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# Oil and the American Century

David S. Painter

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Understanding how oil fueled the “American century” is fundamental to understanding the sources, dynamics, and consequences of U.S. global dominance. Essential to both military power and the functioning of modern society, oil fueled American power and prosperity during the twentieth century. The United States was the world’s leading oil producer for the first three-quarters of the century, and five of the seven great oil corporations that dominated the international oil industry from the 1920s to the 1970s were American companies. Control of oil bolstered U.S. military and economic might and enabled the United States and its allies to win both world wars and the Cold War.<sup>1</sup>

The U.S. government worked closely with the oil industry to gain and maintain control of overseas oil reserves, reflecting a symbiosis of national security interests and the interests of the oil companies. Maintaining access to oil became a key priority of U.S. foreign policy and involved the United States in regional and local conflicts in Latin America, the Middle East, and other oil-producing areas in ways that distorted development in many countries. Most of the major doctrines of postwar U.S. foreign policy—the Truman, Eisenhower, Nixon, and Carter Doctrines—related, either directly or indirectly, to the Middle East and its oil.<sup>2</sup>

The availability of inexpensive oil encouraged the United States to adopt patterns of socioeconomic organization premised on high levels of oil use. Understandable when oil was inexpensive and access secure, this way of life has become less sustainable as economic, strategic, and environmental conditions have changed.

## Oil and the Balance of Power

Shortly before World War I the United States began converting its coal-burning battle fleet to one that used oil for fuel. Oil provided numerous advantages over coal, including

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<sup>1</sup> The seven great oil corporations, known as the “Seven Sisters” because of their close ties and multiple joint ventures, include Standard Oil of New Jersey (Exxon); Socony (Mobil); Standard Oil of California (Chevron); the Texas Company (Texaco); Gulf; the British-owned Anglo-Iranian Oil Company (after 1954 British Petroleum); and Royal Dutch Shell, a 60% Dutch and 40% British partnership. See Anthony Sampson, *The Seven Sisters: The Great Oil Companies and the World They Shaped* (New York, 1975); and Edith T. Penrose, *The Large International Firm in Developing Countries: The International Petroleum Industry* (London, 1968).

<sup>2</sup> On the Truman, Eisenhower, Nixon, and Carter Doctrines, see Marc Jay Selverstone, “Doctrines,” in *Encyclopedia of American Foreign Policy*, ed. Alexander DeConde, Richard Dean Burns, and Fredrik Logevall (3 vols., New York, 2002), I, 526–35.

enabling ships to attain greater speed and range and providing an easier refueling process. Oil also solved the navy's problem of projecting its power in the Pacific Ocean. Coal from the western United States was unsuitable for use in marine steam engines, so supplies for coaling stations had to be shipped from Wales or Appalachia. In contrast, oil was available in California, allowing the U.S. Navy more easily to extend its reach across the Pacific.<sup>3</sup>

Although the surface fleets of the great powers played a relatively minor part in World War I, important military innovations such as the submarine, the airplane, the tank, and motorized transport were oil powered. Oil also carved out a role in the manufacture of munitions when scientists developed a process for extracting toluol (toluene), an essential ingredient in TNT, from oil. Over the course of the war the United States supplied more than 80 percent of Allied oil requirements, and after U.S. entry into the war, the United States helped provide and protect tankers transporting oil to Europe. U.S. oil resources meant that insufficient energy supplies did not hamper the Allies, as they did the Central Powers.<sup>4</sup>

The development of the oil-powered internal combustion engine in the late nineteenth century and its almost-universal adoption in the transportation sector during the twentieth century transformed the U.S. economy. Oil powered the automobiles, trucks, ships, and airplanes that revolutionized transportation and altered the physical, economic, and social landscape. Oil-powered machinery and petrochemical-based pesticides, herbicides, and fertilizers also sparked unprecedented increases in agricultural production.<sup>5</sup>

The United States accounted for almost two-thirds of world oil production in 1920, and the availability of inexpensive oil led the country to reshape its society and economy in ways that guaranteed a large and growing demand for oil. The number of cars registered in the United States increased from 3.4 million in 1916 to 23.1 million by the end of the 1920s. In the 1930s the United States began "motorizing" its cities, moving away from public transit and further entrenching high levels of oil use into the structure of American society. Oil already accounted for almost one-fifth of U.S. energy consumption by 1925, and that figure rose to one-third by World War II. In contrast, outside the United States oil was a secondary fuel reserved mainly for transportation and military uses and accounted for less than 10 percent of energy consumption in Western Europe and Japan before World War II.<sup>6</sup>

The uneven distribution of world oil supplies had a significant and often-overlooked impact on the interwar balance of power. The United States and the Soviet Union were the only great powers with large oil reserves within their borders. Although British and

<sup>3</sup> John H. Maurer, "Fuel and the Battle Fleet: Coal, Oil, and American Naval Strategy, 1898–1925," *Naval War College Review*, 34 (Nov.–Dec. 1981), 60–77; Peter A. Shulman, "Science Can Never Demobilize: The United States Navy and Petroleum Geology, 1898–1924," *History and Technology*, 19 (Dec. 2003), 365–95.

<sup>4</sup> W. G. Jensen, "The Importance of Energy in the First and Second World Wars," *Historical Journal*, 11 (1968), 538–54.

<sup>5</sup> J. R. McNeill, *Something New under the Sun: An Environmental History of the Twentieth-Century World* (New York, 2000), 297–311; John W. Frey and H. Chandler Ide, *A History of the Petroleum Administration for War* (Washington, 1946), 9–12; David Nye, *Consuming Power: A Social History of American Energies* (Cambridge, Mass., 1998), 175–215.

<sup>6</sup> Daniel Yergin, *The Prize: The Epic Quest for Oil, Money, and Power* (New York, 1991), 208; David J. St. Clair, *The Motorization of American Cities* (New York, 1986); J. Allen Whitt and Glenn Yago, "Corporate Strategies and the Decline of Transit in U.S. Cities," *Urban Affairs Quarterly*, 21 (Sept. 1985), 37–65.

