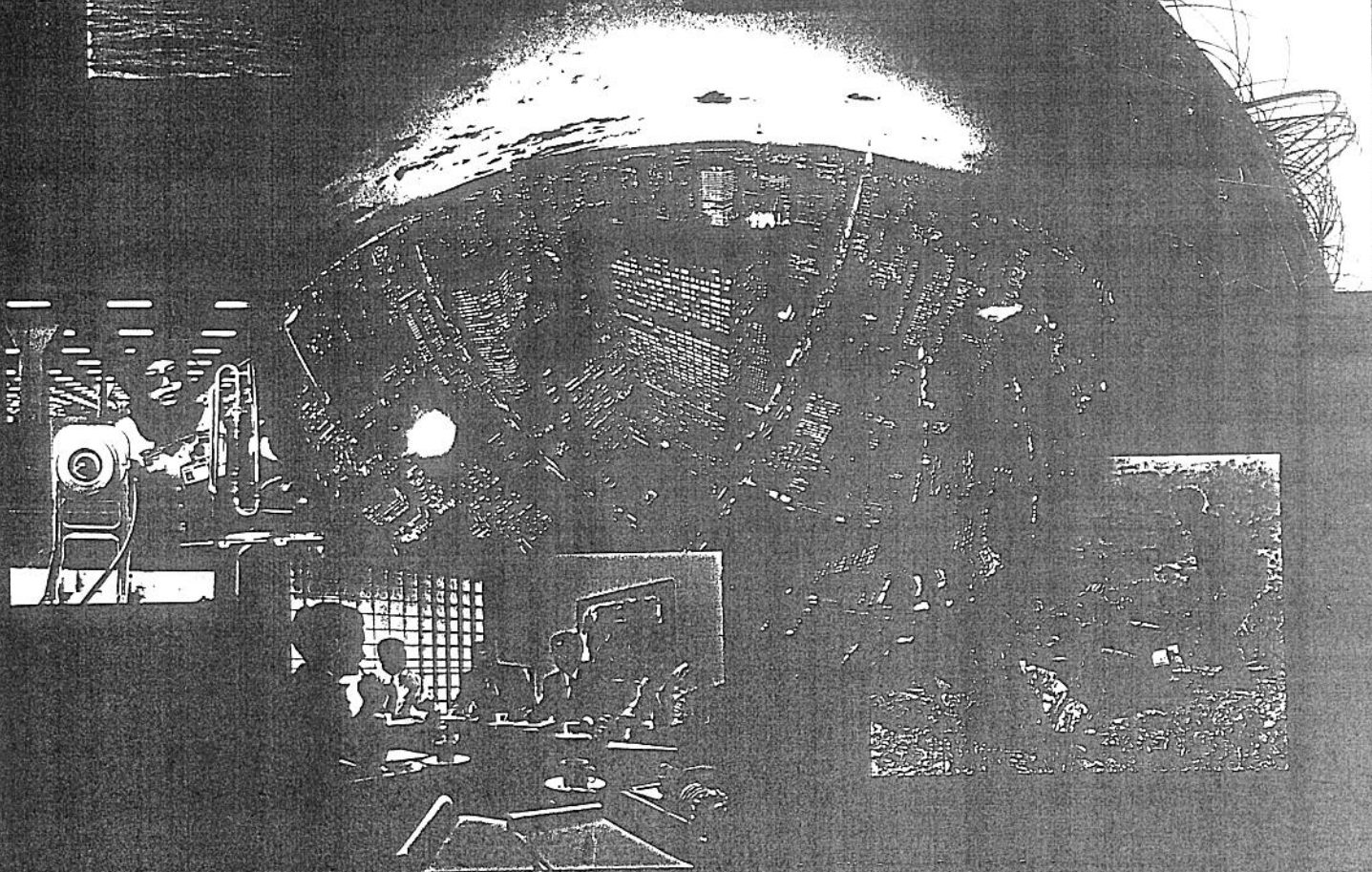


UPDATED
Second Edition

PLACES AND REGIONS IN
GLOBAL CONTEXT

Human Geography

SECOND EDITION



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Globalization

The imperial world order began to disintegrate shortly after World War II, however. The United States emerged as the new hegemonic power, the dominant state within the world-system core. This core came to be called the "First World." The Soviet Union and China, opting for alternative paths of development for themselves and their satellite countries, were seen as a "Second World," withdrawn from the capitalist world economy. Their pursuit of alternative political economies was based on radically different values.

By the 1950s, many of the old European colonies began to seek political independence. Some of the early independence struggles were very bloody, because the colonial powers were initially reluctant to withdraw from colonies where strategic resources or large numbers of European settlers were involved. In Kenya, for example, a militant nationalist movement known as the Mau Mau launched a campaign of terrorism, sabotage, and assassination against British colonists in the early 1950s. Their actions killed over 2,000 white settlers between 1952 and 1956; in return, 11,000 Mau Mau rebels were killed by the colonial army and 20,000 put into detention camps by the colonial administration. By the early 1960s, however, the process of decolonization had become relatively smooth. (In Kenya, Jomo Kenyatta, who had been jailed as a Mau Mau leader in 1953, became prime minister of the newly independent country in 1962.) The periphery of the world-system now consisted of a "Third World" of politically independent states, some of which adopted a policy of nonalignment vis-à-vis the geopolitics of the First and Second Worlds. They were nevertheless still highly dependent, in economic terms, on the world's core countries.

As newly independent peripheral states struggled to be free of their economic dependence through industrialization, modernization, and trade from the 1960s onward, so the capitalist world-system became increasingly integrated and interdependent. The old imperial patterns of international trade broke down and were replaced by more complex patterns. Nevertheless, the newly independent states were still influenced by many of the old colonial links and legacies that remained intact. The result was a neocolonial pattern of international development. Neocolonialism refers to economic and political strategies by which powerful states in core economies indirectly maintain or extend their influence over other areas or people. Instead of formal, direct rule (colonialism), controls are exerted through such strategies as international financial regulations, commercial relations, and covert intelligence operations. Because of this neocolonialism, the human geographies of peripheral countries continued to be heavily shaped by the linguistic, cultural, political, and institutional influence of the former colonial powers, and by the investment and trading activities of their firms.

