrating the Rank-Size Rule.

City by Rank	Population (in millions)	Projected	Rank	% Unrounded Error
Moscow	8.8		1	
St. Petersburg	4.5	4.40	2	2.22%
Kiev	2.6	2.93	3	-11.26%
Tashkent	2.1	2.20	4	-4.76%
Kharkov	1.6	1.76	5	-10.31%
Minsk	1.6	1.46	6	8.33%
Nizhnyi Novgorod	1.4	1.25	7	10.20%

Since the dissolution of the Soviet Union into fifteen separate countries, no longer can Russia be considered to match the rank-size distribution. This is apparent just in a careful examination of the very data above. Four of the top seven cities of the Soviet Union are not in Russia – specifically, Kiev (Ukraine), Tashkent (Uzbekistan), Kharkov and Minsk (both in Belarus). Three, as noted, were capital cities of republics that then became countries. Thus, we are left with the interesting situation that Soviet urbanization and industrialization provided the third link in the creation of the country's rank-size distribution, but the end of the same Soviet authority has now left Russia without an ideal rank-size pattern, even though it still possesses the three expected criteria.

Statistics from the Russian Federal State Statistics Service display the continued lack of a match of the Rank-Size Rule for contemporary Russia. Here are the numbers for 2017, as they show very substantial prediction errors. The pattern of overestimating the size of lesser cities in Russia demonstrates that Moscow might be considered a primate city.

City by Rank	Population	Projected	Rank	% Unrounded Error
Moscow	12.38 m		1	
St. Petersburg	5.28 m	6.19 m	2	-17.23%
Novosibirsk	1.60 m	4.13 m	3	-158.1%
Yekaterinburg	1.45 m	3.10 m	4	-106.9%
Nizhny Novgorod	1.26 m	2.48 m	5	-96.82%

Did you know?

George Kingsley Zipf was a linguist and philologist, not a geographer. The principles of Zipf's equation can be applied to a variety of topics.

Also, the primate city distribution, where one city dominates all urban functions within a country, in a sense is the opposite of the rank-size distribution, for it is the absence of one or more of the three cited criteria that typically lead to the primate city distribution, where one city tends to dominate in all urban ways.

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6.17: Russian Domain- Physical Geography III

By geographic definition, a *strait* is a narrow passage of water that separates two large landmasses. The Bering Strait meets this definition, for it is a stretch of water about 58 miles across, separating Cape Prince of Wales, the westernmost point of Alaska (USA), from Cape Dezhnev, the easternmost point of the Far East region of Russia.

The features of the broader region near the Bering Strait can be remembered with the acronym **CRIPPLE**, perhaps appropriate given the difficulties of life there.

C – Caribou

Few people chose to live in this extreme location of the Russian Far East. Historical patterns of in-migration of Russians into Siberian locations have made Russians the majority population. However, the ethnic natives in the region, among the so-called “numerically small peoples” of Russian/Soviet censuses, remain the few who practice outdoorsmen habits in the Bering Strait region. The most numerous here are the Chukchi, whose name is derived from the term for “rich in reindeer.” Indeed, caribou herding remains a way of life, sometimes supplemented by fish from the cold coastal waters.

R – Resources

As is true with Siberia and the Far East in general, the Bering Strait region possesses a variety of resources, such as tin, lead, zinc, gold, and coal in the Chukchi Peninsula. The challenging climate and landscape causes great difficulties in extracting and transporting these resources, prompting high wages for those willing to work with these resources.

I – Isolation

In terms of different measures of isolation, the Russian shores along the Bering Strait may be the world’s most isolated continental location.

Accessibility right at the Bering Strait is limited to tiny coastal locations of Uelen and Provideniya. Farther down the coast is the town of Anadyr (about 15,800 people) which provides port and airport service.

Population density in the region is exceedingly sparse, fewer than one person per square mile for rural areas. Distance to large cities measures in the hundreds and even thousands of miles.

P – Prison Camps

In Tsarist and more so in Soviet times, Siberia was a notorious location for the exiling of criminals and political prisoners. Soviet prison camps went almost to the waters of the Bering Strait itself. Of course, isolation often is considered desirable for prisons. In addition, prison labor here contributed to resource extraction and transportation construction, without regard for the miserable conditions.

