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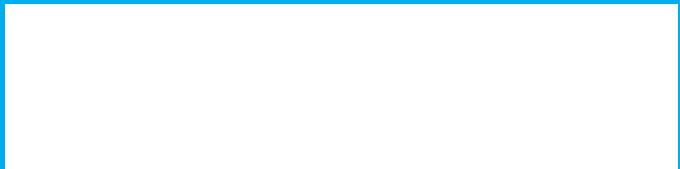
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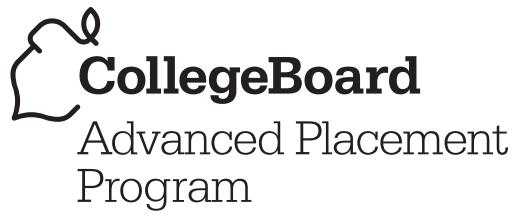
Geography

2006–2007
Professional Development
Workshop Materials

Special Focus:
Globalization

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AP® Human Geography

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Workshop Materials

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Table of Contents

Special Focus: Globalization

Introduction	
Ann Linsley-Kennedy.....	3
Globalization: An Historical Geography of the World Economy	
Brian W. Blouet.....	4
Globalization and International Relations: A Geographical Perspective	
William B. Wood	28
Globalization and Economic Geography	
Thomas L. Bell and Margaret M. Gripshover	32
Recent Developments: Globalization, Agriculture, and Human Geography	
Gary S. Elbow	50
Singapore: The Most Globally Integrated Place on Earth	
Jeffrey W. Lash.....	55
A Snap Shot in a Case Study: Topics in Human Geography	
Ann Linsley-Kennedy.....	60
From Mocha to Java: The Coffee Story	
Cheryl Jenkins Guy.....	66
Contributors.....	72
Contact Us.....	74

Important Note: The following set of materials is organized around a particular theme, or “special focus,” that reflects important topics in the AP Human Geography course. The materials are intended to provide teachers with resources and classroom ideas relating to these topics. The special focus, as well as the specific content of the materials, cannot and should not be taken as an indication that a particular topic will appear on the AP Exam.

Introduction

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The articles and teaching materials that follow develop a theme that transcends the AP® Human Geography curriculum. There are several prevailing threads that bind the curriculum areas of human geography, but none as currently pervasive, universal, and collectively altering to the world’s population as globalization.

Today, the concept of globalization is commonly defined as the integration of economic activities through the world’s markets. These activities are driven by technological and policy changes, facilitating shifts in transportation options, communications, and a greater reliance on market forces. Geography is concerned with the concept of space and the places through which the human world is organized. Globalization is creating a reorganization of these spaces and places, resulting in a collapse of spatial barriers that previously regulated culture, nations, and economic flows. Ultimately, such changes in technology and the economy result in alterations of cultural, economic, and political spaces.

Globalization ties the political, social, and economic sciences together, resulting in an emerging regionalized and reorganized world centered on economics, which, in turn, has restructured the flow of commodities, people, currencies, and ideologies. The articles that are included here provide teachers with an overview of each of the curriculum areas (agricultural, cultural, economic, and political) that are most affected by the aspects of globalization. Each author has provided an analysis of the role of globalization within a spatial context and its impact upon human places and activities. Topics addressed include the geographic inequality that creates shifts in populations to areas of emerging employment opportunities; the geographic interrelatedness forcing the restructuring of nations, places, and regions; the struggle to preserve traditions while faced with the demands of an emerging global culture; and the challenges to environmental sustainability balanced against human demands for the earth’s resources and bounty. The intent is to bind the disciplines of human geography together, to develop a global understanding of the everyday world around us locally, regionally, and globally.

Special Focus: Globalization

Globalization: A Historical Geography of the World Economy

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Outline

This article commences with an overview of trade policies and conflicts from the Age of Exploration through the end of World War II. The development of freer global trade policies in the last half century is examined in the second half of this article under the heading “G.3: From Containment to Free-Market Competition.”

Introduction

Humans are a global species adaptable to tropical, temperate, and tundra environments. By the end of the last ice age, humans had globalized, having migrated from Africa and Eurasia to the Americas and penetrated the most southerly areas of South America.

Today when we speak of globalization, we are referring to the reduction of barriers to international trade and the movement of cultural traits, ideas, capital, and elements of popular culture around the world. Humans still migrate long distances, but the language of globalization does not include the free movement of people. Most countries have immigration laws that limit entry. But there has been progress for, until recently, Communist countries—including China, the Soviet Union, and the states of Eastern Europe—in controlled outmigration or emigration. Now more people are free to migrate internationally, if they can obtain residence in their country of destination.

The Global System

The globalization of today that encourages the movement of raw materials, manufactured goods, agricultural commodities, and investment can be viewed as evolving in three stages, with two major retrogressive intervals:

Globalization, Stage 1 (“G.1”): The Age of Exploration, 1492–1776
Retrogression: The Atlantic Wars, 1776–1815

Globalization, Stage 2 (“G.2”): The Age of Industrialization, 1815–1947
Retrogression: World War I, the Great Depression, World War II

Globalization, Stage 3 (“G.3”): Post-WWII—From Containment to Free Market Competition, 1947 to the Present

G.1: The Age of Exploration (1492–1776)

The voyages of exploration of the sixteenth, seventeenth, and eighteenth centuries opened up world resources to exploitation. Magellan’s round-the-world voyage made a profit! The sale of the spices on the one ship that completed the circumnavigation of the globe more than paid for the enterprise. The new world yielded precious metals, timber, dyes, and harvests of sugar and spices and things not so nice such as tobacco. Plants and animals like wheat and sheep were introduced into Western Hemisphere environments, and corn, potatoes, beans, tomatoes, and squashes were transferred into Old World agriculture.

The age of exploration resulted in a great opening up of earth resources: animal, vegetable, and mineral. However, the colonial powers that exploited distant territories created closed systems. They did not promote trade with each other, and monopolies were encouraged within colonial systems. The colonial systems were mercantilist.

Spain developed a closed colonial economic system. All trade with the Spanish Americas was conducted through Seville, a port city on the Guadalquivir River that flowed to the Atlantic. Vessels could only trade with designated ports in the Caribbean and the Gulf of Mexico and sailed in convoys (*flotas*) for protection and control. The Spanish colonial trade system stretched across the Pacific to the Philippines, but trade between Acapulco and Manila was regulated.

The Portuguese system was not so closed as the Spanish. Brazil produced more sugar than Portugal could absorb, and the commodity was sold into Dutch markets. The Dutch and the English crowns encouraged private corporations to undertake overseas trade and settlement, but the companies—for example, the Dutch East India Company, the Virginia Company, and the English East India Company—were often given monopolies. As is well known, it was the extension of the (English) East India Company’s monopoly on the tea trade to the American colonies that set off trouble.

The leaders of Britain, France, Portugal, and Spain did not want to open up their colonial trade to competition from rival nations, although the Dutch tried to force them to do so. Nevertheless, conflicts among these powers did destroy or change their trading systems.

Special Focus: Globalization

Regression: The Atlantic Wars (1776–1815)

The Atlantic wars, starting with the American Revolution, broke up, damaged, or modified closed colonial systems. During the Napoleonic Wars, France came to control much of Europe and under the Continental System worked to exclude British trade from the region. For its part, the Royal Navy blockaded the coasts of Europe and only allowed into ports authorized cargoes, profitable to Britain. Sugar from French Caribbean islands was not admitted, and it was at this time that French manufacturers began to use sugar extracted from sugar beets. As we shall see, in the twentieth century, those who would control the continent of Europe became keen to seek synthetic substitutes to reduce the need for imports.

At the end of the Napoleonic Wars, there was a new world order. The Spanish empire in Mexico, Central America, and South America had gone. Brazil was on the way to separating from Portugal. The French and the Dutch lost overseas territories.

The British gained strategic territories like Malta, Ceylon, Mauritius, and the Cape of Good Hope, but their imperial vision was altering. The wars had not halted the Industrial Revolution, and now British traders wanted access to overseas markets as an outlet for cotton textiles, ceramics, metalware, and many other goods. The Royal Navy was able to assure freedom of navigation and suppress piracy from a network of overseas bases that spanned the globe.

G.2: The Age of Industrialization (1815–1913)

The Congress of Vienna (1814–1815) brought peace among the nations of Europe, but the end of the Napoleonic Wars was marked by a slump in world trade. The United States, via the Monroe Doctrine (1823), made it clear that it did not want new colonial claims in the Western Hemisphere, and this view coincided with Britain's. Britain wanted the former Iberian colonies opened to trade and, as independence came, quickly recognized the new Latin American states and appointed consuls to facilitate travel and trade by British subjects. Argentina was recognized in 1825 and a consul appointed at Buenos Aires. Other newly independent Latin American states were recognized.

In Britain, the advantages of worldwide competitive trade were realized, and as the manufacturing industry grew and the population urbanized, new interests questioned the need to protect British farmers with high tariffs that kept out cheap food from overseas sources. In 1846, with the repeal of the Corn Laws, markets in Britain were opened to cheaper grain grown on the prairies and plains of North America, the grasslands of Australia, and the steppes of south Russia. Soon cheaper sugar from

non-British Caribbean islands, such as Cuba, was reaching markets in Britain as the country moved toward a policy of free trade, eliminating tariffs on goods entering the country.

There was an imperialism to free trade, for free trade is a policy for strong countries with goods and services to sell worldwide.

Protecting Markets

Other countries saw advantages in protecting home markets to encourage the growth of industries in national territory. The second half of the nineteenth century was marked by an increasing size of states as countries unified, or reunified, in part to create and protect larger market areas. The Civil War prevented fragmentation of the U.S. market, in Japan the Meiji Restoration (1868) established a central government that implemented nationalistic economic policies, and the German empire was created in 1871 (many German states had formed the *Zollverein*, a customs union, in 1834). Italy emerged between 1859 and 1870. From an economic viewpoint, the most interesting of the emerging larger states was Austria-Hungary, which in 1867, with the *Ausgleich* (“compromise”), created the dual monarchy with joint foreign and financial policies. Austria-Hungary had free trade between the countries and regions of the empire, common tariffs on goods entering the economic space of the imperial system, and eventually, a common currency and financial policies. The Austria-Hungary economic model was a forerunner of the European Union.

The United States, which industrialized rapidly after the Civil War, saw the advantages of protecting the home market for growing industries with tariffs. By the 1890s, the United States had the largest economy in the world and a positive balance in international trade, but this did not stop President McKinley from imposing even higher protective tariffs.

Protecting Free Trade

By 1900, Britain was enjoying the benefits, and suffering the disadvantages, of free trade. Britain was a market in which goods from many sources competed for sales, and prices were competitive. On the debit side, cheaper products—made in Germany, for example—were entering Britain and taking market share from British manufacturers. Further, as Britain imported so much, the country had an adverse balance of trade with all major trading partners and, against popular belief, an adverse trade balance with her overseas territories.

Special Focus: Globalization

Table 1: U.S. Leading Trade Partners, 1900

In 1900, total U.S. imports were valued at just over \$1 billion and exports were worth \$1.5 billion.

	Imports From (in millions of dollars)	Exports To (in millions of dollars)
Canada	\$39	\$95
UK	\$160	\$534
Japan	\$33	\$29
Germany	\$97	\$187
France	\$73	\$83
Mexico	\$29	\$35

SOURCE: B. R. MITCHELL, *INTERNATIONAL HISTORICAL STATISTICS: THE AMERICAS, 1750–1993*, NEW YORK: STOCKTON PRESS, 1998.

How was the huge adverse balance of trade paid for? British trading and investment institutions were at the center of the global commercial system. The pound sterling was the leading currency used in international trade, the banks in London cleared payments, the British shipping lines carried more than half of all world trade, Lloyd's insured the ships, and investment houses put profits into the London Stock Exchange and British bank notes. Overseas investments were made in Canada, Argentina, the United States, Chile, Australia, New Zealand, India, and the Far East. Dividends from these overseas investments helped pay for imports.

When, in 1903, British manufacturing interests wanted tariff reform (protectionism), the campaign was opposed by bankers, investment institutions, insurers, shipping lines, and merchant houses. No political party, prior to World War I, would adopt a policy of tariff reform. There was more money to be made in the global economy than in producing metal products on northern coalfields, and there was an expanding export market for British coal in western Europe and to coal bunkers in ports around the world.

In the years before World War I, international trade accounted for a higher percentage of total global economic activity than was achieved until the late twentieth century. The international movement of voluntary migrants was at high levels with Britons, Germans, Scandinavians, Italians, Bohemians, and Poles coming to America and other countries like Australia, Argentina, Canada, New Zealand, and Brazil. Migrants entered and settled with few restrictions if they were of European origin.

Regression: World War I, the Great Depression, World War II (1913-1947)

Commentators look back on the prewar years as the golden age, the Edwardian era, the *belle époque*, for the system of relatively free movement of people, goods, commodities, and currencies was to be crippled by World War I. Woodrow Wilson set out some of the conditions of globalization in his Fourteen Points address: freedom of navigation, reduction of armaments, open diplomacy, and the removal of barriers to trade among all nations. Nothing of the sort happened. The unified Austria-Hungary economic space broke into new countries, each with its own tariff barriers and generally weak currencies.

All European states taking part in the war ended the war in debt. Germany and its allies had unpayable bills for reparations. When payments were behind, in January 1923, French and Belgian troops moved into the Ruhr. Much German industry shut down, and the mark became nearly worthless. Worse, as the economist Keynes had predicted in *The Economic Consequences of the Peace* (1919), the economy of Europe could not thrive without Germany.

The United States had apparently done well in the war, emerging as by far the strongest economy and the largest creditor, with New York assuming the role of global financial center. Postwar the prices of agricultural commodities such as wheat were high. New industries like the cinema and radio emerged and, along with the mass marketing of cars, urban growth (the United States had an urban majority by 1920), suburbanization, and sales of consumer goods, it appeared that the country was poised for sustained economic growth.

The Great Depression

The stock market crash (1929), followed by the near collapse of the banking system, led to the shutdown of many manufacturing activities and massive unemployment. With U.S. financial institutions greatly weakened, other interests were able to lobby for protectionist policies. The infamous Hawley-Smoot Tariff Act (1930) raised tariffs at a time when the United States had a positive trade balance with all major trading partners except one! Japan was the exception, and the deficit with Japan was more than made up by the large positive balance on trade with Britain (see Table 2).

