Chapter 3: North America

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Chapter 3: North America (Fig. 3.1)

[Map of North America with various economic data points and elevation markers.]
Learning Objectives

- Your first opportunity to apply introductory concepts to a region
- Apply concepts of globalization to a familiar region
- Understand the following concepts and models:
  - Acid rain
  - Concentric zone model
  - Counterurbanization
  - Digital divide
  - Ethnicity
  - Gentrification
  - Megalopolis
  - Urban realms model
Introduction

• North America includes the U.S. and Canada
  – Culturally defined region, not continentally defined
  – Both countries are in the final stage of the demographic transition (low birth rate, low death rate)
  – Postindustrial economy with modern technology, innovative financial and information services, and popular culture
  – 315.5 million residents (U.S. – 284.5 million; Canada – 31 million)

Environmental Geography: Threatened Life of Plenty
  – North America has a diverse physical setting, rich in resources, that has been heavily modified by human activities
Environmental Issues in North America (Fig. 3.8)

Arctic National Wildlife Refuge. Rich in both petroleum resources and natural beauty, the Arctic National Wildlife Refuge has become a focus of debate between energy, environmental, and Native American interests.

Los Angeles Air Quality. The topography and climate of Los Angeles create an ideal setting for urban air pollution. Even though stricter standards have selectively improved L.A.’s air quality since 1965, automobiles and industry continue to make it one of the realm’s smoggiest metropolitan areas.

Ogallala Aquifer Depletion. With cookie cutter simplicity, center-pivot irrigation systems water the plains of western Kansas. Beneath these green fields, however, is the shrinking Ogallala Aquifer, a fast-diminishing resource destined to frustrate future farmers in the region.

Acid Rain. Acid precipitation has devastated hundreds of sensitive lake environments across eastern Canada. Aquatic life has often been eliminated from the lakes, and surrounding forests have also been adversely affected by these human-induced environmental changes.

Coastal Pollution in the Chesapeake Bay. The delicate ecological balance of the Chesapeake Bay has been severely disrupted by surrounding urban areas, factories, and farms. Can the setting remain a sustainable fishery, a weekend recreation destination, and a major corridor of industrial and metropolitan development?
Environmental Geography

• A Diverse Physical Setting
  – Eastern mountains (Appalachians, Piedmont) from 3,000-5,000 ft.
  – Western mountains include earthquakes, volcanoes, alpine glaciers, and erosion; Rockies reach more than 10,000 ft.
  – Great Plains in the center

• Patterns of Climate and Vegetation
  – Great variation in climate and vegetation because of latitudinal range, varied terrain (altitude) and oceans
  – Maritime climates in coastal zones (moderated temperatures)
  – Continental climate in the interior (great temperature range)
    • Frequent winds, including tornadoes
    • Natural vegetation often replaced by farm
**Physical Geography of North America (Fig. 3.4)**

**Seattle.** Residents of the Pacific Northwest enjoy the amenities of their mountain scenery, but many Cascade peaks, such as Washington's Mt. Rainier, are still-active volcanoes that threaten nearby metropolitan areas.

**San Francisco and Los Angeles.** California's two largest earthquake hazards are shared, but stress faults as smaller desert rifts pass through these large metropolitan areas and pose great seismic risks in the twenty-first century.

**Salton Sea.** California's largest lake was accidentally created in 1905 during an irrigation project along the Colorado River. A century later, the lake has extensively altered both its environment and economy.

**Iowa.** Focus of one of the world's great food-producing regions, Iowa and much of North America's interior benefit from good soils and growing conditions for many crops and livestock products.

**Lower St. Lawrence River.** Entryway to a continent, the St. Lawrence and Great Lakes system offers an extraordinary natural pathway deep into the heart of North America.

**Mississippi River.** The Mississippi River and other major North American waterways often flood in the spring and summer as melting winter snows combine with heavy precipitation.

