Oil, Materiality, and Interstate War

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Abstract: To the extent that existing studies of oil and interstate war have considered oil's materiality, they have focused on in situ crude oil stocks, which they identify as a cause of conflict. This chapter demonstrates that incorporating the entire hydrocarbon commodity chain, from crude to petroleum products, clarifies the relationships between oil and interstate war. Specifically, it shows that the ease of interrupting the hydrocarbon commodity chain makes oil an unattractive *casus belli*, but also prompts oil to shape the trajectories of wars that were started for other reasons. The chapter illustrates these dynamics by examining oil's contributions to six modern interstate conflicts: World War I, the Chaco War, World War II, the Iran–Iraq War, the first Gulf War, and the 2003 Iraq War. It concludes by discussing the dangers of oversimplifying oil's materiality and overstating its ability to inspire interstate war.

Keywords: oil; war; commodity chain; value; international relations

During an April 2021 appearance in Oakland, California, Vice President Kamala Harris made a striking assertion: 'For years there were wars fought over oil; in a short time there will be wars fought over water' ('Vice President,' 2021). She did not explain the initial claim. Nor did she have to. The idea that wars are fought for oil is taken for granted by politicians, policymakers, journalists, the general public, and many scholars. Meanwhile, strikingly little international relations (IR) research has attempted to disentangle the exact relationships between oil and interstate war.¹ Instead, all types of oil-related conflict are commonly subsumed under the general heading of 'oil wars', which are presumed to be common events in the international system (Klare, 2001).

This chapter proposes that greater attention to the materiality of oil would clarify the relationships between oil and interstate war. Adopting Gavin Bridge's definition, 'the materialities of oil . . . refer to the biophysical characteristics and material forms of oil as it flows in and through society and the way these are productive of particular forms of social relations' (2011, p. 316). Scholars have examined how oil's materiality influences various elements of international relations, including the global economy, institutions, and governance (Bunker and Ciccantell, 2005; Mitchell, 2013). They have also explored how oil's material characteristics shape oil's contribution to intrastate war (Le Billon, 2001; Lujala, 2010). However, in studies of interstate war, oil's materiality is largely neglected. To the extent that researchers do consider oil's material forms, they focus on in situ resource stocks, which they identify as an incentive for interstate competition and armed conflict (Caselli and Rohner, 2015; Nyman, 2015; Schultz, 2017; Struver and Wegenast, 2018). Later stages in the hydrocarbon commodity chain are neglected. By relying on this circumscribed conceptualization of oil's materiality, IR has been unable to accurately answer a question posed fifteen years ago by Shannon O'Lear and Paul Diehl (2007): 'When two states fight over resources, where does that conflict occur?'

In contrast, 'following the oil' from in situ crude to petroleum product consumption, illuminates the ways that oil does—and does not—influence interstate war (Le Billon, 2007, p. 176).² Considering the entire hydrocarbon commodity chain highlights the temporal and geographical gaps between in situ crude and the realization of oil's use and exchange values, which occurs only when oil is consumed or sold. These gaps create abundant opportunities to interrupt the commodification process. This potential for interruption shapes oil–war relationships in at least three ways. First, it discourages classic oil wars: 'severe militarized interstate conflicts driven largely by participants' desire to obtain petroleum resources' (Meierding, 2020, p. 16). Although states may be able to seize oil-endowed territories, they have difficulty benefitting from them. Accordingly, they are unlikely to initiate wars to grab oil resources. Second, the ease of hydrocarbon commodity chain interruption shapes the trajectories of wars that are launched for other, non-oil reasons.³ Specifically, it elevates oil denial and defense as key strategic priorities. If denial attempts succeed, belligerents may also be compelled to resort to 'oil campaigns' within their ongoing wars. Third, concerns about interruptions to the hydrocarbon commodity chain influence some states' peacetime military activities, as they attempt to defend or interfere with global oil flows.

The chapter illustrates these dynamics by examining six of the last century's most prominent interstate wars: World War I (1914–18), the Chaco War (1932–35), World War II (1939–45), the Iran–Iraq War (1980–88), the first Gulf War (1990–91), and the Iraq War (2003– 11). Previous authors have labeled many of these as classic oil wars. The chapter calls those interpretations into question, while also demonstrating that oil shaped the trajectories of all six conflicts, once they were underway. Oil has also influenced the United States' peacetime uses of military forces, especially in the Persian Gulf.

