

Energy Imperialism?

Special issue

Dossier

Impérialisme énergétique ?

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SPECIAL ISSUE

Energy Imperialism? Resources, power and environment (19th-20th Cent.)

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Energy imperialism? Introduction to the special issue

Abstract

In this special issue, we reflect on the relations between energy systems and imperialism via multiple expressions: the role of oil in international relations, the global economy, and the post-colonial world; the problem of waste created by the oil industry; the relations between capitalism and imperialism, and the role of the energy industry in fuelling these structures and these relations since the second wave of European colonisation. Through the adoption of a multidisciplinary and comparative perspective across different periods and geographical areas, we deconstruct the mythology of oil imperialism to highlight the nodes in which energy systems have an actual influence on the course of history, and on the shaping of societies.

Plan of the article

→ Energy Imperialism?

ENERGY IMPERIALISM?

- 1 The connections between humankind and energy are a constant theme throughout history, and the relations between energy and power structures one of the most popular in social sciences. Energy resources have always been a fundamental part of our lives; but since the onset of the industrial revolution and the discovery of fossil fuels, energy production has been independent from animal and human labour, and available in quantities that have not only radically altered the ways in which humans live, but the very face of the Earth. The 19th C. was the age of coal; the 20th C. was the age of oil.¹ The 21st C., the age of the Anthropocene, has brought to the forefront the absolute necessity to implement new energy systems that are not based on fossil fuels, while our world economy is.
- 2 Unsurprisingly then, energy is also a fundamental factor in international relations and global governance. Oil in particular, consumed mostly in countries other than those where it is produced, has been at the forefront of geopolitics since the beginning of its modern usage. A vast historiography has explored the links between resources, commodities, and empires, highlighting that the quest for oil and coal shaped the expansion of the European empires, and promoted the emergence of both the Anglosphere and the Francosphere in the 19th C.² This has

¹ Though we should be careful not to think of oil as “replacing” coal: hydrocarbons were added on top of rising consumption levels. For references about energy consumption in history: Vaclav Smil, *Energy in World History* (Boulder: Westview Press, 1994); Astrid Kander, Paolo Malanima, Paul Warde, *Power to the People: Energy in Europe over the Last Five Centuries* (Princeton: Princeton University Press, 2014); Kostas Bithas, Panos Kalimeris, “A Brief History of Energy Use in Human Societies”, in Kostas Bithas and Panos Kalimeris (eds.), *Revisiting the Energy-Development Link: Evidence from the 20th Century for Knowledge-Based and Developing Economies* (Cham: Springer International Publishing, 2016), 5-10; Joel Darmstadter *et al.*, *Energy in the World Economy: A Statistical Review of Trends in Output, Trade, and Consumption Since 1925* (Baltimore: The Johns Hopkins University Press, 1971).

² For the international economy of the second wave of imperialism: Giovanni Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (London: Verso, 1994); Christopher Chase-Dunn, *Global Formation:*

been particularly the case after the Second World War, when oil gradually replaced coal as the main world energy source. The oil industry developed at a time of global-scale changes that overturned the world’s political and economic assets: the two World Wars, the fall of the empires, the Cold War, and finally the end of the bipolar world. The emergence of United States hegemony in the 20th C. cannot be understood without taking into account the development of the American oil industry and global oil politics – not only in the military and economic aspects of the oil industry, but in its social and cultural ones.

As early as the beginning of the 20th C., oil geopolitics became a genre of its own in political sciences, quickly intertwining oil with imperialism. Early works like *La Lutte mondiale pour le pétrole* by analyst Pierre L’Espagnol de La Tramerye (1922) and *Oil Imperialism: The International Struggle for Petroleum* by Louis Fischer (1927) are indicative of the importance that control over oil (defined as control over the crude fields and the capability of extracting it), already had in the immediate aftermath of World War I. “Qui aura le pétrole aura l’empire” wrote La Tramerye in his popular 1922 book, where he denounced that by allowing American companies to control the French supply market, France was giving up its independence as a nation, and threatened its position as a global power.³ Similarly, in commenting the post-war US and British interests in the oil-rich Baku area, Fischer asked “How much more diplomatic

Structures of the World-Economy (Cambridge: Blackwell, 1989); Peter A. Shulman, *Coal and Empire: The Birth of Energy Security in Industrial America* (Baltimore: Johns Hopkins University Press, 2015); Shellen Wu, *Empires of Coal: Fueling China’s Entry into the Modern World Order, 1860-1920* (Palo Alto: Stanford University Press, 2015); E.A. Wrigley, *Energy and the English Industrial Revolution* (Cambridge: Cambridge University Press, 2010)

³ Pierre Paul Ernest L’Espagnol de La Tramerye, *La lutte mondiale pour le pétrole* (Paris: Editions de la vie universitaire, 1922), 9. It is worth to note here that the expression “oil nationalism”, later applied to producer countries that sought to nationalise their resources, was actually first used in the 1920s for those European countries trying to establish State-led companies that could compete with the American firstcomers.

commotion, financial manoeuvring, political disturbance, military activities, and loss of life must the oil kings feel themselves justified in causing for the sake of the Russian oilfields".⁴ Both authors denounced the international oil industry, which particularly at the time mostly meant the American oil industry, as imperialistic. With the end of the formal empires after World War II, the fight against "oil imperialism" was taken over by newly-independent countries. In 1955, in "Philosophy of the Revolution", the Egyptian leader Gamal Abdel Nasser postulated the idea of oil as a weapon: "The most important weapon of the Arab world against the West is oil, the vital nerve of civilization, without which all its means cannot possibly exist"⁵ - a doctrine that was perceived as successfully applied in 1973, when oil prices quadrupled during the notorious "oil shock", celebrated as a second independence (the economic one) by countries such as Algeria and Iraq. In the same decades, the securitisation of oil supplies became a main feature of security policy in the US and the OECD area, particularly against the self-sufficiency of the Communist bloc - a trait of the Cold War that survived the end of the Soviet Union.⁶

- 4 Throughout the 20th C. then, Western military involvement has often been labelled in the public opinion, and by several scholars, as oil wars, from the Gulf wars to the more recent Libyan intervention.⁷ The mythology of oil imperialism

⁴ Louis Fischer, *Oil Imperialism: The International Struggle for Petroleum* (New York: George Allen, 1927), 11.

⁵ Gamal Abdel Nasser, *The philosophy of the revolution* (Cairo: S.O.P. Press, 1955).

⁶ See for example John Clark, *The Political Economy of World Energy: A Twentieth Century Perspective* (Chapel Hill: University of North Carolina Press, 1991); David Painter, *Oil and the American Century: The Political Economy of US Foreign Oil Policy, 1941-1954* (Baltimore: Johns Hopkins University Press, 1986); David Painter, "Oil and World Power", *Diplomatic History*, vol.1, n°17, 1993.

⁷ See for example: Michael Klare, *Blood and Oil* (New York: Metropolitan Books, 2004); Lleif Wenar, *Blood Oil: Tyrants, Violence, and the Rules That Run the World* (Oxford: Oxford University Press, 2016); Paul Roberts, *The End of Oil: The Decline of the Petroleum Economy and the Rise of a New Energy Order* (London: Bloomsbury Publishing PLC, 2005). A successful rebuttal of the concept of oil wars can be found in Emily Meierding, "Dismantling the Oil Wars Myth", *Security Studies*, n° 25, 2016.

is vast and pervasive: oil as a cause of war; oil as a cause of underdevelopment; oil as a cause of international corruption; oil as hindrance to democracy. Without an adequate context that takes into account the complexities and the many factors on which oil has an impact, these statements are not grounded in reality; and yet, they have often informed the policies and strategies of governments. This is the phenomenon that Robert Vitalis has recently defined in an upcoming book as "oilcraft",⁸ a modern form of magical thinking in which oil has much more agency on our economies and social order than it actually does, but that in a way becomes real because of the self-fulfilling prophecy of acting like it is real. Not to fall this trap, the necessary premise is that talking about "oil" means first and foremost to talk about energy sources. Starting from the title, this special issue wanted to focus on the materiality of oil as a primary resource which is at the heart of global energy policies. A second premise of this issue is the importance of a wide perspective, both historical and interdisciplinary. Few studies have tackled the problem of the relations between energy and imperialism in a long-term and comparative perspective. This special issue explores the relations between oil and energy dependencies and the socio-technical, economic, political, cultural structures around (and in part caused by) energy dependence from fossil fuels. It reflects on the sourcing of fossil fuels as an asymmetric power relation; on the connections between oil, the technology that distributes it, and the actors who consume it. The contributing authors are sociologists (Paul Ciccantell); jurists (Michael Hennessy Picard); anthropologists (Sarandha Jain); as well as historians of the environment (Armel Campagne), of international relations (Duccio Basosi and Francesco Petrini), and of economics (Simone Selva). We can divide the works in three parts: the first essays analyse the possible definitions of energy imperialism; the second part provides examples from colonialism; the third shifts towards the present to

⁸ Robert Vitalis, *Oilcraft: The Myths of Scarcity and Security That Haunt U.S. Energy Policy* (Stanford: Stanford University Press, 2020)

analyse the oil shocks and the global financial system that ensued. In the first contribution, Paul S. Ciccantell provides an overview of what is traditionally considered “energy imperialism”, and then moves to investigate alternative energy access strategies implemented at different times and places, whether market-based approaches (from “stealing peripheries” to pay a premium to ensure a good energy flow; from long-term contracts to the relocation of industries next to energy sources) or technological innovation (e.g., energy efficiency solutions, or material infrastructures for cheaper energy transports). In the second article, Francesco Petrini reminds us of the close relations between capitalism and imperialism, analysing what is surely one of the most interesting example, the American oil industry and its relations with the White House and the Department of State, in a complex public/private dichotomy that in the case of the United States has always remained in favour of the latter. In the third contribution, Michael Picard and Tina Beigi focus on the Persian Gulf and Iraq, perhaps the area that more contributed to the formation of a mythology of oil; however, the authors set aside the problem of oil wars to focus on the emerging concept of Molysmocene, the era of colonisation by waste, one of the most terrifying aspects of the Anthropocene, and how the development of the oil industry condemned the Gulf to be a wasteland of the oil industry, whether controlled by foreign oil companies or national ones.

- 5 The next three articles provide again a novel view on the problem of energy and colonialism. Firstly, Armel Campagne provides a reconstruction of an understudied aspect of French imperialism: the coal interests in Indochina over the Tonkin coal resources, the export-oriented economy that ensued, and the struggle of French authorities against the claims for resource sovereignty that the Vietnamese authorities put forward. This coal-centered research provides very interesting comparisons with the more studied aspects of oil interests in French overseas territories. In the fifth article, Sarandha Jain traces the evolution of the oil industry in India under British rule, in particular the technical aspects

and the government-company contention for rules on taxation. By focussing on the “everyday politics” of the oil industry in British-ruled India, Jain highlights the ways in which oil (and primary resources in general) become encoded in socio-political structures, and how they influence them from the inside.

The third part of the special issue looks at the finance of oil, and in a way overturns the perspective of imperialism by concentrating on the consequences of oil dependence on the West. There is general agreement on the fact that the oil shocks of the 1970s were first and foremost a financial crisis rather than an energy crisis, and a major factor in the renewal of the United States power in global finance after the end of the convertibility of US dollars to gold. Duccio Basosi taps into the debate on the rise of petrodollars by showing the importance of Saudi-United States relations, and the strong intervention of the American government in reclaiming a main role in the reshaping of global finance following the shocks. Simone Selva focusses on petrodollar recycling in Eurodollars from United States multinational banks to non-oil producer lower developed countries, thus promoting the shift from institutional borrowing to commercial borrowing, but under the supervision of American-based private institutions.

All in all, this special issue helps to overcome myths and “oilcraft”, and it allows to focus on the dynamics that make the energy industry, and in particular the oil industry, so relevant in global governance. While it does not expect to offer solutions to end our dependence from fossil fuels, this collection of essays facilitates the reflection on the role of energy systems in the colonial and post-colonial world and conversely, the way in which colonialism and imperialism (formal or informal) have impacted on the structures of the energy industry. Overall, it hopes to highlight the fundamental nodes of our global energy system, and how it developed. Intervening on these nodes in order to modify the energy flux that maintains our financial, economic, social and political structures is perhaps the biggest challenge of our times.

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Alternatives to energy imperialism: Energy and rising economies

Abstract

Cet article cherche à démontrer que les efforts menés par les économies en croissance rapide pour sécuriser un accès aux ressources énergétiques ainsi que leur contrôle reposent souvent sur des alternatives à un impérialisme énergétique. Au dix-neuvième, vingtième et vingt-et-unième siècles, les économies montantes ont utilisé une variété de stratégies pour assouvir leurs besoins croissants en énergie en créant et en maintenant des flux d'énergie et de matériaux à haute intensité énergétique. Ces stratégies ont parfois donné de meilleurs termes d'échange pour les régions exportatrices de ressources. Cet article expose un modèle des stratégies d'accès à l'énergie qui ne reposent pas sur un impérialisme énergétique et présente des cas d'étude illustratifs qui explorent une large diversité de temps, d'espaces et de sources d'énergie.

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The author would like to thank two anonymous JEH reviewers for their extensive and extremely informative suggestions. As a sociologist seeking to bring my research into dialogue with historians and others interested in energy issues, their reviews were invaluable. Funding for this research was received from the Canadian Government's Canadian Studies Faculty Research Grant Program, the Western Michigan University Faculty Research and Creative Activities Support Fund, and the WMU Department of Sociology.

Plan of the article

- Introduction
- The Classic Model of Energy Imperialism
- Alternatives to Energy Imperialism
- U.S. Economic Ascent and Access to Canadian Energy
- Japanese Strategies to Access Raw Materials Via Alternatives to Energy Imperialism
- Chinese Alternatives to Energy Imperialism Strategies Since the 1980s Economic Opening
- Conclusion: Patterns of Alternatives to Energy Imperialism

INTRODUCTION

- 1 Energy imperialism has been an essential element of the world economy at least since the Industrial Revolution as states and firms have sought the energy resources needed to smelt metals, power factories, drive steam engines, and fuel economic development. For states lacking domestic supplies of critical energy sources, energy imperialism, defined here as the use of military, diplomatic, economic, and other forms of social power to take control of energy resources outside a state's domestic boundaries, was essential to the state's economic growth and geopolitical competitiveness.
- 2 Often, energy imperialism entailed imperial expansion efforts and warfare. Successful energy imperialist strategies restructured whole regions of the world, such as the British and French division of the Ottoman Empire after World War I to maintain control over Middle Eastern oil supplies,¹ although the long term geopolitical and socioeconomic consequences of these efforts still haunt the twenty-first century.² Other ultimately unsuccessful energy imperialist strategies drove conflicts that killed millions of people and had similarly long lasting consequences, such as German efforts during World War II to capture oil resources in the Middle East and Eastern Europe³ (Fritz 2011; Shirer 1959; Toprani 2019; Yergin 2011) and Japanese efforts beginning

in the 1930s to control coal in Manchuria and oil in Southeast Asia.⁴ The failed British and French Suez intervention in 1956 may have marked a key shift from energy imperialism to alternative strategies for acquiring needed energy resources, at least for rapidly growing economies.⁵

This paper argues that efforts to gain secure access to and control over energy resources to fuel rapidly growing economies often rely on alternatives to energy imperialism. For energy sources and energy-intensive materials such as aluminum in the nineteenth, twentieth, and twenty-first centuries, rising economies utilized a variety of strategies to supply their growing industries and energy needs. Most notably, the U.S., Japan, and China used a mix of direct foreign investment, trade agreements, joint ventures, long term contracts, infrastructural investments, and technological developments to create and maintain stable flows of coal, oil, natural gas, electricity, and energy-intensive materials from a range of resource-rich areas, including, among others, Canada, Australia, Brazil, Indonesia, and Venezuela. Moreover, these strategies sometimes resulted in better terms of trade for resource-exporting regions because of high and rapidly growing demand in these rising economies and the often weaker bargaining positions of states and firms in these ascendant economies in comparison with those of more established core states and firms. This

1 Marian Kent, *Moguls and Mandarins: Oil, Imperialism, and the Middle East in British Foreign Policy, 1900-1940* (London: Frank Cass, 1993); William Stivers, *Supremacy and Oil: Iraq, Turkey, and the Anglo-American World Order, 1918-1930* (Ithaca, NY: Cornell University Press, 1982); Kristian Ulrichsen, *The First World War in the Middle East* (London: Hurst & Co., 2014).

2 Michael Klare, *Blood and Oil* (New York: Metropolitan Books, 2004).

3 Stephen Fritz, *Ostkrieg: Hitler's War of Extermination in the East* (Lexington, KY: University Press of Kentucky, 2011); William Shirer, *The Rise and Fall of the Third Reich: A History of Nazi Germany* (New York: Simon & Schuster, 1959); Anand Toprani, "Our Efforts Have Deteriorated Into a Contest For Dollars: The 'Revolt of the Admirals' NSC-68, and the Political Economy of the Cold War", *Diplomacy and Statecraft* vol. 30, 2019, 681-706; Daniel Yergin, *The Quest: Energy, Security, and the Remaking of the Modern World* (New York: Penguin Press, 2011).

4 Timothy Lehmann, *For Profit or Power? The Strategic Purpose of Economic Exchange in the U.S.-Japan Great Power Rivalry* (Ph.D. Dissertation, Ohio State University, 2002); Michael Barnhart, *Japan Prepares for Total War: The Search for Economic Security, 1919-1941* (Ithaca, NY: Cornell University Press, 1987); Alvin So, *East Asia and the World Economy* (Thousand Oaks, CA: Sage, 1995); Stephen G. Bunker and Paul S. Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (Baltimore, MD: The Johns Hopkins University Press, 2007).