**Gulf Coast and Florida.** Much of the southeastern United States faces the annual summer and autumn threat from tropical hurricanes. Although they bring benefits of needed moisture, their winds and stormy seas periodically threaten cities such as New Orleans and Miami.
• Physiographic provinces
  – North to South orientation of mountain ranges has a pronounced effect on climates and has influenced east-west movement.
Climate Map of North America (Fig. 3.7)

A TROPICAL HUMID CLIMATES
- Af: Tropical wet climate
- Aw: Tropical savanna climate

B DRY CLIMATES
- BWh: Subtropical desert
- BSk: Midlatitude steppe

C MILD MIDLATITUDE CLIMATES
- Cfa: Humid subtropical, without dry season, hot summers
- Cfb: Marine west coast, without dry season, warm to cool summers
- Cs: Mediterranean summer—dry
- Cfc: Marine west coast, short, cool summers

D CONTINENTAL MIDLATITUDE CLIMATES
- Dfa: Humid continental, warm summer
- Dfb: Humid continental, cool summer
- Dfc: Subarctic

E POLAR CLIMATES
- ET: Tundra
- EF: Ice cap

H HIGHLAND
- H: Complex mountain climates
Climate Factors

- **Continentality** – Large landmasses at high latitudes – Temperature extremes in the interior
- **Rain shadow effect** - Precipitation in Eastern North America declines toward the west
  - Westerlies are intercepted by the coastal ranges
  - Winds from the Gulf of Mexico lose their moisture as they penetrate the continent
  - The 20 inch isohyet is an important division – particularly agriculturally
Gulf-Atlantic Coastal Plain & Piedmont

- **Gulf-Atlantic Coastal Plain**
  - Drained by many short rivers which flow from the interior to the coast
  - Would be most affected by rising sea levels from global warming

- **Piedmont**
  - Foothills to the east of the Appalachian highlands
  - Early settlements often were made at the fall line to take advantage of water power & because it was a break-in-bulk point
Gulf Coast
• Appalachian Highlands
  – Low, old mountain range
  – No major impediment to transportation
  – Resource area – coal, iron ore etc.
• Interior Highlands
  – A dissected plateau known as the Ozarks
Interior Lowlands &
Canadian Shield & Arctic Coastal Plain

- **Interior Lowlands**
  - Much of the best agricultural land
  - Parent material for the soil for much of the area is glacial till

- **Canadian Shield (encircles Hudson Bay)**
  - The oldest rocks in North America
  - The “core” of the North American continent
  - Very thin soil – developed after the last glacial advance

- **Arctic coastal Plain (south coast Hudson Bay)**
  - Cold area – difficult to develop
  - Permafrost
Interior Lowlands
Great Plains & Rocky Mountains

• Great Plains
  – Semi-arid area – gets drier from east to west
  – Wheat growing areas of U.S. and Canada

• Rocky Mountains
  – North-South orientation affects climate
  – Storehouse of many minerals
  – Lumbering & winter-sport tourism
  – Younger mountains than Appalachians, therefore more of an impediment to transportation.
Intermontane Basins – Plateaus & Pacific Mountains and Valleys

• Intermontane Basins & Plateaus
  – Rather dry area
  – North/south oriented – Between the Rockies and Sierra Nevada/Cascade ranges

• Pacific Mountains and Valleys
  – First interruption of westerly winds (orographic precipitation) – north-south orientation
  – Three large, useful valleys
    • California’s Central Valley
    • Cowlitz-Puget Sound lowland of Washington and Oregon
    • Lower Fraser Valley in British Columbia
Intermontane Plateaus & Basins
A Threatened Life of Plenty

• The Costs of Human Modification
  • Increasing population and expanding agriculture are changing North America
  – Transforming Soils and Vegetation
    • Europeans brought new species (ex.: wheat, cattle, horses – one side of the Columbian Exchange)
    • Settlers cut millions of acres of forest, replaced grasslands with non-native grain and forage crops
    • Soil erosion is a result of unsustainable farming practices in the Great Plains and the South
A Special Distinction

- The blessings of climatic diversity
  - The only country in the world that has every kind of climate type.
    - Every kind of plant can be grown somewhere in the USA
    - The whole USA – 48 states, Alaska, Hawaii, & Puerto Rico
  - Of all the countries in the world, the USA is the country most nearly able to be self-sufficient in food production
Managing Water

- City dwellers use 170 gal/person/day
- Agriculture/industrial users average 1,500 gal/person/day
- Allocation
  - 45% manufacturing & energy production
  - 40% agriculture
  - 15% home and business
- Quality and quantity of water are both problems
  - Clean Water Act in U.S.
  - Green Plan in Canada
Human Modification