At about the same time, a new form of imperialism was emerging. This was the commercial imperialism of giant corporations. These corporations had grown within the core countries through the elimination of smaller firms by mergers and takeovers. By the 1960s, quite a few of them had become so big that they were *transnational* in scope, having established overseas subsidiaries, taken over foreign competitors, or simply bought into profitable foreign businesses.

These transnational corporations have investments and activities that span international boundaries, with subsidiary companies, factories, offices, or facilities in several countries. By the mid-1990s nearly 40,000 transnational corporations were operating, 90 percent of which were headquartered in the core states. Between them, these corporations control about 180,000 foreign subsidiaries and account for over \$6 trillion in worldwide sales. Transnational corporations have been portrayed as imperialist by some geographers because of their ability and willingness to exercise their considerable power in ways that adversely affect peripheral states. They have certainly been central to a major new phase of geographical restructuring that has been under way for the last 25 years or so. This phase has been distinctive because an unprecedented amount of economic, political,

neocolonialism: economic and political strategies by which powerful states in core economies indirectly maintain or extend their influence over other areas or people.

transnational corporation: company with investments and activities that span international boundaries and with subsidiary companies, factories, offices, or facilities in several countries.

social, and cultural activity has spilled beyond the geographic and institutional boundaries of states. It is a phase of *globalization*, a much fuller integration of the economies of the world-wide system of states and a much greater interdependence of individual places and regions from every part of the world-system.

Globalization has, of course, been under way since the inception of the modern world-system in the sixteenth century. The basic framework for globalization has been in place since the nineteenth century, when the competitive system of states fostered the emergence of international agencies and institutions; global networks of communication; a standardized system of global time; international competitions and prizes; international law; and internationally shared notions of citizenship and human rights.

The distinctive feature of globalization over the past 25 years or so is a decisive increase in the proportion of the world's economic and cultural activities that are international in scope. This increase is linked to a significant shift in the nature of international economic activity. Flows of goods, capital, and information that take place within and between transnational corporations are becoming more important than imports and exports between countries. The foreign affiliates of transnational corporations achieved more than \$10 trillion in sales in 1998, accounting for more than one third of total world exports. At the same time, all these flows and activity have helped to spread new values around the world. These new values range from consumer lifestyle preferences to altruistic concerns with global resources, global environmental change, and famine relief.

The contemporary world economy is constituted through the myriad commodity chains that criss-cross global space. **Commodity chains** are networks of labor and production processes whose origin is in the extraction or production of raw materials and whose end result is the delivery and consumption of a finished commodity. These networks often span countries and continents, linking into vast global assembly lines the production and supply of raw materials; the processing of raw materials; the production of components; the assembly of finished products; and the distribution of finished products. As we shall see in Chapter 7, these global assembly lines are increasingly important in shaping places and regions.

This globalization of the contemporary world—its causes and effects on specific aspects of human geographies at different spatial scales—is a recurring theme through the rest of this book. For the moment, we need only note in broad outline its principal causes and outcomes.

commodity chain: network of labor and production processes beginning with the extraction or production of raw materials and ending with the delivery of a finished commodity.

A New International Division of Labor

The globalization of the past quarter-century has been caused by four important and interrelated factors: a new international division of labor, an internationalization of finance, a new technology system, and a homogenization of international consumer markets.

The new international division of labor has involved three main changes. First, the United States has declined as an industrial producer, relative to the spectacular growth of Japan and the resurgence of Europe as industrial producers. The second result of the new international division of labor is that manufacturing production has been decentralized from all of these core regions to some semi-peripheral and peripheral countries. In 1999, U.S.-based companies employed about 6.3 million workers overseas, 80 percent of whom were in manufacturing jobs. An important reason for this trend has been the prospect of keeping production costs low by exploiting the huge differential in wage rates around the world (Figure 2.20). Example: A Taiwanese transnational company invested \$80 million in 1993 to build a huge factory in Pouchen, Indonesia, in order to make sports shoes for companies like Nike, Converse, and LA Gear. The factory made Cortez running shoes for Nike, whom it charged \$12.50 a pair; Nike sold them to stores for \$27.50, and stores sold them to the public for \$50.00. Such profit margins are made possible to a large extent by the \$4-a-day wages paid to

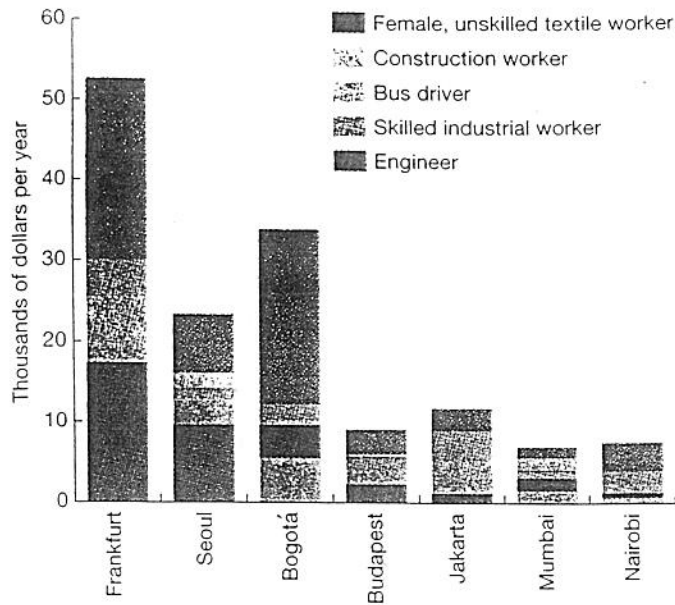


Figure 2.20 International differences in wage rates Wages vary substantially across countries and regions. The height of each bar segment in this chart indicates the range of salaries for several occupations in different cities. Adjusted for differences in their currencies' purchasing power, the earnings of engineers in Frankfurt, Germany, are seven times those of engineers in Mumbai (formerly Bombay), India. International differences in the pay of unskilled workers are even greater—unskilled female textile workers in Frankfurt are paid 18 times as much as their counterparts in Nairobi, Kenya.