5 Steven Galpern, *Money, Oil, and Empire in the Middle East: Sterling and Postwar Imperialism, 1944-1971* (New York: Cambridge University Press, 2009); Hugh Thomas, *Suez* (New York: Harper Colophon, 1966); Donald Neff, *Warriors at Suez: Eisenhower Takes America into the Middle East* (New York: Simon & Schuster, 1981); Niall Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* (New York: Basic Books, 2002).

paper articulates a model of energy access strategies that do not rely on energy imperialism and presents some illustrative case studies across a wide variety of times, places, and energy sources.

4 This paper draws primarily on secondary analyses of energy access strategies of rapidly growing economies and of the efforts of states with large reserves of energy resources to use these raw materials as the basis for economic development. Quantitative data on these industries, including production, consumption, and trade, are drawn from the International Energy Agency, the U.S. Energy Information Agency, the U.S. Bureau of Mines and Geological Service, the BP Statistical Review of World Energy, International Energy Agency publications, and a variety of other sources.⁶

5 The following section examines the classic model of energy imperialism via a discussion of a select set of key cases. The third section outlines the alternatives to energy imperialism model, while the following sections examine illustrative cases. In the conclusion, the paper highlights the historical patterns found in these case studies and their implications for studying energy history.

THE CLASSIC MODEL OF ENERGY IMPERIALISM

6 Of all of the increasingly wide variety of raw materials needed for industrialization and economic development since the Industrial Revolution, energy sources are perhaps the most critical and fundamental. A longstanding and still rapidly growing literature examines various aspects of the central role of energy in economic development and long term social change.⁷ Many works

⁶ B.R. Mitchell, *International Historical Statistics: The Americas 1750-1993* (4th ed.) (New York: Macmillan Reference, 1998); F. Leacy, *Historical Statistics of Canada* (2nd edition) (Ottawa: Government of Canada, 1983); Joel Darmstadter et al., *Energy in the World Economy: A Statistical Review of Trends in Output, Trade, and Consumption Since 1925* (Baltimore: The Johns Hopkins University Press, 1971).

⁷ Eugene Staley, *Raw Materials in Peace and War* (New York: Council on Foreign Relations, 1937); Richard Adams, *Energy & Structure: A Theory of Social Power* (Austin: University of Texas Press, 1975); Richard Adams,

emphasize episodes of imperial efforts to control energy sources and the critical role of oil since the early 20th century.⁸

Coal became the most important source of industrial power by the beginning of the 1800s,⁹ a role it maintained through the mid-20th century and it remains surprisingly central in the twenty-first century.¹⁰ The widespread geologic availability of coal in Europe and North America made energy imperialism largely unnecessary for coal. However, there were a few key instances in which coal became of focus of imperial strategies. For example, after the development of steamships in Great Britain, Europe and the U.S. in the mid-1800s, coaling stations to fuel ocean-going steamships and access to relatively nearby coal deposits to supply these coaling stations far

Paradoxical Harvest: Energy and Explanation in British History, 1870-1914 (Cambridge: Cambridge University Press, 1982); Richard Adams, *The Eighth Day: Social Evolution as the Self-Organization of Energy* (Austin: University of Texas Press, 1988); Jean-Claude Debeir et alii., *In the Servitude of Power: Energy and Civilization Through the Ages* (London: Zed Books, 1991); Vaclav Smil, *Energy and Civilization: A History* (Cambridge, MA: MIT Press, 2017); Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (New York: Verso, 2016); Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2011); Daniel Yergin, *The Prize: The Epic Quest for Oil, Money and Power* (New York: Simon & Schuster, 1991); Michael Klare, *Resource Wars: The New Landscape of Global Conflict* (New York: Metropolitan Books, 2001); Michael Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy* (New York: Metropolitan Books, 2008); Richard Rhodes, *Energy: A Human History* (New York: Simon and Schuster, 2018); E.A. Wrigley, *Energy and the English Industrial Revolution* (Cambridge: Cambridge University Press, 2010).

⁸ Christopher Clark, *Iron Kingdom: The Rise and Downfall of Prussia, 1600-1947* (Cambridge, MA: Belknap Press, 2006); Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (cf. note 7); Yergin, *The Prize: The Epic Quest for Oil, Money and Power* (cf. note 7); Klare, *Resource Wars: The New Landscape of Global Conflict* (cf. note 7); Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy* (cf. note 7); David Harvey, *The New Imperialism* (Oxford: Oxford University Press, 2003).

⁹ Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (cf. note 7).

¹⁰ Paul S. Ciccantell and Paul Gellert, "Chapter 7. Raw Materialism and Socio-Economic Change in the Coal Industry", in Debra Davidson and Matthias Gross (eds.) *Oxford Handbook of Energy and Society* (Oxford: Oxford University Press, 2018), 113-136.

from the home country's coal mines became a critical concern for Great Britain, the U.S., and other nations.¹¹

- 8 The very different geologic distribution of easily available petroleum resources, however, made oil a quintessential subject of energy imperialism, often resulting in warfare between the European powers in the first half of the twentieth century. The division of the Middle East by the United Kingdom and France following the defeat of the Ottoman Empire in World War I in order to secure access to the large oil reserves known and suspected to exist in the region was perhaps the pinnacle of naked energy imperialism. The war had demonstrated the critical role of oil as fuel for ships and land transport, while post-war geologic research in the Middle East made it clear that the two victorious powers needed secure access via colonies and client states to supply their evolving industries and economies¹² and these areas would be important oil sources for the Allied war effort in World War II.¹³ Ferguson¹⁴ argues that “as an Admiralty memorandum of 1922 put it: ‘From the strategic point of view the essential thing is that Great Britain should control the territories on which the oil is situated.’ Although at this time the Middle East accounted for only 5 per-cent

of world output, the British were empire-building with the future in mind”.¹⁵

9 Other prominent examples of direct energy imperialism included Japan's acquisition of coal from Manchuria in 1930s and oil from the Dutch East Indies during the early years of World War II.¹⁶ Japanese efforts at imperial conquest and their failure would make post-war efforts by the U.S. to support Japan's economic development as part of the U.S.' Cold War rivalry with the Soviet Union quite difficult, as will be discussed below.

10 Hitler's unsuccessful efforts to capture the Soviet Union's oil producing Baku region¹⁷ was another key example of direct energy imperialism, of the essentiality of oil for warfare since the early 20th century, and of the tremendous efforts to resist energy imperialism. It is important to note, however, that these energy imperialist efforts built directly on the long tradition of German imperialist efforts within Europe, such as battles over Silesian resources between Germany and France, and in the efforts to acquire colonies in Africa and Asia to supply the new nation of Germany in the second half of the nineteenth century.¹⁸

¹¹ On Barak, “Outsourcing: Energy and Empire in the Age of Coal, 1820–1911”, *International Journal of Middle East Studies* vol. 47, 2015, 425–445; Bernard Brodie, *Sea Power in the Machine Age* (Princeton, NJ: Princeton University Press, 1941); Steven Gray, *Steam Power and Sea Power: Coal, The Royal Navy, and the British Empire, c. 1870–1914* (London: Palgrave Macmillan, 2017); Peter Shulman, *Coal & Empire: The Birth of Energy Security in Industrial America* (Baltimore: Johns Hopkins University Press, 2015).

¹² Toprani “Our Efforts Have Deteriorated Into a Contest For Dollars.’ The ‘Revolt of the Admirals’ NSC-68, and the Political Economy of the Cold War” (cf. note 3); Ulrichsen, *The First World War in the Middle East* (cf. note 1); Efraim Karsh and Inari Karsh, *Empires of the Sand: The Struggle for Mastery in the Middle East 1789–1923* (Cambridge, MA: Harvard University Press, 1999).

¹³ David Edgerton, *Britain's War Machine: Weapons, Resources, and Experts in the Second World War* (Oxford: Oxford University Press, 2011).

¹⁴ Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* (cf. note 5).

¹⁵ *Ibid.*, 263.

¹⁶ Raymond Vernon, *Two Hungry Giants: The United States and Japan in the Quest for Oil and Ores* (Cambridge, MA: Harvard University Press, 1983); So, *East Asia and the World Economy* (cf. note 4); Rajaram Panda, *Pacific Partnership: Japan-Australia Resource Diplomacy* (Rohtak, India: Manthan Publications, 1982); Edward Ackerman, *Japan's Natural Resources and Their Relation to Japan's Economic Future* (Chicago: University of Chicago Press, 1953); Barnhart, *Japan Prepares for Total War: The Search for Economic Security, 1919–1941* (cf. note 4); W. Ball, *Japan—Enemy or Ally?* (New York: John Day Company, 1949).

¹⁷ Toprani “Our Efforts Have Deteriorated Into a Contest For Dollars.’ The ‘Revolt of the Admirals’ NSC-68, and the Political Economy of the Cold War” (cf. note 3); *Shirer The Rise and Fall of the Third Reich: A History of Nazi Germany* (cf. note 3); Yergin *The Prize: The Epic Quest for Oil, Money and Power* (cf. note 7).

¹⁸ Clark, *Iron Kingdom: The Rise and Downfall of Prussia, 1600–1947* (cf. note 8); Fritz Stern, *Gold and Iron: Bismarck, Bleichroder, and the Building of the German Empire* (New York: Vintage Books, 1977); David Hamlin, *Germany's Empire in the East: Germans and Romania in an Age of Globalization and Total War, 1866–1918* (Cambridge: Cambridge University Press, 2017).

11 The widespread destruction and death that resulted from the two world wars and the declining power of the European colonial powers, however, made this strategy increasingly costly and difficult to maintain. The key marker of the end of energy imperialism might be the Suez crisis of 1956 as Britain and France decisively lost control over the region.¹⁹ After Nasser nationalized the Suez Canal Company, the key transport route for Middle Eastern oil to Europe, the U.S. had refused to support British military intervention because “as President Eisenhower later asked: ‘How can we possibly support Britain...if in doing so we lose the whole Arab world?’”.²⁰ The joint British and French military intervention in November 1956 without U.S. support was disastrous: “nothing could have revealed Britain’s new weakness more starkly than what happened next. First, the invaders were unable to prevent the Egyptians from blocking the Canal and disrupting oil shipments through it. Then there was a run on the pound as investors bailed out. Indeed, it was at the Bank of England that the Empire was effectively lost”.²¹ Energy imperialism had failed spectacularly.

12 The loss of control over this key piece of energy and general trade infrastructure emboldened anti-colonial movements against Britain and the other European colonial powers. Ferguson summarizes it succinctly: “Suez sent a signal to nationalists throughout the British Empire: the hour of freedom had struck.”²² Over the next two decades, anti-colonial movements proliferated in the Middle East, Africa and Asia. The newly independent states that emerged often adopted resource nationalist development strategies in the Middle East based on oil and, more generally, resource nationalist development strategies based on taking control over oil, iron ore, bauxite,

and other raw materials.²³ In the second half of the twentieth century, alternatives to traditional energy imperialism became an imperative for ascendant economies.

ALTERNATIVES TO ENERGY IMPERIALISM

The theoretical model presented in this paper rests on the theoretical and empirical analyses of the long term development and periodic restructuring of the capitalist world-economy developed by Braudel, Wallerstein, McCormick and particularly Arrighi.²⁴ Arrighi’s model²⁵ analyzes a series of four systemic cycles of accumulation over the past 800 years. Each cycle began with a period of economic and geopolitical competition that produced a new hegemon that dominated the expanding world economy but then stagnated and declined. The hegemonic cycles move from Genoa (early 1400s to early 1600s) to Holland (early 1600s to 1780s) to Great Britain (early 1800s to the 1920s) to the United States (since the 1940s) over the long term. In Arrighi’s²⁶ terms, hegemony is “the power of a state to exercise functions of leadership and governance over a system of sovereign states.” Economic ascent is defined in this paper as the

23 Norman Girvan, *Corporate Imperialism: Conflict and Expropriation* (New York: Monthly Review Press, 1976); Michael Tanzer, *The Political Economy of International Oil and the Underdeveloped Countries* (Boston: Beacon Press, 1969); Michael Tanzer, *The Energy Crisis: World Struggle for Power and Wealth* (New York: Monthly Review Press, 1975); Bernard Mommer, *Global Oil and the Nation State* (Oxford: Oxford University Press, 2002); Anthony Sampson, *The Seven Sisters: The Great Oil Companies & the World They Shaped* (New York: Bantam Books, 1975).

24 Fernand Braudel, *The Wheels of Commerce: Civilization and Capitalism 15th-18th Century Volume 2* (New York: Harper & Row, 1982); Immanuel Wallerstein, *The Modern World-System I* (New York: Academic Press, 1974); Immanuel Wallerstein, *The Modern World-System IV: Centrist Liberalism Triumphant, 1789-1914* (Berkeley, CA: University of California Press, 2011); Thomas McCormick, *America’s Half Century: United States Foreign Policy in the Cold War and After* (2nd ed.) (Baltimore: Johns Hopkins University Press, 1995); Giovanni Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (London: Verso, 1994); Giovanni Arrighi, *Adam Smith in Beijing: Lineages of the Twenty-First Century* (New York: Verso, 2007).

25 Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24).

26 *Ibid.*, 27.

19 Thomas, *Suez* (cf. note 5); Neff, *Warriors at Suez: Eisenhower Takes America into the Middle East* (cf. note 5); Evelyn Shuckburgh, *Descent to Suez: Foreign Office Diaries 1956-1956* (New York: W.W. Norton & Co., 1986); Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* (cf. note 5).

20 *Ibid.*, 296.

21 *Ibid.*, 296.

22 *Ibid.*, 297.

development of increasing economic, political and military power relative to competing states and the existing hegemon. Economic ascent to challenge the existing hegemon is a difficult and historically contingent process in which “states that have successfully seized this opportunity did so by reconstituting the world system on new and enlarged foundations”.²⁷ Arrighi²⁸ argues that “inter-state competition has been a critical component of each and every phase of financial expansion and a major factor in the formation of those blocs of governmental and business organizations that have led the capitalist world-economy through its successive phases of material expansion.”

- 14 Arrighi²⁹ recognizes that each cycle rested on significantly intensified material production across expanded economic and geopolitical space; each cycle builds on and expands the material and spatial scale of previous cycles. Arrighi’s model attributes the dynamics of these cycles to finance and politics, with capitalists in the hegemonic economy investing in newly ascending economies in order to overcome the falling rates of profit that result from accumulating excess investment in the mature hegemonic economy.³⁰ In contrast, the theoretical model presented in this paper focuses not on hegemonic decline, but instead on the role of ascending economies whose sustained growth depends on expanded and intensified material expansion and energy use to compete with the existing hegemon and other ascendant economies. Material and spatial expansion results from the efforts of ascendant economies to meet the physical requirements of the expanded production that ascendant nations must achieve before they become wealthy and powerful enough to challenge the dominance of the existing hegemon.³¹

²⁷ *Ibid.*, 30.

²⁸ *Ibid.*, 12.

²⁹ Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24).

³⁰ *Id.*

³¹ Stephen G. Bunker and Paul S. Ciccantell, *Globalization and the Race for Resources* (Baltimore, MD: The Johns Hopkins University Press, 2005); Bunker and Ciccantell,

The key problem for rapidly growing economies is obtaining the raw materials needed in the largest volumes to build plants, products, and transport infrastructure and to fuel economic growth. Economies of scale offer opportunities to reduce the costs of processing and transport, potentially creating competitive advantages relative to the existing hegemon and other rising economies. However, raw materials depletion and increasing distance to supplies contradict this, but offer their own opportunities for cost reducing innovations. This tension between the contradictions of scale and space is cumulatively sequential across systemic cycles of accumulation;³² each ascent “raises the bar” for future ascendants organizationally, technologically, and spatially. The most dramatic and rapid processes of economic ascent restructure national economies and the world economy in support of national economic ascent, progressively globalizing the world economy and incorporating and reshaping economies, ecosystems and space.³³

The challenges and the opportunities presented by the basic raw materials industries and by the transport systems on which they depend foster generative sectors: sectors that, beyond creating the backward and forward linkages that underlie the concept of a leading sector, also stimulate a broad range of technical skills and learning along with formal institutions designed and funded to promote them, vast and diversified instrumental knowledge held by interdependent specialists about the rest of the world, financial institutions adapted to the requirements of large sunk costs in a variety of social and political contexts, specific formal and informal relations between firms, sectors, and states, and the form of legal distinctions between public and private and between different levels of public jurisdiction.³⁴

East Asia and the Global Economy: Japan’s Ascent, with Implications for China’s Future (cf. note 4).

³² Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24).

³³ Bunker and Ciccantell, *Globalization and the Race for Resources* (cf. note 31); Bunker and Ciccantell, *East Asia and the Global Economy: Japan’s Ascent, with Implications for China’s Future* (cf. note 4).

³⁴ Bunker and Ciccantell, *Globalization and the Race for Resources* (cf. note 31)

These generative sectors are the key drivers of economic ascent in the world economy, providing the fundamental building blocks of economic development in the ascendant economies and, at the same time, shaping raw materials exporting regions. The concept is thus relational within a world-systems perspective,³⁵ and the outcome is that generative sectors in a rising economy will have significant consequences for economies that export raw materials or trade in other kinds of goods. In short, generative sectors provide the material building blocks, cost reductions across many sectors to increase competitiveness, and patterns of state-sector-firm relations and other institutions that combine to drive economic ascent and underdevelop raw materials extracting and exporting regions.³⁶

17 However, the dynamic and contingent nature of processes of economic ascent and the resulting challenges to hegemonic control over raw materials and transport systems often engender geopolitical conflicts.³⁷ It is critical to note, however, that these processes of economic and geopolitical competition are contentious and historically contingent. The world-systems framework underlying this analysis does not mean that core actors manipulate the world like pieces on a chess board to suit their interests. Instead, their strategies and actions are shaped by the strategies of other state actors, firms, social movements, labor organizations, revolutionary groups, etc. in particular times and locations. The goal of world-systems theory is to explain the broad, long term processes across geographic regions

and long periods of times. The patterns of alternatives to energy imperialism identified here are one such pattern in the operation of the capitalist world-economy as states and firms compete and cooperate and as some economies ascend to challenge existing hegemonies.³⁸ The contestation over British coaling stations for steamships in the late 1800s,³⁹ for example, is an excellent empirical example of a hegemon's strategies and actions, but a case in which the hegemon is not able to impose its will because of resistance and strategic actions by other states and firms seeking to promote their own interests in the face of the hegemon's actions.