French companies held concessions in the Middle East, maintaining access required security and stability in the oil-producing areas and control of the sea routes, particularly through the Mediterranean Sea. Their other main source of oil was the Western Hemisphere, and wartime access to this oil would be dependent on the goodwill and probably the assistance of the United States, whose help would be needed to transport the oil safely across the Atlantic Ocean. German and Japanese oil companies had been almost completely shut out of the major oil-producing areas, leaving both nations reliant on foreign companies for necessary supplies and thus vulnerable to economic and political pressure. Moreover, Anglo-American sea power threatened Germany and Japan's access to oil from the Western Hemisphere and the Middle East.<sup>7</sup>

The United States strengthened its position as the world's leading oil producer during the interwar period and by 1940 accounted for over two-thirds of world production. After a brief oil-shortage scare following World War I, the growth in U.S. reserves outstripped demand as new fields were found in California and Oklahoma. The discovery of the giant East Texas oil field in 1930 amid the Great Depression made overproduction rather than scarcity the main issue facing the U.S. oil industry.<sup>8</sup>

Naval power, and later air power, allowed the United States to secure access to overseas oil-producing areas, especially in the oil-rich Gulf of Mexico–Caribbean region. In addition, the U.S. government helped U.S. oil companies expand their operations overseas by insisting on an Open Door policy of equal opportunity and by supporting private cooperative arrangements among the major companies. Between 1928 and 1934, U.S. companies gained oil concessions in the Netherlands East Indies, Venezuela, Iraq, Bahrain, Saudi Arabia, and Kuwait.<sup>9</sup>

U.S. and British companies lost access to Mexican oil in 1938 when the Mexican government nationalized most of the foreign companies in Mexico and set up a national oil company, *Petróleos Mexicanos* (Pemex), to run the industry. Mexico's actions challenged not only the position of the international oil companies but also the role of multinational corporations in the economic development of what would become known as the Third World. Mexican production had been in decline since the mid-1920s, however, and the rapid development of the Venezuelan oil industry by U.S. and British companies made up for the loss of Mexico. By the end of the 1930s, Venezuela had become the third-leading oil producer in the world, behind the United States and the Soviet Union, as well as the leading exporter.<sup>10</sup>

Oil played an important role in the origins of World War II. Convinced that oil was essential to fulfill his ambitions, Adolf Hitler accelerated the development of a synthetic fuel industry. The process of extracting oil from coal required massive amounts of steel,

<sup>7</sup> David S. Painter, "Oil and World Power," *Diplomatic History*, 17 (Winter 1993), 159–66.

<sup>8</sup> David F. Prindle, *Petroleum Politics and the Texas Railroad Commission* (Austin, 1981), 19–40.

<sup>9</sup> Michael J. Hogan, "Informal Entente: Public Policy and Private Management in Anglo-American Petroleum Affairs, 1918–1924," *Business History Review*, 48 (Summer 1974), 187–205; William Stivers, "International Politics and Iraqi Oil, 1918–1928: A Study in Anglo-American Diplomacy," *ibid.*, 55 (Winter 1981), 517–40. Edward Peter Fitzgerald, "The Iraq Petroleum Company, Standard Oil of California, and the Contest for Eastern Arabia, 1930–1933," *International History Review*, 13 (Aug. 1991), 441–60. Stephen J. Randall, *United States Foreign Oil Policy since World War II: For Profits and Security* (Montreal, 2005), 29–42, 62–69.

<sup>10</sup> Clayton R. Koppes, "The Good Neighbor Policy and the Nationalization of Mexican Oil: A Reinterpretation," *Journal of American History*, 69 (June 1982), 62–81; Jonathan C. Brown, "Why Foreign Oil Companies Shifted Their Production from Mexico to Venezuela during the 1920s," *American Historical Review*, 90 (April 1985), 362–85; Stephen G. Rabe, *The Road to OPEC: United States Relations with Venezuela, 1919–1976* (Austin, 1982), 22–65.

coal, and labor, but by 1940, coal-derived synthetic liquid fuels accounted for around 46 percent of Germany's peacetime oil supply and around 95 percent of its aviation gasoline. In November 1940 Germany gained privileged access to Romanian oil. Romanian exports were not sufficient to meet Germany's needs, and gaining control of the oil of the Caucasus was an important factor in Hitler's decision to invade the Soviet Union in 1941.<sup>11</sup>

Obtaining access to oil was also a key objective behind Japan's decision to attack the United States. Japan developed shale oil in Manchuria during the 1930s, but production was small and costly, leaving Japan dependent on the United States for around 80 percent of its oil needs. Most of the rest came from the Netherlands East Indies, which possessed the largest reserves in East Asia. Control over that oil would cover Japan's oil needs, which had increased sharply during the 1930s. The United States cut off oil exports to Japan in the summer of 1941, forcing Japanese leaders to choose between going to war to seize the oil fields of the Netherlands East Indies or giving in to U.S. pressure. This situation thus led directly to the Japanese attack on Pearl Harbor and other U.S. bases in December 1941.<sup>12</sup>

The key weapons systems of World War II—surface warships (including aircraft carriers), submarines, airplanes (including long-range bombers), tanks, and a large portion of sea and land transport—were oil powered. Oil continued to play an important role in the manufacture of munitions, and the development of petroleum-based synthetic rubber helped relieve Allied dependence on Southeast Asian natural rubber supplies, most of which were in Japanese hands after 1941.<sup>13</sup>

The United States entered the war with a surplus production capacity of over 1 million barrels per day, around 30 percent of U.S. production in 1941. This margin allowed the U.S. oil industry, almost single-handedly, to fuel not only the U.S. war effort but also that of its allies. In addition, U.S. leadership in oil-refining technology provided the U.S. military with such advantages as 100-octane aviation gasoline and specialty lubricants needed for high-performance aircraft engines.<sup>14</sup>

Germany and Japan's inability to gain secure access to oil was an important factor in their defeat. German synthetic fuel production and oil from wells under German control were barely sufficient for wartime requirements. Failure to gain control of the oil of the Caucasus, coupled with setbacks in North Africa, left the German military vulnerable to oil shortages throughout the war. Only the absence of a second front until the summer of 1944 kept oil consumption at manageable levels. In May 1944 Allied bombers began systematically targeting synthetic fuel plants, and by the end of the war the German war machine was running on empty.<sup>15</sup>

The Japanese gained control of the Netherlands East Indies in 1942, but many of the oil facilities had been sabotaged and took time to restore to full production. More importantly, transporting oil from the East Indies to Japan proved difficult after 1943 due to the success of U.S. submarines in interdicting Japanese shipping. By late 1944 Japan faced serious oil shortages, with crippling military consequences.<sup>16</sup>

<sup>11</sup> Yergin, *Prize*, 333, 334–35.

<sup>12</sup> Timothy C. Lehmann, "Keeping Friends Close and Enemies Closer: Classical Realist Statecraft and Economic Exchange in U.S. Interwar Strategy," *Security Studies*, 18 (no. 1, 2009), 115–47.

<sup>13</sup> Harold F. Williamson et al., *The American Petroleum Industry: The Age of Energy, 1899–1959* (Evanston, 1963), 790–91.

<sup>14</sup> *Ibid.*, 747–94. Yergin, *Prize*, 371–84.

<sup>15</sup> Jensen, "Importance of Energy in the First and Second World Wars," 545–54.

<sup>16</sup> Jerome B. Cohen, *Japan's Economy in War and Reconstruction* (Minneapolis, 1949), 136–47.