Special Focus: Globalization

Table 2: U.S. Trade Partners, 1928

In 1928, the United States imported goods to the value of \$4.1 billion, and exports were valued at \$5.2 billion.

	Imports From (in millions of dollars)	Exports To (in millions of dollars)
Canada	\$489	\$915
UK	\$349	\$847
Japan	\$384	\$288
Germany	\$222	\$467
France	\$159	\$241
Mexico	\$125	\$116

SOURCE: MITCHELL 1998.

Table 3: U.S. Trade Partners, 1934

In 1934, the United States imported goods to the value of \$1.7 billion. Exports generated just over \$2 billion.

	Imports From (in millions of dollars)	Exports To (in millions of dollars)
Canada	\$232	\$302
UK	\$115	\$383
Japan	\$110	\$210
Germany	\$69	\$109
France	\$61	\$116
Mexico	\$36	\$55

SOURCE: MITCHELL 1998.

In 1932, formerly free-trading Britain imposed protective tariffs and at the Ottawa Conference adopted a system of imperial preference that gave favored terms of trade

to countries in the British Empire-Commonwealth. The Ottawa system did not cripple U.S.-Canada trade, which began to grow again in 1934. Trade with Britain increased from 1935 as the UK started rearmament.

During the Great Depression, the world economy shrank, and international trade decreased by half. As countries tried to shelter economies, they made things worse by adopting protectionist policies. Comparison of Table 2 (1928) and Table 3 (1934) indicates the extent of the contraction of U.S. international trade during the Depression.

Centrally Controlled Economies

The blame for the disruption of world trade in the 1930s cannot be put solely on the Depression and countries like the United States and the UK trying to protect home economies in a major recession. A new, nationalist economic model was emerging in which the state took control of economic strategy, allocated resources, and decided which industries and sectors of the economy would grow. The intention was to create self-contained economies that were not dependent upon import and export markets.

The most developed example of the centrally planned, self-sufficient, autarkic economy was the Soviet Union, which in 1928 commenced the first five-year development plan to build heavy industry and infrastructure. The Soviet model was extreme, but other European countries began to create corporatist states in which overall economic policy was directed by government to achieve national goals. Italy is an example. As Mussolini and his Fascist regime took over, the state made investments in key industries such as oil (through the nationally owned Azienda Generale Italiana Petroli, or AGIP) and automobiles. Agricultural policy encouraged the production of more wheat, at the expense of higher-value crops, to reduce food imports.

Nazi Germany

Under Nazi rule, prices, wages, imports, and currency were controlled. State-funded autobahns and rearmament reduced unemployment. Products like rubber and aviation fuel were synthesized. Systematically, imports from western Europe and North America were cut. Trade pacts with countries in eastern Europe, the Middle East, and Latin America were paid for with Aski marks, a nonconvertible currency that could only be spent in Germany on German goods and services. The industrial empires of Krupp and Thiessen were not taken over by the state, but they—along with prominent companies including Mercedes-Benz, BMW, and Ford with a large factory in Cologne—were subject to state direction under a four-year plan adopted in 1936. The state did invest directly in enterprises, most famously in the Volkswagen plant, opened by Hitler in 1938.

Special Focus: Globalization

Japan

Japan's leaders had similar geopolitical aims to those of Germany's: they wished to expand territory, gain control of more resources, and strive to produce a self-sufficient, government-controlled economic system. Economic policies were highly nationalistic. The Automobile Manufacturing Enterprise Act (1936) not only gave additional protection to Japanese industry but drove out foreign corporations producing in Japan, including Ford and General Motors.

Large money cliques—*zaibatsu*—controlling industrial and commercial empires systematically reduced business with foreign corporations. The Mitsubishi *zaibatsu*, for example, imported raw materials to Japan in vessels built of Mitsubishi steel in Mitsubishi shipyards. The group produced motor vehicles, aircraft (including the Zero fighter), and the largest battleships used in WWII. Japan had to import raw materials, but the *zaibatsu* saw that few foreign vessels carried cargoes to Japan.

Territorial Expansion

The states striving for self-sufficiency coveted additional territory to enlarge their resource base. By 1931, Japan was taking over the coal and ores of Manchuria and in 1937 invaded eastern China. Plans were laid for “a drive to the South” to capture the oil, ores, rubber, tin, timber, and food supplies of Southeast Asia.

Germany planned *lebensraum* (living space) in the east, and as Hitler told the Nazi party at Nuremberg in 1936, when Germany got control of the grain fields of the Ukraine, the ores of the Urals, and the forests of Siberia, Germans “would swim in plenty.” The Soviet Union, an object of Hitler’s expansion plans, wanted to retake Baltic and east European territory lost at the end of World War I. Italy, with poor natural resources, wanted control of the Mediterranean (*Mare Nostrum*) and an overseas colonial empire. Italy attacked Abyssinia (Ethiopia) in 1935. The League of Nations, the organization that was supposed to address global issues, failed to act decisively and lost credibility.

The policies of Italy, Germany, the Soviet Union, and Japan were the antithesis of globalization. None of them wanted the free flow of goods, ideas, currency, and people. They wanted to seal off portions of world space, control people and economies using the weapons of totalitarianism, and prepare for territorial expansion.

By the time the United States entered World War II in December 1941, Hitler was in control of western and central Europe and harnessing the resources and productive capacity to a fascist New Order. German armies were besieging Leningrad, threatening Moscow, and, deep in the Ukraine, pressing toward the oil resources of the Caucasus and Caspian. At the same time, Japan attacked and conquered large regions of the Pacific and Southeast Asia.

G.3: Post World War II—From Containment to Free-Market Competition

At the end of WWII, the economic future was uncertain. British cities had been heavily bombed, and the country, having applied all resources to the war, was nearly bankrupt. The centers of all German cities had been reduced to rubble. Productive capacity had been bombed out. Japanese urban centers were destroyed, with the firebombing of Tokyo in early 1945 being particularly destructive, before the war was ended by atom bombs on Hiroshima and Nagasaki.

Nazi tyranny had been destroyed, to use the language of the Atlantic Charter, the foundation document of the UN, but the totalitarian Soviet Union, with a closed, centrally controlled economy, remained. The USSR had conquered the “near abroad.” The countries of Eastern Europe, including East Germany, were in Stalin’s grasp, and the Red Army had occupation zones in Berlin and Vienna. There were fears that Communism’s march to the west was still in progress. Early in 1947, President Truman proclaimed American support for free peoples resisting subjugation by force. Aid was sent to Greece to prevent a Communist takeover. In July 1947, Kennan’s famous article on “The Sources of Soviet Conduct” appeared in *Foreign Affairs*, telling the strategic establishment that the Soviet Union had to be confronted and contained. In 1949, the North Atlantic Treaty was signed with a commitment to treat an attack on one member as an attack on all members of NATO. The policy of containment was in place.

The United States ended the war as a superpower with a hugely increased economy and productive capacity. But with whom was the United States to trade? Certainly not the Soviet Union, which wanted a self-contained, self-sufficient, autarkic economy. Not with China where, by 1949, the Communists had defeated the Nationalists (who withdrew to Taiwan), and the Chinese mainland became a closed economic space under a regime that controlled agriculture and industry and allocated every inhabitant to a work unit from which it was impossible to move without official permission and documentation. If an unauthorized move was made, it was without papers, work, and a ration card.

If U.S. international trade was to grow, it would be with Europe first. It was essential that the economies of western Europe—the UK, France, Italy, West Germany, the Netherlands, and Belgium—recover, enter into world trade, and provide markets for U.S. goods and technology.

Europe: Reconciliation, Reconstruction, and Recovery

Perhaps because civilian populations had been bombed and deprived of necessities in every European belligerent country, there was, at war’s end, a sense of reconciliation: another terrible conflict must not be allowed to happen. For a time, France wanted to

Special Focus: Globalization

detach the Rhineland from Germany and internationalize the Ruhr industrial region, but the UK and the United States would not agree to this and in general avoided the retributive policies that had made the 1919 Treaty of Versailles with Germany “the peace to end all peace.” The United States did not repeat the mistakes made after WWI and did not withdraw its funds and influence from Europe.

Reconstruction

Because of the extent of the war damage, there was no shortage of work in Europe in the postwar years, and economic recovery was surprisingly rapid. By the end of 1947, industrial output had attained prewar levels, in spite of a vicious and prolonged winter during 1946–1947 that shut down much economic activity for want of power. Under the Marshall Plan, launched in 1947, the United States made dollars available to speed reconstruction. Economic growth led to imports of U.S. agricultural products and machines to reequip factories. It remained difficult for European countries to export to the United States as tariffs were high and nontariff barriers significant.

The countries of Eastern Europe and the Soviet Union could have benefited from the Marshall Plan, but Stalin would not allow it. The Soviet Union understood that the Marshall Plan was not a purely charitable project. A major aim of the plan was to expand U.S. trade and make the dollar the prime currency in world trade.

Integration

The Marshall Plan aimed to promote European economic integration. From the perspective of U.S. business, Europe was a land of many countries, all with their own systems of tariffs and import/export regulations. A customs union, in which members adopted the same tariffs and regulations, would facilitate exports from the United States to Europe. The idea of European integration had achieved support in the 1920s but had been overwhelmed by the protectionism of the Depression, nationalism, and the rise of totalitarian regimes.

Many interests supported integration. Men and women wanting reconciliation saw integration as a means. Those who favored the corporate state saw the possibilities for regionwide economic planning. France got over its desire for retribution and recognized that it could play the lead part in European integration, assuming the role to which it had aspired since the empire of Napoleon. For Germany, integration was a road to reentry into the community of Europe after defeat, disgrace, and devastation in World War II.

Benelux, EEC, EC, EU

In 1947, Belgium, the Netherlands, and Luxembourg—small countries that depended on European trade—agreed to establish a customs union to promote the free movement of goods, capital, and people between the “Benelux” countries. This model could be expanded as a tool of European integration.

Table 4: U.S. Trade Partners, 1946

Total U.S. external trade in 1946: imports \$5 billion, exports \$9.775 billion. Note the large increase in trade with Canada and Mexico as a result of World War II, laying the foundation for NAFTA.

	Imports From (in millions of dollars)	Exports To (in millions of dollars)
Canada	\$883	\$1,442
UK	\$158	\$855
Japan	\$81	\$102
Germany	\$3	\$83
France	\$63	\$709
Mexico	\$232	\$505

SOURCE: MITCHELL 1998.

In 1951, France, Germany, Italy, and the Benelux countries agreed to create the European Coal and Steel Community. The ECSC was a supranational organization with the power to integrate and plan development of the coal, iron, and steel industries of the member states.

“The Six,” as France, Germany, Italy, and the Benelux countries were known, then moved to found the European Economic Community (EEC) under the Treaty of Rome (1957). Like the Benelux agreement, the EEC promoted the free movement of goods, capital, and people between the member states. But the EEC went further, establishing a central authority in Brussels to promote common business conditions and adopting policies like the Common Agricultural Policy (CAP).

Special Focus: Globalization

The European Economic Community eventually established a framework in which goods made in France, Germany, Italy, and the Benelux countries could move freely between members and created a large, European economic space. The EEC, while opening the markets of members to one another, protected European economic space with a Common External Tariff (CET). Goods entering the EEC paid the same tariffs whether they arrived through Hamburg, Bordeaux, Antwerp, Rotterdam, or Genoa. Many U.S. and Canadian multinational companies invested in productive capacity in the territory of an EEC member to get inside the CET and gain access to the enlarged European market. Thus the creation of the EEC stimulated foreign investment. With the general lowering of tariffs under GATT (General Agreement on Tariffs and Trade) and, since 1994, the creation of the World Trade Organization, the Common External Tariff has been reduced as an impediment to trade. When the United States and the EU have a dispute, it is often over a nontariff barrier to trade. For example, the EU does not allow the import of many genetically modified crops. An example of a U.S. nontariff barrier is the exclusion of Spanish hams on health grounds.

The EEC Common Agricultural Policy, was, and is, a hindrance to world trade. Under the policy, the EEC's central authority in Brussels pays farmers guaranteed prices, well above world prices, to produce agricultural products and reduce food imports. The CAP did make Europe more self-sufficient in food production, but the food is high-priced. When cheap agricultural products arrive from Canada, the United States, Australia, and developing countries, tariffs are placed on imports to bring their price up to the EEC (now EU) guaranteed price. Many developing countries feel the CAP prevents them from selling in European markets. The United States is also criticized for its agricultural policies, not for tariffs but for subsidies to producers that allow the United States to be a major agricultural exporter into markets that developing nations might supply.

EC/EU Expansion

The EC/EU enlarged in the following steps: Denmark, Ireland, UK (1973); Greece (1981); Spain and Portugal (1986); Austria, Finland, and Sweden (1995); and then, in 2004, 10 countries were accepted, bringing membership to 25. The new members included former Communist states that had experienced centrally planned economies: Estonia, Latvia, Lithuania, Poland, the Czech Republic, Hungary, Slovakia, and Slovenia together with Malta and the Greek portion of Cyprus. The EU expansion greatly increased the scope of the free-market, competitive, capitalist world and added to world trade. Bulgaria, Romania, and Turkey are currently negotiating entry.

The Soviet Sphere

After World War II, the Soviet Union had a large task of reconstruction, particularly in the western part of the country, which had been fought over and devastated twice—once when the Wehrmacht invaded and again when the Red Army regained territory. Both sides destroyed economic infrastructure as they retreated.

The Soviet Union established a Communist-bloc trade zone with the creation of the Council for Mutual Economic Assistance (COMECON) in 1949. The organization allowed the USSR to control many aspects of trade in Eastern Europe and was used to produce a common economic policy for the region. Trouble developed in the 1960s when plans called for some Eastern European countries to develop manufacturing and others to be sources of agricultural commodities and mineral raw materials. Romania, with a rich resource base, objected to being classified as a producer of raw materials and denied the opportunity to industrialize.

COMECON was not an effective organization to promote regional economic development, but it was an instrument that kept goods from the rest of the world out of Eastern Europe. COMECON was disbanded in January 1991. As we have seen, many former members, other than Russia, moved to join the EU.

The Americas

In 1934, the United States passed the Reciprocal Trade Agreements Act and under Secretary of State Cordell Hull began the process of liberalizing world trade. A major problem with the 1934 act was that it involved negotiations with many trade partners, and each negotiation developed its own issues. Toward the end of World War II, an agreement negotiated at Bretton Woods (1944) laid the foundation for a World Bank and the International Monetary Fund, but no global trade organization was established.

