

# Chapter One

## Urban Sprawl and the Empire of Capital

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The United States is a global leader in the anthropogenic emission of the key greenhouse gas—carbon dioxide. It is responsible for roughly 25 percent of the globe’s anthropogenic emission of this gas.<sup>1</sup> Moreover, the United States is the leading per capita emitter of carbon dioxide.<sup>2</sup> On a per person, or per capita, basis, it emits a great deal more of this gas than European countries, including Russia, and than China, Japan, and South Korea (Revkin 2001; Lanne and Liski 2004; Baumert, Herzog, and Pershing 2005, 20; Kramer 2005; United Nations Framework Convention on Climate Change 2006; Greenwatch 2007; International Energy Agency 2007). The role of the United States as a prime cause of the planet’s warming is neither coincidental nor readily remedied. Instead, the U.S. role in the global warming trend is the result of the operation of the global economy, and the special role that the United States plays within it.

More specifically, it is the urban sprawl in the United States that has important implications for both climate change and the world economy. Beginning especially in the post–World War II period, diffuse urban development in the United States became the means to absorb the increasing productive capacities of the world’s industrial base. Urban sprawl aids in the consumption of industrial output, because it increases demand for automobiles. Also, because housing developments on the urban periphery tend to produce relatively large single-family homes, such housing generally requires more appliances, furniture, and other consumer goods than smaller abodes (e.g., those within apartment complexes).

While urban sprawl serves as an important spur for the global economy, it is also a key factor behind the massive amounts of carbon dioxide emitted by the U.S. economy. Urban sprawl necessitates the usage of relatively large amounts of energy. This energy is needed for the long

commuting distances via automobiles required in the context of diffuse urban development (Banister 2005). Also, the heating and cooling of spacious suburban homes requires substantial amounts of energy, as does the powering of appliances in multiroom single-family homes.<sup>3</sup> The huge energy needs created by urban sprawl in the United States have been mostly met by the burning of fossil fuels. These fuels when burned for energy emit carbon dioxide.<sup>4</sup>

Why have U.S. urban areas become so sprawled, and an important cause of global warming? The answer to this question can be predominately found in the political and economic behavior of economic elites and producer groups. A geopolitical factor facilitating the sprawling of U.S. urban zones has been the United States' historic access to abundant supplies of fossil fuels.

I begin this chapter by outlining two different views on the operation of the global economy. The proponents of the first view outlined, termed by me the globalization thesis, emphasize the market, international political organizations, and multinational corporations in their analysis of the world economy. Conversely, as these factors have gained preeminence globally, the political and economic role of nation-states has been greatly diminished. The second view of the global economy outlined here is labeled by Ellen Meiksins Wood "empire of capital." Unlike the adherents of the globalization thesis, Wood holds that states within the contemporary world economy play a central and vital role. Given the role of the U.S. state in fostering urban sprawl (described below), the pattern of urban development in the U.S. (with its attending economic consequences) lends support to Wood's empire of capital argument. I conclude this chapter by providing an overview of the book.

## THE GLOBALIZATION THESIS

It has recently become vogue for both politicians and academicians to de-emphasize the role of the nation-state in the operation of the global economy. Among these thinkers, the world economy is cast as an increasingly stateless system where production and distribution take place with little government involvement. Moreover, it is common for researchers, along with some right-wing populists (e.g., Pat Buchanan), to argue that political power in the global system has shifted from states to transnational political organizations, such as the World Bank, the World Trade Organization, and the International Monetary Fund. Robert Paehlke (2003), for instance, in his analysis of the environmental, economic, and social impacts of the international economy, maintains that the paramount challenge for proponents of democracy is to democratize those global political institutions that oversee and regulate the world's economy.

Other scholars, most prominently William I. Robinson (2004), Leslie Sklair (2001), Kees Van der Pijl (1999), and Susan Strange (1996) contend that political power in the global economy has shifted to groups and individuals that hold key decision-making power within transnational firms. Robinson, for example, identifies what he describes as a transnational capitalist class (TCC) as the new center of power in what can be most accurately termed a global society. For Robinson, the TCC has supplanted the system of political and economic power that characterized international relations beginning with the second industrial revolution until the end of the cold war. During this period, political and economic relations within the capitalist camp were marked by multiple centers of political and economic power rooted in nation-states.

With the advent of the neoliberal political and economic project in the 1980s and 1990s, spearheaded by the United States (Hunt 2007, ch. 8), political and economic relations in the capitalist world began to dramatically change (Duménil and Lévy 2004). Proponents and champions of the neoliberal program argue that the movement of capital, goods, and services should be facilitated throughout the world. Along these lines, neoliberal advocates contend that trade barriers should be lowered/eliminated and countries should move away from dictatorships and toward limited democracies. The advantage of democracies for neoliberal proponents is that democratic governments tend to be more transparent and accessible to global firms than dictatorships. Additionally, those nationalist sentiments that normally inhere within the military of a country tend to be more influential and decisive within a dictatorship. Such sentiments militate against open political and economic regimes. These new democracies, however, are limited insofar as they do not tamper with the economic policies brought about by neoliberalism (Robinson 1996).