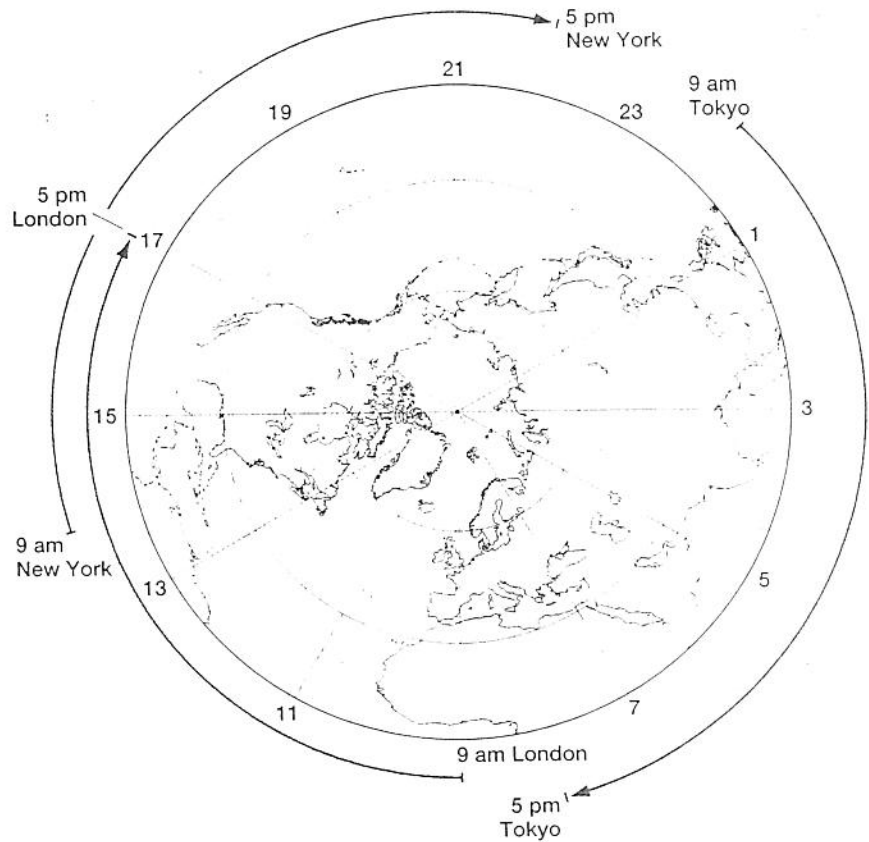
the factory's 9,000 assembly-line workers (compared to, say, \$80 a day plus benefits that Nike would have had to pay U.S. factory workers). A third result of the new international division of labor is that new specializations have emerged within the core regions of the world-system: high-tech manufacturing and producer services (that is, services such as information services, insurance, and market research that enhance the productivity or efficiency of other firms' activities or that enable them to maintain specialized roles). One significant reflection of this new international division of labor is that global trade has grown much more rapidly over the past 25 years than global production—a clear indication of the increased economic integration of the world-system.

The second factor contributing to today's globalization is the internationalization of finance: the emergence of global banking and globally integrated financial markets. These changes are, of course, tied in to the new international division of labor. In particular, they are a consequence of massive increases in levels of international direct investment. Between 1988 and 1998, the flow of investment capital from core to semiperipheral and peripheral countries increased more than twentyfold. These increases include transnational investments by individuals and businesses as well as cross-border investments undertaken within the internal structures of transnational corporations. In addition, the capacity of computers and information systems to deal very quickly with changing international conditions has added a speculative component to the internationalization of finance. All in all, about \$100 billion worth of currencies are traded every day. The volume of international investment and financial trading has created a need for banks and financial institutions that can handle investments on a large scale, across great distances, quickly and efficiently. The nerve centers of the new system are located in just a few places—London, Frankfurt, New York, and Tokyo, in particular. Their activities are interconnected around the clock (Figure 2.21, page 90), and their networks penetrate into every corner of the globe.

The third factor contributing to globalization is a new technology system based on a combination of innovations, including solar energy, robotics, microelectronics, biotechnology, digital telecommunications, and computerized information systems. This new technology system has required the geographical reorganization of the core economies. It has also extended the global reach of finance and industry and permitted a more flexible approach to investment and trade. Especially important in this regard have been new and improved technologies in transport and communications—the integration of shipping, railroad, and highway systems

producer services: services that enhance the productivity or efficiency of other firms' activities or that enable them to maintain specialized roles.

Figure 2.21 24-hour trading between major financial markets Office hours in the most important financial centers—New York, London, and Tokyo—overlap one another because the three cities are situated in broadly separated time zones. This means that, between them, they span the globe with 24-hour trading in currencies, stocks, and other financial instruments.

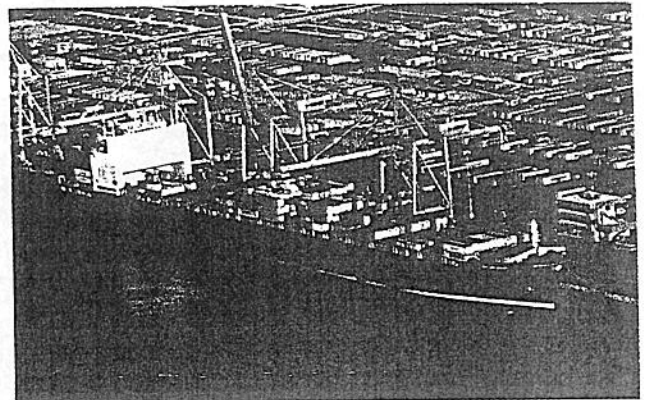


through containerization (Figure 2.22); the introduction of wide-bodied cargo jets (Figure 2.23); and the development of fax machines, fiber-optic networks, communications satellites, and electronic mail and information retrieval systems (Figure 2.24). Finally, many of these telecommunications technologies have also introduced a wider geographical scope and faster pace to many aspects of political, social, and cultural change, as we shall see in subsequent chapters.

A fourth factor in globalization has been the growth of consumer markets. Among the more affluent populations of the world, similar trends in consumer taste have been created by similar social processes. A new and materialistic international culture has taken root, in which people save less, borrow more, defer parenthood, and indulge in affordable luxuries that are marketed as symbols of style and distinctiveness. This culture is easily transmitted through the new telecommunications media, and it has been an important basis for transnational corporations' global marketing of "world products" (German luxury automobiles, Swiss watches, British raincoats, French wines, American soft drinks, Italian shoes and

Figure 2.22 The impact of containerization on world trade

Containerization revolutionized long-distance transport because it did away with the slow, expensive, and unreliable business of loading and unloading ships with manual labor. Before containerization, ships spent one day in port for every one day at sea; after containerization, they spent a day in port for every 10 days at sea. By 1965 an international standard for containers had been adopted, making it possible to transfer goods directly from ship to rail to road, and allowing for a highly integrated global transport infrastructure. Containerization requires a heavy investment in both vessels and dockside handling equipment, however. As a result, container traffic has quickly become concentrated in a few ports that handle high-volume transatlantic and transpacific trade.