In March 1947 at Baylor University, when President Truman spoke on international economic policy, the president reiterated that the United States was prepared to enter into reciprocal agreements. However, in the same year, many countries signed the General Agreement on Tariffs and Trade. GATT adopted the principle of nondiscrimination: if a country entered into a trade deal with another country, automatically those terms would be offered to all signatories to GATT. The process of trade liberalization was speeded up by rounds of negotiations, the most famous of which was the Kennedy Round, culminating in an agreement between the United States, Japan, the UK, and the European Economic Community to reduce tariffs. Later rounds of negotiation continued to reduce tariffs and other impediments to trade. In 1994, the World Trade Organization was established.

Special Focus: Globalization

The WTO could rule on disputes and had enforcement mechanisms. For example, the EU protested to the WTO that high tariffs imposed by the United States on incoming European steel breached the rules. The WTO sided with Europe, which was allowed, if it wished, to impose tariffs on U.S. goods to cover losses on steel exports to the United States.

The steel incident illustrates the complexity of U.S. trade policy. The State Department understands that as the United States has the largest economy, it has to give the lead in promoting global economic interaction if the world economy is to grow. At the state and local levels, economic hardship, brought on by the closure of industries exposed to cheaper imports, can result in political pressure being applied to get protectionist measures (higher tariffs) or quotas on imports or agreement with the import source to slow the rate of U.S. market penetration. Usually there is a degree of balance between those in the administration wanting to liberalize world trade and those who lobby for protection. Obviously, the balance broke down in the Depression, when the Hawley-Smoot Tariff Act helped reduce trade.

NAFTA (Entered into force January 1, 1994)

During World War II, of necessity, hemispheric trade increased rapidly. In particular, there was integration of vehicle and aeronautical manufacturing between the United States and Canada. Under the *bracero* program, commencing in 1942, large numbers of Mexican men entered the U.S. labor market—as the wartime economy was expanding rapidly. After the war, in Latin America generally, countries adopted nationalistic economic policies, discouraged foreign ownership of businesses, and placed restrictions on investment by noncitizens. Policies of import substitution industrialization were widely adopted. Under Import Substitution Industrialization (ISI), high tariffs were placed on manufactured imports and protectionist incentives given to local investors to start or expand factories to make goods for the national market. The policy was good news for American manufacturers of industrial equipment, bad news for those who exported consumer goods to Latin America, and terrible news for consumers in the region who got high-priced, homemade, generally poor-quality consumer products.

In 1964 the *bracero* program was terminated, and the government of Mexico looked for new forms of interaction along its northern border with the largest economy in the world. The Border Industrialization Program was started in 1965. The program reduced some nationalistic economic policies. Foreign corporations could invest in assembly plants in and around northern border towns and bring in manufacturing equipment and key personnel to establish factories specifically designed to supply the U.S. market. The United States only imposed tariffs on the value added in the assembly plants. Thus if components were imported from the United States, then assembled in a *maquiladora* plant and

Special Focus: Globalization

exported to the United States, tariffs were not charged on the total value of the product. For example, a consumer product crossing from a *maquila* into the United States has a total value, at the border, of \$10. However, the U.S. components in the product are worth \$5. Duty is only charged, by U.S. customs, on the \$5 of value added in Mexico.

By the 1960s and 1970s, large quantities of consumer goods were being imported into the United States from Japan, Taiwan, and Hong Kong. Many saw the advantages of stimulating economic activity on the border with Mexico, with its trickle-over effects on U.S. border towns. Thousands of *maquilas* were established before NAFTA (North American Free Trade Agreement).

Trade between the U.S. and Canada had grown strongly during and after World War II. There were strong economic linkages in some areas, for example, between Seattle and Vancouver, while Detroit and Windsor, Ontario, had an integrated motor manufacturing region.

A complicated free trade pact was signed by the United States and Canada in 1989. When the United States started to negotiate free trade with Mexico, Canada suggested a treaty involving the three countries. NAFTA was signed in 1993, entered into force in 1994, and has generally been a mechanism that has opened up Mexican markets to U.S. service industries, including banking and retailing. Agricultural exports have increased to Mexico. Although Pemex (Petróleos Mexicanos) remains the monopolistic national oil corporation, U.S. oil industry service companies are increasingly active in Mexico. As China became a favored place for cheap labor and manufacturing, growth of traditional *maquilas* slowed, but more elaborate manufacturing activities in the border zone are helping promote employment growth again.

A free trade agreement like NAFTA is different from a customs union. In a free trade agreement, the members simply agree to remove, over time, tariffs on goods moving between them, where the goods originate in the territory of member states. In a free trade association, there is no common external tariff, and members can make trade agreements with other countries without reference to the states in the free trade association. Since helping create NAFTA, the United States has signed trade agreements with Chile and Central America. Canada and Mexico did not have to approve these agreements. However, Chilean goods cannot be exported from the United States to Canada and Mexico under NAFTA terms.

Many want to see the creation of a free trade association of the Americas. Creating hemispheric free trade will not be easy. Organizations like Mercosur—the Southern

Special Focus: Globalization

Common Market (1991)—already exist with Argentina, Brazil, Paraguay, and Uruguay as members. Mercosur does have protective common external tariffs, and all Mercosur members would have to agree to remove these on goods entering from the countries of the Americas to create a hemispheric free trade area.

Collapse of the Soviet Union

Before the Soviet Union had been created, the British geographer Halford Mackinder predicted that if one power, or alliance, came to control the closed “Heartland of Euro-Asia,”—what Mackinder called the “geographical pivot of history,”—the “empire of the world would then be in sight.”¹ Mackinder went on to say that the heartland region would cut itself off, economically, from the maritime world and become self-sufficient. And that is what happened. When Stalin took power of the Soviet Union, he initiated a series of five-year plans, starting in 1928, that made the USSR a major industrial power and developed the resources of the Volga, Urals, and Siberian regions. There was little trade with other countries.

The development of industrial regions away from Leningrad, Moscow, and the Ukraine allowed the Soviet Union to go on fighting after it was badly defeated in the west by invading German armies in the summer of 1941. German generals were surprised to find that the supposedly backward Soviets were building tanks and artillery capable of taking on Panzer divisions. The Soviets won their “Great Patriotic War” and took over all of Eastern Europe together with East Germany, imposing Communist regimes and centrally planned economies on the region. The Soviet Union, via the Council for Mutual Economic Assistance (COMECON), exerted economic control over Eastern Europe. COMECON promoted some trade between members, but currency restrictions made it difficult for non-COMECON countries to sell goods into Eastern Europe, although Poland, Czechoslovakia, and Hungary did export to the west.

The collapse of the Communist regimes in the Soviet Union and Eastern Europe in the early 1990s opened up a number of countries to democracy, capital investment, and world trade. By 2004, the Baltic states, Czech Republic, Poland, Hungary, Slovenia, and Slovakia had joined the EU and begun to integrate into a European economic system that promoted the free movement of goods, people, and capital. Russia, Belarus, Ukraine, and other former Soviet Socialist Republics still struggle to make the transition to democracy and an economic system not tied to central planning authorities.

¹ Mackinder, “The Geographical Pivot of History,” *The Geographical Journal*, 298–321.

China

China illustrates the prospects and problems of globalization. On the one hand, a large, cheap labor pool is making low-cost consumer goods available to North America and elsewhere, helping to reduce living costs and promoting consumer spending and economic expansion. In China, waged work has allowed living standards, for part of the population, to rise, and demand has been created for consumer goods. Economic diversification is advancing in China.

On the debit side, many existing patterns have been disrupted. As the manufacturing sector has grown, there has been a large increase in demand for energy and raw materials. Hydroelectric power dams are being built on the Yangtze River gorges to increase energy supplies. Rural inhabitants are being forced from houses and fields as lakes fill behind the dams. In major cities, like Shanghai and Guangzhou, urban redevelopment is erasing the housing of the poor as apartments and commercial buildings are erected to supply new economic demands. Such disruptive forces of globalization are common.

China is not an open, free-market society. The Communists still control the economy to insure that exports thrive and imports are limited. The exchange rate of the yuan is kept artificially low to make exports attractive and imports expensive.

China and a number of Asian countries, including Thailand, Indonesia, and Pakistan, illustrate other aspects of the globalization debate. In the Western world, those campaigning for trade liberalization in the nineteenth century also wanted the abolition of slavery, restrictions on child labor, and safety in the workplace. Many past victories in the Western world concerning restrictions on working hours, the insistence that children go to school and not the factory, and protection of environments have been outflanked by moving manufacturing to unregulated regions where inhabitants cannot resist exploitation.

Time-Space Compression

The globalization of economies is not only about political openings and freer trade agreements. Technology has allowed a widening of economic interaction by cheapening the cost of moving goods and information.²

Once upon a time we had the friction of distance and transport costs. Transport costs added significantly to the cost of goods and made it uneconomic to make many

² De Blij and Murphy, *Human Geography: Culture, Society, and Space*, 424–425.

Special Focus: Globalization

products in distant places with low labor costs for sale in the markets of North America and Europe. Transport costs still exist, but they have been dramatically reduced over air, land, and sea.

Ports used to employ thousands of workers—dockers and longshoremen—who lifted arriving cargoes out of the holds of ships onto trucks and rail cars for transport to warehouses. Similarly, before a ship left port, dockers put goods into nets for cranes to lift onto ships, where more men stowed the cargo and battened down the hatches. The labor costs were enormous before breakages, wastages, and pilfering were added to the accounts. In addition, ships sat at the docks for days or weeks while cargoes were loaded and unloaded. The capital depreciation on a ship is large, and costs are incurred on a daily basis whether or not the crew is sailing the ship.

Then came containers. Containers are a simple device: a large box, packed at the point of production, that can fit on a truck or railroad car. At dockside, containers are lifted rapidly, by crane, from shore to ship and from ship to shore at the port of destination. Now ships could dock and unload rapidly, reducing the number of idle, depreciating days. Dock labor costs fell dramatically as ship design and dock work practices altered to accommodate fast-moving containers.

The container is an organizational change, not a technological breakthrough. Containers could have moved on railroad cars to dockside cranes in the nineteenth century. Why they did not do so, until well after WWII, is a discussion point. Clearly the attitudes of labor and unions are involved. Many dockers lost jobs as a result of the changes.

The movement of information, including bids and orders, has involved major technological breakthroughs. In the sixteenth century, it took the Council of the Indies in Spain seven months to send a message and receive a reply from the viceroy of New Spain in Mexico City, if the viceroy replied promptly. During the eighteenth century, it was possible, in good conditions, to exchange a message and response between Boston and Bristol in two to three months. Questions and clarifications involved another sailing, back and forth, between the ports. In the late nineteenth century and early twentieth centuries, the telegraph and telephone, after transoceanic cables were laid, speeded information transfers but were not cheap. Today with email, information, bids, orders, questions, and clarifications can be dealt with rapidly, provided executives make prompt decisions.

The impact of rapid information movement allows production to quickly orient to demand in markets. Large distribution networks involving warehouses filled with expensive inventories of goods have been replaced by “just in time” delivery systems.

As a result of changes in communication technology, goods move more rapidly and cheaply than could have been imagined a few decades ago. We wonder how it is economic to transport cantaloupes from Guatemala, cucumbers from hothouses in Holland, plant pots from Italy, salmon from Scotland, and a large range of basic, heavy products from China.

Tourism

Tourism is a worldwide industry central to the process of globalization. As a result of overseas travel, citizens of many countries have developed new appetites, adopted new fashions, heard different music, and encountered, firsthand, many formerly foreign cultural traits. Tourism requires resorts, hotels, shopping areas, and quays for cruise liners. Providing facilities stimulates economic growth. On the debit side, tourism overtaxes environments, distorts local lifestyles, and can often result in dual economies where those serving tourist enclaves are separated from those living traditional lifestyles.

Summary

The whole history of globalization has been marked by disruption, as the indigenous population of Hispaniola learnt in a few years after 1492, for within two decades there were only a few hundred native inhabitants left on the island. Yet the development of the world economy is a result of linking regions and resources. There will be no conclusion to the debate on the problems, costs, and benefits of globalization.

The development of the global economy is seen as a contest between those who want to open economic space to intervention and competition—the free traders—and those who wish to close and protect territory—the protectionists. The struggle between the contestants reached an apex in the Cold War when the Soviet Union wanted to create a self-contained economic region centrally planned under Marxist principles, and the Western countries worked to establish free trade on a global basis. With the establishment of the WTO in 1994, the contest appeared to be over. However, we should be cautious in viewing the future. First, large economic spaces—Russia and Communist China—are not fully open to international trade. Second, the expansion of world trade depends upon the expansion of economies. In Japan and several major European economies, growth is slow. The United States, with healthy economic growth, propels the world economy and world trade but each year incurs a larger and larger deficit in international trade. Should the trade imbalances become unsustainable, the United States might be forced to reduce imports and adopt measures that reverse or slow the commitment to free trade.

Special Focus: Globalization

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Special Focus: Globalization

Glossary

Autarkic: Self-sufficient economies that try to minimize international trade by producing most goods and commodities on national territory.

Bracero program (1942–1964): U.S. program initiated to allow male Mexican workers to work in the U.S. when labor was short in WWII.

Flota: Literally fleet. Protected and controlled convoy of vessels sailing between Seville and designated Spanish colonial Caribbean ports, including Cartagena, Nombre de Dios, Panama, Vera Cruz, and Havana.

Friction of distance: The costs associated with moving people, goods, or commodities across space. The longer the journey, the higher the cost and the greater the friction between places.

Import Substitution Industrialization (ISI): A policy widely adopted in post–World War II Latin America to encourage manufacturing on national territory. Imports were reduced by high tariffs. Local manufacturers were given near-monopolies via government regulation. ISI was widely abandoned in the 1990s, and markets opened to imported goods.

Lebensraum: Literally living space. Term coined by German geographer Friedrich Ratzel (1844–1904) to explain why states had a right to grow. *Lebensraum* became part of Nazi ideology, and the word was frequently used by Hitler in relation to his expansionist aims in Slav lands.

Maquiladora: In Spanish, a place where one pays a miller for grinding grain into flour. Colloquially the term refers to an assembly plant using cheap Mexican labor, many of which were established under the Border Industries Program (1965) on Mexico's northern border with the United States.