The chapter's final section concludes by discussing the consequences of IR's oversimplification of oil's materiality. In addition to encouraging misrepresentations of the causes of interstate war, with negative academic and policy effects, IR's overemphasis on oil as a *casus belli* naturalizes armed conflict, reducing interstate war to a Darwinian struggle for scarce resources. In doing so, it depoliticizes interstate conflict, erasing the actual, social motives for international aggression, such as hegemonic aspirations, status concerns, and fear.⁴

Escaping Crude Analyses

Crude oil is the product of marine organisms and time. Formed in the 'oil window,' usually 750–3000 meters below the earth's surface, it is composed of hydrogen, carbon, and small amounts of sulfur, nitrogen, and metals, including nickel, copper, and iron. Crudes with relatively high sulfur content are described as 'sour,' while those with low sulfur content are 'sweet.' Crudes vary significantly in density, from 'light' oils that float on water to 'heavy' oils

that sink and 'extra heavy' oils like tar and pitch, which flow only if heated.⁵ Because of these natural discrepancies, each crude oil can be refined into a different slate of petroleum products, through varying degrees of effort. These differences lead to disparities in crude oil prices; light, sweet crudes costs more than heavy, sour ones.

Most crude oil is physically located in subterranean reservoirs: relatively porous rock formations, bounded by less permeable formations. Reservoirs vary in terms of their depth below the earth's surface, since crude oil can migrate away from the locations where it was formed. Reservoirs also vary in size, contents (the proportion of crude oil, relative to natural gas and water), and porosity. Crudes move relatively easily within highly porous formations, but 'tight' formations must be cracked to permit oil to flow. Reservoirs can be located onshore, under continental crust, or offshore, below oceanic crust. Water depths above offshore reservoirs also vary substantially. As a result, while crude oil is always a 'point' resource, located in specific, concentrated geographic areas, oil reservoirs' accessibility varies widely. Consequently, so do the strategies used to capture different crudes (Bridge, 2008, p. 394).⁶

Some crude oil is found at the earth's surface, in seeps. These are easily visible and accessible, with limited human intervention. However, accessing subterranean oil reservoirs requires geophysical exploration, exploratory drilling, well completion, reservoir development, and lifting crude to the earth's surface. From start to finish, this extractive process usually takes many years.⁷ Additionally, the enormous capital investments required to complete the process encourage oil companies to remain involved in upstream projects for decades. Thus, crude oil is not a quickly or easily lootable resource (Ross, 2003, p. 54).

Once a reservoir's contents are lifted to the earth's surface, they undergo preliminary processing, usually fairly close to extraction sites, to separate crude oil from natural gas and groundwater. The crude is subsequently transported to refineries, via pipelines or maritime tankers. These transit routes may be fully contained within one state. However, crude frequently traverses international boundaries and regions, traveling hundreds or thousands of miles to reach the refineries where it is processed into petroleum products. These products, including gasoline, jet fuel, lubricants, and hydrocarbon gas liquids, are then distributed to consumers, including manufacturing industries, airlines, and individual car owners. This entire process, from exploration to consumption, is the hydrocarbon commodity chain (Bridge, 2008, p. 395).⁸

The petroleum products that are generated through this commodification process possess use and exchange values. Oil's most prominent use value is fueling the transportation sector. However, generating heat and electricity, lubricating machinery, and feeding the petrochemical industry are also core use values. Oil's extraordinary energy intensity magnifies many of these; it is a more efficient energy source than coal, natural gas, or renewables. Oil's utility to modern economies and militaries, coupled with disparities between the geographic distribution of in situ crude oil and petroleum product demand, also give oil exceptional exchange value. Oil companies and the governments of oil-endowed states can amass enormous revenue by selling crude oil and petroleum products, and by taxing those resource sales. Governments can also sell the rights to exploit crude oil resources by licensing oil exploration or production.

Importantly, oil's use and exchange values are only realized if the resource is consumed. Resources' use values are realized at the moment of consumption (Marx, (2011[1867], p. 42): when petroleum-based fuels are burned, lubricants are applied to machinery, or feedstocks are transformed into other products. Oil's exchange values are realized in the moment of transaction: when crude oil, petroleum products, or exploration rights are sold (Labban, 2010, pp. 542, 545, 550). However, oil's exchange values arise from the expectation that oil will eventually be consumed (Bina, 1989, p. 86). Exploration and production rights will be exploited to discover, extract, and process crude oil; the crude will be refined; and the resultant petroleum products will be used. If this process is not completed, crude oil possesses neither use nor exchange values.

The completion of this process is far from guaranteed. The temporal and geographical distance between in situ crude oil and its eventual consumption create abundant opportunities to interrupt the hydrocarbon commodity chain (Bridge, 2011, pp. 317, 319; Le Billon, 2001, p. 569; Mitchell, 2013, pp. 144, 163; Watts, 2004). These opportunities are heightened by oil's status as an 'un-cooperative commodity,' which is challenging to discover, extract, and process (Bakker, 2004; Bridge, 2011, p. 318), and by its high value-to-weight ratio, which increases the 'obstructability' of oil transportation (Ross, 2003, p. 54). Because of the ease of interrupting the hydrocarbon commodity chain, an actor may control oil reservoirs, but fail to realize oil's use or exchange values.