Oil's increasing importance, along with growing concerns about the adequacy of domestic oil supplies, deeply affected U.S. policy toward Latin America and the Middle East and enhanced the role of the major oil companies as vehicles of U.S. national interest in foreign oil. In 1943 the U.S. government helped facilitate a settlement between the Venezuelan government and the major oil companies that resulted in a fifty-fifty profit-sharing agreement, confirmation of the companies' existing concessions, the extension of those concessions for forty years, and access to new areas. Venezuelan oil production increased substantially and helped fuel the Allied war effort. After the war the U.S. government and the major oil companies cooperated with both democratic and authoritarian governments in Venezuela to maintain access to Venezuelan oil.<sup>17</sup>

A U.S. government-sponsored oil mission that surveyed the Middle East in late 1943 concluded: "The center of gravity of world oil production is shifting from the Gulf-Caribbean region to the Middle East—and is likely to continue to shift until it is firmly established in that area." To secure the U.S. stake in Middle East oil, the Roosevelt administration attempted to buy the concession rights in Saudi Arabia held by Standard Oil Company of California (Socal) and the Texas Company. The administration later proposed the U.S. government construct and own an oil pipeline that stretched from the Persian Gulf to the Mediterranean. In addition, in 1944 and again in 1945 the U.S. government worked out agreements with Great Britain that would guarantee existing concessions and equality of opportunity to compete for new concessions, and establish a binational petroleum commission to allocate production among the various producing countries.<sup>18</sup>

Socal and the Texas Company refused to part with their valuable property. As for the pipeline, the oil industry opposed government involvement in the project, except for Socal, the Texas Company, and Gulf, which would benefit from it. Oil companies whose operations were primarily domestic opposed the oil agreements with Great Britain because they feared the deals would allow cheap foreign oil to flood the U.S. market. Those concerns found support in Congress, and all three initiatives failed. The only foreign oil policy on which all segments of the U.S. oil industry could agree was a return to Open Door diplomacy with government involvement limited to maintaining an international environment in which private companies could operate with security and profit.<sup>19</sup>

## Oil and the Cold War

Despite the development of nuclear weapons and ballistic missiles, oil-powered forces remained vital to military power in the postwar world. Except for nuclear-powered aircraft carriers and submarines, most of the world's warships remained oil powered, as did aircraft, armor, and transport. In addition, each new generation of weapons consumed more oil than its predecessors.

A symbiotic relationship formed between postwar U.S. global strategy and oil. Controlling oil helped the United States contain the Soviet Union, end destructive political,

<sup>17</sup> David S. Painter, "Oil, Resources, and the Cold War, 1945–1962," in *The Cambridge History of the Cold War*, vol. I: *Origins*, ed. Melvyn P. Leffler and Odd Arne Westad (Cambridge, Eng., 2010), 491–92.

<sup>18</sup> David S. Painter, *Oil and the American Century: The Political Economy of U.S. Foreign Oil Policy, 1941–1954* (Baltimore, 1986), 32–74, esp. 52.

<sup>19</sup> *Ibid.*, 32–74

economic, and military competition among the core capitalist states, mitigate class conflict within the capitalist core by promoting economic growth, and retain access to the raw materials, markets, and labor of periphery nations in an era of decolonization and national liberation. As part of this strategy, the U.S. military established a vast archipelago of overseas bases that allowed the United States to project its power into almost every region of the world. The forces necessary for this strategy, mainly sea and air power, could and were used to maintain access to overseas oil reserves. These forces were also dependent on oil.<sup>20</sup>

The importance of oil to U.S. goals led the nation to take an active interest in the security and stability of the Middle East. U.S. leaders viewed Iran as a strategic buffer between the Soviet Union and U.S. oil interests in the Persian Gulf. During World War II Soviet, British, and U.S. forces occupied Iran but agreed to withdraw soon after the war ended. The United States and Great Britain pulled out their forces in 1946, but the Soviets refused. The United States backed the Iranians, who worked out a deal that led to Soviet withdrawal and the exclusion of the Soviets from Iranian oil development. Cooperation between Mohammed Reza Shah Pahlavi and the United States during the crisis strengthened the position of the shah in his struggle with the Majlis (parliament) over the role of the monarchy in Iranian public life.<sup>21</sup>

Although circumstances differed greatly in Greece, Turkey, and Iran, U.S. officials interpreted events in all three places as part of a Soviet plan to dominate the eastern Mediterranean and the Middle East. Mention of oil was deliberately deleted from President Harry S. Truman's March 12, 1947, address before Congress pledging resistance to communist expansion anywhere in the world; but guarding access to oil was an important part of the Truman Doctrine.<sup>22</sup>

At the same time, the major U.S. oil companies consolidated their position in the Middle East by joining forces with each other and their British counterparts. The centerpiece of these so-called great oil deals was the expansion of the ownership of the Saudi Arabian concession to include Standard Oil of New Jersey and Socony. The result was a private system of worldwide production management that facilitated the development of Middle East oil and its integration into world markets.<sup>23</sup>

The emerging postwar petroleum order underwent its first test with the Palestine issue. Truman's decisions to support the United Nations (UN) plan to partition Palestine in November 1947 and to recognize the new state of Israel in May 1948 went against the advice of the State Department, the military, and the newly formed Central Intelligence Agency. All three feared that U.S. support for the creation of a Jewish state in Palestine could undermine relations with the Arab world, provide an opening for the Soviet Union to extend its power and influence, and lead to loss of access to Middle East oil at a time when the West needed it for European and Japanese reconstruction. To minimize the threat to U.S. interests, the United States refrained from sending troops and arms to enforce the UN decision. While official relations with the Arab states suffered because of

<sup>20</sup> Melvyn P. Leffler, "National Security and U.S. Foreign Policy," in *Origins of the Cold War: An International History*, ed. Melvyn P. Leffler and David S. Painter (1994; London, 2005), 15–41; J. R. McNeill and David S. Painter, "The Global Environmental Footprint of the U.S. Military, 1789–2003," in *War and the Environment: Military Destruction in the Modern Age*, ed. Charles E. Cloosmann (College Station, 2009), 20–24.

<sup>21</sup> Painter, *Oil and the American Century*, 75–81, 111–15. Habib Ladjvardi, "The Origins of U.S. Support for an Autocratic Iran," *International Journal of Middle East Studies*, 15 (May 1983), 225–39.

<sup>22</sup> Painter, *Oil and the American Century*, 113–14.

<sup>23</sup> *Ibid.*, 102–10.