Mercantilism: Colonial economic system in which trade between the metropolitan power and overseas possessions was controlled and goods from other nations were excluded, to avoid paying for imports with gold or silver out of national treasuries.

Time-space compression: The reduction in the time needed to move information, people, and goods across earth space.

Zaibatsu (Japanese): Literally money clique. A system of interlocking investments by which Japanese groups, such as Mitsubishi, arrive at control of segments of economic activity to the exclusion of outsiders. *Zaibatsu* were outlawed after WWII. The present-day version is the *Keiretsu*, literally interlocking chain. *Keiretsu* and *Zaibatsu* are unchanged in the plural form.

Acronyms

- Benelux—Belgium, Netherlands, Luxembourg
- CAP—Common Agricultural Policy
- CET—Common External Tariff
- COMECON—Council for Mutual Economic Assistance
- EC—European Community
- ECSC—European Coal and Steel Community
- EEC—European Economic Community
- EU—European Union
- GATT—General Agreement on Tariffs and Trade
- ISI—Import Substitution Industrialization
- MERCOSUR—Common Market of the South
- NAFTA—North American Free Trade Agreement
- NATO—North Atlantic Treaty Organization
- WTO—World Trade Organization

Special Focus: Globalization

Globalization and International Relations: A Geographical Perspective

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Globalization and international relations are intertwined concepts that help to define the way we understand how countries of the world both survive and behave. Daily front page coverage of major newspapers often features stories that fall within the category of globalization or international relations: a tragic war in some far-off region of the world or perhaps a trade agreement or dispute over some product that could affect jobs close to home. Two key issues underlie such headlines:

- How do global patterns of economic, political, and cultural activities influence the way governments relate to each other?
- How do international relations depend upon global aspects of trade, resource dependency, and capitalism?

These questions represent two sides of the same coin in the currency of political geography. Each of the social sciences views globalization and international relations from the vantage point of its own academic interests. Geography offers an important view based on its multidisciplinary approaches to studying local, regional, and worldwide concerns. This geographic combination of multiple scales and overlapping perspectives is critical if we are to understand how globalization affects international relations and vice versa.

Before we can discuss globalization and international relations, we must define these complex processes. Globalization is a newer and broader concept and perhaps is less prone to direct governmental behavior than international relations. Diplomats around the world see their work as the business of shaping and implementing international relations, but which particular group sees its role as shaping and implementing globalization?

Globalization is a complicated term for geographers. It suggests that worldwide socioeconomic connectivity is growing and is dependent upon new forms of business interactions and technical capabilities, but it does not make clear who or what is most affected and why. Economists view globalization as the overall means by which international trade evolves, including economic accords among countries (such as a range

* William B. Wood died in July 2005. The views here were his and do not reflect U.S. government policy.

Special Focus: Globalization

of “free trade” agreements), the role of worldwide financial institutions (the World Bank or the International Monetary Fund or the World Trade Organization), and the growing volume of data tracking the type and value of goods sold across international boundaries. The patterns that encourage international finance and trade can be traced back to the nineteenth century in the “First Era of Globalization,” but in fact, their roots are deeply imbedded in the longer history of industrialization and colonialism. More recently, the patterns of international trade and finance declined during the Great Depression of the 1930s, only to be reborn after World War II with the expansion of free trade agreements among the new nations becoming independent around the globe.

Economists thus would view globalization as a potentially productive worldwide process that continues to shape patterns of supply and demand as well as financial flows. They have data to prove their case, ranging from volumes of imports and exports, gold values, and dollar trading. In contrast, political scientists would say that such an economic-centric view is only part of the story; they would point to historical patterns of conquest, plunder, and treaties among the ruling elite as setting the stage for modern-day globalization. Since World War II, the political side of globalization has been closely associated with the United Nations and its member organizations that respond to challenges of war, poverty, and human rights abuses, regardless of where in the world such concerns arise.

International relations, in contrast to globalization, is widely understood as the political processes by which governments deal with each other. The history of international relations dates back to the 1500s with the 1648 Treaty of Westphalia as its official benchmark. International relations have had a turbulent history. War and chaos changed the shape of some states; other countries expanded by colonizing far-flung areas of the globe. Some countries are full of immigrants from many other countries, and others are still ethnically homogeneous, differences that can influence their international relations. Some European countries trace back their own formal history of international diplomacy 500 years, while some African countries have been independent for less than 50 years, and their international relations are still influenced by former colonizers. A point of this brief overview is to underscore that international relations are defined and implemented by a wide range of countries and governments, with diverse histories, varied cultures, and competing economies.

While international relations can be bilateral—that is, between just two governments—more frequently they are multilateral, involving three or more governments from different parts of the globe. These relations encompass increasingly diverse issues, from measures that determine trading patterns to rules that define crimes against humanity. The business of bilateral international relations is conducted largely by foreign ministries and embassies

Special Focus: Globalization

run by diplomats who are trained in the ways of managing both agreements and disputes. For the most part, their work is routine, building on decades of previous cooperation and aiming to keep bilateral relations on track. Increasingly, however, international relations are also influenced by multinational, global organizations of various types and sizes and managed by different groups of bureaucrats and officials. These organizations set up the institutions and legal rules for competition by which particular “global” objectives are addressed and ideally achieved.

A good deal of global competition is about the natural resources controlled by national governments and international corporations. High-valued resources, particularly those marketed as oil and gas, play key roles in a fossil fuel-generated and globalized economy, making some states and corporations very wealthy and other states very dependent. Other international trading patterns are intended to create efficient and inexpensive labor forces that can produce a variety of cheap products for continually shifting world markets. This geography of labor supply and demand among 184 UN member states helps to underscore their relative roles in shaping globalization, with some clearly benefiting as measured by improved living conditions while others sink deeper into poverty. Recent economic growth patterns, for example, suggest that both wealthier and poorer countries have benefited much more from globalization than have middle-income countries, creating serious trade and development challenges.

Today, the geography of globalization is less associated with vast European empires, as it was in a previous century, than it is with myriad and changing patterns of economic, political, and cultural influences. These patterns are both historical and dynamic with new sources of wealth, influential personalities, and growing religious influences shaping the way governments interact with one another. Political geography for the past century has offered a means to understand how states engage with each other and compete within an increasingly vigorous global arena. Perhaps no scholar understood the importance of geopolitical analysis in conceptualizing the changing “geographic pivot” among countries of the world better than Sir Halford Mackinder, political geographer and a British member of Parliament. Mackinder understood that countries, particularly those in his famous “heartland,” had competitive relationships shaped by their maritime and land-based locations. His ideas were furthered by German geographers who used “organic state” theories to make “geopolitical” arguments for justifying military dominance of foreign territory. The point is that in any effort to understand globalized international relations, particularly in times of conflict and war, geography matters.

Old geopolitical stereotypes are dangerous because they confuse international interests while also contributing to misunderstandings that often underlie conflicts. A relevant

Special Focus: Globalization

political geography encompasses complicated realities and trends at international, national, and subnational levels. How we monitor these realities and project these trends will shape the way governments make and implement policies. The “War on Terrorism,” for example, is one that requires an understanding of racial and religious tensions within countries, legal and illegal migration patterns between countries, and local and international access to various types of explosives and weaponry. Terrorism is characterized by an evolving political geography with different types of concerns in different parts of the world. As with other pressing security challenges, its shape will influence international relations and the future of globalization.

Special Focus: Globalization

Globalization and Economic Geography

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Economic Geography as a Subject of Study

This chapter discusses a portion of the subject matter of geography known as economic geography. Economic geography has undergone many changes as the interaction among economic entities (both countries and large companies) has become increasingly global in scope. Economic geographers must, therefore, be aware of the complex social, cultural, and political interactions among these global entities. This article, using a few selected examples from disparate economic pursuits, attempts to illustrate the impact of this economic globalization on the daily lives of people throughout the world. The student is encouraged to think about and explore other examples of globalization. The suggested activities and critical thinking questions scattered throughout the article are designed to do just that.

Economic geography is concerned with the production, distribution, and consumption of goods and services and the human and environmental impacts of these activities. Traditionally the emphasis in economic geography has been on production and distribution. There are many factors that account for this emphasis. First, the spatial distribution of **resources** is uneven. That is, resources are finite and are usually available in exploitable, commercial quantities at only a few places. Second, consumers of these resources, whether they are other industrial activities or you and me as direct consumers, are more widely scattered. In order to get products and services from where they are produced to where they are consumed, transportation or communication is involved.

Since the United States and most developed countries in Europe and parts of Asia are now considered service-based (or postindustrial) economies, it is the service sectors of the economy that are growing the most rapidly. Many of these service activities are highly dependent on access to up-to-date information. So, high-speed communication linkages are vital to modern postindustrial economies.

Economic geographers are most interested in the location of economic activities, and three factors, more than any others, are often used to understand the patterns of these activities: land, labor, and capital. Land is important because of its relative location and its characteristics. A parcel of land that is accessible to major transportation facilities, markets, and sources of raw materials is said to have a good relative location. All the

Special Focus: Globalization

better if this accessible land parcel is also relatively flat, thus reducing the cost of development. Such flat, accessible land might sell for a relatively high price, but the cost of obtaining land is often spread (i.e., amortized) over the many years that an economic activity will be produced at a particular location.

Ongoing or recurring costs such as the cost of transportation to **assemble** necessary raw materials and/or **distribute** the finished products to consumers and the cost of labor needed to make the products are more important locational factors than one-time or fixed costs such as land. The cost of moving commodities has decreased dramatically since the beginning of the Industrial Revolution in the mid-eighteenth century. Early iron and steel production had to take place near coal that was used to fire the furnaces and melt the iron ore. Since coal is rather bulky and low in value per unit of weight, transportation of this important component in the iron- and steel-making process was a major factor in the location of blast furnaces. The Midlands region of the United Kingdom was, for example, the location of both excellent deposits of coal and the earliest iron and steel manufacture. In the United States, Pittsburgh also had an excellent location relative to sources of coal from Appalachia and the Middle West. Today, both the United Kingdom and the United States import much of their iron and steel from overseas producers in countries such as India or South Korea. Such long-distance transport of this commodity has been made possible by improvements in transportation technologies that have reduced the relative cost of transportation when compared to other cost factors such as labor.

The other major cost factor affecting the location of economic activities is labor. Some industries are considered labor-intensive, because labor accounts for a considerable portion of their overall cost structure. The production of textiles and apparel is often used as an example of a labor-intensive industry. Since transportation costs have been reduced by improvements in transportation technology, a manufacturer of simply produced garments such as underwear or socks might locate a plant in a poor, lesser-developed country and pay its workers relatively low wages. To be economically viable, the savings in labor must outweigh the additional transportation costs involved in moving the finished product back to markets in the advanced economies that are often half a world away. This process of locating the manufacturing facility of a labor-intensive industry in a lesser-developed country while maintaining corporate offices and research facilities in the developed world is called **outsourcing**. This practice is sometimes referred to as **offshoring** in the UK and continental Europe. Outsourcing is a consequence of our increasingly global and interdependent world economic system.

The **maquiladora system** along the international boundary of the United States and Mexico is an example of such globalization of the economy. Even before the **North**

Special Focus: Globalization

American Free Trade Agreement (NAFTA) was enacted among Canada, the United States, and Mexico, many domestic companies found it less expensive to move their manufacturing activities to the Mexican side of the international boundary. Manufacturing facilities were often located in border cities such as Tijuana near San Diego or Ciudad Juárez near El Paso. The headquarters, marketing, and distribution portions of these companies would often remain on the United States side of the border. The reduction of tariff barriers between the two countries meant that taxes and fees had to be paid on only the value added in the process of production. Products manufactured in Mexico could, therefore, be marketed and distributed easily in both countries.

Classroom activity suggestion: Have the students take a position on the following statement:

Resolved: That the *maquiladora* program is essentially a good thing for both the United States and Mexico and that good jobs available in El Norte (i.e., the northern border states of Mexico) will eventually stem the tide of illegal immigration to the United States.

Dividing Economic Activities into Sectors

Overall economic activity may be divided into five major sectors: primary, secondary, tertiary, quaternary, and quintary. The **primary sector** of the economy includes activities that are directly reliant upon the processing of raw materials from the earth and surrounding seas and would include agriculture, forestry, fishing, and mining. Historically, these have been the first economic activities that are practiced because they provide the food, clothing, and shelter that are essential for life. The products of the primary sector of the economy provided for local needs but were also among the first products to enter into world trade. Thus globalization is not a particularly new phenomenon. Foodstuffs, raw materials to make cloth, and metallic ores served as the main bases for mercantile trade during the Age of Exploration (fifteenth through eighteenth centuries) and were often the underlying reason for the establishment of colonies all over the world by the European powers.

The **secondary sector** is associated with manufacturing, the process by which tangible raw materials are converted in a factory setting into more useful and valuable products. Modern manufacturing (as opposed to custom-made products of craft and guild activities) developed during the **Industrial Revolution** in the mid-eighteenth century and diffused from the core area in the United Kingdom into continental Europe and eventually to the New World. When the United States was still in its infancy, two entrepreneurs, **Moses Brown** and **Samuel Slater**, started a textile mill in Rhode Island.

Special Focus: Globalization

Slater had worked for an associate of Richard Arkwright, a British businessman who had revolutionized the spinning of fibers into cloth using the spinning jenny, shutterless loom, and other mechanical innovations. The mill was powered by falling water, but later inventor **James Watt's** steam engine allowed factories to be located closer to the market for the goods they produced.

Although a declining proportion of the gainfully employed work in manufacturing in most developed nations, it was manufacturing that got these countries to an advanced stage of development in the first place. And it is manufacturing that is still a major key to the development of lesser-developed countries that aspire to be players on the global stage. With the reduction in the cost of global transportation, such countries now appear to have a comparative advantage in manufacturing in the global marketplace because of their lower labor costs.

Manufacturing is dependent on the physical distribution system, and the wholesalers and retailers that get the manufactured products to their intended markets make up part of the **tertiary sector** of the economy. In many ways, growth in manufacturing spurred the growth of trade and the services. In the developed portions of the world, advanced services, rather than manufacturing activities per se, are now the key to the continued development of these complex economies.

Both the quaternary and quintary sectors are refinements of the tertiary sector. The **quaternary sector** of the economy involves services as well, but the jobs in this sector are generally the better-paid information and knowledge-based activities including, among others, producer services, computer services, and finance, insurance, and real estate (i.e., the FIRE) services. Workers in this sector are said to have “white collar” jobs.