Hegemonic powers and rising challengers utilized 18 a range of strategies in the 19th and 20th centuries to gain and/or maintain control over raw materials, sometimes successfully and sometimes resulting in abject failure and resulting economic and geopolitical decline. Energy imperialism was a common option for achieving this essential goal. The decline of European colonialism marked by the failure to reopen the Suez Canal via British and French military intervention in 1956⁴⁰ and the wave of anti-colonial revolutions in Africa in the 1950s and 1960s made energy imperialist strategies largely untenable, despite efforts such as the U.S. invasion of Iraq in 2004.⁴¹

How can rapidly growing economies acquire the 19 raw materials essential to sustain these generative sectors without resorting to energy imperialism, particularly in the face of domestic raw

³⁵ Wallerstein, *The Modern World-System I* (cf. note 24).

³⁶ Andre Gunder Frank, *Capitalism and Underdevelopment in Latin America* (New York: Monthly Review Press, 1967); Fernando Cardoso and Enzo Faletto, *Dependencia y Desarrollo en America Latina* (Mexico City: Siglo Veintiuno, 1969); Stephen G. Bunker, *Underdeveloping the Amazon* (Chicago: University of Chicago Press, 1985). Bunker and Ciccantell, *Globalization and the Race for Resources* (cf. note 31); Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

³⁷ Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24); Bunker and Ciccantell, *Globalization and the Race for Resources* (cf. note 31); Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

³⁸ Wallerstein, *The Modern World-System I* (cf. note 24); Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24); Arrighi, *Adam Smith in Beijing: Lineages of the Twenty-First Century* (cf. note 24); Bunker and Ciccantell, *Globalization and the Race for Resources* (cf. note 31)

³⁹ Barak, "Outsourcing: Energy and Empire in the Age of Coal, 1820-1911" (cf. note 11).

⁴⁰ Thomas, *Suez* (cf. note 5); Neff, *Warriors at Suez: Eisenhower Takes America into the Middle East* (cf. note 5); *Shuckburgh Descent to Suez: Foreign Office Diaries 1956-1956 1986* (cf. note 19); *Ferguson Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* (cf. note 5).

⁴¹ Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy* (cf. note 7).

materials depletion and the resulting diseconomies of space as these raw materials must be brought from more distant areas outside the political control of the ascendant state? One critical strategy to accomplish this task has been to build new trade, transport, and investment relationships with raw materials peripheries to redirect raw materials flows away from earlier ascendant economies or the hegemon that have already undertaken the difficult and expensive tasks of building the necessary infrastructure, creating political, organizational, and legal forms that promote international trade and investment relations between a particular raw materials-producing state and the world economy, and incorporating these peripheries economically and politically into the world economy. This redirection in terms of both material flows and of economic and political relationships of a raw materials periphery (termed “stealing” in Ciccantell 2009),⁴² reduces costs and risks of meeting the ascendant economy’s growing raw materials needs. Earlier processes of economic ascent progressively globalized the world economy and brought new raw materials peripheries into the global trading system to supply the earlier ascendants’ industries, so new ascendant economies and states have the opportunity initially to purchase raw materials from this established supply system.⁴³

20 The newer ascendants’ rapid growth, however, means that their demand is increasing dramatically and necessitating a sharp and sustained increase in supply if these growth rates are to be sustained. The combination of the existing social and material infrastructures in the raw materials peripheries established by earlier ascendants, rapid demand growth in the ascendant economy, and the willingness of the newer ascendant economy to pay higher prices for raw materials in order to sustain their domestic growth creates an opportunity that states and firms in the raw

materials periphery find very attractive. Higher prices for rapidly increasing volumes of exports (in contrast to slower demand growth in the mature economies of earlier ascendants) motivate firms and domestic elites in the periphery and even from existing core powers with fewer opportunities for profitable investments to invest in production for export to the new ascendant. States in raw materials exporting regions typically support this investment with subsidies for transport and extraction, both in an effort to promote economic development and in hopes of gaining better returns and more political freedom from the power of the existing hegemon. This is particularly apparent in postcolonial situations in which newly independent states seek to break free from neocolonial ties and in situations of resource nationalism in which states seek greater control over and benefits from raw materials exports.⁴⁴ Firms, elites, and states in raw materials peripheries come to see the new ascendant as a potential ally in their attempts to promote political independence and economic development.⁴⁵

From the perspective of the new ascendant, 21 building these relationships with existing raw materials peripheries is much less expensive and difficult than creating their own new peripheries. One of the most important benefits is that most of the cost and the risk of expanding extraction and transport is borne by firms and states in the extractive periphery and often by firms from the earlier ascendant. At the same time, these investments in mines and transport systems also often create opportunities for exports of industrial products from the ascendant economy to the periphery to support the development of these extractive industries and for consumption by the owners of and workers in these industries. Redirecting raw materials flow from these peripheries away earlier ascendants thus further enhances the rapid growth of the new ascendant by reducing costs and risks while

⁴² Paul S. Ciccantell, “China’s Economic Ascent via Stealing Japan’s Raw Materials Peripheries”, in Ho-Fung Hung (ed.), *China and the Transformation of Global Capitalism* (Baltimore, MD: Johns Hopkins University Press, 2009), Chapter 6.

⁴³ *Id.*

⁴⁴ Girvan, *Corporate Imperialism: Conflict and Expropriation* (cf. note 23).

⁴⁵ Ciccantell, “China’s Economic Ascent via Stealing Japan’s Raw Materials Peripheries” (cf. note 42).

simultaneously creating significant new opportunities for profit from trade and investment.⁴⁶

22 Over the last 500 years, this process of redirecting extractive peripheries has been a key element of economic ascent in each case of rapid, transformative ascent.⁴⁷ For example, Holland progressively captured more and more of the Brazil trade from the waning Portuguese empire in the 1600s, taking control of much of the sugar, precious metals, and other raw materials trade and capturing the benefits of this trade for its own domestic development in shipbuilding, shipping, finance, and other industries. Great Britain rapidly displaced the Dutch from North America, the Caribbean, India and Southeast Asia in the 1700s and took control over trade in timber, sugar, and a host of other raw materials. During the postcolonial era in Latin America of the nineteenth century, Great Britain similarly displaced the Spanish empire as the region's main trade and investment partner, inducing states to subsidize the construction of British-owned and manufactured railways to ensure high rates of profit and steady supplies of grain, beef, silver, tin and other products to British consumers and industries. The rapidly growing U.S. did the same to support its ascent in the nineteenth and twentieth centuries, displacing Great Britain first in much of North America, and later from Canada, Latin America, and the Caribbean to acquire the raw materials for U.S. industrialization. The U.S. often used the opportunity to escape British hegemony as a key enticement for firms and states to redirect their exports of copper, bauxite, and other raw materials to the U.S. market with its rapidly growing demand.⁴⁸ Moreover, this process has continued in the late twentieth and early twenty-first centuries, as will be discussed below in the cases of the economic ascents of Japan and China.

⁴⁶ *Id.*

⁴⁷ Bunker and Ciccantell, *Globalization and the Race for Resources* (cf. note 31); Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

⁴⁸ Ciccantell, "China's Economic Ascent via Stealing Japan's Raw Materials Peripheries" (cf. note 42).

The most dramatic and rapid processes of economic ascent restructure national economies and the world economy in support of national economic ascent, progressively globalizing the world economy and incorporating and reshaping economies, ecosystems and space. Most of these transfers of raw materials peripheries from existing hegemonies to rising economies have taken place relatively peacefully as states and firms in the existing hegemon, the rapidly rising economy, and the extractive peripheries have sought to gain economic and geopolitical advantages from these shifts in the "autumn" of the existing hegemon.⁴⁹ However, the dynamic and contingent nature of processes of economic ascent and the resulting challenges to hegemonic control over raw materials and transport systems can often engender geopolitical conflicts over control over particular raw materials sources and the increasingly global spaces, particularly the oceans, through which these raw materials must be moved.⁵⁰

A great deal of analytic and popular attention today is directed at the issue of transitions from one energy system to another (see Podobnik⁵¹ for an early effort to analyze historical transitions in the capitalist world-economy and the need for a move away from fossil fuels). Modernization theory⁵² in the 1960s assumed that the progression through the stages of national economic development to developmental maturity would bring with it technological innovations, including the implementation of new energy

⁴⁹ Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24).

⁵⁰ Christopher Chase-Dunn, *Global Formation: Structures of the World-Economy* (Cambridge, MA: Blackwell, 1989); Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24); George Modelski and William Thompson, *Leading Sectors and World Powers: The Coevolution of Global Politics and Economics* (Columbia, SC: University of South Carolina Press, 1996); Ciccantell, "China's Economic Ascent via Stealing Japan's Raw Materials Peripheries" (cf. note 42).

⁵¹ Bruce Podobnik, *Global Energy Shifts: Fostering Sustainability in a Turbulent Age* (Philadelphia: Temple University Press, 2006).

⁵² Walter Rostow, *The Stages of Economic Growth: A Non-Communist Manifesto Third Edition* (New York: Cambridge University Press, 1960).

systems. Ecological modernization⁵³ posits a similar progression to environmental maturity at the national level, with economic development leading to increased efficiency of resource use, less waste production, and transition to progressively less polluting energy sources such as wind and solar. Other analytic models operating at an international or global level posit similar linear transitions from wood to coal to oil to renewable energy. Smil⁵⁴ uses energy as a key (but not sole) explanatory factor in the long term evolution of human civilization, seeking to bring together material, technological and social processes into a linear narrative.

25 Smil's⁵⁵ work builds on a long tradition of analyses focused on long term changes in energy use as a critical (or sometimes the critical) factor in social change.⁵⁶ Richard Adams's⁵⁷ efforts to bring energy and power together in an energetics framework that linked natural and social processes similarly focuses on this apparent long term linear model of energetic evolution. Debeir, Deleage and Hemery⁵⁸ present an earlier example of this linear energy transition model over the truly long term, with particular emphases on Chinese history and on nuclear power, the expected "next big thing" in energy terms of the

mid-20th century. Podobnik's⁵⁹ world-systems model of energy systems transitions posits a similar linear model.⁶⁰

In some ways, this conception of linear energy 26 transitions could be seen as closely tied to Arrighi's⁶¹ hegemonic sequences, with Holland's wood-based system followed by Great Britain's coal-based system, then the U.S.' oil-based system, and now the potentially Chinese-led renewable system. However, this linear transition model and its potential relationship to hegemonic cycles oversimplifies the relationship between energy and long term social change. These linear models of transitions do not adequately capture the energy realities of the 20th or the 21st centuries; global coal consumption has doubled in the 2000s because of China's rapid ascent fueled in large part by coal.⁶² Rather than assuming linear energy transitions, it would be better to understand energy systems as a process of adding new energy sources to existing systems.⁶³ Oil is certainly a critical component of the world and national energy systems since the early 1900s, but the excessive focus on oil, termed "petromyopia" by Jones⁶⁴ in his critique of energy analysis, has led to insufficient attention being paid to other energy sources. The fears about peak oil that emerged in the 1990s and early 2000s⁶⁵ became a key justification for

53 Arthur P. J. Mol and David A. Sonnenfeld (eds), *Ecological Modernisation Around the World: Perspectives and Critical Debates* (Portland, OR: Frank Cass, 2000).

54 Smil, *Energy and Civilization: A History* (cf. note 7).

55 *Id.*

56 Staley, *Raw Materials in Peace and War* (cf. note 7); Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (cf. note 7); Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (cf. note 7); Yergin, *The Prize: The Epic Quest for Oil, Money and Power* (cf. note 7); Klare, *Resource Wars: The New Landscape of Global Conflict* (cf. note 7); Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy* (cf. note 7); Rhodes, *Energy: A Human History* (cf. note 7); Wrigley, *Energy and the English Industrial Revolution* (cf. note 7).

57 Adams, *Energy & Structure: A Theory of Social Power* (cf. note 7); Adams, *Paradoxical Harvest: Energy and Explanation in British History, 1870-1914* (cf. note 7); Adams, *The Eighth Day: Social Evolution as the Self-Organization of Energy* (cf. note 7).

58 Debeir, Deleage, and Hemery, *In the Servitude of Power: Energy and Civilization Through the Ages* (cf. note 7).

59 Podobnik, *Global Energy Shifts: Fostering Sustainability in a Turbulent Age* (cf. note 51)

60 Paul Gellert and Paul S. Ciccantell, "Coal's Persistence in the Capitalist World-Economy: Against Teleology in Energy 'Transition' Narratives", *Sociology of Development*, vol. 6, 2020, 194-221.

61 Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24)

62 Ciccantell and Gellert, "Chapter 7. Raw Materialism and Socio-Economic Change in the Coal Industry" (cf. note 10).

63 Gellert and Ciccantell, "Coal's Persistence in the Capitalist World-Economy: Against Teleology in Energy 'Transition' Narratives" (cf. note 60).

64 Christopher Jones, "Petromyopia: Oil and the Energy Humanities", *Humanities* vol. 5, no.36, 2015.

65 Matthew Simmons, *Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy* (Hoboken, NJ: John Wiley & Sons, 2005); Anthony Cordesman and Khalid Al-Rodhan, *The Global Oil Market: Risks and Uncertainties* (Washington, DC: Center for Strategic and International Studies, 2006); Kenneth Deffeyes, *Hubbert's Peak: The Impending World Oil Shortage* (Princeton: Princeton

both wars to control oil supplies⁶⁶ and for efforts to hasten the transition to renewable energy sources.⁶⁷ The shale revolution in the U.S. and the growth of the liquefied natural gas (LNG) trade have pushed “peak oil” off into the future and brought the U.S. back into its historic role as a major energy producer and exporter.⁶⁸ This reinvigoration of the U.S. oil and gas industries led the Trump Administration to proclaim U.S. energy dominance, a framing that “invites those who feel aggrieved under Obama administration regulatory policy and the multicultural identity politics of the left to renew their commitment to fossil fuels, American exceptionalism, and a restored social order and privilege”⁶⁹ and that the Administration views as a new geopolitical reality.

27 The rest of this paper will focus more on coal and other energy sources, in part to avoid Jones’ concern about petromyopia⁷⁰ and in part because coal and natural gas have been and remain critical to ascendant economies and in shaping long term change in the capitalist world-economy.

University Press, 2001); Matthew Huber, *Lifeblood: Oil, Freedom, and the Forces of Capital* (Minneapolis: University of Minnesota Press, 2013); Yergin, *The Quest: Energy, Security, and the Remaking of the Modern World* (cf. note 3).

66 Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy* (cf. note 7); John Bellamy Foster, “Peak Oil and Energy Imperialism”, *Monthly Review* vol. 60, no. 3, 2008, 12-33.

67 Smil, *Energy and Civilization: A History 2017* (cf. note 7); Benjamin K. Sovacool, “How long will it take? Conceptualizing the temporal dynamics of energy transitions”, *Energy Research & Social Science* vol. 13, 2016, 202-215; Benjamin K. Sovacool and Frank W. Geels. “Further reflections on the temporality of energy transitions: A response to critics”, *Energy Research & Social Science* vol. 22, 2016, 232-37.

68 Alan Krupnick and Isabel Echarte, *Economic Impacts of Unconventional Oil and Gas Development* (Washington, DC: Resources for the Future, 2017); Vaclav Smil, *Natural Gas: Fuel for the 21st Century* (Chichester, UK: John Wiley & Sons, 2015); Agnia Grigas, *The New Geopolitics of Natural Gas* (Cambridge, MA: Harvard University Press, 2017); Ciccantell Paul S., “Liquefied Natural Gas: Redefining Nature, Restructuring Geopolitics, Returning to the Periphery?”, *American Journal of Economics and Sociology* vol. 79, 2020, 265-300.

69 Jen Schneider and Jennifer Peeples, “The Energy Covenant: Energy Dominance and the Rhetoric of the Aggrieved”, *Frontiers in Communication* vol. 3, 2018, 1-12. 1.

70 Jones, “Petromyopia: Oil and the Energy Humanities” (cf. note 64).

U.S. ECONOMIC ASCENT AND ACCESS TO CANADIAN ENERGY

U.S. economic ascent and industrialization in the nineteenth century took place in the context of British hegemony, with British capital, technology, and markets for American raw materials, most notably cotton, providing critical support for U.S. economic development.⁷¹ Further, other challengers also developed rapidly over the course of the 1800s, including France, Germany, Russia, and Japan, all of which needed access to growing volumes and varieties of energy and other raw materials. 28

The main U.S. solution during the 19th century was territorial expansion of national boundaries to incorporate new raw materials peripheries. Land was seized via warfare, forcible expulsion, and other means from Native American groups and Mexico, while other areas were purchased from France and Russia. This territorial expansion provided a wide range of resources to support U.S. industrialization, ranging from crop and grazing land to wood for construction to coal for electricity generation and metal smelting to iron and copper for construction and machinery to oil for industry and transport. The expansion of national boundaries to a continental scale by the mid-1800s largely obviated any raw materials demand-driven imperial efforts beyond these boundaries during the second half of the 1800s, despite the efforts by some business and political interests in joining the race for colonies in the 1880s and 1890s.⁷² 29

Despite the abundance of coal in Appalachia, the high cost of transporting this coal to metal smelters in Montana and the Northwest led 30

71 John Agnew, *The United States in the World Economy* (Cambridge: Cambridge University Press, 1987); Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24).