Interruptions to the hydrocarbon commodity chain take many forms. The most obvious are physical. Actors, including national military forces, insurgent groups, oil industry employees, and local populations, can physically interfere with oil extraction, processing, refining, or transportation. They can damage drilling equipment, set wells on fire, bomb pipelines, and attack processing facilities, refineries, and export terminals. These attacks can be conducted on the ground or through missile strikes, drone strikes, or aerial bombing campaigns. Actors can also interrupt seaborne oil transportation by intercepting oil tankers or imposing blockades that prevent oil shipments from reaching their intended destinations. In addition, actors can assault the oil industry's human capital: kidnaping, injuring, or killing oil company employees or tanker operators.

Some actors can also use commercial mechanisms to prevent the realization of oil's use and exchange values. States and international organizations can impose trade restrictions on a targeted country's oil purchases or sales. The United States has used its dominant position in the global financial network to block oil-related financial transactions (Meierding, 2021). Threatening primary or secondary sanctions against actors that facilitate oil's extraction and movement, such as oil companies that invest in upstream oil projects, tanker companies, insurance companies, and pipeline certification companies, is another means of impeding oil movements.

These physical and commercial impediments shape the relationships between oil and interstate war in at least three ways. First, they discourage classic oil wars. Although many countries are capable of grabbing control over another state's oil-endowed territories, potential interruptions to the hydrocarbon commodity chain makes initiating such conflicts a highly dubious adventure. In the short run, classic oil wars are likely to damage oil infrastructure. In the long run, local populations and insurgent groups are likely to resist foreign occupation by attempting to interrupt oil production and transportation. Additionally, third party states and international organizations are likely to sanction aggressors, preventing them from selling seized resources internationally. They may also use military force to block oil movements or compel aggressors to withdraw from conquered, oil-endowed territories. Finally, international oil companies are reluctant to invest in conquered territories because of potential interruptions to the hydrocarbon commodity chain. As a result of these invasion, occupation, international, and investment obstacles, classic oil wars are not worth the effort (Meierding, 2020).

Second, the temporal and geographical distances between in situ crude and the realization of oil's values shape the trajectories of ongoing interstate wars, which were started for other, non-oil reasons. Here, oil has at least two specific effects. First, belligerents are likely to target

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each other's energy infrastructure to deny petroleum products or revenue to their adversary, in order to increase their own chance of victory. This denial strategy includes the destruction of extraction and refining equipment and facilities prior to an invader's arrival, as well as local attacks on oil production and transportation networks during a foreign occupation. It also includes artillery strikes and aerial bombing campaigns that target an adversary's oil processing, refining, and storage facilities, along with its transportation infrastructure, including pipelines, railroads, export terminals, and tankers. Navies are likely to implement blockades to impede their adversaries' maritime oil imports or exports. Commercially, belligerents, third party states, and international organizations can impose international sanctions that deny their targets access to petroleum products or revenue.

If these initiatives successfully interrupt a belligerent's access to petroleum products, oil may have a second specific effect on ongoing interstate wars; it can inspire oil campaigns. These are major military attacks that target oil-endowed territories, which occur in the midst of ongoing interstate wars. Belligerents are unlikely to initiate oil campaigns early in a war, since they recognize the obstacles to effectively exploiting seized oil reservoirs in contested territories. Instead, they prefer to satisfy their national energy needs through alternative strategies, like developing domestic reservoirs, stockpiling, international trade, or developing domestic substitutes for imported oil supplies (Meierding 2020). However, alternative strategies may eventually fail to satisfy a belligerent's oil needs, due to its adversaries' effective denial strategies, coupled with the state's heightened oil consumption during wartime. If alternative means of accessing oil prove to be inadequate, a belligerent may initiate an oil campaign to seize foreign resources and—it hopes—satisfy its oil needs.

Third, the possibility of interruptions to the hydrocarbon commodity chain can shape states' peacetime usage of military force. The governments of oil-producing states may task segments of their national security forces with oil industry protection: defending oil fields, processing and refining facilities, and domestic pipeline routes. Additionally, third party states may deploy military forces to major oil-producing regions or transit chokepoints to deter interference with oil production transportation.

In summary, there are substantial relationships between oil and interstate war, as well as between oil and peacetime uses of military force. However, conflating in situ crude with the realization of oil's use and exchange values obscures these connections. In particular, it exaggerates the likelihood of classic oil wars. In contrast, incorporating the entire hydrocarbon commodity chain reveals the opportunities for interruption created by its temporal and geographic gaps. The risk of interruption explains why oil does not cause interstate wars, yet strongly influences their trajectories, as well as states' peacetime usage of military force.

Oil Wars: A Reassessment

To assess these expectations, this section examines oil's contributions to six major modern interstate wars: World War I, the Chaco War between Bolivia and Paraguay, World War II, the Iran–Iraq War, the first Gulf War, and the Iraq War. Many of these conflicts have been labeled classic oil wars. However, this analysis challenges those interpretations of all six conflicts. With one possible exception, oil did not cause any of these wars. However, it did shape all of their trajectories, as well the United States' peacetime usage of military force, especially in the Persian Gulf.