Finally, some economic geographers designate a **quintary sector** for the very top-end jobs in manufacturing, services, and distribution that require individual decisions to be made that might affect the entire company or even the global economy. Individuals in this sector would include the chief executive officers, chief financial officers, researchers, and scientists.

You should bear in mind that in many ways the Industrial Revolution was also an urban revolution. Factory work was the impetus for a great rural-to-urban migration on a scale seldom seen before in the course of human history. The focus of modern manufacturing is a global one. Headquarters and research and development facilities of major **transnational corporations** are often located in the advanced nations of the world, but the actual manufacturing is often done in the lesser-developed nations.

Special Focus: Globalization

Critical thinking question: Have students respond to the following statement:

At the time of the Industrial Revolution, manufacturing caused growth at the scale of the region or, at best, the nation-state. Now, manufacturing must be considered a global phenomenon in order to understand how it still influences growth.

Critical thinking activity: Find out how many students think their parents or grandparents work in each of the five sectors of the economy described above. If the community is typical, there will be few in the primary sector (probably less than 5 to 10 percent), more in the secondary sector (perhaps as many as 20 to 30 percent), and the vast majority (60 to 75 percent) in the service industries involving the tertiary, quaternary, and quintary sectors. Ask them how they think this economic structure has changed since the time the first colonists settled what we now call the United States of America.

Critical thinking activity: The students could engage in a role-playing activity in which they attempt to develop the economy of a “hypothetical” lesser-developed country. In reality, the data provided could come from an actual country in Africa, South America, or Asia, and after their ideas are discussed, they could focus on the real country to determine aspects of its development trajectory.

Economic Location Principles: From Local to Global

In an era of slow and expensive transportation, much of the economic activity was highly localized. Commodities could not move over space without incurring great increases in cost. Other things being equal, industries will often seek sites near their markets in order to reduce the cost of transportation in distributing their product to their potential clientele.

There are three major factors that would, however, work against a market location for industries. These factors are weight, volume, and perishability. If an industry such as the refining of sugar involves a loss of weight in the process of manufacturing, then it would be better to locate the refinery closer to the source of the raw material rather than transport the heavy and expensive raw material all the way to the market for processing. When sugar is refined from sugar beets or sugar cane, there is large reduction in weight (e.g., it takes six pounds of beets to produce only one pound of sugar). This is the reason why there are many sugar refineries located in the Great Plains of the United States, where sugar beets are grown commercially. An added benefit of the raw material orientation of the industry is that beet pulp, a by-product of the refining process, can be fed to the Great Plains cattle, which are able to break down and digest the cellulose fibers of the pulp.

Special Focus: Globalization

Likewise, manufacturing that greatly reduces the volume of the raw material to produce a finished product is likely to be located near the raw material source. Sawmill operations that produce dimensional lumber for the construction industry are usually located close to the source of trees because of the volume of bark and poor-quality wood that must be removed in the process.

Finally, the canning of fish, fruits, and vegetables is usually located near the source of the raw materials because of perishability concerns. The raw materials are highly perishable, but the canning process adds shelf life (i.e., longevity) to the finished product.

If, on the other hand, activities such as commercial bakeries are using raw materials such as sugar and flour that have a long shelf life and producing bread and rolls that do not, then that activity should be **market oriented**. In developing a theory for the location of industries, the German economist **Alfred Weber** introduced a concept known as the **material index** that could be used to estimate the orientation of different industries.

The material index was simply the ratio of the weight of localized raw materials (i.e., those available only from finite sources) as the numerator in the ratio to the weight of the finished product as the denominator. If the ratio was greater than 1.0, the activity was said to involve **gross** (weight-losing) **goods**, and, other things being equal, would be **raw material oriented**. The greater the ratio, the more likely was the raw material orientation of the activity. If the weight of the localized raw materials about equaled that of the finished product, the activity was called a **pure good**. The weaving of cloth into finished garments would be an example of an activity involving a pure good. Finally, there are some examples of activities in which the weight of the finished product actually outweighs the localized raw materials (i.e., the material index would be less than 1).

The only way this could happen is if a nonlocalized (i.e., **ubiquitous**) **good** was added in the process of production. Soft-drink bottling is often used as an example of such an activity. Water is considered ubiquitous, and it is heavy. It is cheaper to transport the thick concentrated syrup used to make a soft drink to the market for the beverages and then add carbonated water at the market. Such ubiquitous goods would be market oriented, other things being equal.

Critical thinking skills: Have the students select some local industries and try to apply Weber's principles to see if they work in the cases they have chosen. If so, what are the factors of production that were most important to the location decision? If not, what other factors were important that Weber's model did not consider? Can they think of factors of production that impact industrial location that Weber did not consider? If so, how might they incorporate these factors into an "improved" model?

Special Focus: Globalization

Changing Scale of Production

The basic principles of market and raw material orientation are still viable, but the scale of application has increased from the local to the global level today. A major concern among the traditional advanced nations of Europe, the United States, and Japan is that there are now areas within nations that have been labeled as “developing” in which a highly educated labor force is available and willing to work for lower wages than comparable workers in the more traditional advanced countries. Also, for many high-tech companies, the pull of either raw materials or specific markets is diminished. Such companies are sometimes said to be locationally **footloose**. That is, many other factors (including those that are sometimes called noneconomic, such as the quality of life of the potential location) may play a role in their location decisions. Because the market for the products of such businesses may be global, no particular location has a comparative advantage over any other. Economic development specialists are especially eager to attract such footloose activities because they are usually growing faster than traditional industries that are more place-bound.

Examples of Globalization in the Three Major Economic Sectors

It is impossible in this brief introduction to discuss all the forms of globalization that are taking place today, but a few examples drawn from each of the three major economic sectors will suffice as illustration. You are encouraged to think of other examples of your own.

One impact of the reduction of the time and cost involved in transportation is the increasing scale of activity provided by this time-space convergence. The increased geographic scope of production can be seen in the produce department of your local supermarket. It used to be that people had to do without certain vegetables and fruits when they were out of season simply because the cost of transportation from other areas was prohibitively expensive. Now it is quite possible for consumers in the Northeast to eat strawberries in the winter or lettuce all year round. The increase in geographic range has led to the creation of specialty regions in countries such as Chile devoted to providing fruits and vegetables that are out of season in the Northern Hemisphere’s winter months. Such commercial agriculture in the primary sector may irrevocably change the nature of Chile’s economy by disenfranchising many small-plot cultivators in favor of large agribusiness that can supply agricultural products to distributors in amounts that make the transaction financially feasible and attractive. Many small-plot cultivators may, by the same token, stop producing a variety of crops for their families and local villages in favor of specializing in a single crop for the world market.

Special Focus: Globalization

But there has been a reaction against globalization as well. This backlash in the example presented above is expressed in a desire by some consumers for fresher, more organically grown produce from local suppliers. It is unclear whether enough people are willing to pay higher prices for such local produce to change the attitude toward greater globalization, larger-scale production, and the application of more chemical fertilizers, herbicides, and pesticides needed to maintain or increase yields.

In the secondary sector, there has been a sea change in the nature of industrial production. An examination of the automotive industry illustrates many of these changes. United States automobile manufacturing has undergone a significant transition. At the beginning of the twentieth century, there were over 200 different manufacturers of automobiles. Steam power, electricity, and a variety of different combustion engines powered some of these early vehicles. Automobiles were toys of the rich and expensive relative to the wages of the day. Then **Henry Ford** built his Highland Park plant in Detroit to build the Model T, an automobile that revolutionized the industry. Ford borrowed the notion of interchangeable parts from **Eli Whitney**'s early firearms factory in the Connecticut River Valley and added his own spin on **mass production** by introducing the assembly line method in which a worker repeated the same tasks. He paid his workers handsomely (\$5 per day when the prevailing wage of the time was \$1 per day), and they, in turn, bought his product.

Soon many of the other automobile manufacturers were only a distant memory. By the 1930s, there was an oligopoly in production (i.e., only a few sellers of automobiles), and automobile sales soared. By the 1960s, imported automobiles cut the proportion of sales by domestic producers (the “Big Three” of Ford, General Motors, and Chrysler), and the technology of the industry became so standardized that some of the most modern plants of these companies are now located in Mexico or Canada. The age of maturity in this industry had arrived. Now United States manufacturers have adopted the lean (i.e., flexible) production methods of their foreign competitors, including the just-in-time (JIT) system of nearby parts suppliers that supply components on demand to the assembly plant, thus keeping inventories low and decreasing the cost of production.

If a product is new in the marketplace, as were automobiles at the turn of the last century, it is a seller’s market, typified by high per unit prices of the goods produced. But as the industry drives toward maturity, manufacturers struggle to drive prices down by developing more standardized ways of producing the product. Products manufactured in their growth phase, such as Henry Ford’s Model Ts and later his Model As, require a great deal of managerial and marketing expertise. Today, the automotive industry would be considered a mature industry, and despite the huge capital requirements

Special Focus: Globalization

required for a firm that is engaged in the manufacture of a product in its mature phase, the less-developed nations of the world could be competitive in these types of industries. Consider the recent entry of automobiles from South Korea (e.g., Kia, Hyundai, Daewoo) into the United States market. Capital, in the form of machinery and automated equipment, has been substituted for higher-cost labor. Persons with low skill levels who might be taught on the job how to work the machinery can handle the assembly line.

There have been locational shifts in the domestic automobile industry as well. The dominance of Detroit and southern Michigan is diminishing, and the importance of the mid-South—especially the corridors formed by interstates 65 and 75—has been increasing. Much of this shift has to do with labor issues and head-to-head competition with the **direct foreign investment** (DFI) made by Japanese and European automobile manufacturers in the same area of the country (e.g., Honda in southern Ohio, Toyota in Kentucky, Nissan in Tennessee, Mercedes-Benz in Alabama, BMW in South Carolina).

Critical thinking activity: What if the lesser-developed nations of the world were further subdivided into those with considerable potential for near-term development (e.g., Brazil, Mexico, the four “little tigers” of Asia) and those without a history of modern manufacturing and a limited natural resource base (e.g., Bangladesh, Chad, Bolivia)? In which economic activities might countries representing these two different types of developmental levels have a comparative advantage?

In the tertiary sector, there are several examples of globalization, some of which are sometimes opaque to the customer or user. For example, many call centers specializing in direct merchandising are located in the Caribbean. Because of the colonial history of the area, many of the residents speak fluent English and work for lower wages than would comparable workers in the United States. Likewise, many help desks for technical questions are located in Bangalore, the “Silicon Valley” of India. Highly educated computer programmers, engineers, and other technical personnel will work for lower wages there. These long-distance relations are made possible by advances in telecommunications technology, including the widespread use of the Internet.

The second-largest economic entity in the world today is China, with its population of 1.3 billion, one-fifth of the world’s total. Some economists predict that its economy will surpass that of the United States in less than 50 years. Ten percent of all of China’s exports are destined for one retailer: Wal-Mart. Already the largest corporation in the world with sales of more than \$245 billion in 2003 (more than GM and Ford combined), Wal-Mart relies on China to supply many of the products it distributes. These products include

high-end electronics and appliances as well as clothing and less-expensive items. In turn, Wal-Mart is aggressively entering the Chinese market by locating many stores there. More than one-quarter of Wal-Mart outlets are now overseas, and after a few well-documented instances of cultural insensitivity, Wal-Mart is increasingly adjusting its product mix to reflect local tastes, customs, and locally produced items. Thus globalization can be seen as a give-and-take process—one of mutual adjustment.

The Downside: Negative Consequences of Globalization

One consequence of globalization is the increased importance of **transnational** (i.e., **multinational**) **corporations**. Many of these companies have operations all over the world and are among the world's largest economic entities. Giants like General Motors or ExxonMobil contribute more to the world economy than many advanced nations in terms of the dollar value of their international trade.

Corporations that operate in more than one country are not new. The famous Krupp family of Germany has been prominent in that country's iron and steel industry and had facilities located throughout Europe as early as the sixteenth century. Likewise, the pharmaceutical giant Bayer has had manufacturing facilities outside of Germany since the nineteenth century. But in the late twentieth century, the number and magnitude of this globalization expanded enormously. It is typical for such transnational firms to have their corporate headquarters in the developed world (e.g., General Motors in the United States, Unilever in the UK, Royal Dutch/Shell in the Netherlands, Nestlé in Switzerland). So too, their research and development arms are usually in the advanced nations. It is usually the manufacturing arms of these transnationals that end up in the lesser-developed countries. When this outsourcing first began, the lesser-developed countries would often compete against each other in order to obtain some branch plant of a giant transnational corporation. After all, this is how Singapore and Hong Kong were able to rise from being mere sources of cheap labor for transnational corporations to becoming major economic powerhouses that today need to be reckoned with in their own right.

Today, lesser-developed countries are more wary of this globalization. Some transnationals still play one lesser-developed country against the other to extract the most favorable deal that they can negotiate. Far from powerless, the lesser-developed country is able to apply some tactics of its own. These strategies may ensure that more of the earnings of the transnational corporation remain in the **host country** and do not "leak back" to the corporate headquarters location. These strategies include requiring a certain percent of local content in the manufacturing process. This requirement can stimulate economic development in the host country. Another tactic is to require a partnership of

Special Focus: Globalization

the transnational and the host country (i.e., a **joint venture**). Some host countries have insisted that the indigenous population be hired in management positions within the transnational's operations. In this way, a cadre of well-trained managers is available to continue the development process. There are a variety of other means by which home industries in the host country can be protected, while at the same time the benefits that accrue from transnational operations within the host country can be channeled into even more indigenous economic development.

Sometimes polluting industries locate in lesser-developed countries to take advantage of environmental regulations that are less stringent or not enforced to the degree that they might be in the headquarters country. Workers in lesser-developed countries are, therefore, more likely to be at environmental risk in the workplace.

Critical thinking issues: Ask the students to imagine that they are the leaders of a lesser-developed country that a major transnational corporation has been “courting.” What policies, other than the few specified above, might the host country enact in order to assure that the transnational corporation will be beneficial to the fragile economy rather than overwhelm it?

The practice of outsourcing the manufacturing has also affected the status of unions in the United States. It is no coincidence, for example, that the state with the highest percentage of its gainfully employed workers in manufacturing (North Carolina) is also the state with the lowest rate of unionization (less than 10 percent). Companies have sought out Sunbelt locations to get away from the strong unions, the high wages, the high taxes, and the stringent environmental regulations often found in the northeastern and north central (i.e., midwestern) states. According to manufacturing executives, a **conducive business climate** is one in which corporate tax rates are low, the cost of buildings and maintenance is low, workers are not unionized, and productivity is high. If these conditions are not found in the United States, it is quite likely that the next branch plant might be outsourced to some lesser-developed country. This is a fact of life in our global economy.