72 Agnew, *The United States in the World Economy* (cf. note 71); Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24); Chase-Dunn, *Global Formation: Structures of the World-Economy* (cf. note 50); Evan Thomas, *The War Lovers: Roosevelt, Lodge, Hearst, and the Rush to Empire, 1898* (New York: Little, Brown and Company, 2010).

to an early alternative to energy imperialism to acquire coal and coke from coal deposits in western Canada at the turn of the twentieth century. Large deposits of metal ores in Montana, most notably copper, required smelting with coke derived from metallurgical coal to remove impurities from the metal ores, but the closest high quality metallurgical coal deposits were located just across the border with Canada in Alberta and British Columbia. The Canadian Rockies in this area contain large amounts of high quality metallurgical coal (used for producing coke to process iron ore into steel and to process other ores) and steam coal (used for generating electricity). The geologic processes that created these mountains produced this high quality coal but covered it with overburden and created coal seams that are often discontinuous and angled. Coal seams are generally quite large and lie in high (up to 11,000 feet) and extremely steep mountains. The climate is very cold and severe in the winter and, in combination with the rugged topography, the area has very limited arable land and limited timber coverage.⁷³ Further, the mountainous topography makes transporting the coal extracted difficult and expensive. The coal in the region has long been very attractive to mining and coal using firms because of these natural characteristics, but extracting and transporting the coal is challenging and costly.⁷⁴

31 These natural characteristics, in combination with the long distances to potential coal markets, meant that coal extraction on a significant scale had to await the arrival of railroads.

⁷³ Richard Cannings and Sydney Cannings, *British Columbia: A Natural History of its Origins, Ecology, and Diversity with a New Look at Climate Change* (3rd ed.) (Vancouver: Greystone Books, 2015); Ben Gadd, *Handbook of the Canadian Rockies* (Jasper, AB: Corax Press, 2009); Bruce Ramsey, *The Elk River Valley: 100 Years of Coal Mining* (Altona, Manitoba: Friesens Corporation, 1997).

⁷⁴ R.G. Harvey, *Carving the Western Path: By River, Rail, and Road Through B.C.'s Southern Mountains* (Victoria, BC: Heritage House Publishing Company, 1998); Paul S. Ciccantell, "Chapter 3: Mountains, Coal, and Life in British Columbia and West Virginia", in Ann Kingsolver and Sasikumar Balasundaram (eds.) *Global Mountain Regions* (Bloomington, IN: Indiana University Press, 2018), 45-58.

In the Elk Valley, the arrival of the Canadian Pacific Railway (CPR) via the Crowsnest Pass line in 1898⁷⁵ opened the area for coal exploration and development. Although small deposits were already known, employees of the Canadian Pacific located extensive deposits on the Alberta side of the border in the Crowsnest Pass region and in the Elk Valley on the British Columbian side of the border, as did a number of other visitors and prospectors.⁷⁶

The area's proximity to the active metal mining and smelting industry of Montana and to the mainline of the Great Northern Railway (GNR) in the U.S. owned by J.J. Hill also led to exploration and coal development by affiliates of the GNR (some of the deposits Hill's affiliates developed in the Elk Valley and the Crowsnest Pass region were actually purchased from the CPR, which for a time had little interest in coal mining) and the construction of a branch line across the border to transport coal and coke to Montana and other U.S. markets.⁷⁷

Once the entry of the railroads solved the transport problem, the coal industry in the region developed rapidly. The railroads themselves

⁷⁵ Harold Innis, *A History of the Canadian Pacific Railway* (London: P.S. King & Son, 1923); John Eagle, *The Canadian Pacific Railway and the Development of Western Canada* (Kingston, ON: McGill-Queen's University Press, 1989).

⁷⁶ Ramsey, *The Elk River Valley: 100 Years of Coal Mining* (cf. note 73).

⁷⁷ Eagle, *The Canadian Pacific Railway and the Development of Western Canada* (cf. note 75); Harvey, *Carving the Western Path: By River, Rail, and Road Through B.C.'s Southern Mountains* (cf. note 74); Harvey, *Carving the Western Path: Routes to Remember* (Victoria, BC: Heritage House Publishing Company, 2006); David Davies, "The Crows Nest Southern Railway", in Wayne Norton and Naomi Miller (eds.) *The Forgotten Side of the Border: British Columbia's Elk Valley and Crowsnest Pass* (Kamloops, BC: Plateau Press, 1998), 58-65; A.A. den Otter, "Bondage of Steam: The CPR and Western Canadian Coal", in Hugh Dempsey (ed.) *The CPR West: The Iron Road and the Making of a Nation* (Vancouver: Douglas & McIntyre, 1984), 191-208; John Fahey, *Inland Empire: D.C. Corbin and Spokane* (Seattle: University of Washington Press, 1965); Michael Malone, *James J. Hill: Empire Builder of the Northwest* (Norman, OK: University of Oklahoma Press, 1996); Larry Haeg, *Harriman Vs. Hill: Wall Street's Great Railroad War* (Minneapolis: University of Minnesota Press, 2013); Ramsey, *The Elk River Valley: 100 Years of Coal Mining* (cf. note 73)

provided a market for coal and some of the capital needed to develop these coal deposits. Once the small initially discovered outcrops of coal had been mined, firms moved on to small and then progressively larger underground mines in the first half of the twentieth century as underground mining technology slowly increased in scale. Ownership of coal mines was almost all in the hands of external owners who used the region's naturally produced coal for their own interests, the CPR based in Toronto and the GNR with its owners based in Seattle, Spokane and Minneapolis.⁷⁸ The key local developmental impact of the coal mines was local processing of coal into coke in coke ovens that was then shipped to the smelters across the border in Montana.⁷⁹

34 U.S. mining firms and railroads sought to overcome the Canadian government's objections to foreign ownership of Canadian resources and railroads by promising large investments and boosts to Canadian economic development by allowing U.S. firms to develop the mines and rail infrastructure to bring coal and coke across the border to the U.S. Despite ongoing contentious political debates, a combination of U.S. and Canadian firms developed coal mines, coke ovens, and railroads in Canada that supplied U.S. metal smelters for the first half of the twentieth century.⁸⁰ U.S. foreign direct investment, along

with Canadian capital from the CPR, in railroads and mines developed this extractive periphery that supplied Canadian and U.S. owned smelters and railroads in Canada and the U.S. with steam coal, coking coal, and coking coal processed into coke near the mines in both British Columbia and Alberta. These coke exports to the U.S. were another alternative to energy imperialism, accommodating resource nationalism development and national unification efforts in Canada by processing a raw material locally, while relocating an energy-intensive and pollution-intensive industry to the extractive periphery in Canada.

Coal production in both southeastern British Columbia and southern Alberta faced near-extinction by the end of the 1950s after the dieselization of North American railroads and the closure of many of the smelters in western Canada and the northwestern U.S.⁸¹ As will be discussed below, this near-extinction created an opportunity for Japanese steel firms and the Japanese state to employ another alternative to energy imperialism strategy to acquire metallurgical coal from this area beginning in the 1960s.⁸²

This alternative to energy imperialism in the western U.S. and Canada was soon replicated in the eastern U.S. and Canada with the development of the hydroelectric potential in eastern Canada, including the large hydroelectric plant at Niagara Falls in Canada and the development of the "frozen electricity" energy-intensive aluminum smelting industry in Canada. The U.S.-based

⁷⁸ Eagle, *The Canadian Pacific Railway and the Development of Western Canada* (cf. note 75); Harvey, *Carving the Western Path: By River, Rail, and Road Through B.C.'s Southern Mountains* (cf. note 74); Harvey, *Carving the Western Path: Routes to Remember* (cf. note 77); Davies, "The Crows Nest Southern Railway" (cf. note 77); den Otter, "Bondage of Steam: The CPR and Western Canadian Coal" (cf. note 77); Fahey, *Inland Empire: D.C. Corbin and Spokane* (cf. note 77); Ramsey, *The Elk River Valley: 100 Years of Coal Mining* (cf. note 73); John Williams, *Appalachia: A History* (Chapel Hill, NC: University of North Carolina Press, 2002)

⁷⁹ Harvey, *Carving the Western Path: By River, Rail, and Road Through B.C.'s Southern Mountains* (cf. note 74); Harvey, *Carving the Western Path: Routes to Remember* (cf. note 77); Fahey, *Inland Empire: D.C. Corbin and Spokane* (cf. note 77); Malone, *James J. Hill: Empire Builder of the Northwest* (cf. note 77); Haeg, *Harriman Vs. Hill: Wall Street's Great Railroad War* (cf. note 77); Ramsey, *The Elk River Valley: 100 Years of Coal Mining* (cf. note 73).

⁸⁰ Eagle, *The Canadian Pacific Railway and the Development of Western Canada* (cf. note 75); Davies, "The

Crows Nest Southern Railway" (cf. note 77); Fahey, *Inland Empire: D.C. Corbin and Spokane* (cf. note 77); Malone, *James J. Hill: Empire Builder of the Northwest* (cf. note 77); Haeg, *Harriman Vs. Hill: Wall Street's Great Railroad War* (cf. note 77); Ramsey, *The Elk River Valley: 100 Years of Coal Mining* (cf. note 73).

⁸¹ Ramsey, *The Elk River Valley: 100 Years of Coal Mining* (cf. note 73); Ciccantell, "Chapter 3: Mountains, Coal, and Life in British Columbia and West Virginia" (cf. note 73); Liza Piper and Heather Green, "A Province Powered by Coal: The Renaissance of Coal Mining in Late Twentieth-Century Alberta", *Canadian Historical Review* vol. 98, no. 3, 2017, 532-567.

⁸² Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 7).

Aluminum Company of America (Alcoa) created a Canadian subsidiary to use cheap Canadian hydroelectricity to produce aluminum ingot for export to the U.S., opening its first Canadian aluminum smelter in 1901,⁸³ as Canadian aluminum production rose from less than 1,000 metric tons in the early 1900s to 38,000 tons in 1928, then expanded rapidly in the World War II and Korean War eras (from 75,000 tons in 1939 to 556,000 tons in 1955), with production chiefly exported to the U.S. and to Great Britain.⁸⁴ This relationship has continued now for more than a century. In the early 1950s, although the U.S. was the world's largest producer of aluminum, Canada supplied 73% of U.S. aluminum imports; in 1970, Canada's share was 93%, in 1994 it was 58%, and in 2016 Canada supplied 49% of U.S. aluminum imports.⁸⁵ U.S. direct foreign investment in aluminum in Canada was thus another alternative to energy imperialism via "frozen electricity" of aluminum ingot, accommodating Canadian economic nationalism and economic development by creating a new Canadian industry.

37 This cheap Canadian hydroelectricity, following the development of long distance electricity transmission infrastructure in the first third of the 20th century, itself became an important export product to the U.S. Northeast.

⁸³ S. Brubaker, *Trends in the World Aluminum Industry* (Baltimore, MD: Johns Hopkins University Press, 1967); Brad Barham, "Strategic Capacity Investments and the Alcoa-Alcan Monopoly, 1888-1945", in Brad Barham, Stephen Bunker, and Denis O'Hearn (eds.), *States, Firms, and Raw Materials: The World Economy and Ecology of Aluminum* (Madison, WI: University of Wisconsin Press, 1994), 69-110; Charles Carr, *Alcoa: An American Enterprise* (New York: Rinehart, 1952); George Smith, *From Monopoly to Competition: The Transformations of Alcoa, 1888-1986* (Cambridge: Cambridge University Press, 1988); Carmine Nappi, "Canada: An Expanding Industry", in M. Peck (ed.), *The World Aluminum Industry in a Changing Energy Era* (Washington, DC: Resources for the Future, 1988), 175-221; Campbell Duncan, *Global Mission: The Story of Alcan Volume I to 1950* (Toronto: Ontario Publishing Company, 1985); David Massell, *Amassing Power: J.B. Duke and the Saguenay River 1897-1927* (Montreal: McGill-Queen's University Press, 2000).

⁸⁴ Mitchell, *International Historical Statistics: The Americas*, 365 (cf. note 6).

⁸⁵ United States Bureau of Mines/United States Geological Survey (USBM/USGS), *Minerals Yearbook* (Washington, DC: USBM/USGS, Various Years).

These exports began in 1921 at 885 million kilowatt-hours, rose to 1,826 million kwh by 1938, 5,511 million kwh in 1960, and 11,409 million kwh (7,438 million net kwh after subtracting imports from the U.S. of 3,971 million kwh after the large scale integration of the regional grids in the U.S. with the Canadian grid in the 1960s.⁸⁶ Canadian electricity exports to the U.S. remain a critical element of the interconnected North American electrical grid,⁸⁷ with net exports to the U.S. in 2018 of 48 billion kwh.⁸⁸

The origins of the CUSFTA and NAFTA in the mid- 38 1980s during the Reagan administration were in one sense a defensive maneuver to create a secure, continental energy market that would help the U.S. compete in the new multipolar world.⁸⁹ Energy trade with Canada had long been characterized by trade disputes; in periods of abundant energy supplies, U.S. energy producers had often sought to keep Canadian exports out of the U.S. market, but during periods of shortage Canada had threatened to and

⁸⁶ Leacy, *Historical Statistics of Canada*, Q92-96 (cf. note 6)

⁸⁷ Joseph Dukert, *The Evolution of the North American Energy Market*. Center for Strategic and International Studies Policy Papers on the Americas Volume X Study 6, 1999; Joseph Dukert, "The Evolution of the North American Energy Market: Implications of Continentalization for a Strategic Sector of the Canadian Economy." *American Review of Canadian Studies* vol. 30, no. 3, 2000, 349-359; Joseph Dukert, "North American Energy, 2000-2007: What a Difference Those Years Make!", *American Review of Canadian Studies* vol. 37, no. 1, 2007, 57-76; Monica Gattinger, "From Government to Governance in the Energy Sector: The States of the Canada-U.S. Energy Relationship", *American Review of Canadian Studies* vol. 35, no. 2, 2005, 321-352; Geoffrey Hale, "'In the Pipeline' or 'Over a Barrel'? Assessing Canadian Efforts to Manage U.S. Canadian Energy Interdependence", *Canadian-American Public Policy* vol. 76, 2011, 1-44.

⁸⁸ U.S. Energy Information Administration, EIA.gov: <https://www.eia.gov/todayinenergy/detail.php?id=39632> (accessed 08/05/20).

⁸⁹ S. Shrybman, "Trading Away the Environment", in Grinspun, R. and Cameron, M. (eds.), *The Political Economy of North American Free Trade* (New York: St. Martin's Press, 1993), 271-196. 274; J. Dillon, "The Petroleum Sector Under Continental Integration", in Grinspun, R. and Cameron, M. (eds.), *The Political Economy of North American Free Trade* (New York: St. Martin's Press, 1993), 315-330.315; R. Pastor, "Post-Revolutionary Mexico: The Salinas Opening", *Journal of Interamerican Studies and World Affairs* vol. 32, no. 3, 1990. 1-22. 20.

sometimes had cut off exports to the U.S.⁹⁰ As Drache⁹¹ has argued, “U.S. negotiators aimed for and got ‘secure and enhanced access’ to Canada’s resource sector”.⁹² The electricity industry was dramatically transformed by this integration between the U.S. and Canada.⁹³

39 Again, this alternative to energy imperialism included both U.S. and Canadian capital and sometimes difficult and contentious negotiations between national, provincial, and state governments to build an energy supply relationship between eastern Canadian rivers with huge hydroelectric potential and the most densely populated and industrialized area of the U.S. in the first half of the 20th century, and then the integration of regional grids between the two countries.⁹⁴ This energy supply relationship remains vitally important to the U.S. in the twenty-first century.

40 Because both the coal mining regions in western Canada and the Niagara region in eastern Canada border the U.S., building the infrastructure of railroads and electric lines and the movement of capital equipment and raw materials across the border between these extractive peripheries and the U.S. was relatively straightforward, especially in comparison to building such connections across oceans. However, this redirection of these extractive peripheries from Great Britain to the U.S. was still a fraught process in political and economic terms. Canada’s long history as an extractive periphery for Great Britain⁹⁵ and Britain’s continued reliance on this relationship,

⁹⁰ Macdonald D., “The Politics and Economics of Bilateral Free Trade: Canadian Perceptions”, in Fried, E., Stone, F. and Trezise, P. (eds.), *Building a Canadian-American Free Trade Area* (Washington: Brookings Institution, 1987), 11-17, 29.

⁹¹ D. Drache, “Assessing the Benefits of Free Trade”, in Grinspun, R. and Cameron, M. (eds.), *The Political Economy of North American Free Trade* (New York: St. Martin’s Press, 1993), 73-88.

⁹² *Ibid.*, 81.

⁹³ Paul S., Ciccantell, “A Continental Electricity Industry”, In Rugman, Alan (ed.), *North American Economic and Financial Integration: Research in Global Strategic Management* Vol. 10. (Oxford: Elsevier Press, 2004).

⁹⁴ *Id.*

⁹⁵ Harold Innis, *Essays in Canadian Economic History* (Toronto: University of Toronto Press, 1956).

in the context of building and consolidating the unification of Canada during the late 1800s and early 1900s (British Columbia did not become a province until 1871, an agreement linked to the building of a national railway network, and Alberta did not become a province until 1905), made the British government and many governmental actors and capitalists in Canada quite wary of these new raw materials relationships with the U.S. The Canadian Pacific Railroad (CPR), long seen as a leading force in the unification of Canada in both infrastructural and political terms as it built a national railway network,⁹⁶ fought efforts by the U.S.-based Great Northern Railway (GNR) to link the western coalfields to the smelters in the U.S. Northwest.⁹⁷ The redirection of these Canadian extractive peripheries, although geographically simple, was at the time quite difficult and contested. The close integration of the U.S. and Canadian economies that emerged in the second half of the 20th century, connections that were marked by the automobile, Canada-U.S. Free Trade Agreement (CUSFTA), and North American Free Trade Agreement (NAFTA) agreements, connections that were themselves contested in Canada (perhaps most bluntly by Hurtig⁹⁸ in his analysis of the CUSFTA), were rooted in these much earlier efforts to redirect Canada’s extractive peripheries to supply the ascendant U.S.

In turn, the U.S. as a hegemonic power in the mid-20th century would become the broker of a new alternative to energy imperialism after World War II in pursuit of its geopolitical goal of rebuilding Japan as a bulwark against Communism in Asia. U.S. efforts to rebuild Japan after World War II and help Japan resume its economic

⁹⁶ Innis, *A History of the Canadian Pacific Railway* (cf. note 75); Eagle, *The Canadian Pacific Railway and the Development of Western Canada* (cf. note 75).