P – Permafrost

Nearly half of the Russian landmass is permafrost, permanently frozen soil. Far northern locations like the Bering Strait region uniformly have permafrost. Even the warming effects of the sea do little to reduce the frigid conditions of the region. Short summers and winters reaching –40°F chill this tundra region. Wind chill in nearby Anadyr has reached –90°F.

L – Land Bridge

Anthropologists tell us that during the world’s last ice age, which peaked at about 18,000 BC, native peoples from Siberia and the Far East crossed the Bering Strait into Alaska. Within this time frame lower water levels in the Bering Strait likely would have exposed the continental shelf, so that people could have crossed on land or ice bridges. These peoples became the ancestors of the native peoples of North and South America.

There has long been interest in recreating this bridge, but now in terms of a transportation link between America and Russia. In 1890, William Gilpin, the Governor of Colorado, suggested a grand plan to connect all the great cities of the world by means of railroads. Thus, the idea was tossed around in the early days of the 20th century; however, disinterest and opposition from American President Theodore Roosevelt and from the Russian ruling elite slowed enthusiasm greatly.

A railroad bridge? A rail tunnel? Both? With conduits for oil and natural gas? These ideas popped up now and then throughout the 20th century. Currently, some experts continue to devise plans. The InterContinental Railway group has a plan that would cost over \$100 billion. It would include a tunnel beneath the Bering Strait, reaching more than 160 feet deep. With this seventy-mile long tunnel, railroad tracks would be added to reach from Yakutsk, Russia, to Fort Nelson, Canada. These rail sites already connect to tracks throughout Russia and all across Canada and the United States.

See https://static1.squarespace.com/static/58b72801e3df2821397e13cb/t/5b92012670a6adc1daab0d65/1536295261952/ICR_WTC_mid-res.pdf map and plan at:

E – Exploration

Russian settlement reached Anadyr in 1649, with the exploration of Russian navigator Semyon Dezhnev. In 1725 Tsar Peter the Great sent Vitus Bering to captain a naval expedition to chart Siberia's northern shores. Though it took Bering 3000 miles and three years of sailing to reach the region, he did find no land bridge to Alaska, but did chart Russian coastline and did discover that Siberia extended farther eastward than previously understood.

Did you know?

The International Dateline runs through the Bering Strait.

Vitus Bering was a Dane who was recruited as a young man in 1704 to join the new Russian Navy. In 1741 on another expedition to the strait now bearing his name, he was shipwrecked by stormy weather and died on the small island that also bears his name, Bering Island, just east of the Kamchatka Peninsula.

“Bering Strait” was the name of a popular music group, consisting of several young classically trained Russian musicians who grew enamored with American bluegrass music and emigrated to the United States to find a few years of success with their country, bluegrass, and pop tunes. However, these Russian musicians are not from the Bering Strait region, but are from Obninsk, near Moscow.

For a quick look at how far a rail line across the Bering Strait could go, look at: <https://i.redd.it/x4dl2058q2651.png>

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6.18: Russian Domain- Overview



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In the various essays about Russia in this textbook, there are many facts presented and many ways of life understood. After reading the textbook, students or other readers should know and understand many things about Russia. Also, as has been stated, it is not the point of this textbook to attempt to convey every possible bit of knowledge about Russia. However, there are certain basic facts about Russia that the reader should know, whether picked up in previous chapters or not.

In area, Russia is huge. Straddling the Eurasian landmass, Russia covers eleven time zones, stretching from the Baltic and Black Seas to the Sea of Okhotsk and the Pacific Ocean. This is not a new phenomenon, for once the Russians passed the Ural Mountains into Siberia, there were few people to stop the tsars, the Cossacks, and others from expanding the empire to the eastern shores of Asia.

Being huge, Russia has vast quantities of natural resources. Oil and natural gas pipelines extend from western Siberia to a variety of European countries. Much of Russia's economy depends on resource exports. Russians are proud of their huge country and enjoy noting its singular features – Lake Baikal is the world's deepest lake, Siberia has the world's largest coniferous forest, the Trans-Siberian Railway is the world's longest railroad, etc.