There is concern also about the way that globalization has impacted the lesser-developed countries in which investments are currently being made. In China, for example, there are large disparities in wealth and opportunities between the coastal regions and special enterprise zones of eastern China, where most of the foreign investment and domestic manufacturing is taking place, and the more rural areas of western and interior China. Such disparities can lead to large-scale migrations of rural peasants seeking a better life in the bustling cities along the eastern and southern coasts. Because migrations are almost

Special Focus: Globalization

always selective, the brightest and best are the most likely to migrate from the western and interior areas, leaving behind an older and less-able population.

Many lesser-developed countries see the globalization as a threat to their indigenous culture, distorting traditional values and creating a consumerist society that may be at odds with long-held religious and ethical precepts. Ironically, processes of globalization are occurring simultaneously with tendencies toward tribalization and the rise of fundamentalism—both reactions to what is perceived as threats to traditional ways of life.

Critical thinking activity: Have the students make an inventory of the country of manufacture of everything in their own bedroom or their classroom. Which nations of the world seem overrepresented, and which ones seem underrepresented? How do they account for these differences?

Critical thinking activity: Have students map a variable that might seem to them to be unrelated to levels of economic development: sex ratios. These data can be obtained for the provinces of China, and the resulting patterns are striking. In the interior and western areas most untouched by globalization, there is a definite preponderance of males to females. In the most urban of the eastern provinces, this sex ratio between males and females is much more balanced. Have the students speculate as to why these disparities exist and how they might be related to economic activities, direct foreign investment, and governmental policies (both the establishment of special enterprise zones and the one-child policy).

Special Focus: Globalization

Glossary of Terms and Individuals

Individuals

Brown, Moses: Wealthy entrepreneur who started an early textile mill near Providence, Rhode Island, and later endowed the nearby Ivy League university (named for a member of his family) with his textile mill earnings.

Ford, Henry: Innovator in the automobile industry. In the teens, Ford really revolutionized the industry with the notion of interchangeable parts and the assembly line method of production, making automobiles affordable to the masses.

Slater, Samuel: Employed by Moses Brown to replicate the British textile innovations of the Industrial Revolution in America.

Watt, James: Inventor of the steam engine in Great Britain that revolutionized both transportation (especially shipping and rail) and industry, as steam power could replace falling water as the source of power for factory machines.

Weber, Alfred: German economist who developed in 1909 a theory for the location of industries that focused on transportation, labor, and agglomeration as factors of production affecting the optimal (least cost) industrial location.

Whitney, Eli: Perhaps best known for his improvements to the cotton-ginning process. He also had a firearms factory in the Connecticut River Valley that employed the concept of interchangeable parts long before Henry Ford used the idea in the automobile assembly process.

Concepts and Terminology

Assembly costs: In Weber's theory for the location of industries, the costs associated with assembling raw materials from disparate sites to the point of manufacturing.

Automation: The substitution of capital for labor in the form of labor-saving devices. This is what spurred the Industrial Revolution.

Conducive business climate: A term that has come to mean low taxes, low utility cost, and low wages paid to workers—but workers with a good work ethic and high productivity.

Direct foreign investment (DFI): When an economic entity such as a large transnational organization decides not simply to market its products in a foreign country but to actually build a facility there (e.g., factory, distribution center). Japan's Nissan Corporation decided, for example, to build an automobile assembly plant in Smyrna, Tennessee, outside of Nashville, a form of direct foreign investment in the United States.

Distribution costs: In Weber's theory for the location of industries, the costs associated with the distribution of the finished product of the manufacturing process to its final markets. Other things being equal, these will be higher than the assembly costs.

Environmental consequences: Often the downside of older, unregulated manufacturing processes. The cleanup of some former industrial sites (sometimes called "brownfield sites") can be astronomical.

Exploitive strategy: A development strategy that is similar to that of many colonial powers: using development capital to exploit the natural resources of the area often for self-serving reasons.

Footloose industry: An economic activity that is not so tied to the natural resource base. Such an industry might locate anywhere and be successful. Many high-tech industries are said to be locationally footloose.

Gross good: A weight-losing good in the process of manufacturing. That is, the weight of the localized raw materials is greater than the weight of the finished product, creating a material index greater than 1.0.

Host country: The country that a transnational corporation decides to set up shop in. There are a variety of protective measures that the host country can adopt to assure that the transnational corporation does not exploit its relationship.

Industrial Revolution: Started with automation being introduced into the textile and apparel industry in the Midlands region of Great Britain in the 1740s and spread to Europe and America as well as to other sectors of the economy somewhat later.

Joint venture: A venture jointly sponsored by a government and a private entity such as a large transnational corporation. (There are many types of joint ventures, but this is the one of most interest in the development sphere.)

Special Focus: Globalization

Maquiladora: A set of twin plants, one on the Mexican side of the border manufacturing some item with cheap labor paid in pesos and another on the American side that receives the input from the Mexican plant and distributes and markets the product throughout the United States, paying taxes on only the value added in the process of manufacturing.

Market orientation: The preference for market locations by industry (other things being equal) because the freight rates on raw material assembly are usually less than the freight rates on product distribution due to the nature of the freight rate structure in the United States. There are many exceptions to this maxim because transportation costs are not the only production factor of importance to locational decision making.

Mass market: A system of exchange adapted to large-scale production and consumption. During the era of Fordism (when assembly line methods of production held sway), products were produced for a mass market. We are now in the era of flexible accumulation where it is possible to manufacture custom orders for niches of the overall market at competitive prices.

Material index: A key in Weber's theory of the location of manufacturing. Goods may be categorized into three different types depending on the ratio of the weight of localized raw materials to the weight of the finished product. If that ratio is greater than 1.0 it is a gross good, if equal to 1.0 it is a pure good, and if less than 1.0 it is a ubiquitous good.

Newly industrializing countries (NICs): A term that has been coined for up-and-coming economies. They have not yet quite achieved the status of first world developed economies, but they are rapidly approaching that status. The four "little tigers" of Asia (Hong Kong, Singapore, South Korea, and Taiwan) are often used as examples of NICs.

North American Free Trade Agreement (NAFTA): An extension of the free trade zone that had been going on for some time between the United States and Canada and the United States and Mexico. Now all three of these North American countries are part of one free trade zone.

Oligopoly: A situation in which there are few very sellers in some product line. By the 1950s, for example, only the "Big Three" (GM, Ford, and Chrysler) remained in the automobile assembly industry, whereas at the turn of the twentieth century there were almost 200 sellers.

Outsourcing: The practice of locating branch plants in foreign countries in order to take advantage of the cheaper labor there.

Pure good: In Weber's terminology, a good like thread/yarn in which the input and the output of the manufacturing process weigh about the same. Other things being equal, such an activity would probably locate at the marketplace.

Quaternary sector: The economic sector in which knowledge-based jobs are among the fastest growing. Sometimes referred to as white collar jobs.

Quintary sector: The economic sector reserved for the very top echelon of any organization: the CEO, FEO, research scientists, and the like. These people are responsible for the top-level corporate decisions and exist in an information-rich environment. These are the “gold collar” jobs. Not all textbooks distinguish this sector of the economy as separate from quaternary activities.

Raw material orientation: The location of the manufacturing plant in relation to the source of raw materials. While most industries would prefer to locate near their markets in order to save the recurring costs of transportation, some industries—especially those that involve a loss of weight, bulk, or perishability in the process of manufacturing—might prefer to locate near their source of raw materials since their material index is much greater than 1.0.

Resource: The physical existence of some raw material that can be used under the current state of technology. If the raw material can't be of use, it isn't really a resource.

Secondary sector: The sector of the economy that takes raw materials from the earth or sea and converts them in form into something more useful (i.e., adding value to the product). Manufacturing and construction are the two most important examples of this sector, the former taking place in factories and the latter on site. Workers in this sector are called “blue collar” and achieved their greatest relative importance in the pre-World War II era.

Tertiary sector: The sector of the economy that is growing rapidly in most developed nations. Some authors divide the tertiary sector into those types of jobs that can be performed with little or no job skills (the “McJobs” of the service sector) and those better-paying jobs that require a great deal of education and information upon which to base decisions. Hence the tertiary sector dealing with services and distribution can be further subdivided into quaternary and even quintary sectors.

Special Focus: Globalization

Traditional society: The first stage of economic development. This stage can last for thousands of years unless there is an impetus for growth in the mercantile and manufacturing areas and a change in the institutions necessary to make the transition to a more modern capitalist society.

Transnational (multinational) corporations: Corporations, usually large ones, with operations in more than one host nation. Often the headquarters and the research and development facilities are located in technologically advanced countries, while the routine manufacturing and assembly operations take place in lesser-developed countries. Markets for the products of such transnational corporations are often global in scope.

Ubiquitous good: A widely available good that might be added in the process of manufacturing at the market since the weight of the finished product would, in this case, be greater than that of the localized (i.e., nonubiquitous) raw materials of which it is composed.

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Special Focus: Globalization

Recent Developments: Globalization, Agriculture, and Human Geography

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A Smaller World

Globalization refers to the spread of businesses, products, people, and ideas around the world. Through globalization, films and television programs made in the United States are seen in countries all over the Earth. Fashions from Italy or France become popular in Mexico or Australia, and fresh grapes, berries, and peaches from Chile and Argentina make their way to supermarkets in the United States, Canada, and Europe when those parts of the world are deep in winter. Globalization affects our lives every day, sometimes in ways we do not even perceive. This essay looks at some of the ways that globalization affects agriculture in the United States and elsewhere in the world.

Free Trade

The North American Free Trade Agreement (NAFTA), a set of trade liberalization agreements between the United States, Canada, and Mexico, went into effect on January 1, 1994. The following year the United States joined the World Trade Organization (WTO), dedicated to opening up trade among the nations of the world. These agreements had far-reaching impacts on trade between the United States and other nations.

Free trade made it easier to export American farm products. For example, agricultural exports from the United States to North America (primarily Canada and Mexico) increased by 39.9 percent between 1994 and 2000. Since that time, they have increased even more. Corn was the largest export by value and increased by 50.6 percent in the same time period (Skorburg 2001). In addition to corn, other important United States exports are live animals (mainly poultry), soybeans, cotton, and fresh fruits and vegetables (Skorburg 2003).

Mexico and Canada also found larger markets in the United States for many of their farm products. Fresh vegetables and fruit from Mexico topped the list of products imported, with a 2001 value of \$2.25 billion. Canada exported \$1.8 billion worth of red meat and \$1.5 billion worth of live animals to the United States in the same year (Skorburg 2003). Much of this trade is complementary. That means it does not compete with similar products from the importing country. However, there are important exceptions. Mexico

is the country where corn was first domesticated, and corn remains a key component of the country's diet and culture. But much of Mexico's corn is produced on tiny farms using ancient techniques. Thus, Mexico's corn production is much less efficient than the highly mechanized corn farming in the United States. Imports of corn from the United States have driven down the price of corn in Mexico, creating problems for Mexico's marginal corn producers, many of whom depend on corn both for their family's subsistence as well as for what little cash income they receive (Weiner 2002). Clearly, not all sectors of Mexican agriculture have benefited from free trade.

Recently, cotton subsidies have been criticized for another reason. The governments of countries such as Brazil, Mali, and Burkina Faso complain that subsidized cotton production in countries like the United States keeps cotton prices so low that their farmers, who do not receive subsidies, cannot compete in the market. They say that American farm subsidies make it impossible for them to export cotton and that alternative cash crops will be hard to find. Critics fail to understand why the United States and other developed countries don't simply let the market decide what farmers grow (Becker 2004; Kristof 2002; Touré and Compaoré 2003). These complaints caused a group of countries, led by Brazil, to file a formal protest with the World Trade Organization in 2003. The following year, the WTO found in favor of the countries that brought the complaint (*Economist Global Agenda* 2004). The United States has appealed the finding, but the likelihood of success is small. It is too soon to evaluate the impact of the WTO action on United States cotton producers, but it is quite possible it will lead to major changes in the nature of cotton production in the United States.

Similar arguments are made about corn subsidies, which make it possible for farmers in the United States to sell corn at reduced prices. The subsidies make it even harder for Mexican farmers to compete against imported American corn (Weiner 2002).

Free trade is a part of globalization. Its impacts are different for each country, for different kinds of producers, and with different kinds of crops. However, it seems clear that free trade-related globalization will lead to important shifts in agricultural production in the future. It will be harder for countries like the United States to compensate farmers for high production costs, and inefficient small farmers in countries like Mexico will be forced to change their means of production or quit farming.

Biotechnology and Agriculture

Recent developments in cellular biology make it possible to engineer plants and animals in ways that have never before been seen. Genes can be transferred from one plant or

Special Focus: Globalization

animal to another to make the gene recipient more useful. For example, most of the corn, soybeans, and cotton grown now in the United States are produced from seed that has been genetically modified (GM) to resist certain kinds of herbicides. Similar techniques make plants poisonous or unpalatable for harmful insects.

The United States is by far the world's leader in use of GM seed, with two-thirds of the world GM crop acreage in 2003 (42.8 million hectares, or 108.7 million acres). The United States was followed by Argentina (13.9 million hectares, or 35.3 million acres), Canada (4.4 million hectares, or 11.2 million acres), Brazil (3.0 million hectares, or 7.6 million acres), and China (2.8 million hectares, or 7.1 million acres). No other country planted more than 400,000 hectares of GM crops. The most important GM crops by area planted in 2003 were soybeans (61 percent), corn (23 percent), cotton (11 percent), and canola (5 percent) (James 2003).

Almost as interesting as who has adopted GM crops is the pattern of nonadopters. In Europe, only Spain, Germany, Bulgaria, and Romania produced GM crops in 2002. Portugal, Ukraine, and France were producers but stopped production before 2002 ("Global Area by Country" 2003). This pattern reflects widespread opposition to GM crops among Europeans and others. Many Europeans believe that foods made from GM plants might be unhealthful for consumers. Also, there is evidence that GM genetic material can be transferred to native plants, thus modifying their genetic structure, and that genetic changes that make plants poisonous or unpalatable for insects might upset the natural ecological balance (Weiss 2004). In Africa, some governments have resisted GM crops because of these environmental concerns, but the cost of seed and unsuitable farming techniques may be greater deterrents to their use.