⁹⁷ Eagle, *The Canadian Pacific Railway and the Development of Western Canada* (cf. note 75); Fahey, *Inland Empire: D.C. Corbin and Spokane* (cf. note 77); Malone, *James J. Hill: Empire Builder of the Northwest* (cf. note 77); Haeg, *Harriman Vs. Hill: Wall Street’s Great Railroad War* (cf. note 77); Ramsey, *The Elk River Valley: 100 Years of Coal Mining* (cf. note 73).

⁹⁸ Mel Hurtig, *The Betrayal of Canada* (2nd ed.) (Toronto: Stoddart Publishing Company, 1992).

ascent based on coal, iron ore, and other raw materials supply arrangements were even more difficult than had been the case of the relationship between Canada and the U.S. Australia and Japan had just fought a war, with the Japanese military poised to invade Australia from nearby Papua New Guinea, and the Australian government and people had not forgotten.

JAPANESE STRATEGIES TO ACCESS RAW MATERIALS VIA ALTERNATIVES TO ENERGY IMPERIALISM

42 Japanese economic development from the Meiji Revolution of the 1860s through the early 1900s relied primarily on domestic raw materials. Coal production in Japan tripled during the 1880s and again in the 1890s, then doubled in the 1900s and again in the 1910s, rising from 880,000 tons in 1880 to 29.2 million tons in 1920 (see Table 1 below), reflecting Japan's rapid economic ascent and industrialization during this period. Coal imports were only a very small part of total coal consumption during this period, the result of the development of Japan's extensive domestic coal reserves. This rapid industrialization, however, depleted domestic sources, leading to a shift to direct imperial conquest of Manchuria and Southeast Asia in the 1930s and increasing reliance on imported raw materials, including metallurgical coal from Manchuria,⁹⁹ an example of classic energy imperialism.

43 Accelerated depletion of domestic coal supplies during World War II resulted in increasing technical difficulties and costs of domestic mining in the late 1940s and 1950s. Domestic metallurgical coal reserves for producing steel were almost completely exhausted. Obtaining metallurgical coal and iron ore at costs low enough to make Japanese steel production globally competitive presented key challenges for Japanese economic development and U.S. government efforts to rebuild Japan as a bulwark against

⁹⁹ Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4); Laura Hein, *Fueling Growth: The Energy Revolution and Economic Policy in Postwar Japan* (Cambridge, MA: Harvard University Press, 1990).

	Domestic Production	Total Imports	Coal Consumption	Import Dependence %
1874	0.21	0.009	0.219	4
1880	0.88	0.022	0.902	2
1885	1.3	0.011	1.311	0.8
1890	2.6	0.012	2.612	0.5
1895	4.8	0.07	4.87	1.4
1900	7.4	0.1	7.5	1.3
1905	11.5	0.3	11.8	2.5
1910	15.7	0.18	15.88	1.1
1915	20.5	0.62	21.12	2.9
1920	29.2	0.81	30.01	2.7
1925	31.5	1.8	33.3	5.4
1930	31.4	2.9	34.3	8.5
1935	37.8	4.0	41.8	9.6
1940	57.3	6.9	64.2	10.7
1945	29.9	0.5	30.4	1.6
1950	38.5	0.8	39.3	2.0
1955	42.4	2.9	45.3	6.4
1960	51.1	8.3	59.4	14.0
1965	49.5	17.1	66.6	25.7
1970	44.1	50.2	94.3	53.2
1975	19	62.1	81.1	76.6
1980	18.1	68.3	87.7	77.9
1985	16.4	93.4	109.4	85.4
1990	8.3	103.6	111.9	92.6
1995	6.3	127.3	133.5	95.4
2000	2.5	150.3	153.2	98.1
2005	1.2	177	178.2	99.3
2010	1.1	185.4	186.6	99.5
2015	1.3	189.2	190.5	99.3
2017	1.3	187.5	188.8	99.3

Millions of metric tons

Table 1: Japanese coal production, imports and consumption. Source: Japanese Industry 1968:34; USBM Minerals Yearbooks; IEA 1992, 1998; Japanese Economic Statistics; SCAP Natural Resources Section; IEA 2002; reproduced from Bunker and Ciccantell 2007; IEA Coal Information 2018; Mitchell 1995

communism in Asia in the context of the Cold War and the Korean War. The rapid economic ascent of Japan in the post-World War II period entailed a rapid growth in Japanese demand for coal and growing demand for imported coal.¹⁰⁰

¹⁰⁰ Hein, *Fueling Growth: The Energy Revolution and Economic Policy in Postwar Japan* (cf. note 99); Vernon, *Two Hungry Giants: The United States and Japan in the Quest for Oil and Ores* (cf. note 16); So *East Asia and the World Economy* (cf. note 4); Panda *Pacific Partnership: Japan-Australia Resource Diplomacy* (cf. note 16); Ackerman, *Japan's Natural Resources and Their Relation to Japan's Economic Future* (cf. note 16); Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

44 Japan's attempts to build a Pacific empire during World War II, combined with the onset of the Cold War and the resulting geopolitical unavailability of coal supplies from nearby Manchuria, made obtaining energy and other raw materials to support Japan's ascent incredibly difficult. From the perspective of the U.S. government, relatively nearby Australia presented the best opportunity to resolve this challenge and support Japanese economic development.¹⁰¹ Obtaining access to Australian coal in the late 1940s and early 1950s became the first major step in creating the raw materials supply system to sustain Japan's economic ascent. The U.S. State Department, U.S. Military Occupation Forces in Japan, the Japanese steel firms, and the Japanese state worked together to initially buy Australian coal indirectly, via U.S. military procurement channels, and then to establish direct short term and then long term supply agreements with Australian coal producers.¹⁰²

45 The search for sources of coking coal for the steel industry became the pioneering effort in establishing Japan's raw materials access strategies based on state-sector-firm cooperation and support from the existing hegemon. No global coal market existed in the late 1940s and early 1950s. The network of coaling stations around the world established by the British empire¹⁰³ and the U.S.¹⁰⁴ had fallen into disuse after the shift to oil for marine transport in the 1920s and 1930s. The eastern coast of Australia, 3,600 nautical miles away, provided a potential solution. Both coking and steam coal existed in Australia, most of it undiscovered. The Australian

state and mining firms active in Australia lacked incentives to explore for it, but Australian firms and the state governments of New South Wales and Queensland sought ways to increase steam coal exports to generate export revenues, economic growth, and employment and resolve a crisis of excess capacity and declining production and employment.¹⁰⁵

The Australians distrusted Japanese reliability 46 and did not plan to export metallurgical coal, the type of coal critical to Japan's steel industry and therefore its heavy industry-based development plans. From 1951 onward, U.S. State Department and other government officials in Australia promoted the idea of exporting metallurgical coal to Japan. The U.S. actively supported World Bank loans for Australian coal mines.¹⁰⁶ U.S. diplomats also consulted extensively with Australian businessmen and politicians known to favor expanded mining and export of Australian coal.¹⁰⁷ These U.S. efforts to gain Japanese access to Australian metallurgical coal finally succeeded when the U.S. devised a means of avoiding the politically sensitive problem of exporting to Japan. The Japanese Procurement Agency, a part of the U.S. Army occupation government of Japan, contracted for 100,000 tons of coking coal from Queensland in 1953.¹⁰⁸ Delivery began in 1955 and opened the door for constructing a new

¹⁰¹ Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

¹⁰² W. Borden, *The Pacific Alliance: United States Foreign Economic Policy and Japanese Trade Recovery, 1947-1955* (Madison: University of Wisconsin Press, 1984); Richard Samuels, *The Business of the Japanese State: Energy Markets in Comparative and Historical Perspective* (Ithaca: Cornell University Press, 1987); Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

¹⁰³ Barak, "Outsourcing: Energy and Empire in the Age of Coal, 1820-1911" (cf. note 11).

¹⁰⁴ Shulman, *Coal & Empire: The Birth of Energy Security in Industrial America* (cf. note 11).

¹⁰⁵ Panda, *Pacific Partnership: Japan-Australia Resource Diplomacy* (cf. note 16); Chris Fisher, *Coal and the State* (Melbourne: Methuen, 1987); Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

¹⁰⁶ Floyd Whittington, "Collinsville coking coal from the Bowen Basin, Australia, for Japan." July 24, 1953. Foreign Relations of the United States: 843.2552/1.2453.

¹⁰⁷ Donald W Smith, *American Consul General to Department of State*, August 6, 1952, Despatch 60, RG 59, Foreign Relations of the United States: 843.2552/8-652; Armistead Lee, "Australian Coking Coal for Japan." December 16, 1952. Foreign Relations of the United States: 843-2552/12/1652.; Floyd Whittington, "Letter from Whittington to Benjamin Graham, Graham-Newman Corporation." February 26, 1953. Foreign Relations of the United States: 843.2552/2-2753; Floyd Whittington, "Collinsville coking coal from the Bowen Basin, Australia, for Japan." July 24, 1953. Foreign Relations of the United States: 843.2552/1.2453.

¹⁰⁸ Armistead Lee, "Further Progress in Australian-Japanese Coking Coal Trade." May 4, 1953. Foreign Relations of the United States: 843.2552/5-453.

coal-supplying periphery for Japan. The U.S. government, pursuing its Cold War goal of rebuilding Japan, used its considerable economic and political leverage to convince an unwilling potential raw materials exporter by appealing to citizens and firms interested in exporting by funding politically appealing forms of raw materials trade relations that did not initially involve foreign direct investment by Japanese steel firms. Over the following decades, this U.S.-fostered coal supply relationship based on alternatives to energy imperialism grew rapidly.¹⁰⁹

47 The Japanese steel mills and the Japanese government replicated this raw materials access strategy in western Canada beginning in the 1960s in order to reduce their very high dependence on often unstable Australian supplies and to further reduce the coal of coal imports by fostering excess capacity and competition between coal exporters. Coal production in British Columbia confronted total extinction by the early 1960s. These long term contracts in Australia and Canada embodied the state-sector-firm coordination so critical to the development of the Japanese steel industry. The long term contracts linked all the Japanese steel mills, put them on an equal footing in terms of coal access and cost, and provided an important mechanism for MITI to coordinate steel capacity and production.¹¹⁰

48 The Japanese steel mills, with the assistance first of SCAP and later of the Japanese state, thus devised a model of long term contracts to guarantee long term secure access to metallurgical coal from Australia that could be transferred to other regions, an extremely effective alternative to energy imperialism. This new model accommodated the resource nationalism of host nations. It fundamentally altered the nature and composition of the world metallurgical coal industry, transforming metallurgical coal flows

from domestic movement from captive mines to their steel mill owners to transoceanic trade flows governed by long term contracts. Domestic and transnational firms assumed the capital cost and risks of opening up previously unexploited metallurgical coal deposits. Deposits that had not even been explored for earlier because of the tremendous distances between these deposits and potential markets suddenly became highly attractive. The Japanese steel mills used the market opportunities in Japan, long term contracts, and small equity investments as tools to induce mining firms in Australia and Canada to invest repeatedly in creating excess capacity in the world industry, driving down prices and the production costs of the Japanese steel mills. The Japanese steel mills refined this model during the 1970s and early 1980s in ways that made these long term contracts and the newly globalized coal industry even more favorable to the interests of the Japanese steel mills.¹¹¹

The Japanese steel mills replicated this model 49 in multiple locations during the 1970s and 1980s, creating a global excess capacity in metallurgical coal that drove down global coal prices in the late 1990s.¹¹² Intense global competition and excess capacity fomented by Japanese long term contracts lowers raw materials prices and reduces or eliminates rents (as demonstrated by the halving of real costs of importing coal into Japan between 1959 and 1998 from US\$86.65 to US\$43.63 in constant 1992 dollars),¹¹³ putting intense pressure on exporting firms to reduce costs or face bankruptcy.¹¹⁴

The experience gained from accessing coking 50 coal in Australia with minimal Japanese capital investment laid the foundation for the tremendously successful program for diversifying sources whose capital expenses were largely met

¹⁰⁹ Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

¹¹⁰ Johnson 1982; Samuels 1987; Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

¹¹¹ Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

¹¹² *Id.*

¹¹³ *Ibid.*, 188-189.

¹¹⁴ Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

by exporting states and firms: the “ABC policy (Australia, Brazil, and Canada)...a term applied to describe this approach, and to recognize the need for vigilant management of security of supply, quality, and delivery...the strategy has been clear: supply basic intermediate feedstock materials to downstream assembling and processing manufacturing industries at the lowest possible cost”.¹¹⁵ This model, in various forms and combinations¹¹⁶, since the late 1940s provided the material foundations for Japan’s economic ascent. The challenge of gaining access to Australia’s metallurgical coal began a learning process for the Japanese state and the Japanese steel mills on how to create the raw materials supply relations to support industrialization. Australia became the first major raw materials supplier directly dependent on Japanese markets; Brazil and Canada became during the 1960s the other two major pillars of Japan’s raw materials supply chains. Locationally, topographically, and politically, these countries presented very different sets of problems and opportunities for Japanese raw materials access strategies. In learning how to respond to and exploit these differences, the Japanese state and Japanese firms developed highly useful flexibility and agility that later serve them well in other countries.¹¹⁷

51 A very different industry provides another insightful case study of the alternatives to energy imperialism strategies developed and employed by Japanese firms and the Japanese state: aluminum. While lacking the raw material form of aluminum, bauxite ore, in its national territory, Japanese firms began developing a domestic aluminum smelting industry in the early 1900s as part of the broader process of economic development. After World War II, these firms, sometimes in partnership with the major U.S.

aluminum firms, rebuilt their domestic smelting industry and relied on imports of bauxite, mainly from Australia. The oil price shocks of 1973 and 1979, however, made this energy-intensive industry (aluminum ingot is often referred to as “frozen electricity” because energy is the single most expensive input required to remove impurities and produce almost pure aluminum ingot) uncompetitive in Japan.¹¹⁸

The Japanese aluminum firms and MITI had a ready alternative strategy: forming joint ventures with minority Japanese ownership and signing long term contracts with state-owned firms in hydroelectric-rich countries, most importantly Brazil, Venezuela, and Indonesia. These strategies accommodated the resource nationalist policies in all three of these nations in the 1970s and 1980s, with majority ownership remaining in the hands of the exporting nations’ governments and long term contracts for exports guaranteeing loans from Japan to build smelters costing hundreds of millions of dollars. Japanese aluminum firms rapidly closed their uncompetitive and often highly polluting domestic smelters and became the world’s leading importers of aluminum ingot that they transformed into auto parts, construction materials, airplane components, and consumer packaging (none of which required large amounts of energy). Aluminum ingot became one of the leading export industries in Brazil, Venezuela and Indonesia during the 1980s and 1990s, although subsequent domestic issues and global aluminum price volatility have made these large investments unprofitable in many instances.¹¹⁹

The aluminum industry is thus a different means of accessing low cost energy resources essential to industrial production: move the production facility and much of its cost and risk to a raw materials periphery and then import the

¹¹⁵ C. McMillan, *The Japanese Industrial System* (2nd ed.) (Berlin: Walter de Gruyter, 1985):79-80.

¹¹⁶ T. Ozawa, “Japan’s Largest Financier of Multinationalism: The EXIM Bank”, *Journal of World Trade Law* vol. 20, no. 6, 1986, 599-614.

¹¹⁷ Bunker and Ciccantell, *East Asia and the Global Economy: Japan’s Ascent, with Implications for China’s Future* (cf. note 4).

¹¹⁸ Paul Ciccantell, “Raw Materials, States and Firms in the Capitalist World Economy: Aluminum and Hydroelectricity in Brazil and Venezuela” Ph.D. Diss., University of Wisconsin-Madison, 1994.

¹¹⁹ *Id.*; Paul Ciccantell, “Globalization and Raw Materials-Based Development: The Case of the Aluminum Industry”, *Competition and Change* vol. 4, no. 2, 2000, 273-323.

processed material. Less pollution was produced in Japan, helping resolve another major domestic issue in the 1980s and 1990s in Japan, global aluminum prices ultimately fell in relative terms, making consumption of products made from aluminum less expensive in Japan and for export from Japan, and reducing the costs and risks of this industry to Japanese firms. This Japanese strategy for raw materials access was thus successfully extended to one of the world’s most energy-intensive industries, aluminum smelting, reducing the costs and risks to Japanese firms¹²⁰ using this alternative to energy imperialism.

- 54 One relatively new energy industry, natural gas imports via liquefied natural gas (LNG), has been pioneered by Japanese firms in recent years. This industry is following the alternative strategies developed in coal via reliance on long term contracts, minority Japanese participation in joint ventures in exporting countries, and technological innovations in large scale, capital-intensive processing and transport that all tie exporting countries to first Japan and, in recent years, more importing countries.¹²¹ The global LNG industry is very much a replication of these earlier alternative strategies.
- 55 The strategies developed to drive Japan’s economic ascent with the initial support of the U.S. would be replicated in support of China’s economic ascent over the last four decades.

CHINESE ALTERNATIVES TO ENERGY IMPERIALISM STRATEGIES SINCE THE 1980S ECONOMIC OPENING

- 56 China’s extremely rapid economic ascent in terms of sustained economic growth rates over the last four decades is well-known.¹²² In material energy consumption terms, economic ascent

is readily apparent. From only 6.3% of total world energy consumption in 1980, China’s share rose to 23.6% in 2018. In metric tons of oil equivalent, Chinese consumption in 2018 was 7.9 times greater than in 1980, while total world consumption had only doubled (see Table 2 below). This is the essence of economic ascent: a rapidly growing economy that needs more and more resources every year to sustain its growth trajectory at a far higher rate than most other economies and than the world economy as a whole.