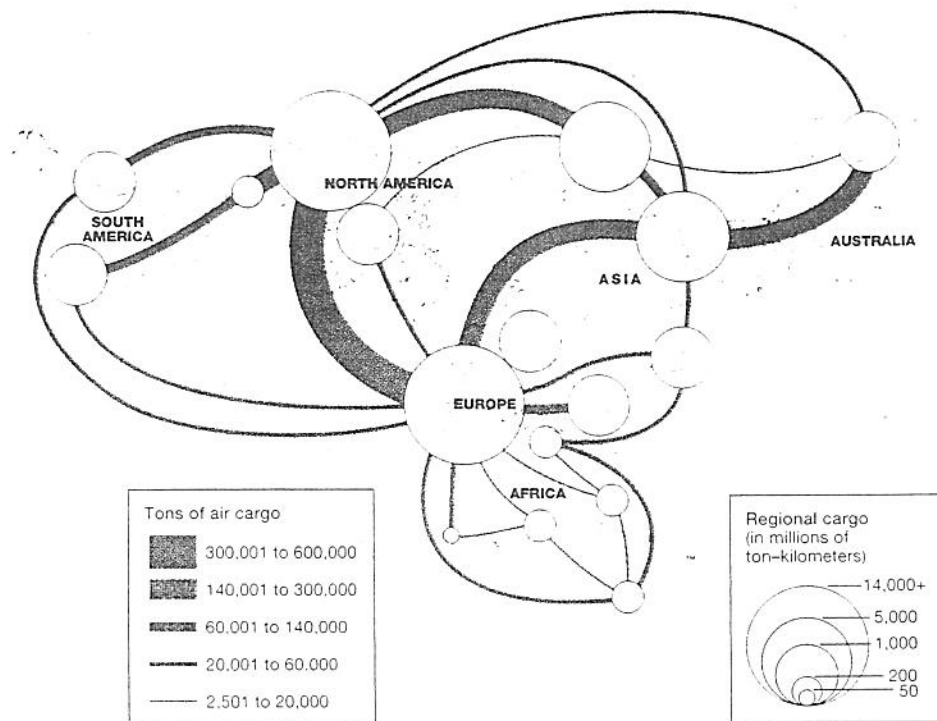


Figure 2.23 Global air cargo traffic in 1990 The introduction of wide-bodied cargo jets (like the Boeing 747) in the 1970s was an important factor in contributing to the globalization of the world economy. Within a few years, specialized parcel services had established regular routes handling a high volume of documents and freight with a high value-to-weight ratio. This Dymaxion projection shows how the pattern of air freight reflects the three-cornered structure of the contemporary world economy, with the highest-volume flows going between Western Europe, North America, and Japan. (Source: Map projection, Buckminster Fuller Institute and Dymaxion Map Design, Santa Barbara, CA. The word *Dymaxion* and the Fuller Projection *Dymaxion*™ Map design are trademarks of the Buckminster Fuller Institute, Santa Barbara, California, © 1938, 1967, & 1992. All rights reserved.)

designer clothes, and Japanese consumer electronics, for example). It is also a culture that has been easily reinforced through other aspects of globalization, including the internationalization of television, especially CNN, MTV, Star Television, and the syndication of TV movies and light entertainment series. The number of television sets per 1,000 people worldwide doubled between 1980 and 2000, while multimedia industries have been booming. The global market for popular cultural

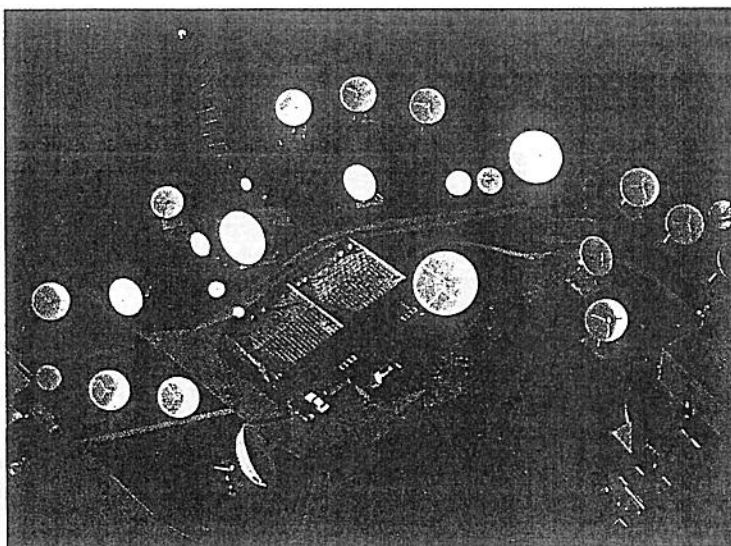


Figure 2.24 Teleport Teleports are office parks equipped with satellite Earth stations and linked to local fiber-optic lines. In the context of an expanding and ever more integrated global communications network, teleports offer an important local competitive advantage. Just as major ports handle the transshipment of cargo, teleports serve as vital information transmission facilities in the age of global capital. The world's first teleport was built on Staten Island, New York, in 1981. By 1995 there were over 60 teleports around the world.

products carried by these media is becoming concentrated, however. At the core of the entertainment industry—film, music, and television—there is a growing dominance of U.S. products, and many countries have seen their home-grown industries wither. Hollywood obtains more than 50 percent of its revenues from overseas, up from just 30 percent in 1980. Movies made in the United States account for about 50 percent of the market in Japan, 70 percent in Europe, and 85 percent in Latin America. Similarly, U.S. television series have become increasingly prominent in the programming of other countries (Figure 2.25).