World War I (1914–18)

When World War I began, the modern oil industry was over a half-century old, having emerged in the 1860s with the discovery of commercial oil reservoirs in western Pennsylvania. However, until the twentieth century, oil's leading use value was as an illuminant, in the form of kerosene. Its use value as a transportation fuel emerged with the invention of the automobile in the 1880s and was amplified when the Ford Motor Company began mass production of the Model-T in 1908. A few years later, the government of the United Kingdom decided to change the Royal Navy's primary fuel source from coal to oil. Concerns about securing fuel access prompted the UK government to purchase a majority stake in the Anglo-Persian Oil Company (now BP) in 1914 (Winegard, 2016, p. 63). However, it did not inspire any countries to enter World War I. Although the conflict's causes continue to be debated, oil is never identified as one of them.

The first world war did confirm oil's strategic significance. The increased use of automotive transportation freed armies from conducting 'wars by timetable' using the railways, while the invention of the tank transformed the war on the Western Front by allowing the allies to break through German lines (Yergin, 1991, p. 171). The rapid development of air power also fundamentally shifted the character of modern war, first by facilitating reconnaissance and observation missions, then air combat and tactical and strategic bombing (Yergin, 1991, p. 172). All of these new transportation technologies ran on petroleum-based fuels.

This rising awareness of oil's strategic value shaped the trajectory of World War I in multiple ways. First, many of the war's participants undertook operations to defend their resource access or deny it to their adversaries. Within a month of the war's outbreak, the United Kingdom had deployed forces to protect the Abadan refinery in Persia. The next year, a small German force arrived in the region and attempted to interrupt the hydrocarbon commodity chain by repeatedly attacking local pipelines (Winegard, 2016, p. 66). More significantly, Germany attempted to interrupt the United Kingdom's and France's maritime oil imports, through its submarine warfare campaigns. These unrestricted campaigns would eventually contribute to the United States' decision to enter the war.

The Entente also attempted to deny oil supplies to Germany. In 1915, retreating Russian forces destroyed oil facilities in Galicia (southern Poland) before the German army arrived (Winegard, 2016, p. 95). In 1916, as German forces approached Romania's oil fields in Ploieşti, industry employees inflicted extensive damage on local oil infrastructure. The Entente also imposed its own blockade in the Atlantic, interrupting oil shipments bound for Germany (Yergin, 1991, pp. 179–82). By 1918, the oil shortages precipitated by this blockade were severe enough to prompt Germany to reach an oil agreement with Russia, which had withdrawn from the war in March 1918. The parties agreed in late August that Russia would supply Germany mith 25 percent of the output from Baku's oil fields, in present day Azerbaijan, if Germany prevented advancing Ottoman forces from seizing control over the city and its industry. The Turks, meanwhile, aspired to seize Baku in order to acquire its oil fields, expand their pan-Turkic empire, and protect Azerbaijani Muslims. The United Kingdom attempted to deny Baku's oil to both of its adversaries by sending forces to assist the local Bolshevist authorities with the city and industry's defense (Winegard, 2016, pp. 191, 197–9, 201, 205).

The United Kingdom did not plan to hold Baku after the war ended (Winegard, 2016, p. 191). However, in the conflict's closing months, British forces did launch an oil campaign in Mesopotamia to strengthen their country's postwar access to oil resources. The campaign to capture Mosul province was organized in September 1918 and British forces secured control

over the region from 2-4 November, after hostilities with Turkey had formally ended (Kelanic, 2020, pp. 90-91; Winegard, 2016, pp. 114–15). Contrary to the chapter's predictions, this oil campaign was not initiated as a last resort. However, future oil campaigns would be.

The Chaco War (1932–35)

The Chaco War is the earliest conflict that is commonly labeled a classic oil war; Bolivia and Paraguay were purportedly fighting over oil resources in the Chaco Boreal, which now comprises northwestern Paraguay. However, this interpretation of the conflict is inaccurate. Neither belligerent believed that the Chaco contained valuable oil resources. Bolivia did possess an active oil industry just east of the contested region, in the foothills of the Andean mountains between Santa Cruz de la Sierra and Yacuiba. However, neither the belligerent governments nor the Standard Oil Company, which had explored the region before the war, believed that these deposits continued into the plain. Confusion about the war's causes arose largely because of the commentary of Louisiana Senator Huey P. Long, who deliberately obfuscated the conflict's geography in order to blame the war on his political nemesis, Standard Oil (Meierding, 2020, pp. 84–8).

Oil did influence the war's trajectory, once it was underway. After unexpectedly routing Bolivia's forces in the Chaco itself, Paraguayan troops attempted to seize their adversary's oil infrastructure, at the edge of the Chaco Boreal. However, the aim of these attacks was not to permanently grab Bolivian oil. Instead, Paraguay was attempting to bring the devastating conflict to an end and hoped that threatening Bolivia's oil industry would prompt La Paz to sue for peace. In the states' 1938 settlement, Paraguay willingly relinquished control of the oil fields (Cote, 2016, pp. 82–3).