• Altering the Atmosphere
  • Activity in cities raises the temperatures above nearby rural temperatures
  • Air pollution from factories, utilities, and vehicles
  • **Acid rain** occurs when airborne pollutants (sulfur & nitrogen) mix in chemical reaction to make acidic precipitation; originates in industrial areas, comes down far away
  • Global warming & rising sea levels

• The Price of Affluence
  • North Americans use almost twice as much energy per capita as the Japanese and more than 16 times that of people in India
  • Toxic waste, poor air quality, wild lands lost to development, excellent farmland lost to “development”
  • Increased medical costs – asthma, emphysema, skin cancers (from ozone depletion) etc.
Population and Settlement: Reshaping a Continental Landscape

- **Modern Spatial and Demographic Patterns**
  - Settlement is uneven in the region
  - N. America has 315.5 million (284.5-U.S.; 31-Canada)
  - **Megalopolis**: largest settlement cluster in the U.S. (Boston-Washington, DC)

- **Occupying the Land**
  - Indigenous people occupied N.A. at least 12,000 years
  - Europeans came to N.A. 400 years ago
  - European diseases and disruptions reduced Native American populations by 90% in some areas.
**Population Map of N. America (Fig. 3.10)**

**Rural Iowa.** Many rural Iowa counties continue to lose population as young people leave farms in search of better employment opportunities. The resulting demographic and economic declines have affected dozens of small towns across the U.S. Great Plains and Canadian Prairies.

**Vancouver.** Vancouver has been a major recipient of recent Asian immigrants, and its proximity to the Pacific Rim suggests that the migration pattern will continue in the twenty-first century.

**Las Vegas.** Las Vegas continues to be the fastest growing city in the American West. Approaching a population of 2 million people, this blossoming southern Nevada metropolis faces significant water shortages in the decades to come.

**New York.** With more than 20 million people, the New York City metropolitan area is North America’s largest urban setting. Much of the recent growth has occurred in the suburbs that ring the city from New Jersey to southwestern Connecticut.

**South Florida.** South Florida continues to see rapid population growth. Northern retirees as well as Latin and Caribbean immigrants have contributed to the influx of people across the region.

**PEOPLE PER SQUARE KILOMETER**
- Fewer than 5
- 5-25
- 25-50
- 50-100
- More than 100

**POPULATION:**
- Metropolitan areas 1,000,000–5,000,000
- Metropolitan areas over 5,000,000
• Three settlement stages for Europeans
  – Stage 1: 1600 - 1750: European colonial footholds on East Coast (French, English, Dutch, Spanish, enslaved Africans)
  – Stage 2: 1750 - 1850: Infilling better eastern farmland, including Upper Ohio & Tennessee Valleys, Interior Lowlands, Midwest, Interior South; Canadian settlement slower
  – Stage 3: 1850 - 1910: Westward movement (immigrants & American-born Europeans) heading west for gold rushes and other opportunities
Good Hydrography (water)

• **Two major drainage systems**
  – Great Lakes-St. Lawrence River
  – Missouri-Mississippi Rivers

• **Best inland water transportation system in the world**
  – Canals connect the two major systems – Illinois River to Lake Michigan
  – Canal around Niagra Falls – St. Lawrence Seaway made Chicago a seaport

• **Western rivers – no comparable roles for transportation** – Hydroelectricity, Drinking and irrigation water sources
North America on the Move

• **Westward-Moving Populations**
  – By 1990, more than half of U.S. population west of Mississippi River

• **Black Exodus from the South**
  – After emancipation, most African-Americans stayed in the South
  – Movement north for jobs
  – 1900: more than 90% of African-Americans lived in the south; today, only 50% live there
  – Some Blacks returning to the South
Migration

- **Push Factors** – drive people away from home
  - Undesirable conditions in the homeland that make emigrating seem desirable
  - Depressed economy, famine, persecution, war, etc.