Just as globalization has been driven by several interrelated factors, so the outcomes of globalization are manifest in different ways. First, for example, is the commercial aspect of globalization: the commodity chains of transnational corporations, the spread of American-style consumerism and popular culture, and the extension of English as the language of business the world over. Second, certain global issues are tied to economic globalization: the depletion of the ozone layer, for example, together with threats to biodiversity and marine life. Third is the cosmopolitan aspect of globalization: the growth of internationally and globally oriented groups, organizations, and alliances—Greenpeace, for example, along with hundreds of international professional organizations, international conferences, and web-based international virtual communities. Fourth are the various local outcomes of the operation of the international economy: resource depletion and environmental despoilation in some regions, ecotourism in others, industrialization in still others, and so on. Finally, there are other kinds of local outcomes of economic and cultural globalization: local reactions that sometimes involve the clashing of cultures, sometimes the mingling of cultures, and sometimes the emergence of alternative pathways to economic and cultural development.

The Fast World and the Slow World

The single most dramatic outcome of the globalization that has resulted from all these changes is the consolidation of the core of the world-system. The core is now a close-knit triad of the geographic centers of North America, the European Union of Western Europe, and Japan (see Figure 2.26). These three geographic centers are connected through three main circuits, or flows, of investment, trade, and communication: between Europe and North America, between Europe and the Far East, and among the regions of the Pacific Rim. Figure 2.27, for example, shows just how dominant the United States has become in accounting for flows of international telephonic communication. As we shall see in Chapter 7, this consolidation of the core of the world-system is having some profound effects on economic



Figure 2.25 Global marketing of television programming The globalization of culture has been facilitated more than anything else by television broadcasting via satellite and by the sales of popular television programs to markets around the world. This photograph shows a television fair held in Miami Beach, Florida.

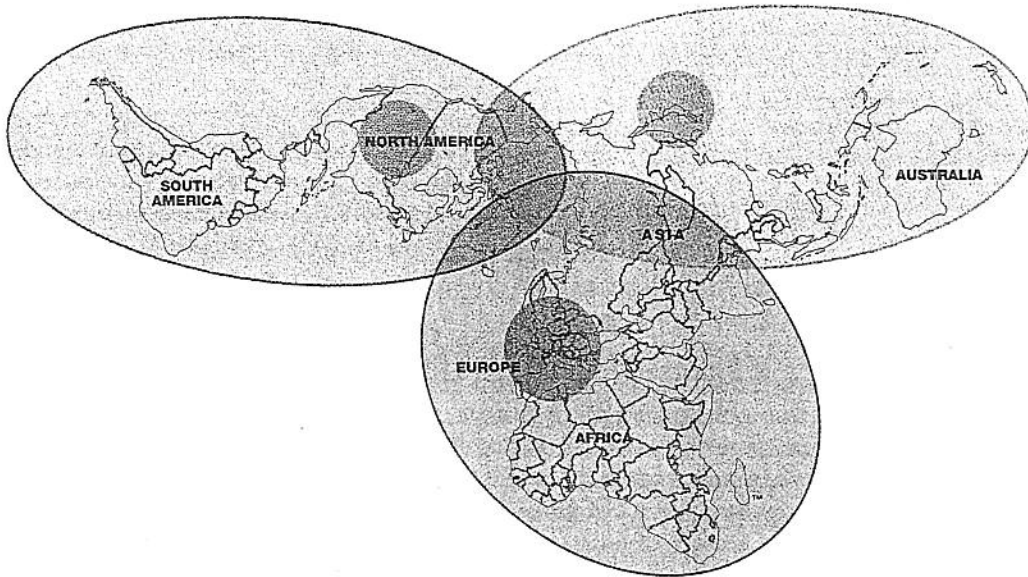
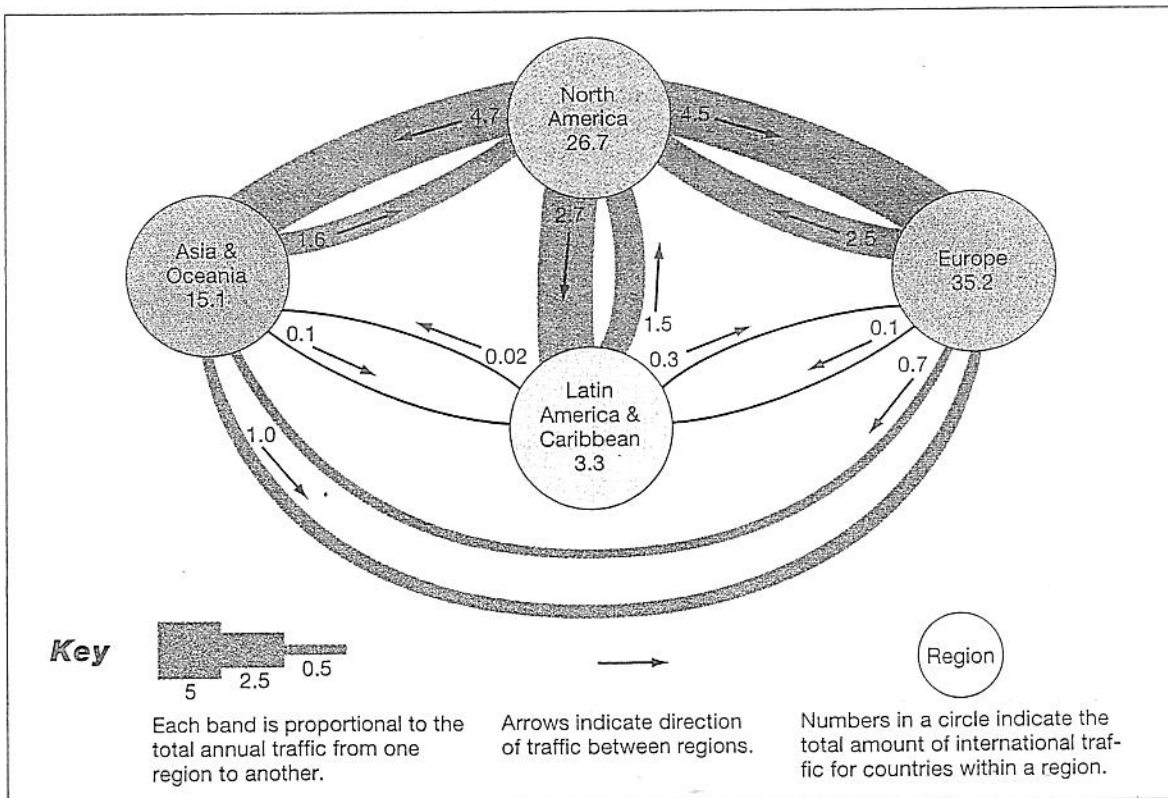


Figure 2.26 The tri-polar core of the world economy In general terms, the world economy is now structured around a "core" with three centers: the United States, Japan, and the European Union. Most of the flows of goods, capital, and information are within and between these three centers. Among them, they dominate the world's periphery, with each center having particular influence in its own regional expansion zone: its nearest peripheral region. (Source: Map projection, Buckminster Fuller Institute and Dymaxion Map Design, Santa Barbara, CA. The word *Dymaxion* and the Fuller Projection *Dymaxion™* Map design are trademarks of the Buckminster Fuller Institute, Santa Barbara, California, © 1938, 1967, & 1992. All rights reserved.)