Because of resistance to GM crops, many countries refuse to import corn and other GM foods from the United States and other GM adopters. This resistance clearly has an impact on global trade and has inhibited the adoption of GM crops in Europe and elsewhere.

Despite the objections of those who resist GM technology, globalization pressures are likely to continue to lead to wider adoption of existing GM crops and to creation of new applications. A GM rice with genes to produce beta carotene (Vitamin A) is being tested. It has the potential to greatly reduce nutritional deficiencies among poor Asians whose diet is made up largely of rice (Fedoroff and Brown 2004). Other crops that are more productive, more nutritious, or resistant to pests and/or disease are under development. If these GM plants are effective, it will be hard to resist their adoption.

Conclusion

International trade agreements, farm subsidies, and responses to genetic modification technology all have global impacts on agriculture. Some of those impacts are positive, such as making farms more productive or allowing food to be shipped from areas of surplus to places in need. However, globalization of agriculture also has drawbacks. Local farmers may be unable to compete in the international marketplace. Unforeseen consequences of technological innovation may lead to irreversible environmental changes, and even if they do not, the public's response to innovation may limit its potential for adoption.

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Special Focus: Globalization

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Singapore: The Most Globally Integrated Place on Earth

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On the sixth of February, 1819, Sir Stamford Raffles, lieutenant governor of Bencoolen, closed a deal with Sultan Hussein of Johor and the Temenggong Abdu'r Rahman, the local rulers. The deal secured a trading post for the British East India Company on an island off the southern tip of the Malay Peninsula (see Figure 1). On that day, Sir Raffles became known as the founding father of Singapore, a country that today is ranked the most globally integrated place on Earth.



Figure 1: Map of Singapore

What does it mean to say a place is “globally integrated?” Global integration suggests globalization at work. Globalization is a buzzword with innumerable definitions. In its simplest form, globalization is the increasing degree of interconnections among people and places. Global connections increase through intensified flows of people, goods, and ideas. It follows, then, that a globally integrated place has a significant volume of these elements moving in and out of it. In theory, these flows, or globalization, can be measured. But how can one measure globalization? One popular magazine thinks it has figured it out.

Special Focus: Globalization

In the year 2000, *Foreign Policy* magazine in partnership with A. T. Kearney Inc. published its first “Globalization Index.” The Globalization Index (GI) attempts to measure globalization by collecting data from 62 countries. The 2005 GI accounts for 96 percent of the world’s gross domestic product (GDP) and 85 percent of the world’s population. Both developed and developing countries appear in the GI, resulting in a comprehensive and comparative view of global integration. The GI tracks four key dimensions and indicators of global integration (see Table 1).

Table 1: *Foreign Policy Magazine’s Four Key Dimensions of Global Integration*¹

Dimension	Indicators
Economic integration	Gross domestic product, trade, foreign direct investment (FDI)
Personal contact	Telephone traffic, international travel arrivals, remittances and personal transfers
Technological connectivity	Internet users, Internet hosts, secure servers
Political engagement	Memberships in international organizations, United Nations peacekeeping missions, treaties signed, government transfers (credit)

“Economic integration” combines data on trade and inflows and outflows of foreign direct investment (FDI). “Personal contact” tracks international travel arrivals and tourism, international telephone traffic, and cross-border remittances and personal transfers (including worker remittances, compensation to employees, and other person-to-person and nongovernmental transfers). “Technological connectivity” tallies the number of Internet users, Internet hosts, and secure servers processing encrypted transactions. Finally, “political engagement” includes each country’s memberships in a variety of international organizations, personnel and financial contributions to United Nations (UN) peacekeeping missions, ratification of selected multilateral treaties, and amounts of governmental transfer payments and receipts (*Foreign Policy* 2005, pp. 52–53).

¹ For a comprehensive discussion of how the Globalization Index (GI) is calculated and for a complete listing of data sources, please visit www.foreignpolicy.com.

Based on the aforementioned indicators, Singapore ranks as the most globally integrated place on Earth in 2005 (see Table 2).

Table 2: Foreign Policy Magazine's Top 10 Most Globally Integrated Countries 2005

Country	Rank 2005	Rank 2004
Singapore	1	2
Ireland	2	1
Switzerland	3	3
United States	4	7
Netherlands	5	4
Canada	6	6
Denmark	7	10
Sweden	8	11
Austria	9	9
Finland	10	5

Singapore unseats Ireland, which held the title for three years in a row. *Foreign Policy* cites the following as reasons for Singapore's most integrated status:

- Increased its financial contributions to UN peacekeeping missions by 40 percent (a Singaporean general commanded UN peacekeepers in East Timor for most of 2003)
- Signed a bilateral free trade agreement with the United States (the first such agreement the United States has signed with an Asian nation)
- Ranked first in trade, FDI, and telephone traffic indicators (*Foreign Policy* 2005, pp. 54–55)

While Singapore itself is primarily responsible for its number one ranking, the fact that Ireland's economy slumped from strong GDP growth of 6.9 percent in 2002 to 1.8 percent in 2003 opened the door for Singapore to take the top spot.

Special Focus: Globalization

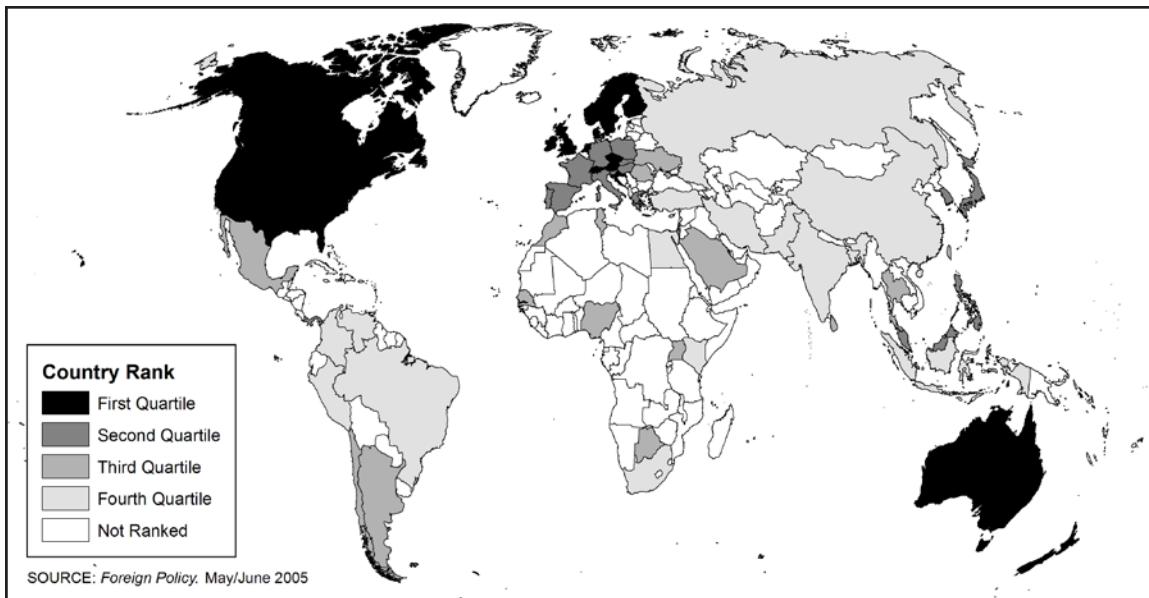


Figure 2: Map of Foreign Policy Magazine's 2005 Globalization Index

While at a quick glance the GI draws attention to Singapore, closer study reveals numerous additional facets of globalization. The United States, for example, is described as "schizophrenic," being the most technologically integrated place on Earth but ranking 57 of 62 countries in terms of ratifying treaties. This fact places the United States below both China and Pakistan. Russia falls eight rankings since 2004 due to its status as a "petrostate." Government attacks on the petroleum industry and continued fighting in Chechnya have seriously deterred foreign direct investment. The GI points to China's continued record growth (7.1 percent in 2001, 8.0 percent in 2002, and 9.1 percent in 2003) as an indicator of the rapid economic integration in the planet's most populous country.

New European Union members did not escape notice. The Czech Republic, Slovakia, and Slovenia all saw their inflows of FDI slip in 2004. Canada, maintaining sixth place, is noted for quietly stealing a large segment of the outsourcing industry from competitor India, which ranks 61 on the GI. Iran, on the other hand, continues to struggle with global integration. The country, ranked 62, has been plagued by falling levels of FDI from a high of 2.53 percent of GDP in 2001 to 1.16 percent of GDP in 2003.

Finally, careful analysis of the statistics reveals little correlation between the size of a country's economy and its level of globalization. Large economies rank from 4 (United States) to 54 (China), whereas smaller economies rank from 1 (Singapore) to 55 (Venezuela). Size, however, is not irrelevant. In combination with the level of economic development, as measured by per capita income, a relationship becomes clear: small

countries, like Singapore, tend to have an advantage over larger countries at similar levels of per capita income.

Sir Raffles is undoubtedly proud of his little trading post. His little island country, Singapore, has grown up to become the most globally integrated place on Earth.

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Special Focus: Globalization

A Snapshot in a Case Study: Topics in Human Geography

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Note: This piece was adapted with permission from a presentation by Martha Sharma (formerly of the National Cathedral School, Washington, D.C.) at the National Council for Geographic Education, November 2004.

Introduction

Case studies in geography provide students with a brief overview or examination of events that impact or alter the way people function and live day to day within the human and physical environment. They are important to assist students in developing a series of “real world” examples at differing levels of scale that relate to the theoretical content they are studying. The student prepares the case study for class discussion by analyzing the background data and presenting the facts and data to explain the situation in a geographic perspective. A good case study in geography provides several key elements; it:

- Tells a story.
- Focuses on a conflict within the human environment.
- Is timely, recently occurring, or ongoing.
- Creates a human sentiment of volunteerism and sympathy.
- Includes cited commentary from all parties.
- Is relevant to the reader and the area of study.
- Presents a conflict that provokes discussion.
- Is short, concise, and to the point.

Objectives

Students will:

1. Develop and interpret a real-world issue as it applies to the AP Human Geography topic of study.
2. Acquire key understandings essential to decision making.
3. Collect and review geographic information from multiple sources, e.g., journals, media sources, opinion editorials, maps, and data sets.
4. Analyze the historical, spatial, and human context of the conflict examined.
5. Evaluate the effectiveness and desired outcome of the conflict based on cultural and political responses.
6. Evaluate sources for accuracy, bias, understanding, and relevancy.

Special Focus: Globalization

7. Provide alternative responses or solutions to the conflicts.
8. Present their findings in the form of a case study.

Instructions

1. The teacher assigns or the students select a conflict, discord, disagreement, dispute, event, or incident as it applies to the area of study.

Students locate and develop a quick and concise understanding of the conflict and prepare answers to the following questions:

- a. What is the conflict, and who are the parties involved?
 - b. What is the cause of the disagreement? What is the relevant historical context?
 - c. What is the type of conflict?
 - d. How long has the disagreement occurred?
 - e. How has the dispute been expressed?
 - f. Who is affected? What is the immediate impact of the issue? What are its long-term effects?
 - g. Where? And what is the spatial extent? What is the geographic perspective?
 - h. What is the scale of the conflict (local, regional, national, global)?
 - i. Why does the disagreement continue, and are there any contrary opinions?
 - j. How is the conflict carried out?
 - k. What is the world response, and by whom?
 - Government legislation if applicable
 - NGO (nongovernmental organization)/UN position on the topic
2. Students design the case study presentation. The idea is to be concise and to the point—maximizing the space with the most important information on the topic, without losing content and implications.

Option A: A Geographic Brief

Students can construct a one-page, double-sided handout on legal-sized paper. This can be passed out as supplementary handouts, addressed in A-B type grouping, or used in a presentation. It can be completed in small groups of two to three or individually. Whichever format students choose, they must create an identity for the case study in a geographic perspective. Topics selected at different levels of scale are essential, for example, the differences and conflicts between intramigration and intermigration. In

Special Focus: Globalization

addition, students should use maps at differing scales to help establish location as well as relative location but also potential impact and escalation into associated areas.

This is one page, front and back:

1. On the front page, include parts a, b, g, i, and j. This includes the conflict, causes, relevant historical context, geography of the area, map, players, and applicable data.
2. On the back page, include parts c, d, e, f, h, and k. This includes the type of conflict, time frame, how it has been carried out, impact, effect, scale, and world/national/regional response or legislation.

Specific questions should be addressed in the brief.

Option B: A Geographic Slide Case Study

Students can construct a four to five slide study in a PowerPoint-type format. This can be printed out, but it is better presented via computer and/or a projector to the rest of the class. Students can complete this option in small groups of two to three or individually.

The slide presentation should build the conflict, effects, and responses.

- Slide 1 introduces the conflict, the parties involved, and the geographic setting with a map in a relative setting.
- Slides 2 and 3 respond to the causes, historical context, type of conflict, impact, effects, and contrary opinions,
- Slide 4 addresses the scale of the conflict, applicable data, government and world responses, legislation, prediction for the future of this conflict, and relevant photos.

Materials

The materials used will depend on how you want students to develop and present the case study.