Russia is often cold. Being parallel to Canada, of course Russia will have a relatively cold climate. With almost its entire coastline being on the frigid Arctic Ocean, Russia receives little warming from the sea. Being cold, Russia's land often is inhospitable to sizeable human population. Indeed, Siberia averages about eight people per square mile.

Although often cold, Russia is not simple one slab of ice. Being huge, Russia incorporates numerous landscape features. Yes, the tundra is cold. Tundra is land that is sufficiently cold so that even trees are uncommon or absent. In fact, the term *tundra*, meaning *treeless*, is a word taken from the language of the Sami peoples who are native to these far northern lands. In Russia the tundra extends across the length of the Arctic coastline from the Kola Peninsula to the Bering Strait (Chapter 97), typically dipping 100-400 miles south of the northern ocean.



Sable home. Photo by Tatiana Bulyankova on Flickr.

However, the dominant physical landscape of Russia is mainly coniferous forest, known there as **taiga**. Although the roots of the word тайга are Turkic, this is a vast Russian landscape. This too stretches the length of the country from Karelia bordering Finland to the Sea of Okhotsk. In contrast to the tundra, taiga lunges fully southward, so that in central Siberia it reaches Russia's southern border there with Mongolia. While much of these forests is comprised of evergreen trees such as larch, there are some deciduous species present. For instance, Russian birch trees often are seen as emblematic of Russian forests. A majority of the land of the world's largest country is taiga. There also are forests in western Russia; however, these show a much higher share of deciduous (broadleaf) trees than found in Siberia.

The Ural Mountains as discussed sometimes mark the division between Europe and Asia. to both the southwest and the southeast of these mountains, Russia features the **steppe** (сренъ) landscape. Steppe is a treeless plain, indeed similar to the American Great Plains in its characteristics. This means that for a share of Russia (perhaps 40%), its forests are bounded on north and south by treeless regions.

Although the Soviet Union had considerable desert area in Central Asia, by itself Russia has little desert or near-desert land, that being a small area along the borders with Kazakhstan and the Caspian Sea.

The Soviet Union had significant mountainous areas in Central Asia and the Caucasus that again by itself Russia no longer holds. In this case, though, Russia has other mountain ranges. The low Ural Mountains are somewhat similar to America's Appalachian Mountains in low elevation, age, and raw material wealth. Some of the mountains of the Caucasus region extend into Russia past the trio of countries there – Armenia, Georgia, and Azerbaijan. This includes Mt. Elbrus, the highest mountain of Russia at 18510 feet. In Siberia, there are several mountain ranges. The Altai Mountains cross Russia's southeastern border with Kazakhstan, as the Sayan Mountains do with China's western border with Russia. East of Lake Baikal are the Yablonoi Mountains which sit south of the Stanovoy Range. Farther north and then east of the Lena River is the Verkhoyansk Range that lie west of the Kolyma Mountains that sit across from the Kamchatka Peninsula (Chapter 92) and its volcanoes.



Lake Baikal. Photo by Sergey Pesterev on Flickr.

There are plenty of lakes in Russia, but by far the most noteworthy are Lake Baikal and the Caspian Sea. Lake Baikal is the world's oldest and deepest lake, filling a mile down between stretches of mountains. The Caspian Sea technically is a lake, for it fails to connect to the world's oceans, thus not meeting the geographic standards to be a **sea**. While the Soviet Union held about 3/4 of the shoreline and thus waters of the Caspian Sea (the rest for Iran), now Russia's share is only about 1/4. In terms of waterways, the historic Volga River is crucial to western Russia, but is considerably smaller and shorter than Siberian streams that are discussed in Chapter 85.



Lake Baikal Panorama. Photo by Sergey Pesterev on Flickr.