Figure 2.27 Communications flows between major world regions

This diagram shows the flows, in billions of minutes of telecommunications traffic over public telephone networks, between major regions.

(Source: G. C. Staple (ed.) *TeleGeography* 1999. Washington D.C.: TeleGeography Inc., 1999, fig. 4, p. 255.)



geography. Within the core regions, for example, a new hierarchy of regional economic specialization has been imposed by the locational strategies of transnational corporations and international financial institutions.

Globalization, although incorporating more of the world, more completely, into the capitalist world-system, has intensified the differences between the core and the periphery. According to the United Nations Development Program, the gap between the poorest fifth of the world's population and the wealthiest fifth increased more than threefold between 1960 and 1999. Some parts of the periphery have almost slid off the economic map. In some countries—55 of them, in fact—per capita incomes actually fell during the 1990s. In sub-Saharan Africa, economic output fell by one-third during the 1980s and stayed low during the 1990s, so that people's standard of living there is now, on average, lower than it was in the early 1960s. In 1999, the fifth of the world's population living in the highest-income countries had:

- 74 percent of world income (the bottom fifth had just 1 percent)
- 82 percent of world export markets (the bottom fifth had just 1 percent)
- 74 percent of world telephone lines, today's basic means of communication (the bottom fifth had just 1.5 percent)

spatial justice: the fairness of the distribution of society's burdens and benefits, taking into account spatial variations in people's needs and in their contribution to the production of wealth and social well-being.

Such enormous differences lead many people to question the equity, or fairness, of geographical variations in people's levels of affluence and well-being. The concept of **spatial justice** is important here, because it requires us to consider the distribution of society's benefits and burdens at different spatial scales, taking into account both variations in people's need and in their contribution to the production of wealth and social well-being. Thinking about spatial justice is an important aspect of the "geographical imagination" described in Chapter 1, and it is a recurring theme in the remainder of the book.

Meanwhile, differences between the core and the periphery are now less easily captured in terms of the framework of states. Economic and cultural globalization have not been matched by political globalization, or a system of governance that can cope with their powerful forces. Policymakers everywhere lack an adequate framework for coping with the consequences of globalization. Trade policy has come to be governed by powerful transnational corporations, while national governments are unable to deal with large-scale environmental issues. Globalization has fueled global economic expansion, but in the process it has widened the gap between rich and poor and made places and regions everywhere vulnerable to rapid and devastating change. As Ted Turner, owner of CNN, observed in a 1999 United Nations report on international development, "It is as if globalization is in fast forward, and the world's ability to react to it is in slow motion."²

fast world: people, places, and regions directly involved, as producers and consumers, in transnational industry, modern telecommunications, materialistic consumption, and international news and entertainment.

slow world: people, places, and regions whose participation in transnational industry, modern telecommunications, materialistic consumption, and international news and entertainment is limited.

Ted Turner's observation points to an increasing division that now exists between the "fast world" and the "slow world." The fast world consists of people, places, and regions directly involved, as producers and consumers, in transnational industry, modern telecommunications, materialistic consumption, and international news and entertainment. The slow world, which accounts for about 85 percent of the world's population, consists of people, places, and regions whose participation in transnational industry, modern telecommunications, materialistic consumption, and international news and entertainment is limited. The slow world consists chiefly of the impoverished periphery, but it also includes many rural backwaters, declining manufacturing regions, and disadvantaged slums in core countries, all of them bypassed by this latest phase in the evolution of the modern world-system.

The center of gravity of the fast world is the tri-polar core of the world-system. The United States, for example, with less than five percent of the world's population, accounts for more than 40 percent of the world's telephone stock. Similarly,

²United Nations, *Human Development Report 1999*. New York: United Nations Development Programme, 1999, p. 100.

the fast world also extends throughout the world to the more affluent regions, neighborhoods, and households that are “plugged in” to the contemporary world economy, whether as producers or consumers of its products and culture. The leading edge of the fast world is the Internet, the global web of computer networks that began in the United States in the 1970s as a decentralized communication system sponsored by the United States Department of Defense. Until the mid-1970s, there were less than 50 nodes (servers) in the whole system. Then, in the early 1980s, the original network (ARPANET) was linked with two important new networks: CSnet (funded by the National Science Foundation) and BITNET (funded by IBM). In July 1988 a high-speed backbone (NSFnet) was established in order to connect regional networks in the United States.

Today, these early networks have become absorbed into the Internet, a loose confederation of thousands of small, locally run computer networks for which there is no clear center of control or authority. The Internet has become the world's single most important mechanism for the transmission of scientific and academic knowledge. Roughly 50 percent of its traffic is electronic mail; the rest consists of scientific documents, data, bibliographies, electronic journals, bulletin boards, and a user interface to the Internet, the World Wide Web. In 1999 more than 56 million Internet hosts existed in more than 150 countries; somewhere between 150 and 180 million people had access to the Internet; and somewhere between 75 and 80 million people worldwide had Internet e-mail addresses. The Internet has been doubling in networks and users every year since 1990, but most Internet users are still in the world's core regions: At the beginning of 2000, about 55 percent were in North America, and another 23 percent were in Europe. The rest were in Japan, Australia, and New Zealand, and in the fragmentary outposts of the fast world that are embedded within the larger metropolitan areas of the periphery and semiperiphery. Overall, more than 80 percent of all Internet traffic originates in, or is destined for, North America. These particular inequalities between the fast world and the slow world are part of a digital divide that exists at every spatial scale (see “Geography Matters 2.4—The Digital Divide”).