It is the economic changes brought about by the neoliberal project that are most closely associated with it, and that are most controversial. It is argued by advocates of neoliberalism that in order to improve the fiscal conditions of governments in developing regions, increase global economic efficiency, expand economic opportunities, and improve economic performance, countries throughout the world should allow for the free movement of capital, goods, and services. Nations are encouraged to reduce tariffs, eliminate subsidies of all types, and generally adopt congenial policies toward international private investors (Gilpin 1987; Stilwell 2002; Bhagwati 2004; Patterson and Afilalo 2008).

In many instances these neoliberal reforms are codified in regional trade agreements (e.g., the North American Free Trade Agreement [NAFTA]), in loan agreements with the World Bank and International Monetary Fund, or historically through the global trade treaty known as the General Agreement on Trade and Tariff (GATT). The primary purpose

of the World Trade Organization is to determine if countries' policies are abiding by globally negotiated terms of trade (formerly known as GATT). Organizations such as the World Bank and the International Monetary Fund loan money to countries in order to foster economic activity, and/or to help governments remain solvent.

To run afoul of the World Trade Organization, the International Monetary Fund, and/or the World Bank creates the definite possibility that a country will be economically isolated. It may be denied access to key markets, and the financing needed in the exporting and importing of goods and services. This could be particularly devastating for nations in the developing world, whereby the most important markets for these countries' goods and services are in the developed world and whose productive capacity is vitally dependent on inputs from other countries. The seeming result for a nation that has a falling-out with these global organizations would be economic stagnation, if not depression, and numerous sources of international investment and credit would likely shun it (e.g., Argentina [MacLachlan 2006]). Other results would ostensibly be increasing rates of unemployment and poverty, as well as political instability. Given these possibilities, getting and staying within the good graces of these key international institutions appears to be less an option and more a requisite for most countries of the world.

The result of the political and economic changes brought about by the neoliberal project is to give transnational firms a maximum amount of leverage over the countries of the world. In the contemporary world, capital has a substantial amount of mobility. Given advances in production techniques, means of transportation, and information transmission, firms can shift economic activity all over the world in a very short time frame—sometimes virtually instantaneously. This results in part from the fact that many companies distribute their production infrastructure throughout the globe (Robinson 2004; Friedman 2005). This mobility allows firms to seek out those circumstances that provide for the most favorable environment for profit maximization. As a result, nation-states must strive to provide such an environment if they are going to attract and, just as importantly, maintain the capital investments that foster employment and economic growth in their economy. In this context of maximum capital mobility the effect of neoliberalism is to disempower countries. In other words, neoliberal reforms have resulted in the configuration of governments throughout the world into institutions that can only minimally affect capital flows and investment decisions (Shambaugh 2004).

Significantly, the mobility of capital and the neoliberal reforms enacted throughout the developing world have profoundly affected those nations with developed economies. With neoliberalism creating greater political and economic stability for investors throughout the Third World,

such investors can place their money in many regions without concern that governments are going to act against their investments, limit their profit margins, or suddenly increase their operating costs. This, coupled with the fact that labor costs are dramatically lower in many parts of the developing world than in the developed world, has resulted in substantial production infrastructure being retired in the First World and reconstituted in the Third World. Glaringly, a great deal of the U.S. industrial base has been shifted to China, where labor costs are greatly lower than in the United States (Gallagher 2005; Gallagher 2006; Uchitelle 2006; Goodman 2008 August 24). What this demonstrates is that governments in the developed world must strive to create favorable investment climates, much like those in the developing countries. More precisely, developed countries must seek to proximate the cost factors in the developing world, including lower labor and regulatory costs. Hence, capital's newfound mobility and neoliberalism have put the developed world in direct competition with developing nations (Wriston 1992; Castells (1996/1998; Greider 1997; Ohmae 1999; Tonelson 2000; Hardt and Negri 2000; Friedman 2005; Hansen 2006; Prasad 2006). This works to the strategic advantage of transnational firms and, more precisely, their ownership—the TCC.

Robinson, in particular, holds that the owners and managers of transnational firms can be considered as an increasingly coherent class or unit because of the trend toward centralization of ownership over multinational conglomerates, interlocking directorates (whereby firms share the same board of director members), and the coordination of corporate operations through strategic alliances and other forms of cooperation, such as licensing agreements and shared representation within particular countries. The result is that more and more centralized blocs of capital compete between one another over resources and markets. This trend is evident in the oil industry, where over the last few years a series of mergers and acquisitions has significantly narrowed the number of major oil firms (Mouawad 2005). Robinson (2004) explains that the result is a “*transnational* concentration and centralization of capital, that is, the increasing centrality of transnational capital to the world capitalist system.” With this increasing concentration of capital, nation-states have less room to maneuver between a lower number of corporate managers and owners who control vast amounts of capital, production expertise, marketing know-how, and distribution networks. Therefore, “Transnational conglomerates now compete against each other . . . and states are indeed overwhelmed by the pressures placed on them by transnational capital” (62).