World War II (1939–45)

World War II is commonly identified as a classic oil war. These interpretations of the conflict emphasize Japan's invasion of the Dutch East Indies and British Borneo (1941–42) and Germany's attacks on the Soviet Union (1941–42). However, labeling this conflict a classic oil war conflates the war's causes and the factors that shaped its trajectory. Germany initiated the

European war to pursue continental, if not global hegemony, not to seize foreign oil. Neither the state's prewar annexations of Austria and the Sudetenland, nor its military operations during the conflict's opening years (in France, Belgium, the Netherlands, or Poland) focused on oil resources (Meierding, 2020, pp. 131–3).⁹

Japan's invasion of the Dutch East Indies was also a continuation of an ongoing war. Although, for the United States, the war in the Pacific began on 7 December 1941, Japan had been at war with China since at least 1937. This conflict—the Second Sino-Japanese War—was the culmination of multiple decades of Japanese expansionism in East Asia, beginning with the state's annexation of Korea (1910), followed by its occupation of Manchuria (1932) and other provinces in northern China (1933). This early territorial aggrandizement was not driven by a desire to seize oil resources.¹⁰ Instead, Japan's goal was to establish its hegemony in East Asia, so it could effectively compete with other great powers, including Russia, the United Kingdom, and the United States (Meierding, 2020, pp. 119–21).

Germany and Japan's early acts of aggression actually constrained their access to oil, rather than enhancing it. After Germany invaded Poland, France and the United Kingdom blockaded the country, again obstructing its access to crude oil and petroleum products from the United States and Caribbean. Since up to 85 percent of Germany's oil resources had arrived from overseas before the war (USSBS, 1947, p. 15), the blockade significantly impeded the country's resource access. The Allies also attempted to deny oil to Germany by purchasing Romania's resource output and booking all available means of transporting it, including rail tanker cars and river barges (Pearton, 1971, pp. 244–5, 248). The USSR became Germany's leading source of foreign oil in 1939–1940, due to the Allied blockade. However, while the Soviets were not yet German adversaries, they proved to be unreliable suppliers. Their oil deliveries often arrived late or fell short of promised volumes (Ericson, 1999).

In East Asia, the United States responded to Japanese aggression by progressively restricting the state's access to US petroleum products. In September 1939, the Roosevelt administration extended the 'moral embargo' on Japan to include the technological information and material required to manufacture aviation fuel. In August 1940, the United States limited exports of lubricants and aviation fuel. The following spring, it restricted exports of oil drums and drilling and refining equipment. Finally, in July 1941, the United States retaliated for Japan's invasion of southern Indochina by freezing all Japanese assets in the United States. This policy

became a de facto oil embargo, which immediately blocked Japan's access to 80 percent of its previous oil imports (Meierding, 2020, pp. 121–2, 129).

Oil therefore affected the trajectory of the war in Europe and Asia, as the Allies used denial strategies to punish and constrain the Axis powers.¹¹ The success of this denial eventually prompted Germany and Japan to launch oil campaigns, although they refrained from initiating these operations until they had exhausted all other means of obtaining needed petroleum supplies, including courting friendly oil producers, establishing barter-based oil trade agreements, developing synthetic fuel industries and, in Japan's case, trying to persuade the United States to lift its embargo (Meierding, 2020, pp. 124–30, 134–9). Japan invaded the Dutch East India and British Borneo from December 1941–January 1942, while also attacking Pearl Harbor and the Philippines to impede a US military response. Germany invaded the USSR in June 1941. During Operation Barbarossa, most of the Germany army advanced towards Leningrad and Moscow. However, Army Group South aimed to occupy the Donets industrial region, then to proceed to the oil fields of the Caucasus. The next year, Germany initiated Case Blue. One component of the campaign targeted Stalingrad, while the other, Operation Edelweiss, focused on Soviet oil resources in the Caucasus. In addition to attempting to capture oil fields for Germany, these oil campaigns aimed to deny petroleum products to the Soviet war machine (Trevor-Roper, 1964, pp. 85, 89, 93, 98).

The Allies responded to the oil campaigns by intensifying their efforts to deny Germany and Japan access to petroleum products. The USSR retaliated for Operation Barbarossa by deploying bombers from Odessa to attack Romania's oil infrastructure at Ploiești, which Germany had acquired by the end of 1940, through a 'bloodless invasion.' Retreating Soviet forces also destroyed oil facilities in Maikop, in the Caucasus, to deny them to German forces (Hayward, 1995, pp. 123–4, 126; Levy, 1982, p. 16). The United States bombed Romanian oil facilities in 1943 in Operation Tidal Wave and intensified these attacks, along with its strategic bombing campaign against Germany's synthetic fuel plants, in 1944 (Cooke and Nesbit, 1985). In the Pacific, oil company employees destroyed oil wells and infrastructure before Japanese forces arrived (Goralski and Freeburg, 1987, pp. 141–2, 182). In 1943, US aircraft carrier-based planes began to attack Japanese tankers transporting oil resources along the 5500 kilometer route from the Dutch East Indies to Japan's home islands (Cohen, 1949, p. 142). The shortages caused by these denial strategies contributed to the Axis' defeat.