This division between fast and slow worlds is, of course, something of a caricature. In fact, the fast world encompasses almost *everywhere* but not *everybody*. As a result, human geography now has to contend with the apparent paradox of people whose everyday lives are lived part in one world, part in another. Consider, for example, the shantytown residents of Mexico City. With extremely low incomes, only makeshift housing, and little or no formal education, they somehow are knowledgeable about international soccer, music, film, and fashion, and are even able to copy fast-world consumption through cast-offs and knock-offs. Much the same could be said about the impoverished residents of rural Appalachia (substitute NASCAR racing for international soccer) and, indeed, about most regions of the slow world. Very few regions remain largely untouched by globalization.

This distinction between the fast world and the slow world brings us back to the themes of place, scale, and change that will recur throughout the rest of this book. At first glance the emergence of the fast world—with its transnational architectural styles, dress codes, retail chains, and popular culture, and its ubiquitous immigrants, business visitors, and tourists—seems as if it might have brought a sense of placelessness and dislocation, a loss of territorial identity, and an erosion of the distinctive sense of place associated with certain localities. Yet the common experiences associated with globalization are still modified by local geographies. The structures and flows of the fast world are variously embraced, resisted, subverted, and exploited as they make contact with specific places and specific communities. *In the process, places and regions are reconstructed rather than effaced.* Often, this involves deliberate attempts by the residents of a particular area to create or re-create territorial identity and a sense of place. Inhabitants of the fast world, in other words, still feel the need for enclaves of familiarity, centeredness, and identity. Human geographies change, but they don't disappear.

digital divide: inequality of access to telecommunications and information technology, particularly the Internet.

The Digital Divide

The growth of the Internet has been phenomenal. In 1989 only 100,000 computers were connected to the Internet worldwide. In 1999, the estimate was close to 40 million, with between 150 and 180 million people around the world having access to the Internet, either at home or at work. By 2001, 700 million people are expected to be using the Internet. The rapid spread of the Internet owes much to the tremendous advances made in computing power during the 1990s, combined with sharply falling costs. (If the automobile industry had enjoyed the kind of productivity growth the computer industry has experienced since 1990, the price of a family car in 2000 would be less than \$10.)

This growth, together with the Internet's ability to bypass borders and interweave world cultures, has led many observers to hail a "digital revolution" that is going to shrink the globe. But geography still matters. The reality is that people in most places and regions throughout the world have little infrastructure and few computers through which to communicate digitally. The benefits of the digital revolution are being reaped by the world's affluent populations, leaving the poor even more marginalized than before.

There is, in short, a "digital divide" between countries. According to United Nations figures, the world's core countries, with about 15 percent of the global population, account for nearly 90 percent of the Internet users. But not everyone in the core countries is an Internet user, of course, so that in overall terms only 2 percent of the global population is online. The map of global Internet connectivity (Figure 2.4.1) shows very starkly the magnitude of the digital divide.

Yet access to the Internet is not limited simply by physical connectivity: Four-fifths of the world's websites in 1999 were in English. Meanwhile, the governments of Singapore, China, and Saudi Arabia all censor what can be accessed and sent on the Web. Syria's President Hafez Assad has gone a step further and forbidden Internet access to his citizens. Those who can afford it must pay long-distance telephone charges to access the Internet via an ISP (Internet service provider) in neighboring Beirut.

Despite the digital divide, it is already clear that the Internet gives a voice to the politically powerless. For example, the Internet played a widely publicized role when used by pro-democracy students in Beijing in 1989 and in preventing a coup against then-Soviet leader Mikhail Gorbachev in 1991. In 1999, the first Internet center in a Palestinian refugee camp was opened, allowing people living in the Dheisheh camp to speak to friends and relatives in Gaza and Lebanon. In Mexico City an organization called *Mujer a Mujer* ("Woman to Woman") e-mailed contacts in California for assistance when plans for a new textile factory were announced in

their community. The women went to meet the management armed with a bulky portfolio detailing the company's practices, profits, and ownership. For impoverished nations facing shortages of drinking water and food, the Internet can help bring desperately needed information about farming and health issues. The best-known example is HealthNet, a networked information service that supports health-care workers in more than 30 countries, including 22 in Africa. Doctors in Central Africa used it to share information on the 1995 outbreak of the deadly Ebola virus; and malaria researchers at a remote site in northern Ghana use it to communicate daily with colleagues in the London School of Tropical Medicine.