In the globalizing economy, political power has effectively been transferred away from states and those economic and political interests that surround them, and toward supranational political institutions (i.e., the World Trade Organization, etc.) and increasingly centralized transnational

capitalist groupings (i.e., the TCC). This is at least according to those who hold that economic and political power is largely, if not entirely, global in form and operation.

## EMPIRE OF CAPITAL

The most explicit argument against the characterization of the global economic system as operating largely beyond the influences of states is proffered by Ellen Meiksins Wood (1999; 2003). Wood holds that the state, abstractly speaking, plays a much more important role within the context of the global economy than allowed for by advocates and supporters of the globalization thesis. Firstly, the apparent separation of the state from the operation of the economy is an illusion created by the nature of capitalism. Secondly, when consumption, as opposed to production, within the global economy is examined the importance of the state, especially in the developed world, becomes apparent.

### THE STATE AND CAPITALIST PRODUCTION

Capitalism as a system of economic expropriation is different from earlier systems of expropriation insofar as it does not rely directly on extra-economic force to extract surplus value. In economic systems characterized by feudalism or slavery, political/military force is exercised to directly obtain from feudal peasants and slaves the products of their work. In this way extra-economic power is used by political/economic elites to appropriate surplus value from subjugated feudal peasants/slaves, who otherwise directly possess the factors of production (e.g., land). Surplus value represents the amount of economic value beyond what is deemed necessary to reproduce a worker, both in terms of a current worker and future workers (i.e., the offspring of workers). Reflective of the political economy analysis of Karl Marx, Wood explains that within capitalism the object of control is not the product of a worker, but the labor of the worker itself. As a result, the goal of elites (or in this case capitalists) within capitalism is not to directly control the peasants or slaves and force them to turn over the product of their labor for less than its value, but to get workers to sell their labor below its economic worth. For this, capitalists can rely on the market.

A labor market can be managed to ensure that the supply of workers exceeds demand and thus labor costs are pushed down to the point where the amount of economic value created by a worker exceeds the remuneration (i.e., wages) paid that same worker (Hernandez 2002; Light 2006). Therefore, the recently accelerated move toward shifting production toward places like China does not represent a new phase of capitalist

development, but is part of a continuing effort on the part of capitalist firms to expand the labor pool, in this case by tapping new labor pools made accessible by technological advances and political changes throughout the developing world (Glyn 2006).

In comparing the mode of capitalist production to earlier modes of production it becomes apparent that within feudalism and slavery the goal for elites was to alienate laborers from the product of their labor, and within capitalism the goal is to alienate workers from the means of production (i.e., factories, farms, as well as distribution and information networks). By legally (and coercively [Sexton 1991; Acher 2001, 2008]) separating workers from the means of production, workers must sell their labor in order to survive. Just as importantly, the labor market has historically operated in such a way that the price of labor has largely been advantageous for capitalists. What is significant for this discussion is to note the centrality of extra-economic force for all three economic systems. The only real difference is that extra-economic force plays a more obvious and direct role in the feudal and slavery systems, because expropriation is carried out through its direct application. In the case of capitalism extra-economic power is employed to ensure that workers remain alienated from the means of production. Put another way, extra-economic force is deployed to establish and maintain the capitalist's control of the means of production.<sup>5</sup>

## CONSUMPTION WITHIN THE GLOBAL ECONOMY

Some within the globalization camp would largely agree with Wood on the role of states in maintaining the socioeconomic structure within the global economy. William Avilés (2006), for instance, relies heavily on Robinson's theory of global politics to analyze the ongoing Colombian civil war, and the political and economic changes made within the context of this conflict. The Colombian civil war pits Marxist/Maoist-inspired rebels against the government. Where there appears to be a clearer break between Wood's thesis of capitalist empire and the globalization perspective is when the consumption side of the global economy is considered. Wood holds that in the final analysis the uneven distribution of wealth and income in the world decisively upends any contention that the world economy operates as a fully integrated economic unit, as inherent in the globalization position (also see Kütting 2004). She (2003) expresses this position in the following:

Let us accept that the speed and extent of capital movements, especially those that depend on the new information and communication technologies, have created something new. Let us even accept that the world is more "interdependent," at least in the

sense that the effects of economic movement in the heartlands of capital are felt throughout the globe. There remains one overriding indication that the global market is still far from integrated: the fact that wages, prices and conditions of labor are still so widely diverse throughout the world. In a truly integrated market, market imperatives would impose themselves universally, to compel all competitors to approximate some common social average of labor productivity and costs, in order to survive in conditions of price competition. (135–36)