U.S. support for Israel, the oil companies managed to maintain a degree of distance from government policy and thus escaped the burden of Arab displeasure.<sup>24</sup>

Middle East oil was crucial to the success of the Marshall Plan. Postwar Western Europe faced a coal shortage of alarming proportions owing to wartime overproduction and destruction. Making matters worse, Soviet expansion into Eastern Europe left the Soviet Union in control of most of Europe's known indigenous oil reserves as well as important sources of coal in Poland. To fuel economic recovery and prevent Western Europe from falling under Soviet control, the United States looked to Middle East oil. Around 10 percent of total Marshall Plan assistance paid for oil supplied by U.S. oil companies. To limit the drain on U.S. reserves most of the oil came from the overseas holdings of U.S. oil companies, especially in the Middle East, thus providing those companies with markets for their growing production. Although dependence on Middle East oil increased European vulnerability to disruptions in supply, controlling access to essential oil supplies helped the United States reconcile its goal of German economic recovery and integration into a Western alliance with its desire to ensure against a recurrence of German aggression.<sup>25</sup>

To further secure the oil companies' position in the Middle East, the U.S. government supported fifty-fifty profit-sharing arrangements between U.S. oil companies and host governments. The U.S. tax code granted U.S. corporations credit for taxes paid overseas, allowing the companies to shift to the U.S. Treasury the cost of payments to host countries.<sup>26</sup>

Iran's nationalization of the British-owned Anglo-Iranian Oil Company (AIOC) in the spring of 1951 highlighted and reinforced key aspects of the postwar petroleum order—concern over Middle East security, opposition to economic nationalism, and close cooperation with the major oil companies. AIOC's Iranian operations were Britain's most valuable overseas asset, and the British feared that if Iran succeeded in taking over the company, all of Britain's overseas investments would be jeopardized. In addition to concerns about the impact of British interests, U.S. policy makers also feared that Iranian nationalism, if successful, could jeopardize U.S. oil concessions in the Middle East and elsewhere. Nationalization was popular in Iran, and U.S. policy makers were concerned that the use of force to reverse nationalization could destabilize Iran and boost the prospects of the pro-Soviet Tudeh party. Moreover, the crisis broke out during the Korean War, making U.S. policy makers reluctant to risk confrontation. Therefore, the United States urged the British to reach a negotiated settlement that preserved as much of Britain's position as possible.<sup>27</sup>

U.S. efforts to mediate a settlement failed, as did attempts to convince the shah to remove nationalist prime minister Mohammed Mossadeq, the main proponent of nationalization. A boycott of Iranian oil exports led by AIOC and supported by other major oil companies and by the British and U.S. governments sharply reduced Iran's export earnings and decimated government revenues. British and U.S. involvement in Iranian internal

<sup>24</sup> Aaron David Miller, *Search for Security: Saudi Arabian Oil and American Foreign Policy, 1939–1949* (Chapel Hill, 1980), 176–99. Painter, *Oil and the American Century*, 126–27.

<sup>25</sup> David S. Painter, "The Marshall Plan and Oil," *Cold War History*, 9 (May 2009), 159–75, esp. 163–64. Similar considerations applied to Japan. See Laura Hein, *Fueling Growth: The Energy Revolution and Economic Policy in Postwar Japan* (Cambridge, Mass., 1990), 202–5.

<sup>26</sup> Painter, *Oil and the American Century*, 165–71.

<sup>27</sup> *Ibid.*, 172–79.

affairs further destabilized Iran. The end of the Korean War in 1953 and the completion of the U.S. military buildup set in motion by the war gave U.S. policy makers the confidence to pursue more aggressive policies toward Iran. Fearing that Mossadeq might displace the shah, that Soviet influence was increasing, and that the oil boycott was weakening, the United States and Britain organized, financed, and directed a coup in 1953 that removed Mossadeq and installed a government willing to reach an oil deal on Western terms. After the coup, the United States provided massive assistance to Iran as the shah established a royal dictatorship, ending Iran's experiment with representative government and freedom from foreign interference. To introduce Iranian oil back into world markets without disruption, the United States enlisted the major U.S. oil companies, Shell, the French firm *Compagnie Française des Pétroles*, and AIOC in an international consortium to run Iran's oil industry.<sup>28</sup>

Concerns about Middle East oil significantly shaped U.S. response to Egypt's nationalization of the Suez Canal Company in July 1956. The Suez Canal was an important symbol of Western presence in the Middle East and a major artery of international trade; two-thirds of the oil that went from the Persian Gulf to Western Europe passed through the canal. In addition, Egyptian control of the canal and the Straits of Tiran, the passage that allowed ships to reach Israel through the Gulf of Aqaba, threatened Israeli access to Persian Gulf oil. Although opposed to the Egyptian leader Gamal Abdel Nasser, the United States feared that the use of force to reverse his bid for nationalization would jeopardize Western position in the Middle East. However, Israeli, British, and French forces did attack Egypt. In response, the Egyptians closed the canal by sinking ships in it, Saudi Arabia embargoed oil shipments to Britain and France, and Syria shut down the oil pipelines from Iraq to the Mediterranean. President Dwight D. Eisenhower was incensed by his allies' actions and embarrassed by the timing—the attack occurred just before the U.S. presidential election and amid the Soviet suppression of a revolt in Hungary. The United States refused to provide Britain and France with oil, blocked British attempts to gain assistance from the International Monetary Fund to maintain the value of the pound, and threatened to cut off economic aid to Israel until the three nations withdrew their forces from Egypt. Following the withdrawal of the British and French forces, the U.S. government and the major oil companies cooperated to supply Europe with oil until the canal was reopened and oil shipments from the Persian Gulf to Europe restored. Israel withdrew its forces after receiving U.S. assurances of free passage through the Straits of Tiran and that UN peacekeeping forces would be stationed in Egypt along its border with Israel and at the straits.<sup>29</sup>

<sup>28</sup> Mary Ann Heiss, "The International Boycott of Iranian Oil and the Anti-Mosaddeq Coup of 1953," in *Mohammad Mosaddeq and the 1953 Coup in Iran*, ed. Mark J. Gasiorowski and Malcolm Byrne (Syracuse, 2004), 178–200; Francis J. Gavin, "Power, Politics, and U.S. Policy in Iran, 1951–1953," *Journal of Cold War Studies*, 1 (Winter 1999), 56–89; Samuel F. Wells Jr., "The First Cold War Build-Up: Europe in U.S. Strategy and Policy, 1950–1953," in *Western Security: The Formative Years, 1947–1953*, ed. Olav Riste (New York, 1985), 181–97; Mark J. Gasiorowski, "The 1953 Coup d'Etat in Iran," *International Journal of Middle East Studies*, 19 (Aug. 1987), 261–86; Painter, *Oil and the American Century*, 189–98.

<sup>29</sup> *Foreign Relations of the United States, 1955–57* (27 vols., Washington, 1985–1992), XVI, 62–68, 78–93, 382–91, 645–48; Dwight D. Eisenhower, *The White House Years: Waging Peace, 1956–1961* (Garden City, 1965), 20–57; Robert R. Bowie, "Eisenhower, Dulles, and the Suez Crisis," in *Suez 1956: The Crisis and Its Consequences*, ed. Wm. Roger Louis and Roger Owen (Oxford, 1989), 189–214; Uri Bialer, *Oil and the Arab-Israeli Conflict, 1948–63* (New York, 1999), 220–22. *Foreign Relations of the United States, 1955–57*, XVI, 873–74, 1070–86; Eisenhower, *White House Years*, 72–99, 183–93; Yergin, *Prize*, 491–95; Stephen G. Galpern, *Money, Oil, and Empire in the Middle East: Sterling and Postwar Imperialism, 1944–1971* (Cambridge, Eng., 2009), 178–97; Salim Yaqub, *Containing Arab Nationalism: The Eisenhower Doctrine and the Middle East* (Chapel Hill, 2004), 106–11.