The Iran–Iraq War (1980–88)

Much of the Iran–Iraq War was fought in Khuzestan, Iran's primary oil-bearing province. As a result, some commentators have labeled the conflict a classic oil war. However, this interpretation misrepresents Iraq's territorial war goals. Rather than aspiring to permanently annex Khuzestan, the Iraqis aimed to regain control over approximately 330 km² of territory along the states' shared border, which they believed that the Iranians had unlawfully occupied. They also aspired to reassert full Iraqi authority over the Shatt al-Arab, the waterway that makes up the southernmost portion of the states' boundary, which Iraq had lost in the 1975 Algiers Agreement (Meierding, 2020, pp. 94, 99-100). Most importantly, Iraqi president Saddam Hussein aimed to defend his state against Iran's revolutionary Islamist government, which was adopting an increasingly threatening posture towards Iraq (Gause, 2002).

Oil did contribute to the war's trajectory. The Iraqis believed that they needed to exert significant pressure on the Iranian regime in order to compel it to concede control over the contested border territories and Shatt al-Arab. The best way to achieve that would be to deny the regime access to oil revenue and resources by temporarily seizing control over Khuzestan. Additionally, threatening Iran's oil industry and drawing Iranian forces away from Tehran might precipitate the regime's overthrow by facilitating a domestic coup (Meierding, 2020, pp. 94, 102). To immediately interrupt Iranian oil output, during the opening week of the war, Iraqi artillery struck Iran's massive oil refinery in Abadan and its air force bombed the state's export terminal on Kharg Island. The Iranians retaliated by striking Iraqi oil infrastructure in Kirkuk and Sulaimaniyeh. They also shut down the Iraqi port at Fao and seized oil-loading facilities in Khor al-Amaya and Mina al-Bakr (Cordesman and Wagner, 1990, pp. 92–3). The states' attacks on each other's oil installations would continue throughout the war.

Both belligerents also targeted oil tankers in the Persian Gulf. Iraq perpetrated the first of these attacks, striking a Turkish-flagged tanker in May 1982. Both states substantially increased their strikes in 1984, with Iraq targeting tankers near Kharg Island and Iran focusing on tankers traveling to or from Kuwaiti or Saudi ports, in order to discourage those states from supporting Iraq. In response to the Iranian attacks, in January 1987, Kuwait formally requested that the United States protect its tankers. For the last two years of the war, the US Navy reflagged and escorted Kuwaiti-owned tankers through the Persian Gulf. On two occasions, US forces attacked

Iranian oil platforms, to retaliate for Iran laying mines in the Gulf and striking a reflagged Kuwaiti tanker (Cordesman and Wagner, 1990, pp. 277–80, 295–302, 533–9, 569–70).

Gulf War I (1990–91)

Iraq's invasion of Kuwait in 1990 is often identified as the quintessential classic oil war. The Iraqi government seized oil-endowed Kuwaiti territory, after complaining about Kuwait slant-drilling into the transboundary Rumailah oil reservoir and stealing Iraq's oil resources. When the war began, Iraq was also facing a domestic economic crisis, intensified by low oil prices that it blamed partly on Kuwait and the UAE exceeding their OPEC oil production quotas. By seizing Kuwait's oil, Iraq could control the state's output, boosting Iraq's share of global oil production and possibly precipitating an increase in international oil prices (Karsh, 1996).

These economic concerns contributed to Saddam's decision to invade Kuwait. However, the leading aim of Iraq's aggression was to resist a perceived threat from the United States. Saddam had been suspicious of US intentions towards his regime since the 1970s. American actions from 1988–90, including remaining in the Persian Gulf after the Iran–Iraq ceasefire, threatening sanctions against the Iraqi regime, interfering with its weapons programs, and limiting Iraq's access to the US Commodity Corporation Credit program, which allowed the government to feed its population by purchasing American agricultural products, appeared to confirm these misgivings. Saddam believed that the United States was pushing Kuwait to exceed its OPEC quota and, if the ongoing economic crisis failed to remove him from power, it would turn to other strategies, including assassination attempts and missile strikes, to overthrow him. Saddam therefore perceived the invasion of Kuwait as defensive. And, after the conflict, he believed that he had won. Although Saddam lost control of Kuwait's oil fields, he had confronted the United States in "the mother of all battles" and survived (Meierding, 2020, pp. 144–51, 157–9). This conviction, alone, calls classic oil war interpretations of Iraq's invasion into question.