When one considers the deep (and persistent) disparities in wealth and income between the developed and developing worlds (“The Chips are Down” 2002; Firebaugh and Goesling 2004; Bardhan, Bowles, and Wallerstein 2006; Kong 2006), the contemporary global economic system looks less like the result of the free play of markets, and more like the result of an imperial project. It is a system complete with a center, semi-periphery, and periphery, which characterizes all imperial formations. In all of these formations, the center extracts wealth and income from the semi-periphery and periphery, thereby enriching the center—especially the upper socioeconomic strata of the center (Wallerstein 1974/1980; Braudel 1982/1984; Moore 2003; Nexon and Wright 2007). In this context, the U.S. military, with its ability to project overwhelming force throughout the world, takes on the characteristics of the preeminent military power enforcing and maintaining a global economic system that has been historically advantageous to the developed countries (Todd 2003; Agnew 2005; Barrow 2005; D. Harvey 2005; Barkawi 2006). Current U.S. spending on its military roughly equals the current military spending of all the countries of the world combined (Moore 2004; Bacevich 2005; Greenberg and Page 2005, 545; Karen 2005; *SIPRI Yearbook* 2007; Shanker 2008 Feb. 4).

## URBAN SPRAWL IN THE GLOBAL ECONOMY

The importance of urban sprawl becomes clear when we consider consumption within the global economy. Urban sprawl is central to sustaining the empire of capital, and to understanding its modern operation. Importantly, urban sprawl is directly dependent on state intervention, and, in particular, the U.S. state.

This fact would seemingly counter the view that the U.S. state plays an ostensibly minimal/unimportant role in the operation of its domestic economy. Linda Weiss (1998), in her book entitled *The Myth of the Powerless State*, empirically demonstrates, contrary to the empirical claims of the



globalization proponents, that states throughout the world shape, in important ways, their countries' relations with the global market (e.g., influencing domestic investment patterns and promoting particular industrial sectors) (also see Boyer and Drache 1996; Weiss 2003; Katzenstein 2005; Chang 2008). Nevertheless, while she holds that the United States' foreign policy is "strong," Weiss contends that the U.S. state is domestically "weak" (also see Evans 1997). She specifically holds that "America's strong focus on foreign policy and international capacity may well be a consequence of its weakness in the domestic [economic] arena" (4). When considering urban sprawl and its impact on both the U.S. economy and the world economy, what becomes evident, however, is that the U.S. state does play a key role in the operation of its domestic economy. Moreover, what also comes into relief is that U.S. foreign policy, especially as it relates to oil, is directly linked to its domestic economic policies.

What may be confusing observers such as Weiss is that U.S. domestic economic policies do not necessarily benefit its domestic economy—at least as measured in the balance of trade. (Weiss [1998], in particular, argues that a strong state is one that deploys its industrial, investment, and labor policies to improve its economy's relative performance in the global economy. She regards these policies as determining a state's transformative capacity.) So whereas most states, including those in the advanced industrialized world, intervene into the economy primarily to improve their nation's trade position, U.S. trade and domestic policies have in the long term operated to benefit the overall operation of the global economy. Thus, U.S. trade policies, coupled with pro-urban sprawl policies, along with oil policies (described below), have worked to deteriorate the U.S. trade position to the benefit of the global economy. The United States has been running a substantial and growing trade deficit for decades (Bonker 1988; Gordon 2001; Cline 2005). This deficit peaked in 2004 at more than \$600 billion, in 2005 at \$716 billion, and at \$764 billion in 2006 (these are the largest trade deficits for any nation in modern history) (Becker 2005; Borak 2006; Goodman and Henderson 2007).

## THE U.S. STATE AND URBAN SPRAWL

It has been long understood that government policies abet the operation of the market economy (Ely 1914; Commons 1924; Coase 1960). The state provision of such infrastructure as roads, schools, ports, and courts facilitates the production and distribution of goods and services in important and central ways (Barrow 1998; Gough 2000; O'Connor 2002). In the case of the United States, the federal government, since the Progressive Era at the turn of the turn of the twentieth century, has posited regulatory regimes designed to protect the value of investments, stabilize

the operation of the market, and enhance the long-term profitability of capital (Kolko 1977; Higgins-Evenson 2003). During the Great Depression in the 1930s, the U.S. federal government took an even more direct role in the economy in an effort to foster economic recovery during this period (Graham 1976; Bernstein 1987; Gordon 1994).