	China	World Total
1980	416.8	6627.1
1985	530.1	7319.6
1990	683.9	8111.6
1995	890.9	8565.2
2000	1010.9	9356.4
2005	1803.4	10893.6
2010	2491.3	12119.4
2015	3009.8	13060.2
2018	3273.5	13864.9

Million Metric Tons of Oil Equivalent

Table 2: China’s Primary Energy Consumption. Source: BP 2019

The central element of this growth of energy consumption in the late twentieth and early twenty-first centuries in China was coal. Coal consumption provided the largest share of energy to drive Chinese economic ascent (see Table 3 below).

As this table shows, coal’s share did fall during this rapid ascent, but only from 73% to 58.2%, despite extensive efforts by the Chinese government to promote other energy sources, including nuclear power and renewable energy such as hydroelectricity, solar and wind power. Oil consumption increased by a factor of 7.3 and natural gas consumption by a factor of 19.6, but coal remains the most important energy sector, due to China’s large domestic coal reserves and the creation of a global market for seaborne

¹²⁰ *Id.*
¹²¹ Grigas, *The New Geopolitics of Natural Gas* (cf. note 68); Ciccantell “Globalization and Raw Materials-Based Development: The Case of the Aluminum Industry” (cf. note 119).
¹²² Arrighi, *Adam Smith in Beijing: Lineages of the Twenty-First Century* (cf. note 24).

	Primary Energy Consumption MTOE	Coal Consumption MTOE	Oil Consumption MTOE	Natural Gas Consumption MTOE
1980	416.8	304.3	87.0	12.4
1985	530.1	407.2	90.7	11.2
1990	683.9	527.5	114.5	13.3
1995	890.9	665.2	163.4	15.4
2000	1010.9	706.1	228.8	21.2
2005	1803.4	1324.6	334.9	40.4
2010	2491.3	1748.9	455.2	93.6
2015	3009.8	1914.0	573.5	167.4
2018	3273.5	1906.7	641.2	243.3

Millions of Metric Tons of Oil Equivalent

Table 3: China's Energy Consumption by Fuel Type Source: BP 2019

coal trade by Japan's earlier economic ascent that Chinese steel mills and power companies have been able to utilize to supplement domestic production, particularly with higher quality imported metallurgical coal.

59 China's large, diverse land area has provided significant quantities of energy resources in addition to coal, most notably large rivers for hydroelectricity, nuclear materials, land for solar installations, and strong sustained winds for wind power generation. Even with these material advantages, rapid economic ascent made imported energy raw materials critical to China's sustained growth, as the table below shows.

	Coal Production MTOE	Coal Consumption MTOE	Coal Net Imports MTOE
1980		304.3	
1985	436.2	407.2	-28.9
1990	539.9	527.5	-12.5
1995	680.4	665.2	-15.1
2000	707.3	706.1	-1.3
2005	1241.7	1324.6	82.9
2010	1665.3	1748.9	83.7
2015	1825.6	1914.0	88.4
2017	1747.2	1892.6	145.4

Million Metric Tons of Oil Equivalent

Table 4: China's Coal Production, Consumption and Trade Source: IEA 2018

As the table above shows, in less than four decades, Chinese coal production in MTOE terms has grown by a factor of 4.6 and China has moved from a position of a net exporter of coal to a net importer, chiefly of high quality metallurgical coal from Australia and Canada because of the rapid growth of China's steel industry and depletion of domestic metallurgical coal supplies¹²³ and of steam coal from Australia, Indonesia, and a number of other countries. Chinese steel firms are making use of the global seaborne metallurgical coal market created to serve the Japanese steel industry in the 1950s and 1960s¹²⁴ to supply what is now the world's largest steel industry. The Chinese steel industry produces half of all the world's steel every year, providing the essential building block of China's rapid urbanization and infrastructure building and exporting significant quantities to other parts of the world as well.

Despite the rapid growth of the Chinese economy and the resulting growing demand for imported raw materials, Chinese firms have long complained of paying higher prices for coal, iron ore, and other raw materials than do Japanese firms and other importing countries. In iron ore, for

¹²³ Ciccantell, *China and the Transformation of Global Capitalism* (cf. note 42)

¹²⁴ Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

example, in the 1990s and early 2000s Chinese steel firms typically paid US\$3.50-4.00 more per ton for iron ore than did the Japanese steel firms, even though China is the world's largest iron ore importer, because the Chinese steel firms did not coordinate their purchases.¹²⁵ Chinese steel firms during the 2010s have sought to replicate the Japanese model of making small foreign direct investments in coal and iron ore mines in order to reduce costs and guarantee secure access to rapidly growing volumes of these raw materials. In some cases, most notably in Africa, Chinese firms have also agreed to construct railroad and port infrastructure to move raw materials to the coast for export to China,¹²⁶ another alternative to energy imperialism strategy.

62 As was the case of British support for U.S. economic ascent and U.S. support for rebuilding Japan, the U.S. and Japan played key roles in China's ascent as the supplier of capital and technology to the rising economy as part of what Arrighi¹²⁷ analyzed as the period of financialization and decline in the existing hegemon and the efforts of financial capital in the hegemon to find new opportunities for investment in rapidly growing economies. Japanese firms played this role in the ascent of China in raw materials, transport, and many other industries in the 1990s and early 2000s. Coastal steel mills were built with technical assistance from Nippon Steel and other Japanese companies¹²⁸, an explicit replication of the Japanese steel-based Maritime Industrial Development Areas program to allow imports of coal and iron ore from Australia, Canada, and Brazil. Japanese steel firms are joint venture partners in several steel mills and steel

processing plants,¹²⁹ supplying capital and technology to their Chinese partners. In other raw materials industries, a wide variety of Japanese raw materials processing firms, trading companies and banks played similar roles.¹³⁰ Most significantly, China followed the Japanese model of coastal greenfield heavy industrialization to supply other industries at low cost¹³¹ as state policies focus on deepening industrialization in steel, shipbuilding, and other heavy industries via reliance on rapidly growing volumes of imported raw materials.

A close cooperative relationship between the U.S. and China supported China's economic ascent over the past four decades. Shared opposition to the Soviet Union led the U.S. and China to form what Henry Kissinger referred to as a "tacit alliance" by 1973 during which "Washington proceeded to support, arm, share intelligence with and nurture the economy of a Chinese government it had previously attempted to overthrow".¹³² The U.S. government supported China's military modernization and, via granting Most Favored Nation trading status to China, supported the origin and development of China's export-led development strategy.¹³³ Further, another analyst argued that "the training of People's Republic of China (PRC) students and scholars in the West, most importantly in the United States, by itself constitutes the most significant transfer of technology to one country in a short period of time ever. Without doubt, over the past four decades, China has obtained what it needed for its economic modernization from abroad (capital, technology and access to

¹²⁵ AFX News, "BHP Wins 9 Bln. USD, 25-Year Iron Ore Supply Deal with 4 China Steel Cos." *AFX News* March 1, 2004.

¹²⁶ Elizabeth Economy and Michael Levi, *By All Means Necessary: How China's Resource Quest is Changing the World* (Oxford: Oxford University Press, 2014).

¹²⁷ Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (cf. note 24)

¹²⁸ William Hogan, *The Steel Industry of China: Its Present Status and Future Potential* (Lanham, MD: Lexington Books, 1999a).

¹²⁹ Tse Pui-Kwan, *The Mineral Industry of China* (Washington, DC: U.S. Geological Survey, 2000).

¹³⁰ Id.

¹³¹ Todd D., *Industrial Dislocation: The Case of Global Shipbuilding* (London: Routledge, 1991); Hogan, *The Steel Industry of China: Its Present Status and Future Potential* (cf. note 128).

¹³² Mann 1999:8, cited in Baldev Raj Nayar, "The Geopolitics of China's Economic Miracle", *China Report* vol 40, no. 1, 2004, 19-47, 31.

¹³³ Nayar, "The Geopolitics of China's Economic Miracle" (cf. note 132); Kishore Mahbubani, "Understanding China", *Foreign Affairs* Vol. 84, No. 5: 49-50, 51-56, 57-58, 59-60; Bunker and Ciccantell, *East Asia and the Global Economy: Japan's Ascent, with Implications for China's Future* (cf. note 4).

markets) in greater amounts and at less cost than any country previously”.¹³⁴ This tacit alliance played a critical role in helping the U.S. in its geopolitical rivalry with its most formidable political rival of the mid-twentieth century, the Soviet Union, but, just as was the case of Japan-U.S. relations after World War II, led to the dramatic rise of a new economic and political ally and rival that transformed the world economy. As in the earlier cases of rapid and systemically transformative economic ascent, the existing hegemon unintentionally created a major new rival,¹³⁵ a rivalry clearly demonstrated by the Trump Administration-initiated trade war with China.

64 As is the case in Japan, the Chinese state is also supporting efforts to import LNG. Because China does possess large domestic natural gas reserves as well, extensive efforts are being made to increase natural gas extraction and transport domestically, including via the introduction of hydraulic fracturing technology from the U.S. The ongoing trade war with China is raising concerns in late 2019 that U.S. LNG exports to China and the pace of developing new LNG export facilities will be slowed by the 10% tariff imposed by China in September 2018¹³⁶ and then the 25% retaliatory tariffs the Chinese government imposed on U.S. LNG in June 2019.¹³⁷ The 10% tariff sharply reduced Chinese imports of U.S. LNG from 23 cargoes in the first four months of 2018 to only four cargoes in the same period in 2019.¹³⁸ As one industry trade group official noted, “what we are seeing is the interconnectivity of policy that has nothing to do

with gas, impacting gas. We are collateral damage”.¹³⁹ In short, the escalating U.S.-China trade war is already claiming a victim in one of the fastest-growing U.S. export industries, one that has received significant support from the Trump Administration for its role as “freedom gas” and a major new export industry.¹⁴⁰ This alternative to energy imperialism has thus become a hostage in the broader geopolitical and economic rivalry between the U.S. and China.

It is important to note that, despite the Trump 65 Administration’s focus on China as an economic and geopolitical rival in recent years, the analysis of China’s economic ascent does not necessarily mean that it can or will challenge the U.S. for hegemony. This is in fact a hotly debated topic across a variety of disciplines, with some analysts convinced that China will succeed the U.S. as hegemon,¹⁴¹ some who see it as possible,¹⁴² and some who are convinced that China’s ascent will not end in a new hegemony.¹⁴³ However, it is very clear that China’s economic ascent and the resulting demand for energy and other raw materials are transforming many regions of the world economy into extractive peripheries supporting China’s economic ascent.¹⁴⁴

CONCLUSION: PATTERNS OF ALTERNATIVES TO ENERGY IMPERIALISM

Rapid economic growth in ascendant economies 66 makes access to increasingly large and diverse flows of energy raw materials essential for sustained economic development. One historical

¹³⁴ Peter Van Ness, “Hegemony, Not Anarchy: Why China and Japan are not Balancing US Unipolar Power”, *International Relations of the Asia-Pacific* Vol. 2, No. 1, 2002, 131-150, 133.

¹³⁵ Bunker and Ciccantell, *Globalization and the Race for Resources* (cf. note 31). Bunker and Ciccantell, *East Asia and the Global Economy: Japan’s Ascent, with Implications for China’s Future* (cf. note 4).

¹³⁶ Meghan Gordon, “Oil, LNG Trade at Stake in US-China Talks Resuming Monday”, *Platts* January 4, 2019.

¹³⁷ Eric Yep et al., “China To Raise Tariff on US LNG to 25% But Excludes US Crude from List”, *Platts* May 13, 2019.

¹³⁸ Id.

¹³⁹ Paul Corey, “Political Challenges Send Chill Through US Gathering of LNG Interests”, *Platts* October 15, 2019.

¹⁴⁰ Ciccantell, “Liquefied Natural Gas: Redefining Nature, Restructuring Geopolitics, Returning to the Periphery?” (cf. note 68)

¹⁴¹ Andre Gunder Frank, *ReOrient: Global Economy in the Asian Age* (Oakland, CA: University of California Press, 1998).

¹⁴² Arrighi, *Adam Smith in Beijing: Lineages of the Twenty-First Century* (cf. note 24)

¹⁴³ Hung Ho-fung, *The China Boom: Why China Will Not Rule the World* (Columbia University Press, 2015).

¹⁴⁴ Economy and Levi, *By All Means Necessary: How China’s Resource Quest is Changing the World* (cf. note 126); Michael Klare, *The Race for What’s Left: The Global Scramble for the World’s Last Resources* (New York: Henry Holt and Company, 2012).

option to accomplish this task has been energy imperialism, but the socioeconomic and geopolitical changes of the second half of the twentieth century have made that model of dubious value in recent decades. There is a long history of alternatives to energy imperialism, dating back at least to the late 1800s and the process of U.S. economic ascent that relied in part on energy trade relationships with Canada. The Suez Crisis of 1956 may serve as the marker of a new era in which energy imperialism has become extremely difficult and costly.

67 Over the past century and a half, several patterns of alternatives to energy imperialism have developed in rapidly ascending economies, including the U.S., Japan, and China:

1. Redirecting material flows from existing raw materials peripheries from earlier ascendant economies, e.g. the U.S. eventually reorienting Canada to supply its needs rather than Great Britain, Japan and Australian coal;
2. Paying higher prices for imported raw materials to gain access to needed resources, e.g. Japan and coal in Australia and Canada in the 1960s and 1970s, China in the 1990s and 2000s;
3. Building large scale transportation infrastructure to lower transport costs and tie exporting countries with matched large infrastructure to the importing country, e.g. Japan and China with large ore carriers for coal, the U.S. and China building railroads in extractive peripheries;
4. Technological innovations in larger scale, more energy efficient energy consuming industries, e.g. steel mills in Japan that were replicated in China;
5. Long term contracts to induce exporting nations and firms to invest in infrastructure and mines, lessening the capital requirements for importing states and firms, e.g. railroads and ports in Australia and Canada for coal export, aluminum smelters and

hydroelectric dams to export aluminum to Japan;

6. Joint ventures with minority foreign ownership by firms in ascendant economies, transferring part of the cost and risk to states and firms in the exporting periphery and accommodating resource nationalist development efforts in the periphery, e.g. coal in Australia with Japanese and Chinese firms, aluminum smelters to Brazil, Venezuela, and Indonesia with Japanese firms; and,
7. Relocating energy-intensive industries like aluminum to energy resource-rich and resource nationalist energy-rich countries, e.g. aluminum smelters from Japan to Brazil, Venezuela and Indonesia.

The alternative strategies to energy imperialism developed in the coal industry now appear to be replicated in the newest form of long distance energy trade, liquefied natural gas, with consuming countries with growing energy demand and limited or nonexistent domestic supplies investing in large scale, capital-intensive, and specialized infrastructure that must be in place on both ends of the voyage, signing long term contracts to guarantee supplies, and forming joint ventures with minority foreign ownership to accommodate resource nationalist policies in exporting countries.¹⁴⁵ 68

The findings from these case studies call into question several assumptions about the role of energy in long term social change. For example, coal is typically viewed as the quintessential 19th century energy source that was rapidly displaced by oil in the 20th century.¹⁴⁶ However, over the long term, this transition narrative is highly misleading; the two most rapid and 69

¹⁴⁵ See, e.g., Grigas, *The New Geopolitics of Natural Gas* (cf. note 68); Ciccantell, "Liquefied Natural Gas: Redefining Nature, Restructuring Geopolitics, Returning to the Periphery?" (cf. note 68).

¹⁴⁶ Podobnik, *Global Energy Shifts: Fostering Sustainability in a Turbulent Age* 2006; Smil, *Energy and Civilization: A History* (cf. note 7); Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (cf. note 7).

transformative cases of economic ascent in the late twentieth and early twenty-first centuries, the post-World War II reconstruction of Japan and the rise of China since the 1980s, both relied fundamentally on coal to fuel their steel and electricity industries. Global coal production, driven by demand in China, in fact doubled during the first two decades of the twenty-first century.¹⁴⁷ Learning how to acquire coal imported from distant mining regions shaped the broader patterns of economic ascent in Japan with assistance from the U.S., patterns that were replicated with help from Japan and the U.S. in China. Moreover, in the wake of the two oil price shocks, political instability of Middle Eastern oil supplies, and price volatility in the 1990s and 2000s,¹⁴⁸ coal became even more attractive as an energy source, despite its large contribution to climate change. Oil was only part of a broader suite of diverse energy sources sought by rapidly growing economies in order to sustain economic development, sometimes via energy imperialism

but often via the alternative strategies that are the focus of this paper.

In short, the age of energy imperialism is likely to be past. In fact, as was recently noted in opinion piece in *The Washington Post* about President Trump's desire to keep the oil in Syria by a former war crimes prosecutor, "keeping Syria's oil could well constitute pillage-theft during war-which is banned in Article 33 of the Fourth Geneva Convention and the 1907 Hague Laws and Customs of War on Land...the prohibition has a solid grounding in the laws of war and international criminal justice, and the U.S. federal code, including as a sanction for the illegal exploitation of natural resources such as oil from war zones".¹⁴⁹ The alternative strategies that have developed since the late 1800s analyzed here may prove to be the future of the global energy system, at least as long as fossil fuels remain essential to the world economy.

¹⁴⁷ Ciccantell and Gellert, "Chapter 7. Raw Materialism and Socio-Economic Change in the Coal Industry" (cf. note 10); Gellert and Ciccantell, "Coal's Persistence in the Capitalist World-Economy: Against Teleology in Energy 'Transition' Narratives" (cf. note 60)

¹⁴⁸ Klare, *Blood and Oil* (cf. note 2); Yergin, *The Quest: Energy, Security, and the Remaking of the Modern World* (cf. note 3).

¹⁴⁹ Stewart James, "Trump Keeps Talking about 'Keeping' Middle East Oil. That Would Be Illegal", *The Washington Post* November 5, 2019.

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“Jumped on the boat of a territorialist organization”: State and capital at the origins of oil imperialism

Abstract

Modern imperialism springs from the interaction of the geopolitical and economic logics. The international oil industry offers an ideal case study of this connection. The links between nation states and multinational oil companies have been close and mutually advantageous. The oil majors took advantage of the expansion of the U.S. hegemony, both in terms of access to crude and profitable markets; the U.S. profited from the control of a key energy source. This chapter sketches the consolidation of this relationship throughout the first half of the 20th century. This will retell a familiar story, but from a different perspective. How does the capitalist logic of imperialism interact with the geopolitical imperative?