The Digital Divide in the United States

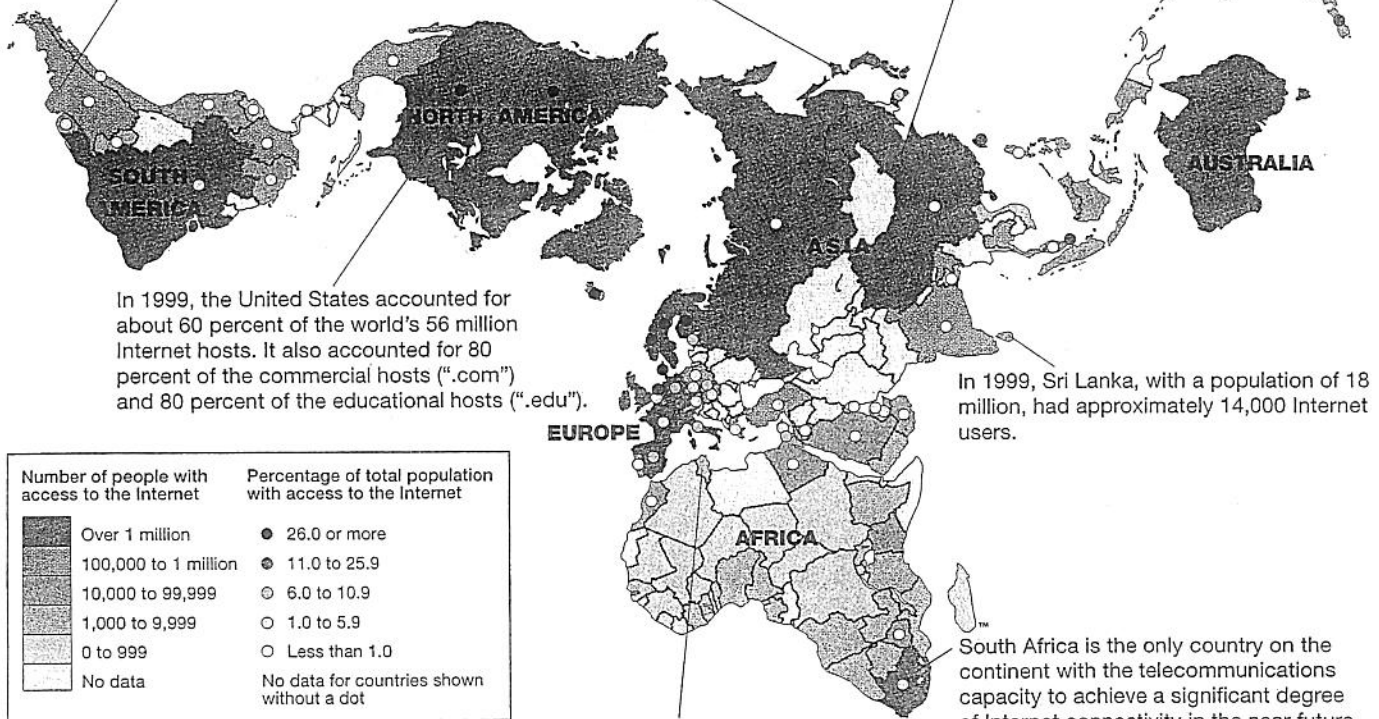
Although the United States has a tremendous advantage in the global digital revolution, there is a serious digital divide within the country. Overall, in 1999, approximately two-thirds of United States households had no access to the Internet. Once again, geography matters. A report by the Progressive Policy Institute¹ identified a clear geographic pattern in 1999: The West Coast and eastern seaboard from New Hampshire to Virginia are at the forefront of the wired economy, while the Deep South and the Upper Midwest lag far behind. Another report, by the U.S. Department of Commerce,² found that households with annual incomes above \$75,000 are more than 20 times as likely to be Internet users as those earning less than \$15,000. Single-parent households are less than half as likely to be wired as two-parent families. The disparity is even greater among African American families: Black children living with one parent are less than one-fourth as likely to have Internet access as those in two-parent households.

These aspects of the digital divide were reflected in variations by region and geographic setting (Table 2.4.1). More than 40 percent of the adult population of Alaska, Colorado, Maryland, New Hampshire, and Utah had access to the Internet in 1999, compared to less than 25 percent in Arkansas, Kentucky, Louisiana, Mississippi, and West Virginia. The cities with the most Internet users included Atlanta, Boston, Dallas-Ft. Worth, Los Angeles, Minneapolis-St. Paul, New York, Oakland, San Diego, San Francisco, Seattle, and Washington, D.C. Even in these cities, however, there exists a deep digital divide between the affluent suburbs and disadvantaged inner-city neighborhoods. In general, underserved groups such as the residents of poor inner-city neighborhoods and rural areas have fallen further behind as the digital revolution has gathered pace. As at the global scale, the gap between the plugged in and the shut out is reinforcing spatial inequalities, rather than reducing them.

The number of Internet connections in Argentina more than doubled in 1999, taking the total to 348,000. The typical Internet user in Argentina is male, in his thirties with a college degree. E-mail is the most popular activity among Argentine Internet users, most of whom are reluctant to make online purchases: only 30 percent of those with access in 1999 had ever made an online purchase, compared to approximately 80 percent in the United States.

Japan has lagged behind other countries in its use of the Internet. Although there were 2 million Internet hosts in Japan in 1999 (compared with 1.6 million in Britain and 1.4 million in Germany), fewer than 20 percent of Japanese offices are computerized compared with over 65 percent in the United States. Similarly, only 20 percent of Japanese personal computers are hooked in to a network of some sort, compared to 70 percent in the United States.

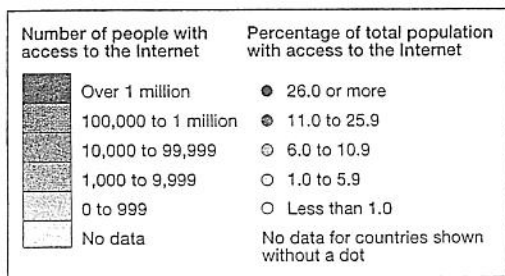
China is connected to the Internet, but through lines with only a very small capacity. In early 1996 this amounted to less than half a dozen lines, each with 64-kilobit-per-second capacity—much less than the capacity of a small U.S. college campus.



In 1999, the United States accounted for about 60 percent of the world's 56 million Internet hosts. It also accounted for 80 percent of the commercial hosts (".com") and 80 percent of the educational hosts (".edu").

In 1999, Sri Lanka, with a population of 18 million, had approximately 14,000 Internet users.

South Africa is the only country on the continent with the telecommunications capacity to achieve a significant degree of Internet connectivity in the near future.



In early 1999 Tunisia had 53 Internet hosts and a total of about 5000 e-mail users. Charges for Internet access included a \$1000 installation fee and \$100 per month usage fee. The average per capita income in Tunisia in 1999 was just over \$110 per month.

Figure 2.4.1 Global Internet connectivity This map shows the number of people with access to the Internet in each country (indicated by the size of the circles), and the percentage of the total population in each country with access to the Internet (indicated by the density of shading). Data are from Nua Internet surveys (<http://www.nua.ie>), taking the highest estimates from late 1998 or early 1999. (Source: Map projection, Buckminster Fuller Institute and Dymaxion Map Design, Santa Barbara, CA. The word *Dymaxion* and the Fuller Projection *Dymaxion*™ Map design are trademarks of the Buckminster Fuller Institute, Santa Barbara, California, © 1938, 1967, & 1992. All rights reserved.)

TABLE 2.4.1 U.S. Households with e-mail, by region and geographic setting, 1999

Region	Rural	Urban	Central City
Northeast	20.6	17.5	12.7
Midwest	14.4	19.4	18.3
South	12.4	18.8	17.3
West	17.4	23.5	23.9

¹The State New Economy Index. Progressive Policy Institute, 1999 (www.dlcpipi.org/tech.htm).

²Falling through the Net: Defining the Digital Divide. U.S. Department of Commerce, 1999. (www.ntia.doc.gov).

Source: From U.S. Department of Commerce, *Falling through the Net: Defining the Digital Divide*. U.S. Department of Commerce, 1999, Chart A-25 (www.ntia.doc.gov).