- **Pull Factors** – attract people to leave home
  - Desirable conditions in the receiving country which attract immigrants
  - Freedom from persecution & repression, economic opportunities, etc.
United States Population Change by County 1634-1951

1634
More Migration

- Rural to Urban Migration
  - Today, more than 75% of North Americans live in cities (2,500 or more people)
- Growth of the Sun Belt South
  - Fastest growing region since 1970, with some states growing by 20% (GA, FL, TX, NC)
- The Counterurbanization Trend
  - Since 1970, some people have moved to smaller cities and rural areas
    - Lifestyle migrants: seeking amenities
- Settlement Geographies: The Decentralized Metropolis
  - Urban decentralization: when metropolitan areas sprawl in all directions and suburbs take on the characteristics of downtown
Growth of the American City (Fig. 3.13)

1. Walking/Horsecar (before 1888)
2. Electric Streetcar (1888-1920)
3. Recreational Automobile (1920-45)
4. Freeway (1945-present)

Result of technological change.
Urban Models

• **Concentric Zone Model:** Urban land uses organized in rings around the Central Business District

• **Urban realms model or *Edge Cities:***
  – New suburbs with a mix of retail, office complexes & entertainment
Changing Urban Patterns

• **Consequences of Sprawl:**
  – People and investment flee city for suburbs
  – Poverty, crime, racial tension in cities

• **Gentrification:**
  – Movement of wealthier people to deteriorated inner-city areas; may displace low income residents

• **Suburban downtowns:**
  – Similar to edge cities; suburbs becoming full-service urban centers with retail, business, education, jobs, etc.
North Americans historically have favored a dispersed rural settlement pattern

- Township-and-range survey system: Rectangular survey system introduced in 1785 in U.S. for unincorporated areas; similar system in Canada
  - Railroads opened interior to settlement
  - Today, many rural areas are experiencing population declines, as family farms are replaced by corporate farms
Most of Canada’s population lives within 200 miles of the US border.
The Roots of a Cultural Identity

- Early dominance of British culture, then Consumer Culture after 1920 provided common experience.

Ethnicity – group of people with a common background & history identify with one another (sometimes as a minority group in larger society); both Canada & U.S. have many minorities – can be the basis of nationalism.

Peopling North America

- Cultural assimilation – the process in which immigrants are absorbed by the larger host society.
• **Migration to the U.S.**
  – Five distinct phases determined by immigrants’ number and source regions
    • Phase 1: before 1820: English and Africans
    • Phase 2: 1820-1870: Irish and Germans
    • Phase 3: 1870-1920: Southern and Eastern Europeans
    • Phase 4: 1920-1970: Canada, Latin America, but overall numbers of immigrants drops
    • Phase 5: 1970-present: Latin America, Asia, and overall numbers rise again

• **The Canadian Pattern**
  – Similar to U.S., but with larger French presence
  – Today, 16% in Canada are foreign-born
U.S. Immigration, By Year and Group (Fig. 3.17)
In modern times, many immigrants are the result of wars and terrorism.
America continues to appear to be the pot of gold at the end of the rainbow for many people around the world.
North America’s cultural diversity expressed two ways geographically

- People with similar characteristics often congregate and derive meaning from their territory
- Distinctive cultures leave their mark on the landscape
Ethnicity

• Persisting Cultural Homelands
  – French-Canadian Quebec
  – Hispanic Borderlands
  – African-Americans in the “Black Belt”
  – Cajuns in Southern Louisiana
  – Native American Reservations

• Persisting urban ethnic neighborhoods
  – The Hill (Italian neighborhood) in St. Louis
Selected Cultural Regions of North America (Fig. 3.18)
Culture & Place

- A Mosaic of Ethnic Neighborhoods
  - Smaller scale ethnic signatures can shape both rural and urban landscapes
  - Can have political impacts

- Patterns of North American Religion
  - Dominance of Protestantism in the U.S. (60%)
  - Regional concentration of American Catholics, Jews
    - Catholics are the largest single denomination in USA
  - Millions with religious or secular traditions apart from Christianity
  - Canada: 40% Protestant; 25% Roman Catholic
  - Increasing diversity: Hindus, Buddhists, Muslims, etc.
Globalization of American Culture

• North Americans: Living Globally
  – Many international tourists, students in North America
  – Globalization of culture (international restaurants, imports, music, etc.)