In the mid-1930s, in order to foster economic recovery, the federal government put forward policies to promote urban sprawl. The techniques of urban sprawl were developed by real estate interests that sought to bring utility to their land on the urban periphery (Weiss 1987; Knox 2008). The sprawling of urban America began during the late nineteenth century (chapter 3 of this book). It was at this time that the trolley, or electric streetcar, proved to be a technically and economically viable means to bring utility to land that was beyond walking distance of employment, goods, and services (Foster 1981; McShane 1994; Bruegmann 2005; Gonzalez 2005a, ch. 4). Notwithstanding the efforts of land developers to sprawl urban development through the use of the trolley, urban areas were compact and highly congested in the late nineteenth and early twentieth centuries (Rosen 1986; Schultz 1989; Fogelson 2001; Tebeau 2003; Beauregard 2006; Norton 2008). With the price of an automobile within reach of the average consumer and growing consumer confidence in cars (Flink 1975; 1990), land developers embraced the automobile as a low-cost way to increase the utility of their land—and hence its economic value. As a result, by the 1920s large-scale land developers began to shape their planned communities on the urban periphery around the automobile. This trend was particularly evident in Los Angeles (Foster 1975; Wachs 1984; Weiss 1987; Hise 1997).

As I outline in chapter 4 of this book, it was within the context of the Great Depression that the federal government came to aggressively subsidize urban sprawl. Sprawl became a means to revive the moribund U.S. economy. It specifically became a way for the economy to profitably absorb the surplus capital/savings in U.S. financial institutions. Perhaps more importantly, urban sprawl served to increase demand for the output of the U.S. industrial base. By the 1920s the United States was the world's leading producer of consumer durables, especially of automobiles. It should be noted that automotive production had broad implications for the U.S. industrial base, because by the 1920s automobile manufacturers became the leading consumers of steel, glass, and rubber. So, as described in chapter 4, when automobile consumption collapsed in the early 1930s this had reverberations throughout the manufacturing sector.

The federal government helped push urban development horizontally through a program that guaranteed home loans for newly constructed housing on the urban periphery (Jackson 1985; Weiss 1987; Hornstein 2005; Fein 2008). Such loan guarantees encouraged home construction on the urban outskirts, where homeowners would have to purchase automobiles to get around.

In the 1950s, the federal government financed an extensive highway system that helped further spur the sprawling of urban regions. Moreover, the federal government and states established what are known as highway trust funds to build and maintain highway and road systems. These trust funds are financed through earmarked gasoline taxes and other automotive fees (Burnham 1961; Rose 1979; Whitt 1982; Kay 1998; Gutfreund 2004; Baum-Snow 2005; Rose, Seely, and Barrett 2006).

U.S. foreign policy is also directly involved in the sprawling of urban development in the United States. Urban sprawl is predicated on superabundant supplies of oil. Ample supplies of petroleum mean that the price of gasoline/diesel will remain relatively low, and this facilitates the long driving distances inherent in sprawled urban development. From the late nineteenth century until the middle of the twentieth century, the United States was the world's leading producer of oil. The U.S. firm Standard Oil was the first to globalize the trade in petroleum products—in particular kerosene, used for indoor lighting. This trade was initially based on Pennsylvania oil production. Later oil finds in the states of California, Oklahoma, Texas, Indiana, and Louisiana established the United States as the world's prime source of oil until the 1950s (Franks and Lambert 1982; Yergin 1991; Davis 1993, ch. 3; Black 2000; Olien and Olien 2002; Sabin 2004).

Improved refining techniques allowed more oil to be refined into gasoline for internal combustion engines, just as the electric light bulb had severely curtailed the kerosene market at the turn of the century. The abundant supply of oil, and hence gasoline, spurred automobile development, production, and consumption in the United States (Flink 1975; 1990; Thomas 1977; Bardou et al. 1982, ch. 6; Barker 1985; St. Clair 1986; Podobnik 2006).

While large domestic supplies of oil spurred the automobile trade and facilitated the urban development policies of the federal government, the inability of U.S. petroleum production to increase with the growing demand for gasoline portended severe limitations for the urban sprawl model of economic growth. As early as the 1920s, U.S. oil firms were concerned that domestic supplies could not meet the demand resulting from expanding automobile usage. The U.S. government responded by successfully negotiating, with France and Great Britain, access for U.S. firms to oil supplies within modern-day Iraq (Yergin 1991; Randall 2005). So even during this early period of automobile use, U.S. policy was designed to expand oil supply in response to growing demand, and not an effort to curtail demand to remain within the confines of otherwise abundant U.S. oil supplies. During the post-World War II period, when urban sprawl became central to maintaining U.S./world economic stability, oil became a vital economic resource. As explained in chapter 5, by 1973 U.S. foreign

policy became especially geared toward maintaining an ample flow of oil from the Persian Gulf region. The countries of the Persian Gulf hold the majority of known oil reserves.