The Suez crisis highlighted the danger that Arab nationalism posed to Western access to Middle East oil. In early 1957 Eisenhower warned that without Middle East oil, "Western Europe would be endangered just as though there had been no Marshall Plan, no North Atlantic Treaty Organization." To counter Nasser, Eisenhower sought to bolster conservative Arab regimes and reinforce their pro-Western alignment through economic and military assistance. Labeled the Eisenhower Doctrine, these policies marked an important milestone in the U.S. assumption of Great Britain's role as the guardian of Western interests in the Middle East.<sup>30</sup>

In July 1958 nationalist elements of the Iraqi army overthrew the country's pro-Western monarchy. Rather than increasing the threat from Arab nationalism, however, the Iraqi Revolution did not diminish Egyptian-Iraqi rivalry for leadership of the Arab world and may have even exacerbated divisions within the Arab nationalist movement and reduced the danger to Western interests in the region. The breakup of the United Arab Republic (a union between Egypt and Syria) in September 1960, coupled with the development of supertankers that could bypass the Suez Canal by inexpensively going around the African continent, further reduced the danger of Arab nationalists cutting off Western access to Middle East oil. In addition, the development of North African oil fields and the availability of Soviet oil made Western Europe less dependent on oil from the Persian Gulf.<sup>31</sup>

In September 1960, after the major oil companies had twice unilaterally reduced the prices that were used to calculate how much revenue producing countries received, the oil ministers of Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela formed the Organization of the Petroleum Exporting Countries (OPEC). Although OPEC eventually gained power over pricing in the 1970s, its formation subordinated the broader Arab nationalist agenda of using "Arab oil" for the benefit of all Arab states to the narrower economic goal of protecting the revenues of the major oil-producing countries by securing the best possible terms within the postwar petroleum order.<sup>32</sup>

Concerns about oil significantly shaped U.S. policy during the crisis leading up to the June 1967, or Six-Day, War. Following the Suez settlement, the Israeli port of Eilat at the head of the Gulf of Aqaba emerged as the main conduit for oil entering Israel from Iran. By the early 1960s, 85 percent of Israel's oil needs were being met by Iranian oil. The withdrawal of UN forces from Egypt in May 1967, including those stationed at the Straits of Tiran, the entrance to the Gulf of Aqaba, threatened Israel's access to oil. Rather than risk Arab retaliation against U.S. oil interests if it intervened to reopen the gulf, and confident that Israeli forces would prevail, the United States stood aside and let Israel deal with the issue on its own. After Israel launched a preemptive strike against Egypt on June 6, the main Arab oil producers cut off oil shipments to the United States, Great Britain, and West Germany. The fighting also closed the Suez Canal, and Syria disrupted shipments through the pipelines connecting the Persian Gulf oil fields to the Mediterranean. Increased oil production in the United States, Venezuela, and Iran (which could now bypass the

<sup>30</sup> *Public Papers of the Presidents of the United States: Dwight D. Eisenhower, 1957* (Washington, 1958), 8; Yaqub, *Containing Arab Nationalism*, 87–117; Douglas Little, *American Orientalism: The United States and the Middle East since 1945* (Chapel Hill, 2008), 131–37.

<sup>31</sup> Nathan J. Citino, *From Arab Nationalism to OPEC: Eisenhower, King Sa'ūd, and the Making of U.S.-Saudi Relations* (Bloomington, 2002), 145–50; *Foreign Relations of the United States, 1958–60* (9 vols., Washington, 1986–1993), IV, 665–79.

<sup>32</sup> Citino, *From Arab Nationalism to OPEC*, 150–56.

canal with supertankers), and using oil in storage, made up for the shortfall. The Arab embargo began to break down after a month, and by September, exports from the Arab states were back to precrisis levels.<sup>33</sup>

### The Oil Crises of the 1970s

During the 1970s a combination of political turmoil and shifts in the global oil economy threatened U.S. control of world oil. Following World War II, the United States intensified its embrace of patterns of socioeconomic organization premised on high levels of oil use. The transformation of the U.S. transportation system continued after 1945, as neglect of public transportation and dispersed housing patterns resulting from suburbanization spurred increased automobile use. Between 1945 and 1973, U.S. car registrations increased from 25 million to over 100 million, and per capita oil consumption more than doubled. In addition, the nation's trucking fleet expanded dramatically, and trucks increased their share of intercity freight traffic at the expense of rail transport. By 1972 oil accounted for 45.6 percent of U.S. energy consumption.<sup>34</sup>

Western Europe and Japan were even more dependent on oil to meet their energy needs. Automobile use skyrocketed in both places, and by 1972 oil accounted for 59.6 percent of West European energy consumption and 73 percent of Japanese energy consumption. Around 80 percent of Western European and Japanese oil imports came from the Middle East and North Africa.<sup>35</sup>

While consumption soared during the decade, U.S. domestic oil production peaked in 1970 at 18.7 percent of world production, forcing the United States to import increasing amounts of oil to meet its needs. Imports rose from 23.2 percent of U.S. oil supply in 1970 to 36.3 percent in 1973. The Middle East's share of world oil production rose from 7 percent in 1950 to 40 percent in 1973 as the low cost of producing Middle East oil concentrated investment and production in the region.<sup>36</sup>

At the same time, war and revolution in the Middle East and the changing dynamics of the Cold War raised questions about the ability of the United States to maintain access to Middle East oil. In early 1968 the British government informed the United States that Britain planned to withdraw its military forces from positions east of Suez by the end of 1971. Embroiled in an unpopular war in Vietnam, the United States, following the Nixon Doctrine, turned to Iran to take over as guardian of the Gulf. The shah was eager to accept, hoping to restore the power and prestige of ancient Persia. For the other pillar of its policy, the United States looked to Saudi Arabia to take over the U.S. role of maintaining spare

<sup>33</sup> Bialer, *Oil and the Arab-Israeli Conflict*, 224–45; *Foreign Relations of the United States, 1964–68* (33 vols., Washington, 1992–1999), XIX, 208–13, 228–30, 270–77, 280–83; Roland Popp, “Stumbling Decidedly into the Six-Day War,” *Middle East Journal*, 60 (Spring 2006), 281–309; Ami Gluska, *The Israeli Military and the Origins of the 1967 War: Government, Armed Forces, and Defense Policy, 1963–67* (London, 2007), 152–53, 180–81, 217, 223–24, 243–46. M. S. Daoudi and M. S. Dajani, “The 1967 Oil Embargo Revisited,” *Journal of Palestine Studies*, 13 (Winter 1984), 65–90.

<sup>34</sup> Joel Darmstadter and Hans H. Landsberg, “The Economic Background,” in *The Oil Crisis*, ed. Raymond Vernon (New York, 1976), 21; Steven A. Schneider, *The Oil Price Revolution* (Baltimore, 1983), 59–63.