• The Global Diffusion of U.S. Culture
  – U.S. culture has impact on billions since WWII
    • Global corporate culture, advertising, consumption
    • Other countries challenge U.S. influence
Cultural Pluralism

• **Definition:** Society with 2 or more population groups, each practicing its own culture, live adjacent to one another without mixing inside a single state – *can be centrifugal force*

• **Strongly geographical in Canada**
  – French Canadians concentrated in Quebec
  – Quebec independence movement near majority

• **U.S.A. not so geographically pronounced**
  – Some groups are somewhat more concentrated geographically, but they are still quite mixed
  – English remains the language of all people though not officially – English language movement
The Cree and Inuit of northern Quebec held their own plebiscites and voted to remain in Canada.
No Ethnic Minority Has a Majority
Patterns of Dominance & Division

• Creating Political Space
  – U.S. broke cleanly, violently from Great Britain; Canada separated peacefully
    • U.S. purchased and conquered new lands
    • Provinces of Great Britain joined Canada

• Continental Neighborhoods
  • Long boundary between U.S. and Canada
    – Many cross-boundary issues
    – Water resources, transportation, environmental quality
  • North American Free Trade Agreement (NAFTA)
    – Brings Mexico into the picture.
Geopolitical Issues in North America (Fig. 3.23)

**Salmon Wars.** Recent negotiations between the United States and Canada have eased tensions between the two countries over contested fisheries in the North Pacific. Still, potential exists for more trouble in the future.

**Commercial Lumbering.** U.S. loggers have protested British Columbia timber operations, arguing that the provincial government has given Canadian lumber companies special privileges and an edge in competing with their southern neighbors.

**Illegal Immigration.** Will NAFTA’s success lead to more or less immigration across the U.S./Mexico border? As trade linkages grow closer, so do the destinies of people north and south of the international border.

**Baffin Island.** Baffin Islands are now a part of the new Canadian Territory of Nunavut. Canada’s native peoples may see additional territorial representation in the north during the 21st century.

**Terrorist attacks.** The hijacking of commercial airliners and the terrorist attacks on the World Trade Center and Pentagon in 2001 ushered in a new era of political uncertainty for the United States.

**Puerto Rico.** Puerto Rico’s political future remains uncertain. Currently a U.S. Commonwealth, Puerto Rico may one day be independent or become the 51st state.
Historical Framework

• The Legacy of Federalism
  • **Federal states:** those that allocate considerable power below the national level
  • **Unitary states:** those with centralized power at national level
    – Quebec’s Challenge
      • French-speakers consider secession from Canada
    – Native Peoples and National Politics
      • In the U.S., Indian Self-Determination and Education Assistance Act of 1975 and the Indian Gaming Regulatory Act (1988)
      • In Canada, Native Claims Office (1975) (Canada) and Nunavut Territory (1999)
A Global Reach

• U.S.’s geopolitical reach is beyond our borders
  – Monroe Doctrine (1824) asserted U.S. rights in Western Hemisphere
  – WWII and Truman Doctrine gave U.S. wider world role
  – North Atlantic Treaty Organization (NATO), Organization of American States (OAS)
  – Other international involvement: Korea (1950–1953); Vietnam (1961–1973); Afghanistan and Iraq
Economic & Social Development

• North America has the world’s most powerful economy and its wealthiest population

• An Abundant Resource Base
  • Direct extraction of natural resources makes up 3% of U.S. economy, and 6% of Canadian economy

  – Opportunities for Agriculture
  • Highly mechanized and productive
  • Good land being lost to “development.”
  • Agriculture employs 2.6% of U.S., and 3.7% of Canadian labor force
  • Geography of farming in North America determined by (1) diverse environments; (2) continental & global markets for food; (3) historical patterns of settlement & agriculture
An Abundant Resource Base (cont.)
- Industrial Raw Materials
  - North America has abundant resources, but still imports raw materials
  - U.S. produces 12% of world’s oil, consumes 25%

Creating a Continental Economy
- Connectivity and Economic Growth
  - Connectivity fosters economic growth
    - **Connectivity**: how well regions are linked together by transportation and communication
Major Economic Activities of North America (Fig. 3.23)
Growth of the Manufacturing Belt – sometimes called the “Rust Belt” today.
Population Shifts