Whereas U.S. policies promoted low-density urban development, in Europe public policies served to keep urban areas relatively compact. In the 1920s Western and Central Europe did not possess the economic factors that would have made urban sprawl immediately profitable. It did not have much surplus capital to invest in new housing stock—indeed, during this period most of these countries were deeply in debt to U.S. financiers. Also, unlike the U.S. economy, the advanced economies of Europe were not geared toward the production of consumer durables (Fearon 1987; Atkinson 2004).

It should also be noted that the politics surrounding transportation and land use were decidedly different in Europe than in the United States. As outlined in chapter 3 of this book, in the United States the trolley was largely deployed to inflate land values on the urban periphery by rendering such land usable as suburban housing. The utilization of trolley systems in the United States to inflate land values served to undermine the economic and political viability of U.S. trolley systems, as these systems were configured in an economically and geographically inefficient manner (Dewees 1970; Foster 1981). In Europe, in contrast, the trolley was used predominately to bring economically efficient transportation to urban zones. As a result, in Europe the advent of the trolley did not push urban regions in a horizontal direction, as it did in the United States (McKay 1976; 1988; Dunn 1981; Yago 1984). In most U.S. cities comprehensive rail systems do not exist today, whereas in Europe almost every town with a substantial population has a fixed rail transport network (Banister et al. 2000; Beatley 2000; Sheehan 2001, 48).

These factors help explain why European countries did not enact policies to promote urban sprawl during the 1930s and during the post–World War II period. They do not necessarily explain, however, why these countries have generally adopted policies that curb horizontal urban development. The predominant explanation for this can be found in energy politics. Unlike the United States, for most of their history the advanced economies of Western and Central Europe did not have much appreciable domestic oil production. Also, whereas the United States had massive supplies of coal and natural gas (Schurr and Netschert 1960; Vietor 1980; Sanders 1981; Banks 1995; Adams 2006), Europe did not (Maull 1980; Hatch 1986; Holter 1992; Haugland, Bergensen, and Roland 1998). Such ample supplies of fossil fuels can be used to cheaply electrify, as well as heat and cool, large homes on the urban periphery. Energy expert Paul Roberts (2004) explains that contemporary U.S. households are “at least twice as energy-intensive as European and Japanese households” (152;

also see International Energy Agency 1997, 162; Fackler 2007; Roberts 2008). Finally, in the post-World War II era, the countries of Europe did not have the military and political capacity to intervene in the Middle East to ensure that the oil from this region amply flowed.

Thus, the policies historically employed throughout the leading countries of Europe that serve as barriers to urban sprawl can be viewed as efforts to minimize the risk to these countries' economies posed by their tenuous access to the key global sources of fossil fuels. (For a further discussion of this see chapter 5.) The policies in question include steep gasoline and energy taxes (Lucas 1985; Haugland, Bergensen, and Roland 1998; Nivola 1999; Sheehan 2001, 48; Romero 2005). Significantly, these taxes are not earmarked for road or highway development, as occurs in the United States, but instead go into general revenue funds (Dunn 1981, ch. 7; Nivola and Crandall 1995). Governments in Western and Central Europe also tend to coordinate mass transit and urban development (Beatley 2000). By way of contrast, in the United States there is rarely such coordination and planning (Warner and Molotch 2000; Sheehan 2001, 42-47; Gotham 2002; Portney 2003; Dilworth 2005).

Thanks to radically divergent energy, transportation, and land use policies, Europe and the United States have dramatically different urban landscapes. These differences are all the more significant because the two regions are not that different geographically and possess similar demographic characteristics. For instance, whereas Belgium and the state of New Jersey have a similar land to population ratio and per capita income, per capita automobile ownership and use is substantially higher in New Jersey (Kenworthy and Laube 1999; Nivola 1999).

In general, the United States has the most sprawled urban regions in the world. This is documented in Kenworthy and Laube's *An International Sourcebook of Automobile Dependence in Cities 1960-1990*, published in 1999. Two key indicators of sprawl and automobile dependency are per capita automobile ownership and automobile usage. In Kenworthy and Laube's study of forty-six international cities they found that the U.S. cities studied had the highest total figures on both counts. (These cities are listed in Table 1.1.) The authors group the cities they studied into six countries/regions: (1) U.S. cities, (2) Australian cities, (3) Canadian cities, (4) European cities, (5) wealthy Asian cities, and (6) developing Asian cities. The U.S. cities in Kenworthy and Laube's analysis were Boston, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Phoenix, Portland, Sacramento, San Diego, San Francisco, and Washington. The Australian cities were as follows: Adelaide, Brisbane, Canberra, Melbourne, Perth, and Sydney. The Canadian cities were: Calgary, Edmonton, Montreal, Ottawa, Toronto, Vancouver, and Winnipeg. European cities: Amsterdam, Brussels, Copenhagen, Frankfurt, Hamburg,