Oil did substantially affect the first Gulf War's trajectory. The fear that Saddam would interrupt regional oil movements was a leading incentive for international intervention in the conflict. As US President George H. W. Bush stated to a joint session of Congress six weeks after the invasion:

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Iraq itself controls some 10 percent of the world's proven oil reserves. Iraq plus Kuwait controls twice that. An Iraq permitted to swallow Kuwait would have the economic and military power, as well as the arrogance, to intimidate and coerce its neighbors: neighbors who control the lion's share of the world's remaining oil reserves. We cannot permit a resource so vital to be dominated by one so ruthless ('Bush').¹²

Other world leaders concurred. They responded to the invasion by attempting to deny Iraq access to oil revenue. On 6 August, the United Nations passed Resolution 661, prohibiting imports of all Iraqi and Kuwaiti goods, including oil. The United States and its Coalition partners also deployed naval forces to the Persian Gulf, where they interdicted Iraqi shipping, including oil tankers (McCausland, 1993, pp. 8–9, 15, 36). After these initiatives failed to compel Iraq to withdraw from Kuwait, the Coalition forcefully expelled Iraq from its neighbor's territory.

Iraq responded to these international activities by attempting to deny oil revenue to Kuwait. Occupying Iraqi forces had begun wiring Kuwait's oil fields with explosives soon after invading the country. They started to experiment with these explosives in December 1990 and, when the Coalition initiated Operation Desert Storm in mid-January, the Iraqis deliberately burned some wells and released oil from Kuwait's Sea Island export terminal into the Persian Gulf. When the Coalition launched its ground offensive on 24 February, Iraq accelerated this destruction, setting fire to more than 700 oil wells. The Iraqis hoped that, in addition to denying oil to Kuwait, this sabotage might produce a military advantage, as the smoke from burning oil wells could impede air strikes and shield Iraqi military movements (US DoD, 1998, section III).

The Iraq War (2003–11)

After the first Gulf War, the United States maintained a large, permanent force presence in the Persian Gulf to monitor the no-fly zones in Iraq and deter further acts of aggression. This represented a continuation of US regional policy since 1980, when President Jimmy Carter increased the American military presence in the region in response to the Iran hostage crisis and Soviet invasion of Afghanistan, and announced that the United States would defend the free flow of oil in the Persian Gulf against local and extra-regional threats, using military force if necessary (Rovner and Talmadge, 2014, pp. 568–75).¹³ In 2001, the United States still had over 20 000 troops deployed to the region, mostly operating out of Kuwait and Bahrain (Prados, 2002, 8). These force levels ratcheted up as the United States and its partners prepared for war in Iraq. Many observers of the United States' 2003 invasion of Iraq accused the country of going to war for oil. However, this conflict was not a classic oil war. Contrary to popular perceptions in the United States and Arab world (Banerjee, 2003), the George W. Bush administration did not aim to seize long-term control over Iraq's oil resources. Officials were aware that a resource grab would alienate Iraqis, as well as the region's broader population, provoking intense local pushback that could target the oil industry. In addition, international oil companies would not establish contracts with an occupying authority, due to the risk of physical attacks to oil infrastructure and the commercial risk that, once a sovereign Iraqi government returned to power, it would abrogate the agreements. Accordingly, the Bush administration's prewar oil plan was to restore Iraq's control over the industry as soon as possible (Meierding, 2020, pp. 160–64).¹⁴

Although the Iraq War was not an international oil grab, broader concerns about regional oil flows may have contributed to the Bush administration's decision for regime change in Iraq. By 2002, prominent energy analysts were predicting that global oil demand would soon outstrip global oil supplies, leading to shortages (Morse and Jaffe, 2001). Lifting international sanctions on Iraq and restoring the country's oil production could avert—or at least delay—this scenario. However, if Saddam remained in power, any increase in Iraq's oil revenue was dangerous, as the Iraqi leader could use the windfall to finance threatening activities, including weapons programs. Removing Saddam would eliminate that obstacle, as well as the risk of future Iraqi aggression that could destabilize regional oil flows (Muttitt, 2012). Empirical assessments of this oil motive have been inconclusive. However, it would align with one of the United States' leading goals in the Persian Gulf since at least 1980: securing the hydrocarbon commodity chain.

Oil also influenced the war's trajectory. During the lead-up to the conflict, members of the Bush administration highlighted the dangers of local attacks on oil industry infrastructure (Woodward, 2004, pp. 244, 258, 381). To limit this damage and preserve Iraq's oil output and revenue, during the invasion, the United States and its partners prioritized seizing oil facilities, including export terminals on the Persian Gulf, the Rumailah oil field, and, notoriously, the Ministry of Oil in Baghdad (Gordon and Trainor, 2006, pp. 182–96, 427). As the war persisted, insurgent groups also targeted oil infrastructure in order to deny resource revenue to the US-led occupying authority and, subsequently, to the Iraqi government. By the end of 2003, insurgents were regularly targeting the pipeline exporting crude from Iraq's northern oil fields to Turkey, as

well as the pipelines carrying crude to refineries around Baghdad. In 2004, these attacks expanded to the Basra area and insurgents began targeting oil industry personnel (Luft, 2004). The United States responded to the attacks by creating an Iraqi oil police force to protect the pipeline network and a "pipeline exclusion zone" from Kirkuk to Baiji (Sabbagh, 2007; Spinner, 2004).