Even by random chance, we would expect that the vast lands of Russia would hold a variety of natural resources. This certainly is true, though the remote locations of many of these resources has presented challenges for the extraction and transportation of energy and mineral wealth. Siberia is a treasure trove of energy sites – oil and natural gas (Chapter 83) – and mineral resources – nickel, gold, platinum. In the 1930s Stalin had the city of Magnitogorsk constructed to specialize in the extraction and processing of immense deposits of iron ore nearby. Bordering Ukraine, the Kursk Magnetic Anomaly holds another huge supply of iron ore. The resource city of Norilsk is discussed in Chapter 88.

Again to be clear, Russia is not and was not the same place as the Soviet Union (USSR). Under the tsars, the Russian Empire expanded greatly, especially across Siberia. The land area of the Russian Revolution that overthrew the Romanov dynasty was

roughly the same as the extent of the Soviet Union after World War II. Russia was by far the largest piece of the Soviet Union, both in population and in area; however, there were numerous other pieces too. When the Soviet Union dissolved in 1991, Russia became an independent country, but the other fourteen republics of the USSR did so as well. This geopolitical event distributed a lot of land and a large number of people from the USSR into these new countries. So, Russia is huge in area and big in population, but it is smaller than the Soviet Union was. During the decades of the Soviet Union and ever since then Russia has faced demographic challenges that eventually resulted in Russia having several recent years of more deaths than births. Most population scholars anticipate that Russia's population will shrink in upcoming years and decades.



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The breakup of the Soviet Union led to great disruption within the fifteen successor States. Russia experienced considerable social, economic, and political turmoil. The country's eventual relative stability under the leadership of President Vladimir Putin is responsible for much of his popularity. Putin's emphasis on pushing Russia's international status and clout toward that of the Soviet Union also has been effective in boosting his appeal. Russia annexed Crimea from neighboring Ukraine in 2014 and continues to battle in eastern Ukraine.

Even so, the chaos following the dissolution of the USSR led to great economic disparities and the development of the super-rich oligarch class (Chapter 90). Moscow ranks fourth in the world among cities with numbers of billionaires. In 2019 Credit Suisse Bank in Switzerland ranked Russia as the world's most unequal economy with the top 10% of people owning 83% of Russia wealth.

Russia has inherited many elements of life from the Soviet days. The skewed sex ratio (Chapter 94), heavily favoring numbers of women, is an artifact of male life expectancy in the late Soviet period. Considerable environmental pollution is a legacy of Soviet near total disregard for protecting the natural environment. The ethnoterritorial system (Chapter 86) of managing a multinational State moved from the Soviet Union to the governing system of Russia. The autocratic leadership under Putin is a morphed inheritance of the authoritarian Soviet system, which in its harsh control was an altered version of tsarist autocratic rule.

Although World War II is even further back in history than is the breakup of the Soviet Union, WWII still is noteworthy for Russians. At a bare minimum there were twenty million deaths on the Soviet side. The Battle of Stalingrad caused 3.5 million Soviet deaths alone. While the Stalin era also cost millions of lives as caused by the communist system, unlike the history of WWII, Stalinist history has not been taught well in Russian schools. In fact, in a survey by the Levada-Center in 2019, when asked what role Stalin played in the history of Russia, 70% of answering adults in Russia either said entirely positive or mostly positive. It should not be a surprise that Putin seems to secure the highest ratings of popularity when he emphasizes nationalism, even as far as annexing Crimea away from Ukraine.

Russians comprise a remarkable nation, locked into a huge and often cold land, governed by autocratic leadership.

For this textbook, we are counting Ukraine, Belarus, Armenia, Georgia, and perhaps Moldova in a region to be called the Russian Domain. The peoples of Ukraine and Belarus are mainly Slavic, sharing ethnic and linguistic characteristics with Russians. The lands of Ukraine and Belarus border western Russia and not surprisingly share similar landscape features of forests and the North European Plain. These several lands that now are the countries listed here share historical links with Russia, territorial occupation and conquest both in the tsarist era and during the Soviet Union.

Did you know?



Steppe eagle. Photo by Francesco Veronesi.

The steppe eagle breeds in Siberia and Kazakhstan. In 2019 a tagged steppe eagle send accumulated GPS data back to scientists in Russia. Unfortunately, the eagle had flown to Iran, so that when the data was sent, it accumulated huge roaming charges.

The Siberian tiger does live in the taiga.

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