<sup>35</sup> Yergin, *Prize*, 544–46; Darmstadter and Landsberg, “Economic Background,” 21.

<sup>36</sup> DeGolyer and MacNaughton, *Twentieth Century Petroleum Statistics, 2009* (Dallas, 2009), 3, 53, 108; Darmstadter and Landsberg, “Economic Background,” 31–35; Schneider, *Oil Price Revolution*, 66–75.

production capacity that could be used to supply oil in an emergency and help moderate prices.<sup>37</sup>

With little spare capacity outside the Middle East, the United States hoped to avoid disruptions in oil supplies by allowing prices to rise slowly, and gradually ceding ownership of oil concessions and facilities. Higher oil prices could stimulate increased investment and production, especially in such high-cost areas as Alaska and the North Sea, making the West less dependent on Middle East oil. Higher prices could also encourage conservation, efficiency in oil use, and increased utilization of alternative sources of energy, in particular coal and nuclear power.<sup>38</sup>

Politics—in the form of the 1973 Arab-Israeli War and the 1978–1979 Iranian Revolution—intervened, however. During the war, in response to U.S. aid to Israel, the Organization of Arab Petroleum Exporting Countries (OAPEC)—composed of OPEC’s Arab members and Bahrain, Egypt, and Syria—organized an embargo of oil shipments to the United States and a cutback in oil production. Although Iran, Venezuela, and the other non-Arab members of OPEC did not join the embargo or cut back production and exports, the disruption led to a quadrupling of oil prices and economic problems for most oil-importing countries.<sup>39</sup>

Increased oil earnings allowed producing countries to buy back company-owned concession rights and establish national oil companies. In 1970, producing countries owned less than 10 percent of their oil industries; by 1979, they owned almost 70 percent. Ownership of all aspects of their oil industries gave producing countries greater control over such factors as the pace of development of their reserves, the rate of production, and the destination of their exports.<sup>40</sup>

For Iran, higher oil prices also led to a sharp increase in oil revenues; spurred extravagant military spending, inflation, and massive rural–urban migration; and increased already-sharp inequalities in wealth and income. The weapons systems the shah bought also brought thousands of Western technicians and military advisers into Iran, inflaming conservative fears of corrosive Western influence and swelling the ranks of the shah’s opponents. Declining oil earnings and decreases in real oil prices in 1978 and decreases in government spending caused domestic economic problems, sparking widespread demonstrations against the shah. By the time the U.S. government realized what was happening, it was too late to save the shah, who fled Iran in January 1979. The turmoil surrounding the Iranian Revolution disrupted oil supplies and markets, and led to a doubling of oil prices.<sup>41</sup>

<sup>37</sup> *Foreign Relations of the United States, 1969–76*, vol. 24, document 91, <http://history.state.gov/historicaldocuments/frus1969-76v24/d91>. For the reasoning behind the policy, see *ibid.*, document 2, <http://history.state.gov/historicaldocuments/frus1969-76v24/d2>; *ibid.*, document 82, <http://history.state.gov/historicaldocuments/frus1969-76v24/d82>; *ibid.*, document 83, <http://history.state.gov/historicaldocuments/frus1969-76v24/d83>; *ibid.*, document 89, <http://history.state.gov/historicaldocuments/frus1969-76v24/d89>; *ibid.*, vol. E-4, document 70, <http://history.state.gov/historicaldocuments/frus1969-76ve04/d70>; *ibid.*, document 75, <http://history.state.gov/historicaldocuments/frus1969-76ve04/d75>; and *ibid.*, document 91, <http://history.state.gov/historicaldocuments/frus1969-76ve04/d91>.

<sup>38</sup> James E. Akins, “The Oil Crisis: This Time the Wolf Is Here,” *Foreign Affairs*, 51 (April 1973), 462–90; Kenneth A. Rodman, *Sanctity versus Sovereignty: The United States and the Nationalization of Natural Resource Investments* (New York, 1988), 232–69.

<sup>39</sup> Fiona Venn, *The Oil Crisis* (London, 2002), 7–21, 75. Calling the embargo an “OPEC embargo,” as is common in both scholarly and popular studies, obscures the specific political circumstances that led to it.

<sup>40</sup> Brian Levy, “World Oil Marketing in Transition,” *International Organization*, 36 (Winter 1982), 113–33.

<sup>41</sup> James A. Bill, *The Eagle and the Lion: The Tragedy of American-Iranian Relations* (New Haven, 1988), 216–60; Mark J. Gasiorowski, *U.S. Foreign Policy and the Shah: Building a Client State in Iran* (Ithaca, 1991), 142–51, 187–222.

The oil crises of the 1970s evoked images of a weakened United States, especially since those crises coincided with the U.S. withdrawal from Vietnam, the Watergate crisis, a wave of revolutions in the Third World, and the Soviet Union's achievement of nuclear parity with the United States. High oil prices intensified the economic problems faced by the United States and the other Western industrial countries in the 1970s, especially inflation, which was accompanied by stagnation and increased unemployment. In addition, the oil crisis paralleled the decline of U.S. manufacturing as a result of increased competition from Western Europe and Japan. U.S. popular culture tended to equate the private automobile and personal mobility with individual freedom, so high oil prices seemed to strike at the American way of life.<sup>42</sup>

The Soviet Union, in contrast, benefited from high oil prices. As new fields in western Siberia entered production, the Soviet Union overtook the United States as the world's leading oil producer in 1974. Although most Soviet oil exports went to Eastern Europe, Cuba, and Vietnam, hard-currency earnings from oil exports to Western Europe and Japan rose sharply and by 1976 were responsible for half of the Soviet Union's hard-currency earnings. The windfall from higher prices allowed the Soviets to import large amounts of Western grain and machinery, and gave the illusion of continued viability to a system that was already in serious trouble.<sup>43</sup>

After a difficult decade, the United States was able to reassert its influence through a strategy that included permitting higher prices to induce more efficient use of oil, replacing oil with other energy sources (particularly in electricity generation), and reducing imports from OPEC producers by increasing production elsewhere. Despite losing their concessions, the oil companies managed to retain an important role in the world oil economy and remained among the largest and most profitable corporations in the world.<sup>44</sup>

The United States also assumed a direct role in assuring Western access to Middle East oil. Warning that growing Soviet power and involvement abroad, Third World instability, and Western dependence on Middle East oil threatened U.S. security, President Jimmy Carter on January 23, 1980, announced before a joint session of Congress that: "An attempt by any outside power to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America, and such an assault will be repelled by any means necessary, including military force." Shortly thereafter, the United States established a Rapid Deployment Joint Task Force (RDJTF) dedicated to this mission. Although Carter made the announcement in the wake of the Soviet invasion of Afghanistan, his administration had been considering this move for years. In 1983 the RDJTF became U.S. Central Command, a regional unified military command with responsibility for the defense of U.S. interests in the Middle East, North Africa, and Central Asia.<sup>45</sup>

<sup>42</sup> On economic problems and declining U.S. manufacturing, see Venn, *Oil Crisis*, 145–72; and Robert Brenner, *The Economics of Global Turbulence: The Advanced Capitalist Economies from Long Boom to Long Downturn, 1945–2005* (New York, 2006), 97–236. On cars, mobility, and individual freedom, see David S. Painter, *The Cold War: An International History* (London, 1999), 80; and David E. Nye, "Path Insistence: Comparing European and American Attitudes toward Energy," *Journal of International Affairs*, 53 (Fall 1999), 139–40.