Table 1.1. The 46 Cities of Kenworthy and Laube's (1999) Study

U.S. cities	Australian cities	Canadian cities	European cities	Wealthy Asian cities	Developing Asian cities
Boston	Adelaide	Calgary	Amsterdam	Hong Kong	Bangkok
Chicago	Brisbane	Edmonton	Brussels	Singapore	Jakarta
Denver	Canberra	Montreal	Copenhagen	Tokyo	Kuala Lumpur
Detroit	Melbourne	Ottawa	Frankfurt		Manila
Houston	Perth	Toronto	Hamburg		Seoul
Los Angeles	Sydney	Vancouver	London		Surabaya
New York		Winnipeg	Munich		
Phoenix			Paris		
Portland			Stockholm		
Sacramento			Vienna		
San Diego			Zürich		
San Francisco					
Washington, D.C.					

London, Munich, Paris, Stockholm, Vienna, and Zurich. Wealthy Asian cities: Hong Kong, Singapore, and Tokyo. Developing Asian cities: Bangkok, Jakarta, Kuala Lumpur, Manila, Seoul, and Surabaya. As shown in Table 1.2, in the U.S. cities, in 1990 there were 604 automobiles per one thousand people. In the other cities the number of automobiles per thousand individuals were as follows: Australian cities, 491; Canadian, 524; European, 392; wealthy Asian, 123; and developing Asian, 102 (529).

In 1990 each automobile in those U.S. cities studied was driven an average of 11,155 kilometers. In Australia this average was 6,571; Canada, 6,551; Europe, 4,519; wealthy Asian cities, 1,487; and developing Asian cities, 1,848 (529). The ratio of the average use of each automobile in the U.S. cities compared to the others was: Australia, 1.70; Canada, 1.70; Europe, 2.47; wealthy Asian cities, 7.50; and developing Asian cities, 6.04 (530). The wide gap between automobile use in the United States and everywhere else prompted Kenworthy and Laube to note that "vehicle use not ownership is the primary factor in determining outcomes such as congestion, fuel use and emissions." They go on to

assert that “if cities build in compulsory car use through low-density, heavily zoned land uses which make travel distances long and the use of other modes very difficult, then high car use is almost assured” (530).<sup>6</sup>

With much of the economic growth in the United States throughout the 1990s occurring in the southern and southwestern regions of the country (Abbott 1987; Dreier, Mollenkopf, and Swanstrom 2001; Pack 2005), the average commuting distance between home and work, and the average amount of automobile use, has increased (Lopez and Hynes 2003). The southern and southwestern urban regions of the United States are highly sprawled and automobile dependent (Nivola 1999; Bento et al. 2005; Kahn 2006). For instance, in Los Angeles, located in the southwest, the average distance between home and work was 17.8 kilometers in 1990, while in Houston (the south) it was 19.1. In Los Angeles, during 1990, the percentage of people riding public transportation to work was 6.7. In Phoenix (the southwest) and Houston that figure was 2.1 and 4.1 percent, respectively. By way of comparison, New York City, in the northeast, in 1990 had an average distance to work of 13.6 kilometers, whereas in Boston (the northeast) it was 10.1. In New York the percentage of people using public transportation to get to work was 26 percent in 1990. Among residents of Boston 14.7 percent took public transportation to work in that year (Kenworthy and Laube 1999, 610; also see Kahn 2006, 115 and 117).

**Table 1.2. Comparative Urban Automobile Use\***

Region	Automobile Ownership (per 1000 people)	Average Automobile Use (kilometers)	Ratio of Average U.S. Automobile Use Compared to Other Urban Areas
U.S. cities	604	11155	—
Australian cities	491	6571	1.70
Canadian cities	524	6551	1.70
European cities	392	4519	2.47
Wealthy Asian cities	123	1487	7.50
Developing Asian cities	102	1848	6.04

*Source:* Kenworthy and Laub (1999), 529–30

\*Figures for most recent year available: 1990

Table 1.3. Carbon Dioxide (CO<sub>2</sub>) Emissions Per \$1 million of GDP of Selected Countries\*

Countries	Emissions (in tons) of CO <sub>2</sub> per \$1 million of GDP
France	56
Japan	57
Germany	80
South Korea	84
United Kingdom	118
<b>United States</b>	<b>171</b>
India	621
China	731
Russia	914

*Source:* Environmental Performance Index (2006)

\*All figures are for 2004.<sup>7</sup> All countries selected have populations over 45 million

The United States' relatively energy-intense urban transportation system at least partially accounts for the fact that, according to an international study produced by Yale and Columbia universities, every \$1 million of the U.S. GDP resulted in 171 tons of carbon dioxide emissions in 2004.<sup>8</sup> As outlined in table 1.3, this is three times the rate of the advanced economies of France (56) and Japan (57). It is more than twice the emission rate of Germany (80) and South Korea (84) per \$1 million of GDP. The United Kingdom was found to have a rate of 118 tons per \$1 million of GDP (Barringer 2006 Jan. 23; *Environmental Performance Index* 2006).