Plan of the article

- Introduction: Imperialism in the Age of Capitalism
- Empires of profit
- Forging oil imperialism
- Harold Ickes and the search for a new oil imperialism
- The postwar petroleum order
- The shock
- Epilogue

INTRODUCTION: IMPERIALISM IN THE AGE OF CAPITALISM

- 1 In his 1939 essay 'The Jews and Europe', Max Horkheimer wrote that "whoever is not willing to talk about capitalism should also keep quiet about fascism".¹ As Alex Callinicos comments, "I think Horkheimer was right about fascism, but his remark could be applied to imperialism: modern imperialism is capitalist imperialism".²
- 2 Imperialism – a process of territorial expansion, through coercive and/or hegemonic means, of a political entity characterized by asymmetric power relations between a centre and a periphery – dates back to the dawn of political history and it has been driven by a multitude of factors, including human nature and, first and foremost, power politics. Yet there is a specificity of modern imperialism that cannot be ignored: imperialism in the modern era, say at least since the 1870s but we might maybe go back to 17th-century Holland, is understandable only in close connection with the development of capitalism. This does not deny the importance of geopolitics. Yet, at the same time, it is impossible to understand imperialism – and international relations – without considering the interaction of geopolitical and socioeconomic factors.³
- 3 As Alex Callinicos writes: "capitalist imperialism is constituted by the intersection of two forms of competition, namely economic and geopolitical".⁴

¹ Max Horkheimer, "Die Juden und Europa", *Zeitschrift für Sozialforschung* vol. VII/1939 (New York: Institute of Social Research, 1940), 115. English translation available at: <https://thecharnelhouse.org/2015/03/20/the-jews-and-europe/> (accessed 09/06/2020).

² Alex Callinicos, *Imperialism and Global Political Economy* (Cambridge: Polity Press, 2009), 10.

³ This is the argument put forward by Peter Gowan in his review of John J. Mearsheimer *The Tragedy of Great Power Politics*: Peter Gowan, "A Calculus of Power", *New Left Review*, n° 16, 2002. The intersection of the social and the geopolitical as crucial in understanding international relations, is at the foundation of the "uneven and combined development" approach; for an introduction see Justin Rosenberg, "Isaac Deutscher and the Lost History of International Relations", *New Left Review*, n° 215, 1996.

⁴ Callinicos, *Imperialism*, 15 (cf. note 2).

From this perspective, modern (capitalist) imperialism is the result of two mutually influencing forces. One is the continuation of Great power military and territorial competition that had characterized Europe since the 15th century. The other is capitalist logic: the inherently expansionist and competitive nature of capitalism which fuels inter-capitalist rivalries and those between the owners of capital and the wage earners. The latter conflict sometimes is diverted into aggressive foreign policy (social imperialism).⁵

Giovanni Arrighi and David Harvey have delved into the dialectical relationship between the "territorial" and the "capitalist" logic of power. As Harvey wrote:

The fundamental point is to see the territorial and the capitalist logics of power as distinct from each other. Yet it is also undeniable that the two logics intertwine in complex and sometimes contradictory ways. [...] The relation between these two logics should be seen, therefore, as problematic and often contradictory (that is, dialectical) rather than as functional or one-sided. This dialectical relation sets the stage for an analysis of capitalist imperialism in terms of the intersection of these two distinctive but intertwined logics of power. The difficulty for concrete analyses of actual situations is to keep the two sides of this dialectic simultaneously in motion and not to lapse into either a solely political or a predominantly economic mode of argumentation.⁶

It follows that, to understand imperialism, it is essential to investigate the relation between political power and big business, the sphere of relations that Braudel identified with capitalism *tout court*.⁷ In this domain, one walks a

⁵ Geoff Eley, "Defining social imperialism: use and abuse of an idea", *Social History*, vol. 1, 1976.

⁶ David Harvey, *The New Imperialism* (Oxford: Oxford UP, 2003), 29-30.

⁷ "Capitalism only triumphs when it becomes identified with the State, when it is the State". The zone in which big business meet the power of the State is – Braudel adds – "the zone of the anti-market, where the great predators roam and law of the jungle operates. This – today and in the past, before and after the industrial revolution – is the

fine line between two binary views. In one, cultivated in some corners of the Marxist tradition, the government is seen as the executor of the will of the ruling class, an instrument manipulated by the bourgeoisie. This conception denies any autonomy of the state with regards to the dominant social forces, reducing the motivations behind public policy to direct economic interests.⁸ But, as Callinicos notes, even the Bush-Cheney administration – “memorably described by Mike Davis as the executive committee of the American Petroleum Institute” – cannot be portrayed as exclusively driven by the demands of Halliburton.⁹

- 7 At the other pole is the liberal view of the state as a neutral ground, mediating between civil society and the national community,¹⁰ a view marred by a blindness to the conflictual nature of politics and social relations.¹¹ For this reason, such an approach cannot stand the test of the empirical reality.
- 8 This raises the need for a more nuanced point of view.
- 9 The international oil industry offers an ideal case study. As we shall see, the links between the nation state and multinational oil companies have been

real home of capitalism.” (Fernand Braudel, *Afterthoughts on Material civilization and Capitalism* (Baltimore: The Johns Hopkins UP, 1977), 64; Idem, *Civilization and Capitalism, 15th-18th Century: Vol. II. The Wheels of Commerce* (London: Collins, 1982), 230, italics added).

8 “The literature on imperialism and empire too often assumes an easy accord between them: that political-economic processes are guided by the strategies of state and empire and that states and empires always operate out of capitalistic motivations”. Harvey, *The New Imperialism*, 29 (cf. note 6).

9 Callinicos, *Imperialism*, 15 (cf. note 2). Halliburton is a U.S.-based multinational company, active in the oil field service sector.

10 For a critique of this point of view see Ralph Miliband, *The State in Capitalist Society* (New York: Basic Books, 1969), chapter 4.

11 As McCormick has written, it is “the American Dream” view which sees decision-making as “the end product of numerous private, voluntary, democratic groups competing with each other in a relatively coequal way”, thus substituting “the mystification of self-evident truths [...] for systematic exploration”. (Thomas J. McCormick, “Drift or Mastery? A Corporatist Synthesis for American Diplomatic History”, *Reviews in American History*, n° 4, 1982, 321).

close. The relationship is summarised by the title of this chapter, drawn from Giovanni Arrighi’s *Long 20th Century*, from a paragraph which discusses the role of Genoese merchant bankers in the late 16th century (*nobili vecchi*) and the Rothschilds during the 19th. He describes the reciprocity between politics and business during the capitalist era, leaving space for the autonomy of both.

They [the *nobili vecchi* and the Rothschilds] were business cliques who, in view of a profit and by means of the cosmopolitan business network which they controlled, acted as the ‘invisible hand’ of an imperial organization – Imperial Britain and Imperial Spain, respectively. Thanks to this “invisible hand”, both imperial organizations could reach and control a greater number and variety of power and credit networks than they would have ever been able to do just by deploying the ‘visible hand’ of their state- and war-making apparatuses.

Instrumentality ran both ways. Neither the Rothschilds nor the *nobili vecchi* were mere instruments of the imperial organizations which they ‘serviced’. Both cliques belonged to a wider circle of merchant bankers who had jumped on the boat of a territorialist organization and had skillfully turned the expansion of the latter into a powerful engine of the self-expansion of the commercial and financial networks which they themselves controlled.¹²

What if one replaces the Rothschilds with the 10
Rockefellers, finance with energy, and Britain with the United States? Wouldn’t this still be an accurate description of the interaction between the big oil companies and their parent governments in the 20th century? The oil majors jumped on the boat of expanding U.S. hegemony and gained access to immensely profitable resources, while the U.S. as an international power profited from the control of a key energy source. The rest of this chapter sketches the consolidation of this relationship throughout the first half of the 20th century as the main driver

12 Giovanni Arrighi, *The Long 20th Century: Money, Power and the Origins of Our Times* (London: Verso, 2009), 172.

of oil imperialism. This will retell a familiar story, but from a different perspective. How does the capitalist logic of imperialism interact with the geopolitical imperative? The next section will retrace the history of the international oil industry, from the aftermath of WWI to the 1970s. The Epilogue will highlight some conclusions.

EMPIRES OF PROFIT

11 In many ways, the oil industry is emblematic of capitalism. On the one hand, it is marked by harsh competition, a constant threat of overproduction and of collapse of profitability. On the other, it tends to stifle competition. The industry's history has been punctuated by cycles of boom and bust, “frequent market crises and often uncontrollable price fluctuations”.¹³ Hence the tendency to build an oligopolistic system of governance of the business, to prevent phases of “excessive competition” and falling prices.¹⁴ The landmark agreement signed in 1928 by the three biggest oil companies of the time – Anglo-Persian Oil Company (later BP), Standard Oil of New Jersey and Royal Dutch-Shell – acknowledged the instability of the oil business:

Excessive competition has resulted in the tremendous overproduction of today, when over the world the shut-in production amounts to approximately 60% of the production actually going into consumption. [...] The petroleum industry has not of late years earned a return on investment sufficient to enable it to continue to carry in the future the burden and responsibilities placed upon it in the public's interest [...]. Recognizing this, economies must be effected, waste must be eliminated, the expensive duplication of facilities curtailed [...].¹⁵

¹³ Leonardo Maugeri, *The age of oil* (Westport: Praeger, 2006), xi.

¹⁴ On the political economy of the oil industry during the 20th century see Paul H. Frankel, *Essentials of Petroleum* (London: Frank Cass, 1969); Jack E. Hartshorn, *Oil Companies and Governments: An Account of the International Oil Industry in Its Political Environment* (London: Faber and Faber, 1962); Edith Penrose, *The Growth of Firms, Middle East Oil and Other Essays* (London: Frank Cass, 1971).

¹⁵ U.S.'s Government's Exhibits in the International Petroleum Case, Exhibit 1, Pool Association, 17/9/1928, in

FORGING OIL IMPERIALISM

The instability of the oil business drew the public powers into the industry. The year 1914, with the acquisition by the UK government of the majority of the Anglo-Persian Oil Co., marks the beginning of a century of entanglement between public powers and the private oil business. The “fateful plunge” – to use Churchill's words¹⁶ – of the liberal British government into the procellous sea of the oil business was dictated as much by strategic considerations about the availability of fuel for the Royal Navy, as by the skillful maneuvering of sir Charles Greenway and the top management of the Anglo-Persian, a company on the verge of bankruptcy unless it found a huge and solvent customer for its Persian crude.¹⁷ It was not the triumph of state interventionism over *laissez-faire*, what would have constituted quite an anachronistic feat in the pre-World War I epoch.¹⁸ Instead, it was the beginning of an intricate and asymmetrical partnership between public powers and private companies which has been at the heart of oil imperialism.

As international hegemony began shifting westward across the Atlantic, the compact between state and business in the oil sector assumed

93rd Congress, Hearings Before the Subcommittee on Multinational Corporations of the Committee on Foreign Relations of the U.S. Senate (Washington: U.S. Government Printing Office, 1975) (from now on Hearings), part 8, 35.

¹⁶ Churchill referred to his own decision, as First Lord of the Admiralty, of shifting the Royal Navy from coal- to oil-fueled battleships. Geoffrey Jones, *The State and the Emergence of the British Oil Industry* (London: Macmillan, 1981), 27.

¹⁷ *Ibid.*, chapter 6.

¹⁸ Even though the State held a majority share until the 1980s, Anglo-Persian (in 1935 Anglo Iranian, in 1954 BP) always acted as a purely private company. The two representatives of the government in the board never exercised an effective conditioning role. As reported in a 1951 memo for the Foreign Secretary Herbert Morrison: “[...] HMG hold 51% of the shares and nominate two directors. [...] Directorships have normally been used to give rewards to superannuated public servants, and once appointed they have not been expected to take a very active part in the affairs of the company. Indeed, had they done so, it would have been regarded as undue interference with a business operation”. Anthony Sampson, *The Seven Sisters. The Great Oil Companies and the World They Made* (Sevenoaks: Hodder and Stoughton, 1975), 135.

more discrete forms, more compatible with the social realities of the New World. Thus, instead of a direct entry of the state into the business, in the U.S. public and private built a partnership, which eventually installed the business in the driver's seat.

- 14 In the United States after 1918, the first of a series of recurrent “oil fright campaigns” – to use Robert Sherrill's expression¹⁹ – set the stage for a redefinition of the partnership between the government and the oil majors in the frame of an “aggressive oil policy”.²⁰ The U.S. debate on oil matters hinged upon a widespread concern for the alleged exhaustion of the domestic crude reserves – a concern that was largely unfounded – which coupled with a deep-seated resentment towards Britain and other European countries, accused by U.S. business and political circles of carving up exclusive zones of influence for their oil companies to the detriment of the U.S. interests.²¹ As a consequence, both in the government circles and in the industry a consensus was forming around the idea that the United States should develop a vigorous overseas oil policy to defend its interests abroad. As early as 1916, Mark L. Requa, a consulting engineer of the Bureau of Mines,²² produced a report for the Senate describing the depletion of the U.S. domestic oil reserves. As a response to the allegedly impending threat of exhaustion of the national oil resources, Requa called for

“an aggressive economic imperialism,”²³ directed at acquiring oil reserves abroad, especially in Mexico. If the United States did not act soon, Requa wrote, “when it is too late we will awake to the fact that the oil resources of the world are in foreign hands, and that, so far as its lubricants are concerned, the United States has become the vassal of some foreign power.”²⁴

Requa's oil imperialism fits well with the attitude of some important sections of the U.S. oil industry. Standard Oil of New Jersey, the biggest company issued from the dismantling of the Rockefeller empire decreed by the Supreme Court in 1911, was particularly interested in acquiring new oil reserves. The 1911 sentence had left Jersey with less crude than its worldwide refinery and marketing activities required. In 1912, Jersey Standard's own production of crude met only 8% of the needs of its refineries.²⁵ Not surprisingly, Jersey's top executives were among the most active in arguing for government support in the search for oil reserves abroad. In January 1919, the industry journal *Oil and Gas Review* reported the declarations of Jersey's Chairman of the Board Alfred C. Bedford and President Walter C. Teagle. Citing the government estimate that more than 40 percent of U.S. oil reserves had already been exhausted, Bedford said: “Our position in this most essential industry is not nearly so secure as it ought to be”. Teagle too stressed the “conservationist” argument, saying that the United States was spending its petroleum wealth for the world's benefit. Both lamented that Americans were treated unfairly overseas: foreigners were free to exploit American oil fields, but they barred Americans from sharing foreign supplies in their hands. Thus, to conserve domestic oil, they insisted

¹⁹ Robert Sherrill, *The Oil Follies of the 1970-1980. How the Petroleum Industry Stole the Show (and Much More Besides)* (New York: Anchor Press, 1983), 6 and 529-533.

²⁰ John DeNovo, “The Movement for an Aggressive American Oil Policy Abroad, 1918-1920”, *The American Historical Review*, n° 4, 1956.

²¹ Gerald D. Nash, *United States Oil Policy, 1890-1964* (Pittsburgh: University of Pittsburgh Press, 1968), chap. 3; Gaetano Di Tommaso, *America's Energy Transition, the Evolution of the National Interest, and the Middle Eastern Connection at the Dawn of the Twentieth Century* (PhD diss., University of Bologna, 2017), 247 and ff.

²² Requa then became, in January 1918, head of the Oil Division of the Federal Fuel Administration, the agency created by President Wilson in August 1917 to coordinate the production and distribution of American coal and oil resources during wartime. On Requa's conceptions and action see Di Tommaso, *America's Energy*, 233-247 (cf. note 21).

²³ Roger M. Olien, Diana Davids, *Oil and Ideology: The Cultural Creation of the American Petroleum Industry* (Chapel Hill: The University of North Carolina Press, 2000), 133.

²⁴ *Id.*

²⁵ George S. Gibb and Evelyn H. Knowlton, *History of Standard Oil Company (New Jersey), vol. II: The Resurgent Years 1911-1927* (New York: Harper & Brothers, 1956), 44. By the end of the war the oil extracted by Jersey Standard accounted for only about 15% of its refineries' needs. Daniel Yergin, *The Prize: The Epic Quest for Oil, Money & Power* (New York: Simon & Schuster, 1993); 199.

on acquiring reserves abroad. As Bedford concluded, “I particularly hope that public opinion will demand cooperative effort [of government and business] looking to the extension of our holdings of oil lest we be caught in the position of a petitioner for oil in foreign markets.”²⁶ But which form should this cooperative effort between business and government take?

16 Soon it became clear that the direct involvement of the U.S. government in industry, with the establishment of some kind of state company in the wake of the British initiative, a hypothesis raised in the immediate postwar period by some political quarters, was out of the question. In September 1919 the board of directors of the American Petroleum Institute²⁷ approved a report of its Foreign Relations Committee, chaired by Teagle, with the ominous title *The Menace of Foreign State Monopolies to the American Industry*. The report, sent to Secretary of State Robert Lansing, drew attention to the restrictive policies of countries like Great Britain, the Netherlands, Japan, and Argentina.²⁸ However, they did not demand direct entry of the government into the oil business, a fact that they stated would undermine the “individual initiative and efficiency” that had allowed the petroleum industry to prosper. Still worse, government’s intervention would substitute “a condition of government rivalries” for “fair and open commercial competition”, “thus transforming what had hitherto been commercial questions” into “questions essentially political.”²⁹ This was a crucial point, upon which hinged, over the following decades, the companies’ claim of primacy in the international oil negotiations. In the interwar period they allegedly acted as a “depoliticizing cushion” between the Great Powers; after

1945 they played an analogous function in relations with the producing countries. So, instead of a direct intervention of politics into business, they demanded diplomatic backing in negotiations with the British, to establish reciprocity and defend the principles of free enterprise and the Open Door.