Conclusion

Oil influenced the trajectories of all six of the interstate wars discussed in this chapter. Belligerents attempted to deny each other access to oil reservoirs, petroleum products, or resource revenue by interrupting each other's oil production and transportation. They also defended their own energy infrastructure against these threats. During both world wars, some states that were denied access to oil—or feared such interruptions in the future—launched oil campaigns. Additionally, concerns about interruptions to global oil flows shaped the United States' peacetime usage of military force in the Persian Gulf.

Oil was not, however, a *casus belli*. Of the six wars discussed in the chapter, none clearly qualifies as a classic oil war, initiated to gain direct control over foreign oil resources. Even the first Gulf War was driven primarily by Saddam Hussein's belief that the United States was determined to overthrow his regime. In the subsequent 2003 Iraq War, global oil supply concerns may have contributed to the Bush administration's decision to invade. Yet, their goal was not to seize Iraqi oil.

Oil's materiality explains these divergent dynamics. Because of the ease of interrupting the hydrocarbon commodity chain, classic oil wars do not pay. An aggressor may be able to seize foreign oil-endowed territories. However, it is unlikely to benefit them. In contrast, the ease of interruption makes oil production and transportation networks a highly appealing target in ongoing interstate wars, because denying an adversary access to oil resources or revenue can substantially increase a belligerent's prospects for victory. In addition, the exigencies created by these interruptions—coupled with the normative latitude that can emerge during wartime—may prompt belligerents to launch oil campaigns. Projecting forward, until oil is displaced by other energy sources, it is likely to shape the trajectories of future interstate wars, However, it will not cause them.

Given the infrequency of interstate wars in the contemporary international system, these conclusions may appear inconsequential or anodyne. However, clearly delineating oil's contributions to interstate war is vital, for three reasons. The first is academic precision; identifying the causes of war has been a core goal of IR scholarship. The second is policy effectiveness; even if interstate wars are rare events, effective conflict mitigation requires an accurate understanding of why these conflicts begin. Third, attributing wars to oil depoliticizes interstate conflict (Bridge, 2011, p. 316). It erases the social and ideational incentives for war, presenting it as an inevitable, natural, struggle for survival in a world of scarcity, rather than a product of human choice. This absolves aggressors of responsibility or casts them simply as villains, yielding to their baser instincts. Meanwhile oil, itself, is granted a curious causal power, as if it can provoke war on its own, without human involvement (Huber, 2011).

Matthew Huber (2011) describes this perspective as "oil fetishism," and critiques scholars that express it for falling into a "vulgar materialist trap." He asserts that, to escape this trap, writers must embed oil in the "webs of relations and cultural meanings through which [it] is imagined as a 'vital' and 'strategic' resource in the first place" (p. 36).¹⁵ This chapter does not argue with Huber's instruction. However, it also indicates that the problem with existing research on oil and interstate war is not *too much* emphasis on oil's materiality, but *too little*. Until researchers integrate the entirety of the hydrocarbon chain, from in situ crude oil to petroleum product consumption, into their analyses, they will continue to misrepresent the relationships between oil and interstate war.

Notes

- ¹ For recent exceptions, see Colgan (2013); Kelanic (2020); Meierding (2020).
- ² As discussed in Huber (2011, p. 36), Mitchell (2009) also uses the terminology of 'following the oil.'

⁹ Poland did possess a substantial oil industry, but Germany allowed Russia to occupy 70 percent of these fields (Goralski and Freeburg, 1987, pp. 30–31).

¹⁰ Manchuria contained some shale oil resources, which Japan exploited. However, these fulfilled a very small share of Japan's oil needs (Porter, 1936, p. 11).

¹¹ Germany also attempted to repeat its WWI denial campaign by attacking oil tankers traveling from the Caribbean to Europe (Bercuson and Herwig, 2014).

¹² Other incentives included a desire to defend the international norm against conquest and reinforce the "new global order" created by the fall of the USSR.

¹³ The Carter Doctrine was announced in the 1980 State of the Union address.

¹⁴ Claims that the United States and United Kingdom invaded Iraq to specifically benefit US or UK oil companies are also inaccurate. A sovereign Iraqi government would be able to select its preferred international partners.

¹⁵ Bakker and Bridge (2006, pp. 8, 14) express a similar concern. See also Le Billon (2001; 2007).

³ Le Billon (2001, p. 580) makes this point with regard to intrastate resource wars.

⁴ For related arguments, see Bridge (2011); Huber (2011); Le Billon (2001; 2007).

⁵ Crude oil density is measured in terms of 'API gravity'; the higher the number, the lighter the crude.

⁶ See Boyes (2020) for a broader examination of mineral resources' 'extractability.'

⁷ Tight oil reservoirs can be developed more quickly.

⁸ Bridge also includes a final step, carbon capture.

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