The United States' heavy use of the automobile, coupled with its energy-intensive housing stock, helps explain the per capita carbon dioxide emissions data recently released by the International Energy Agency (Table 1.4). The United States emitted 19.6 tons of carbon dioxide for every one of its residents in 2005, while France emitted 6.2 tons; United Kingdom 8.8; South Korea 9.3; Japan 9.5; and Germany 9.9. Even the highly energy inefficient economies of India, China, and Russia emitted significantly less anthropogenic carbon dioxide than the United States on a per capita basis in 2005, 1.05, 3.9, and 10.8, respectively (International Energy Agency 2007, Part Two, 49–51) (The Russian economy emitted 914 tons of CO<sub>2</sub> for every \$1 million of GDP, while China emitted 731 and India 621, respectively [*Environmental Performance Index* 2006]).



Table 1.4. Carbon Dioxide (CO<sub>2</sub>) Per Capita Emissions of Selected Countries\*

Countries	Per Capita CO <sub>2</sub> Emissions (in tons)
United States	19.6
Russia	10.8
Germany	9.9
Japan	9.5
South Korea	9.3
United Kingdom	8.8
France	6.2
China	3.9
India	1.05

*Source:* International Energy Agency 2007, Part Two, 49–51

\*All figures are for 2005. All countries selected have populations over 45 million

## OVERVIEW OF BOOK

There is a debate among scholars over the role of the state in the operation of the global economy. The most prominent view of the state within the global economy is that it is becoming increasingly irrelevant, as the unfettered market has apparently become the preeminent world economic force. With the state receding as a global economic factor, political power has ostensibly shifted to such international institutions as the World Bank, the International Monetary Fund, and the World Trade Organization, as well as to those who make decisions within major transnational corporations (i.e., TCC).

Drawing heavily on traditional Marxist thought, Ellen Meiksins Wood holds that the state in the global economy is central to its operation and maintenance. Wood explains that it is instrumental in upholding the capitalist world order. Additionally, the U.S. state is particularly important in stimulating world economic demand. The fostering of sprawled urban regions by the U.S. government can be viewed as a specific and important effort to increase worldwide consumption and ultimately stabilize the global economy. Historically, sprawl was embraced as a means to increase demand for consumer durables during the Great Depression. The post-World War II boom in U.S. consumption of consumer durables (Olney 1991; French 1997; Brenner 2002) can be directly linked to urban sprawl and the public policies that promoted such sprawl (Beauregard 2006). In

the contemporary period, the U.S. state plays the central role in spurring urban sprawl. It does so through a foreign policy that seeks to guarantee the flow of Middle East oil, through cheap credit policies (“Greenspan Defends Homeowner Debt Levels” 2004; Gotham 2006), land use policies that dictate the building of single-family homes, and an aggressive road and highway building program. These policies and the urban sprawl they foster can help explain why the United States is the largest consumer in the world, and also has a very low savings rate (Goodman 2008 Feb 5; Wilcox 2008). American families spend money on multiple automobiles so members can get to and fro, on furniture and appliances to fill relatively large homes, and on energy expenses to power their vehicles, appliances, and to heat and cool their relatively spacious abodes.

While urban sprawl in the United States serves to prop up the world economy, urban sprawl has a number of environmental costs associated with it. Firstly, horizontal urban expansion destroys open space and wilderness (Hayden 2003; Johnson and Klemens 2005; Schipper 2008). Urban sprawl also draws down finite fossil fuels at a prodigious rate (Goodstein 2004; Roberts 2004; Podobnik 2006). This huge use of fossil fuels substantially contributes to the climate change phenomenon. These fuels are being consumed at such high rates that the carbon dioxide emitted by their burning cannot be benignly absorbed by the biosphere of the planet (Clark and York 2005; Volk 2008).

How did the policies underlying the creation of the sprawled urban zones in the United States come into being? Economic elite theory offers the deepest insight in the development of the sprawled urban zones of the United States. This theory posits that economic elites and producer groups are at the center of public policymaking. This theory, along with competing theories of the public policymaking process, is laid out in chapter 2. I outline in chapter 3 how the techniques of urban sprawl were developed by landed interests and land developers (i.e., producer groups) who sought to enhance the economic utility of their landholdings. More importantly, sprawl was embraced by economic elites in the 1930s as the means to address the economic exigency of the Great Depression (chapter 4). In chapter 5 I describe how U.S. oil policy was shaped by economic elites. In chapter 6 I outline how the response of business groups, as well as environmental groups, to climate change has not been to directly address urban sprawl but to advocate the creation and deployment of technologies (including alternative energy) that would abate the emission of greenhouse gases and allow urban sprawl to continue and expand.