Population Distribution, 1900

- Midwest: 34%
- South: 32%
- West: 6%

Population Distribution, 1999

- Midwest: 23%
- South: 36%
- West: 22%

Least Populated

- Northeast: 26%
- South: 32%
- West: 6%

Most Populated

- Northeast: 19%
- South: 36%
- West: 22%

SUNBELT
Creating a Continental Economy

• The Sectoral Transformation
  – Changes in employment structure signaled modernization
  – Sectoral transformation: the evolution of the nation’s labor force from primary sector activities to secondary, tertiary and quaternary activities
    • Primary: natural resource extraction
    • Secondary: manufacturing/industrial
    • Tertiary: services
    • Quaternary: information processing
    • Today, tertiary and quaternary activities employ more than 70% of the U.S. and Canadian labor force
Regional Economic Patterns

- **Location factors**: the varied influences that explain why an economic activity is located where it is
  - Factors include proximity to natural resources, connectivity, productive labor, market demand, capital investment
  - Major manufacturing regions: megalopolis and Midwest, Sunbelt areas, West Coast locations
  - Other influences on economic activities: government spending, access to innovation and research, agglomeration economies
The Economy

• North America & the Global Economy
  – North America plays a pivotal role in global economy
  – Spurred the creation of the International Monetary Fund (IMF), the World Bank, & the World Trade Organization (WTO)
  – U.S. & Canada members of Group of Seven (G-7)
    • A collection of powerful countries that regularly confer on world political and economic issues

• Patterns of Trade
  – North America is prominent in both the sale and purchase of goods and services in international economy
• North America and the Global Economy (cont.)
  – Patterns of Investment in North America
    • Foreign capital comes to North America as investments in North American stocks and bonds and as foreign direct investment (FDI)
  – Doing Business Globally
    • Many U.S. firms have established businesses abroad
    • U.S. pension dollars invested in Japan, Europe
Persisting Social Issues

• Wealth and Poverty
  – Strong contrasts among communities and ethnicities
    • Black household incomes are 64% of the national average and Hispanic incomes are 72% of the national average
  – Regional contrasts
    • In U.S., Northeast and West are richest regions
    • In Canada, Ontario and B.C. are wealthiest
  – North American poverty rates have fallen
    • Problems still remain in rural and inner city areas
    • Digital divide: region’s poor and underprivileged have less access to Internet connections
Persisting Social Issues (cont.)

- Twenty-First Century Challenges
  - U.S. and Canada’s social indicators compare favorably, but concerns persist
    - Jobs, education
    - Health care, chronic disease & aging
    - Gender gap
- Conclusions
  - North America enjoys abundance, but must work with diverse populations to address challenges
Aging Population

- **Growing Problem**
  - The sandwich generation

- **Growing Expense**
  - Funding Social Security & Medicare
Similarities

- ANGLO-AMERICAN LABEL – not completely descriptive
- ENGLISH OFFICIAL LANGUAGE (with 2nd languages)
  - Canada – de jure English & French
  - USA – de facto English
- JUDEO-CHRISTIAN FOUNDATION – ethics and mores
- EUROPEAN NORMS – Western culture foundation in government, architecture, art, diet, etc.
- HIGHLY URBANIZED & MOBILE POPULATIONS
- HIGHLY EDUCATED POPULATIONS
- HIGH INCOMES (large spread between rich and poor)
- MANUFACTURING OUTPUT – CORNERSTONE OF DEVELOPMENT (Declining in importance)
- FEDERAL STATES WITH PLURAL SOCIETIES
More Similarities

• Well-developed infrastructure
• Increasing multiculturalism
• Changing population distribution (more USA)
  – Settlement by immigrants
• Somewhat similar landscapes
  – Western mountains & central plains
  – Urbanization – city structure
• Highly involved in the global economy
• Growing relationship with Latin America
  – NAFTA & possible expansion
• International involvement – UN, NATO, GATT
Differences

- Climatically, Canada is colder – much smaller area for productive agriculture
- Canadian population is highly concentrated along the U.S. border – 11% of US population
- Canada still has non-binding ties to Britain
- Canada has a dissatisfied ethnic minority which has a geographic base which could lead to devolution – Quebec – two official national languages
- Native Americans (Inuit) have gained a more significant role in their affairs

End of Chapter 3: North America