Sources

Journals and periodicals with an applicable focus:

Newsweek, Time, World & I, Economist, National Geographic, the American Geographical Society's FOCUS on Geography, Current History

News sources:

New York Times, Times of London, Washington Post, CNN, MSNBC, USA Today

Online sources:

Associated Press: www.ap.org

CNN: www.cnn.com

CNN/Money: <http://money.cnn.com>

CorpWatch: www.corpwatch.org

Economic Policy Institute (EPI): www.epinet.org

Focus on the Global South: www.focusweb.org

Foreign Policy in Focus: www.fpi.org

Global Policy Forum—Web Resources: www.globalpolicy.org/globaliz/websites.htm

The Globalist: www.theglobalist.com

Infotrac: <http://infotrac.thomsonlearning.com>

MSNBC: www.msnbc.msn.com

National Geographic News: <http://nationalgeographic.com/news>

PBS: www.pbs.org

Population Connection: www.populationconnection.org

Reuters: www.reuters.com

Lexis-Nexis: www.lexisnexis.com

Urban Institute: www.urban.org

U.S. Census Bureau: www.census.gov

U.S. Department of Agriculture: www.USDA.gov

World Bank: www.worldbank.org

WorldNews: www.worldnews.com

Worldpress.org: <http://worldpress.org>

World Trade Organization (WTO): www.wto.org

Special Focus: Globalization

Suggested Topics¹

Agriculture/Land usage:

- 40 years after the Green Revolution
- Development in marginal lands
- Future of food production
- Genetic modification to feed the world
- Global trade network in food commodities
- Labor in agriculture in developed nations
- Shift to agribusiness in the developing world

Culture:

- Challenges of language in a globalizing world
- Changing roles of women
- Cultural icons
- Cultural impacts of outsourcing
- “Hollywoods to Bollywoods”
- Impact of globalization on culture
- Religious influences in economic/political/social decisions
- Traditional values versus modern practices

Development:

- Balancing development and conservation
- Centrifugal/centripetal influences of development
- Challenges of development with limited resources
- Changing geography of industry and work
- Development in rim countries
- Impact of globalization and development
- Impact of recreation and tourism
- Regional shifts in manufacturing
- Role of resources and development

Political:

- Colonies
- Conflicts to sovereignty
- Global states

¹ These topic ideas are not inclusive of all areas that should be examined in the AP Human Geography curriculum. These are only suggestions. Specific events within these topics should be addressed at varying levels of scale.

- NGOs
- Role of nation-states
- Political-cultural conflict
- Political suppression
- Rise in nationalism
- Supranational organizations

Population:

- Current patterns of international migrations
- Impact of negative growth populations
- Political conflict and migration
- Population demographics

Urbanization:

- Changes in transportation with development
- Changing land usage in urban areas
- Counterurbanization
- Cultural influences in urban areas
- Gentrification
- Planned development
- Urban renewal: focus of redevelopment

Evaluation Suggestions

- Present an oral explanation to summarize the case study without reading it to the audience.
- Develop teacher-guided questions from the presentations.
- Use A-B grouping or jigsaw grouping with guided questioning.
- Use study questions. These are questions that are listed at the ends of the various sections of the case to help students focus on particular issues.
- Evaluate the product from the presentation.

Most importantly, the class should discuss each case in an organized way. The instructor should move through various critical topics as addressed by the presented conflict with interactive discussion with the students. Connecting the events and the current situation with the related topics in the AP Human Geography curriculum concludes the study.

Special Focus: Globalization

From Mocha to Java: The Coffee Story

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Coffee was first domesticated in Eastern Africa and then diffused through the Arab world, into Europe, and around the globe. Today this aromatic beverage is the product of an important cash crop in many lesser-developed countries and represents a significant set of economic linkages that extend around the world. This article traces the history of the plant's domestication and diffusion as well as some of the important economic issues regarding its trade.

Coffee is one of the most valuable resources traded in the world today. It is the second most valuable legal commodity traded, after petroleum, and it is the largest food import into the United States by value (Dicum and Luttinger 1999). It is consumed in the wealthiest countries, yet it is grown largely in the poorest parts of the globe. The growing, processing, shipping, preparation, and sale of coffee provide jobs for millions of people worldwide.

History

Coffee was first domesticated in what is today Ethiopia. A popular legend says that a goatherd observed his goats eating red berries and becoming very frisky. The boy tried the berries for himself, was filled with energy, and began dancing with his goats. Another story indicates that monks from a local monastery came upon the idea of boiling the berries to help themselves stay awake during long religious ceremonies. By the early fifteenth century, coffee was being cultivated in nearby Yemen. The Red Sea port city of Mocha became synonymous with coffee. Although the Arabs tried to limit the export of fertile coffee seeds or plants, in the early 1600s the Dutch were able to smuggle out plants, which they transported to their colonies in Java and elsewhere. Java is another place name that has become interchangeable with coffee. The Dutch supplied coffee to European coffeehouses, which were growing in popularity. By the late 1600s, coffeehouses were established in North American cities such as New York, Philadelphia, and Boston. The Green Dragon, a coffeehouse-tavern in Boston, was nicknamed the "headquarters of the Revolution" and was likely the place where the Boston Tea Party was planned (Pendergrast 1999).

Special Focus: Globalization

In 1714 the Dutch gave a healthy coffee plant to the French government, and it was planted in the Royal Botanical Gardens (now the Jardin des Plantes) in Paris. Several years later, a French naval officer, Gabriel Mathieu de Clieu, acquired a cutting from the plant and carried it to the colony in Martinique, where he planted it, and it flourished. Within three years there were millions of coffee shrubs on the island of Martinique, as well as Haiti, and the king made de Clieu governor of Guadeloupe. Around the same time, the Dutch introduced coffee in Dutch Guiana (today Suriname), and seeds were smuggled from there into Brazil.

In the late eighteenth century, French Haiti became the world's largest coffee exporter on the backs of nearly half a million slaves. In 1791 and 1793, the Haitian slaves revolted and destroyed many of the island's plantations. Haiti was replaced by Ceylon as the world's leader in coffee production. However, a fungal disease called coffee rust destroyed the plants on Ceylon, and the British replanted the estates with tea, which replaced coffee as their national drink. Brazil emerged as the leading coffee producer in the 1800s and continues to lead world production today.

Brazil entered the twentieth century controlling more than three-fourths of the global production of coffee (Dicum and Luttinger 1999). Growers in Brazil created an agency, Instituto do Café, which was taken over by the government in 1926; it is now called the Instituto Brasileiro do Café (IBC). The IBC bought coffee from farmers, sold it on the world market, and controlled coffee prices by manipulating the coffee supply. As prices rose, farmers in other countries, particularly Colombia, increased production of coffee. Colombian farmers created the Federación Nacional de Cafeteros (FNC), not to control the supply as the Brazilians did but to stimulate demand. One of the most successful projects of the FNC has been the Juan Valdez advertising campaign to promote Colombian coffee in the United States and Europe. In the 1940s and 1950s, new centers of coffee production also emerged in Africa. In the 1960s, at the urging of Brazil, Colombia, and major U.S. roaster companies, a global cartel was created called the International Coffee Organization, or ICO. The ICO assigned quotas and prices for member countries. However, in the 1980s, support for free trade and a coffee surplus brought an end to the cartel's power.

How Coffee Is Grown

Coffee grows on a woody shrub (genus *Coffea*, family Rubiaceae) that can grow over 30 feet in height but is usually pruned to about eight feet. It is found naturally in tropical forests of Africa, where it is towered over by the canopies of taller trees. Coffee grows best in areas with no frost, temperatures averaging 60 to 70°F, and moderate rainfall. All coffee is grown within 2,000 miles of the equator and is often grown in mountainous

Special Focus: Globalization

areas, usually between sea level and 6,000 feet elevation. It is a lush green plant with shiny leaves and small, white, fragrant flowers that are replaced by a fruit. The berries, which are like cherries, have a fleshy fruit that usually contains two seeds, or coffee “beans.” A mature tree will produce 2,000 cherries, or 4,000 beans, per year, about one pound of roasted coffee (Dicum & Luttinger, 1999). There are over 20 species of coffee, but two make up the bulk of coffee grown for consumption today. *Coffea arabica* is native to Ethiopia, while *Coffea canephora* (var. *robusta*) is native to the hotter, lowland forests of West Africa. Arabica and robusta coffees differ in taste, caffeine content, disease resistance, and conditions for cultivation (Dicum and Luttinger).

Traditional coffee agriculture involves shade cultivation of the shrubs under an overstory of noncoffee trees, such as bananas. This agroforestry system provides protection from soil erosion, and the noncoffee trees provide fruit, firewood, and alternate sources of income for the small-scale coffee grower. Although the Green Revolution of the 1950s and 1960s focused initially on food grains such as rice and wheat, the influence has also been felt in coffee production. Many coffee plantations now utilize an agro-industrial approach. The coffee is grown with little or no shade, with heavy inputs of pesticides, herbicides, fungicides, and fertilizers. The coffee cherries are mechanically harvested. Loss of tropical biodiversity, including migratory songbirds, and increased soil erosion has resulted. Additionally, coffee is a cash crop and often supplants food production in efforts to increase profits.

The Economics of Coffee

Some coffee-dependent economies have suffered from the boom and bust cycles of coffee prices. Pests, disease, frosts, and drought can devastate coffee production. Poor crops cause a short-term rise in prices, which encourages other farmers to plant coffee instead of other crops. After three to five years, between planting and production, a glut of coffee arrives on the market, driving prices lower. Some countries have battled surpluses by burning excess coffee or dumping it in the ocean.

By the time a pound of coffee arrives at the grocery store or local Starbucks outlet, it has already passed through a series of economic linkages between the producer and the consumer, known as the value chain (Dicum and Luttinger). After the coffee is grown and harvested, the farmer removes the seeds from the cherry and washes and dries the beans. Then the coffee is transferred to a local mill, or *beneficio*, for processing. Because coffee is harvested between December and May, while the demand for coffee is constant year-round, some of the coffee is stored at the mill. Eventually it is shipped to the United States or Europe, where it is roasted, packaged, and transported to market. Each step, from crop to cup (grower, *beneficio*, shipping, manufacturing, retail), adds value to the agricultural

product. The “downstream activities” in this product flow (those closest to the consumer) are the activities that add the greatest value. Of a dollar spent on roasted, ground coffee in a U.S. supermarket, only five cents are paid to the grower, while nearly 70 cents goes to the wholesale roasting and packaging company (Dicum and Luttinger).

Coffee in the United States

In the United States, coffee consumption grew in popularity during the twentieth century. Coffee is a universal beverage, enjoyed by people across different social strata. The coffee break has become an integral part of the workday. The caffeine in coffee provides energy and increased concentration to combat work fatigue. The coffee break also provides important social interaction. Coffee advertising has introduced several icons of pop culture: the figure of Juan Valdez and slogans like “Good to the Last Drop” are instantly recognized. Some popular television programs, such as *Frasier* and *Friends*, feature coffeehouses prominently.

Regional roasting companies, such as Folgers and Maxwell House, became national brands and then fell victim to corporate takeovers. For example, Maxwell House was bought by General Foods, which was bought by Philip Morris, where it was later merged with Kraft. By the late 1970s, almost 90 percent of American coffee roasting and distribution was controlled by four companies. However, at the same time, the specialty coffee industry began to grow rapidly. One specialty store, Starbucks, created a special appeal with darker-roasted arabica beans and special cafés. In contrast to the ubiquitous fast-food outlets, Starbucks created an environment of leisurely conversation. The growth continues today: every working day Starbucks opens four new outlets and hires 200 new employees (Reid 2005). The green logo that features a mermaid from a sixteenth-century Norse woodcut (Schultz 1997) can be found around the world. Starbucks represents the vertical integration of many agribusinesses, with investment in coffee plantations, processing plants, and retail outlets. Starbucks has over 9,000 direct retail outlets worldwide and has expanded into ice creams, bottled drinks, and whole-bean coffees in supermarket outlets.

Whether it is a Turkish *kahve*, Italian *caffè*, or a plain “cup of Joe,” coffee creates connections between people. From the small farmer in Colombia to the Starbucks barista, a series of economic linkages are formed as this agricultural product flows from one part of the globe to another.

Special Focus: Globalization

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Web Sites

Coffee Research
www.coffeeresearch.org

Coffee Universe
www.coffeeuniverse.com

Global Exchange: Fair Trade
www.globalexchange.org/campaigns/fairtrade/coffee

International Coffee Organization
www.ico.org

Specialty Coffee Association of America
www.scaa.org

Starbucks Coffee Company
www.starbucks.com

Suggested Student Activities

1. Have students use an outline map of the world to map the story of the diffusion of coffee. Include key places: Ethiopia, Yemen, Mocha, the Netherlands (Dutch), Java, France, Martinique, Haiti, Suriname, Brazil, Colombia.
2. Use a *Goode's Atlas* (published by Rand McNally) to identify which countries are the leading producers and importers of coffee. On an outline map of the world, highlight the producers and importers and draw in the likely flows of coffee.
3. Go to a grocery store and identify the major coffee-producing companies. What other products do these companies produce? (Or what other "brand" names are parts of that company's holdings?)
4. Investigate "fair trade" coffee. Create an advertisement (print or other media) for fair trade coffee.
5. Select another agricultural product. Where was it first domesticated and how/where did it diffuse? Where is it produced today? How and where is it "consumed"? (Some may be used as foods; others may be used in manufacturing.) Create a PowerPoint presentation about the product that includes photos and maps.

Special Focus: Globalization

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Information current as of original publish date of September 2005.

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Ann Linsley-Kennedy has taught IB/AP Physical and Human Geography at Bellaire High School in the Houston Independent School District for the past nine years. She previously taught AP World History for seven years. A teacher consultant with the Texas Alliance for Geographic Education under NGS, as well as a College Board consultant and a Reader for the AP Human Geography Exam, Ann received her initial AP training at James Madison University in the second national training program. She has been a participant in numerous state and national geography summer institutes and is currently finishing a second master's degree in geoscience at Texas A&M University.

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Cheryl Jenkins Guy teaches AP Human Geography and ninth-grade world regional geography at Spring Valley High School in Columbia, South Carolina. She has been an AP Reader since 2003 and will be a Table Leader in 2005. She earned her national board certification in 2002 (Adolescent–Young Adult Social Studies–History). She has been a member of the South Carolina Geographic Alliance since it began in 1990. She was selected Teacher of the Year for her school for 2004–2005 and received a Distinguished Teaching Achievement Award from the National Council for Geographic Education in 2004.

Jeffrey Lash is an associate professor in the School of Education at the University of Houston: Clear Lake. He received his Ph.D. from Texas State University: San Marcos in 2001. Several of his articles have recently appeared in journals such as the *International Journal of Middle East Studies*.

William B. Wood, who died in July 2005, was deputy assistant secretary for analysis and information management in the Bureau of Intelligence and Research (INR) and the geographer for the U.S. Department of State. (The views in his essay in these materials were his own and do not reflect U.S. government policy.) Dr. Wood conceived of the Geographic Information for Sustainable Development project, which brought geographic data and science to Africa during the World Summit on Sustainable Development, and the Humanitarian Information Unit, which has used geographic data, science, and tools to help humanitarian work related to the Sumatra-Andaman earthquake, the Indian Ocean tsunami, and the genocide in Darfur. He coedited *Reordering the World: Geopolitical Perspectives on the Twenty-First Century* (1999), and in 2001, he was awarded the Anderson Medal in Applied Geography by the Applied Geography Specialty Group of the Association of American Geographers.

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