<sup>43</sup> Marshall I. Goldman, *The Enigma of Soviet Petroleum: Half-Full or Half-Empty?* (London, 1980), 85–111.  
<sup>44</sup> Simon Bromley, *American Hegemony and World Oil: Industry, the State System, and the World Economy* (University Park, 1991), 4, 161; G. John Ikenberry, *Reasons of State: Oil Politics and the Capacities of American Government* (Ithaca, 1988).

<sup>45</sup> Jimmy Carter, "The State of the Union Address Delivered before a Joint Session of the Congress," in *Public Papers of the Presidents of the United States: Jimmy Carter, 1980–1981* (Washington, 1980–1981), 194–200, esp. 197; Olav Njølstad, "Shifting Priorities: The Persian Gulf in U.S. Strategic Planning in the Carter Years," *Cold War History*, 4 (April 2004), 21–55. On the U.S. Central Command, see the series "The Proconsuls," *Washington Post*, Sept. 28, 29, 30, 2000.

Between 1979 and 1985 decreases in oil consumption in the noncommunist world and increases in non-OPEC oil production resulted in a drop of 10.2 million barrels per day in demand for OPEC oil. Increased domestic oil production and decreased consumption led to a decline in U.S. oil imports from 47 percent of total supply in 1977 to 32.3 percent in 1985. Despite the disruption caused by the Iran-Iraq War (1980–1988), these changes in supply and demand began to affect oil prices. After initially trying to support prices by reducing output, the Saudi leadership decided in the fall of 1985 to regain their position in world markets by increasing production. Rather than selling oil at a fixed price, the price would be based on what refined products sold for in the marketplace minus a fixed margin for the refiner. The new system put a premium on volume rather than price and led to a collapse of world oil prices in 1986. Saudi oil production, which had fallen to 3,175,000 barrels per day (bpd) in 1985, increased to 4,784,200 bpd in 1986 and 6,412,500 bpd in 1990. Oil revenues dropped from \$25,937,000,000 in 1985 to \$18,061,000,000 in 1986, but began increasing in 1987 and reached \$40,130,000,000 in 1990.<sup>46</sup>

The price collapse decimated Soviet hard currency earnings and undermined the reform plans of the new government of Mikhail Gorbachev, who had taken power in March 1985. Gorbachev hoped to use oil earnings to finance a modernization of Soviet industry and to improve living standards, thus easing the transition from a command economy to a market economy and a more democratic society. Instead, declining oil prices played an important role in the collapse of the Soviet economy.<sup>47</sup>

Some conservative writers claim that the Reagan administration engineered the oil price collapse to bring about the fall of communism and win the Cold War. Even if this is what happened—and it is far from clear on the basis of the available record—it misses a key point: Gorbachev and the generation of Soviet leaders that emerged in the 1980s had already concluded that continued conflict with the West threatened their goal of overcoming the disastrous legacy of Stalinism, reforming their economy, democratizing their politics, and revitalizing their society. Thus, rather than killing communism, which was already terminally ill, the collapse of oil prices precluded the possibility of social democracy in the Soviet Union.<sup>48</sup>

## Oil and Power after the Cold War

By the end of the century, oil accounted for around 40 percent of world energy consumption, including over 90 percent of transportation energy use. World oil consumption continued to increase due to the existing structures of consumption in developed countries (especially in the United States) and economic growth in developing countries (especially in China and India).<sup>49</sup>

The United States continued its embrace of patterns of socioeconomic organization premised on high levels of oil consumption. Lower oil prices after 1986 undermined

<sup>46</sup> Edward T. Dowling and Francis G. Hilton, "Oil in the 1980s: An OECD Perspective," in *The Oil Market in the 1980s: A Decade of Decline*, ed. Siamack Shojai and Bernard S. Katz (New York, 1992), 71–87. Organization of the Petroleum Exporting Countries, *Annual Statistical Bulletin 1999*, [http://www.opec.org/opec\\_web/en/publications/202.htm](http://www.opec.org/opec_web/en/publications/202.htm).

<sup>47</sup> Thane Gustafson, *Crisis amid Plenty: The Politics of Soviet Energy under Brezhnev and Gorbachev* (Princeton, 1989).

<sup>48</sup> David S. Painter and Thomas S. Blanton, "The End of the Cold War," in *A Companion to Post-1945 America*, ed. Jean-Christophe Agnew and Roy Rosenzweig (Oxford, 2002), 479–500.

<sup>49</sup> Michael T. Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy* (New York, 2008), 14, 36, 63–87.

many of the conservation gains of the late 1970s and early 1980s, as automobile use expanded and housing patterns became even more dispersed. Per capita consumption, which had fallen after 1977, started rising again. The U.S. share of world crude oil production fell to 8.1 percent in 2003, and imports increased from 47.1 percent of the U.S. oil supply in 1990 to 61.1 percent in 2003.<sup>50</sup>

Although the U.S. military shrank somewhat following the end of the Cold War, it still maintained a vast fleet of ground vehicles, aircraft, and warships and remained the largest single user of petroleum products in the world. These forces also ensured that conventional military operations would continue to be an extremely oil-intensive activity.<sup>51</sup>

Maintaining access to foreign oil, especially to the vast oil resources of the Persian Gulf, remained a top priority of U.S. foreign policy. Even though the United States obtained only a relatively small portion of its oil needs from the Persian Gulf, oil from this region played a crucial role in the world oil economy, and the global nature of world oil markets meant that shortfalls anywhere would be reflected in higher prices, if not shortages, in other parts of the world. In addition, control of access to Persian Gulf oil remained a source of U.S. influence over its allies as well as potential enemies.

Maintaining access to Persian Gulf oil was a key objective of the U.S. response to the Iraqi conquest of Kuwait in August 1990. Iraq's take-over of Kuwait gave Saddam Hussein control of around 20 percent of world petroleum reserves. If Iraq also seized Saudi Arabia's oil fields, it would control almost half of world reserves. Even if Iraqi forces stopped at Kuwait, they would still control enormous resources and gain leverage over the other Persian Gulf states. In response, the United States assembled an international military coalition to force Iraq out of Kuwait and after the war instituted a sanctions regime to contain Hussein.<sup>52</sup>

To lessen the leverage of Persian Gulf producers, the United States promoted oil development in areas outside the region. This strategy included efforts to increase domestic oil production, develop a Western Hemisphere oil partnership with Canada, Mexico, and Venezuela, increase production in West Africa, and promote the rapid development of Caspian Sea and Central Asian oil. Although relatively successful individually, these efforts failed collectively to displace Persian Gulf oil from its dominant place in the world oil economy. In addition, when these policies worked to reduce oil prices, they also reduced incentives to conserve oil and develop alternatives.<sup>53</sup>

The *National Energy Policy* report issued by a commission headed by Vice President Dick Cheney in May 2001 called for massive investment in exploration, development, and refining to meet U.S. and world oil needs. The report focused on the Persian Gulf, since the region possessed two-thirds of world oil reserves, but Persian Gulf producers, and state-owned oil companies in general, had little incentive to increase production,

<sup>50</sup> DeGolyer and MacNaughton, *Twentieth Century Petroleum Statistics*, 3, 53, 108. If natural gas liquids, other liquids, and refinery gains are included, the U.S. share of world oil production in 2003 was around 11%, according to U.S. Energy Information Administration, *International Energy Annual, 2006*, <http://www.eia.gov/iea/pet.html>, tables 2.2, G.2.

<sup>51</sup> Sohbet Karbuz, "How Much Energy Does the U.S. Military Consume?," *Daily Energy Report*, <http://www.dailyenergyreport.com/2011/01/how-much-energy-does-the-u-s-military-consume/>; Jeff Brady, "Military's Oil Needs Not Deterred by Price Spike," Nov. 14, 2007, *National Public Radio*, <http://www.npr.org/templates/story/story.php?storyId=16281892>.

<sup>52</sup> Steven Hurst, *The United States and Iraq since 1979: Hegemony, Oil, and War* (Edinburgh, 2009), 83–113.

<sup>53</sup> Ian Rutledge, *Addicted to Oil: America's Relentless Drive for Energy Security* (London, 2006), 80–119.

since they could earn the same or even higher revenues from lower production and higher prices.<sup>54</sup>

It is not yet possible to determine the precise role oil played in the U.S. invasion of Iraq in 2003, but it is clear that concerns about oil were a factor. The September 11, 2001, attacks on the United States highlighted the costs of keeping U.S. troops in the Persian Gulf to ensure Western energy security and provided a political opening for the United States to move against Saddam Hussein. U.S. policy makers believed that regime change would end the Iraqi threat to Persian Gulf security and that opening Iraq to private investment would have several benefits. Iraq had huge underdeveloped oil reserves, and increasing Iraqi production would moderate prices and lessen U.S. dependence on Saudi Arabia. Opening Iraq could also have a demonstration effect on other state-owned oil companies and head off bilateral deals between Iraq and Russia, China, and France. At the least, these potential benefits of regime change may have prevented U.S. policy makers from reexamining their other motives.<sup>55</sup>

In early January 1948 Secretary of Defense James Forrestal warned that without access to Middle East oil, "American motorcar companies would have to design a four-cylinder motorcar sometime within the next five years." U.S. annual per capita oil consumption in 1948 was 14.4 barrels. In 2010 annual per capita consumption was 22.6 barrels, and the United States consumed around 19 million barrels per day. Had U.S. public policy, through the preservation of public transportation, the promotion of efficiency, and other measures (including four-cylinder motorcars), maintained the 1948 level of oil use, U.S. oil consumption in 2010 would have been almost 40 percent lower, with consequent benefits for the economy, U.S. security, and the environment.<sup>56</sup>

This story shows that although the strategic and economic benefits of controlling world oil significantly shaped U.S. foreign policy, definitions of national security and national interest were not isolated from the society that they were meant to defend. Social and economic patterns that fostered high levels of oil use reinforced U.S. determination to maintain access to foreign oil, especially after domestic production failed to keep pace with the nation's growing appetite for oil. The alternative of reducing, or at least slowing, the rise in consumption was rarely seriously considered due to well-organized political and economic interests and deep-seated ideological beliefs.<sup>57</sup>

The oil industry has been one of the most powerful sectors of the U.S. economy, and it has operated in a political culture that favors private interests while placing significant

<sup>54</sup> National Energy Policy Development Group, *National Energy Policy* (Washington, 2001), <http://www.ne.doe.gov/pdfFiles/nationalEnergyPolicy.pdf>; Michael T. Klare, *Blood and Oil: The Dangers and Consequences of America's Growing Dependency on Imported Petroleum* (New York, 2004), 56–73.

<sup>55</sup> John S. Duffield, "Oil and the Decision to Invade Iraq," in *Why Did the United States Invade Iraq?*, ed. Jane K. Cramer and A. Trevor Thrall (London, 2011), 145–66.

<sup>56</sup> James Forrestal, *The Forrestal Diaries*, ed. Walter Millis (New York, 1951), 356–57; DeGolyer and MacNaughton, *Twentieth Century Petroleum Statistics*, 108. According to the U.S. Census Bureau, U.S. population in 2010 was 308,745,538. The U.S. Energy Information Administration estimates that U.S. oil consumption in 2010 was around 19,148,000 barrels per day or a little over 7 billion barrels annually. U.S. Census Bureau, "U.S. Census Bureau Announces 2010 Census Population Counts—Apportionment Counts Delivered to President," Dec. 21, 2010, <http://2010.census.gov/news/releases/operations/cb10-cn93.html>. For U.S. per-day oil consumption in 2010, see U.S. Energy Information Administration, "Petroleum Statistics," [http://www.eia.gov/energyexplained/index.cfm?page=oil\\_home#tab2](http://www.eia.gov/energyexplained/index.cfm?page=oil_home#tab2). For U.S. oil consumption in 2010, see U.S. Energy Information Administration, "Product Supplied," [http://www.eia.gov/dnav/pet/pet\\_cons\\_psup\\_dc\\_nus\\_mbbl\\_a.htm](http://www.eia.gov/dnav/pet/pet_cons_psup_dc_nus_mbbl_a.htm).

<sup>57</sup> For fuller discussion of these issues, see Painter, *Oil and the American Century*, 207–10. The best analysis remains Robert Engler, *The Politics of Oil: A Study of Private Power and Democratic Directions* (Chicago, 1961).

limits on the scope of public policy. Although the industry was divided between a mass of small- and medium-sized companies and a handful of large multinational firms, there has been a broad consensus in favor of limiting government's role to maintaining an environment, at home and abroad, in which private companies can operate with security and profit. In contrast, policies to limit demand for oil would require a more robust role for public authority in regulating the economy and have been strongly and successfully opposed by oil and other business interests.

By the early twenty-first century, dependence on oil had become an economic and strategic liability and an environmental problem. The cost of importing vast amounts of oil puts serious strains on the U.S. balance of payments, and the economic and human costs of maintaining access to the Persian Gulf and other oil-producing areas are increasing. Finally, most climate scientists agree that oil use is a major contributor to global warming. Therefore, the most important issue facing the United States regarding oil in the twenty-first century may not be how to ensure access to oil to meet increasing demand, but rather how to move away from what is clearly an unsustainable path. Understanding the history of oil and the American century is a necessary first step in this direction.