The administration agreed with the companies’ stance. As Lansing’s successor, Bainbridge Colby, pointed out, state management of an international oil company risked creating “international friction embarrassing to the business itself.”³⁰ 17

This convergence over the refusal of direct State intervention didn’t mean the triumph of *laissez-faire*. Instead, it inaugurated a phase of private-public co-operation, founded on the identification between national interest and private interest. In his 1919 *Report on International Policies Affecting the World’s Petroleum Industry*, Van H. Manning, director of the U.S. Bureau of Mines, –“a self-appointed liaison agent between the United States government and the American petroleum industry”³¹ explicitly theorized the coincidence between national and private interest, stating that there was no greater service to the United States than assisting American citizens in their participation in developing the world’s oil resources.³² The identification of the national interest with that of the companies has been key in legitimizing the compact between state power and private interests at the root of oil imperialism. As noted by Gregory Nowell in his pathbreaking study of oil politics in the interwar period: 18

Firms cannot justify a privileged relationship with the State because it enriches them as well as the President or Prime Minister. Numerous excluded groups would protest. The norm has shifted to keeping the State away from favoritism, unless that favoritism can be justified as the “national interest.”³³

²⁶ Olien and Davids, *Oil*, 138 (cf. note 23).

²⁷ Founded in March 1919 as the industry body representing the interests of the oil business in the public arena. Leonard M. Fanning, *The Story of the American Petroleum Institute; a Study and Report* (New York: World Petroleum Policies, 1959).

²⁸ Stephen J. Randall, *United States Foreign Oil Policy Since World War I. For Profits and Security* (Montreal & Kingston: McGill-Queen’s UP, 2005), 17.

²⁹ Michael J. Hogan, *Informal Entente, The Private Structure of Cooperation in Anglo-American Diplomacy 1918-1928* (Columbia: University of Missouri Press, 1977), 161.

³⁰ *Ibid.*, 161.

³¹ De Novo, “The Movement”, 862 (cf. note 20).

³² *Id.*

³³ Gregory Nowell, *Mercantile States and the World Oil Cartel, 1900-1939* (Ithaca: Cornell UP, 1994), 11.

19 This public-private partnership found its first application during the negotiations over Mesopotamian oil.³⁴ These were, from an American point of view, an attempt at opening up the enclosed reservoir which the European companies (Anglo-Persian and Royal Dutch-Shell) had carved out for themselves with the San Remo Pact of 1920, in a region that promised to contain vast crude reserves.³⁵ The Harding administration, with Secretary of Commerce Herbert Hoover at the forefront, and the oil companies acted in close collaboration. At Hoover's request the companies interested in the Mesopotamian affair established a consortium, the American Group,³⁶ that soon occupied centre stage. In fact, the negotiations, begun as a classic diplomatic game, soon changed into a transnational dialogue between oil companies. On the ground that "they knew better" and that limiting the talks to the companies cleared the way from inter-state rivalries (the usual depoliticization argument), the companies installed themselves at the head of foreign oil policy, relegating the governments to a supporting role. The result was that the sacred principle of the Open Door, that at the start of the negotiations the U.S. administration had asserted against the imperialist Europeans, was quietly buried and replaced by an oligopolistic agreement that split up the resources and locked out the outsiders.³⁷ Needless to say the control of the oil (quantity to produce, price at which to sell, marketing) rested entirely in the hands of the U.S. and European companies.

20 The year 1928 seemed to carry out the definitive postwar stabilization for the oil industry, with

the birth of the Euro-American consortium controlling Iraqi oil, the conclusion of the Red Line Agreement among the same companies constituting the consortium and the setting up of a global system of governance of the oil markets agreed upon by the majors through the Achnacarry agreement.³⁸ The spectre of overproduction and calamitous competition seemed to have been held at bay by the establishment of a grandiose world cartel.

HAROLD ICKES AND THE SEARCH FOR A NEW OIL IMPERIALISM

The Great Crisis, the collapse of the international trade system, the war and the discovery of the Saudi oil riches shattered the newfound stabilization and threw the oil industry into turmoil. Furthermore, the weakening of colonial relations and the discontentment of the producing countries with their share of the oil profits created a rising tide of "resource nationalism": first in Iran, with demands for a renegotiation of the concessionary terms of the Anglo-Persian,³⁹ and then in Bolivia (1937) and Mexico (1938) with the nationalization of the oil industry.⁴⁰ Around the same time, in Saudi Arabia the joint venture created by Standard Oil of California and Texaco was put under pressure by the local government in search of additional resources to consolidate its power. In Venezuela, the main crude production centre outside the USA, the disruption caused to the oil trade by German submarine warfare pushed the local government to demand a renegotiation of the concessionary terms. Thus, at the beginning of the 1940s the companies faced two great questions: How would they manage the huge productive capacity of the Middle East without causing a collapse of price? How would they respond to

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³⁴ John DeNovo, *American Interests and Policy in the Middle East 1900-1939* (Minneapolis: The University of Minnesota Press, 1963), 176-202; Fiona Venn, *Oil Diplomacy in the Twentieth Century* (New York: St. Martin's Press, 1986), 54-62; Nowell, *Mercantile States*, 183-191 (cf. note 33).

³⁵ Fiona Venn, "Anglo-American Relations and Middle East Oil, 1918-34", *Diplomacy and Statecraft*, n° 1, 1990.

³⁶ This was originally composed of seven companies: Atlantic, Gulf, Jersey, Mexican Petroleum, Sinclair, Socony and Texaco.

³⁷ Nowell, *Mercantile States*, 186 (cf. note 33) and the primary documentation contained in 82nd Congress, Staff Report to the Federal Trade Commission, *The International Petroleum Cartel*, 22/8/1952, U.S. Government Printing Office, Washington, 1952.

³⁸ On the international oil cartel in the interwar years see John M. Blair, *The Control of Oil* (New York: Vintage Books, 1976), 50 and ff.

³⁹ James Bamberg, *The History of the British Petroleum Company. Volume 2: The Anglo-Iranian Years, 1928-1954* (Cambridge: Cambridge UP, 1994), 27-50.

⁴⁰ Jesús Silva Herzog, *Historia de la expropiación de las empresas petroleras* (Ciudad de México: Instituto Mexicano de Investigaciones, 1973).

producers' demands for a greater portion of the pie? The two problems were strictly connected: an increase in production was necessary to meet the producers' demands but how could this be reconciled with global overproduction? In any case the circumstances required a reconsideration of the private/public partnership. The reaction to Mexican nationalization highlighted the strains in the relationship between the companies and the Roosevelt administration that was accused of "plucking daisies" while the industry was conducting tough negotiations with the Mexican government.⁴¹

22 This situation opened up new possibilities for those who pleaded for a clearer demarcation between the national and the private interest and for a more interventionist stance of the government in oil affairs. Harold Ickes, for thirteen years secretary of the Interior in the Roosevelt administration, was the main advocate of this position.⁴²

23 Ickes, described by a biographer as the "aggressive progressive", acknowledged the centrality of big companies in modern capitalism, while being firmly convinced that a strong public hand was necessary to make the system function properly. In the early 1930s, in the wake of plunging oil prices caused by the recession, Ickes tried to strengthen the role of the government in oil matters, especially in price setting, but his attempts were rebuffed by the industry as soon as it recovered some confidence.⁴³ The U.S. entry into the Second World War disclosed new possibilities to Ickes' interventionism, as he was summoned by the president to head the Petroleum Administration for

War (PAW).⁴⁴ Writing to Roosevelt in December 1941, Ickes complained that the United States had "no adequate national policy with respect to petroleum, and no international policy I know of except to protect the interests of our nationals."⁴⁵ He believed that the interest of the nation not always, indeed rarely, coincided with that of the companies. So it was time for the U.S. government to approach the problem of foreign oil "from a nationalistic point of view" and begin to formulate a "national" oil policy. In this view, Ickes presented two controversial proposals. The first was the purchase by the government of 100% of the U.S.-owned consortium which had in concession the Saudi oil resources;⁴⁶ the second was the construction of an oil pipeline from Saudi Arabia to the Mediterranean, owned and managed by the U.S. government.⁴⁷ Both proposals cast a dark shadow on the survival of the oligopolistic system of governance the companies were strenuously trying to defend. However, Ickes' approach, as disruptive as it was of the equilibrium between public and private, was not so innovative in the relations with the oil-producing countries. The U.S. grip on foreign oil resources was not in question. For example, in relation to the Mexican dispute, Ickes proposed that the U.S. government buy the nationalized oilfields and hold them as a strategic reserve. To this proposal, President Roosevelt replied that it was inconceivable that the Mexicans, who had gone to so much trouble to gain control of their oil, would agree to such a plan.⁴⁸

⁴¹ Randall, *United States*, 101 (cf. note 28).

⁴² On Ickes' life see Linda J. Lear, *Harold L. Ickes: the Aggressive Progressive, 1874-1933* (New York: Garland Publishing, 1981).

⁴³ On Ickes' role during the New Deal years cf. Jeanne Nienaber Clarke, *Roosevelt's Warrior: Harold L. Ickes and the New Deal* (Baltimore: Johns Hopkins UP, 1996). On the New Deal era oil policies see Ellis W. Hawley, *The New Deal and the Problem of Monopoly: A Study in Economic Ambivalence* (New York: Fordham UP, 1995), 212 and ff.; Donald R. Brand, "Corporatism, the Nra, and the Oil Industry", *Political Science Quarterly*, n° 1, 1983.

⁴⁴ Created in May 1941, originally denominated Office of Petroleum Coordinator, to help organize the allocation of fuels. A useful source of information on the composition and activities of the agency is: John W. Frey, H. Chandler Ide, *A History of the Petroleum Administration for War, 1941-1945* (Washington: U.S. Government Printing Office, 1946).

⁴⁵ David Painter, *Oil and the American Century: The Political Economy of U.S. Foreign Oil Policy, 1941-1954* (Baltimore: Johns Hopkins UP, 1986), 25.

⁴⁶ The consortium, composed by Standard Oil of California and Texaco, struck oil in 1938. By the early 1940s it had become clear that Saudi Arabia contained huge oil reserves. Irvine Anderson, *Aramco, the United States and Saudi Arabia. A Study of the Dynamics of Foreign Oil Policy, 1933-1950* (Princeton: Princeton UP, 1981).

⁴⁷ Cf. Painter, *Oil*, 32-74 (cf. note 45).

⁴⁸ *Ibid.*, p. 25.

24 Ickes' interventionism was met by the strong opposition of the oil companies. Since 1941 representatives of the consortium operating in Saudi Arabia had lobbied President Roosevelt to get the Lend Lease Program extended to that remote country to counter British influence.⁴⁹ But they did not want any direct involvement of the government in their business. A long memorandum presented in November 1943 by the Foreign Operations Committee of the Petroleum Industry War Council (PIWC)– the body representing the industry within the PAW – stated forcefully the U.S. interest in foreign oil: “the national security of the United States is dependent upon adequate world oil development”. At the same time they reaffirmed the centrality of private initiative: “Oil development can best be handled by private initiative”. What the governments should do was to support the efforts of private companies to acquire control of foreign oil: “Action is needed to enlarge the reserves under the stewardship of nationals of the United States [...]. Nationals of the United States should not be in a position of inferiority in acquiring and developing petroleum reserves within the territories or spheres of influence of other nations.”⁵⁰ The allusion to the British grip on Mideast oil was patent. In 1943-44, with the Saudi reserves still underdeveloped, 80% of Mideast production was in the hands of British companies.⁵¹ In sum, the industry was asking the administration to renounce its more interventionist stance and to put its weight at the service of the private companies' efforts to acquire and develop foreign oil reserves. The assumption was, as always, that what was good for the oil companies was good for the United States. As the 1943 PIWC memorandum argued:

⁴⁹ Michael B. Stoff, *Oil, War, and American Security. The Search for a National Policy on Foreign Oil, 1941-1947* (New Haven: Yale UP, 1980), chapter 2.

⁵⁰ Petroleum Industry War Council (PIWC), *A Foreign Oil Policy for the United States*, 5/11/1943, in 93rd Congress, Subcommittee on Multinational Corporations of the Committee on Foreign Relations of the United States Senate, *A Documentary History of Petroleum Reserves Corporation 1943-1944* (Washington: U.S. Government Printing Office, 1974) (from now on DHPRC), 60-68, 61 and 65.

⁵¹ Army Service Forces, *Memorandum: Oil Situation in the Middle East*, 9/2/1944, in DHPRC, 49-58, 49.

The American petroleum industry should be encouraged to expand its plans for developing the world's oil resources. This encouragement requires assurance that nationals of the United States will receive the cooperation of our Government in securing a position of equal opportunity with the nationals of other countries and that the Government itself will not enter into competition with its own nationals.⁵²

The form this cooperation should take was made clear in March 1944 by the Oil Policy Committee of the PIWC: 25

The varying and conflicting oil policies of the various nations need to be brought into harmony with the objective of orderly and efficient world oil development. To this end, international machinery is necessary. The government of the United States should take the lead in bringing about this necessary coordination.

In a concretization of Karl Kautsky's ultra-imperialism, the companies demanded the collaboration of the government in establishing an agreement with the British to manage the vast reserves of the region that increasingly seemed bound to become the pivot of the oil production. As indicated by the geological mission sent by the U.S. government to Middle East in 1943: “For the next 10 to 15 years at least, the Middle East area is likely to develop and maintain productive capacity of as much as four times its probable market outlet.”⁵³ This was a development that if not properly managed – by means of what the companies usually “termed orderly marketing”, an euphemism to avoid the rigours of the U.S. anti-trust legislation – threatened to precipitate another crisis. 26

⁵² PIWC, *A Foreign Oil Policy for the United States*, 5/11/1943 (cf. note 50), 65.

⁵³ 93rd Congress, Report to the Committee on Foreign Relations of the U.S. Senate, Multinational Oil Corporations and U.S. Foreign Policy, 2/1/1975 (Washington: U.S. Government Printing Office, 1975) (from now on MNOC), 43.

THE POSTWAR PETROLEUM ORDER

27 The initial solution was the stipulation of a bilateral oil agreement between the powers controlling Mideast oil. The talks between the British and U.S. governments, attended also by representatives of the industry, went on from 1944 to 1946.⁵⁴ An agreement was signed but its ratification was shelved by the U.S. Congress due to the vociferous opposition of the domestic oil industry to what it saw, not without reason, as a cartel of the multinationals to develop production abroad at the expense of the U.S. one.⁵⁵ Anyway, at the moment of its demise, the Anglo-American oil agreement had been abandoned also by its main sponsors, the majors, which had lost interest when it became clear they would not get the wide-ranging anti-trust waiver they demanded.⁵⁶

28 The answer to the dual problem of resource nationalism and overproduction that loomed over the oil industry was found not in a direct government-to-government accord, even less in the interventionist positions defended by Ickes. The rising tide of "resource nationalism" was met with a policy of concession that gave to the producing countries a portion of the oil wealth, while ensuring the companies' hold on the oil production and distribution. The 50-50 profit-sharing system between the companies and the producing countries, inaugurated in Venezuela in 1943, was generalized to the main Mideast producing countries in the early 1950s.⁵⁷ In return, the companies obtained what they wanted: stable access to the oil resources and the preservation of the concessionary system that guaranteed them absolute control over the industry in the developing world. The generalization of the 50-50 system was facilitated by the granting on the part of the U.S. government of the possibility of deducting the entire sum paid to the foreign governments from U.S. income taxes. In this way, in practice, the U.S. fiscal coffers financed

the aid to oil-producing governments to allow a bunch of private companies to retain their hold on extremely lucrative oil concessions. As State Department officials acknowledged, this "in effect would amount to a subsidy of Aramco's position in Saudi Arabia by the U.S. taxpayers."⁵⁸ One can get an idea of how much the unaware taxpayer (the measure was never discussed by Congress before the 1970s) was called to contribute to the good fortune of the multinational oil companies by considering that the amount paid by Aramco to the U.S. fiscal authorities passed from \$50 million in 1950, to six million in 1951, to one in 1952. Since that year onward, Aramco's tax credit exceeded the payments it owed to the U.S. Treasury.⁵⁹ This act of generosity was justified on the ground that it was in the national interest of the United States to maintain control of the key oil-producing regions and that this objective was best guaranteed by the U.S. private companies. This syllogism was most clearly articulated by James Forrestal, Secretary of the Navy and then of Defense in the Roosevelt and Truman administrations, with a past as a commercial banker with strong links to the oil industry:⁶⁰

The largest known oil reserves outside of the Western Hemisphere are located in the Mesopotamian Basin in the area of the Persian Gulf. These reserves are largely undeveloped. It is distinctly in the strategic interest of the United States to encourage industry to promote the orderly development of petroleum reserves in the more remote areas such as the Persian Gulf, thereby supplementing the Western Hemisphere sources and protecting against their early exhaustion at inefficient rates of production. [...] The prestige and hence the

⁵⁴ On the negotiations for the Anglo-American oil treaty see Stoff, *Oil*, 151-177 (cf. note 49).

⁵⁵ Randall, *United States*, 199 (cf. note 28).

⁵⁶ Anderson, *Aramco*, 91 (cf. note 46).

⁵⁷ Sampson, *Seven Sisters*, 123-126 (cf. note 18).

⁵⁸ Foreign Relations of the United States (Frus), 1950, The Near East, South Asia, and Africa, vol. V, Doc. 42, Memorandum of Conversation, by Mr. Richard Funkhouser, 2/11/1950, 106-108, 107.

⁵⁹ See Hearings, part 4, 13 and the testimony of George Mc Ghee, 95.

⁶⁰ Prior to his political career, Forrestal had worked for the New York based merchant bank Dillon, Read & Co. In that capacity, in 1936 he promoted the partnership between Socal and Texaco at the origins of the Saudi consortium. Yergin, *The Prize*, 299 (cf. note 25).

influence of the United States is in part related to the wealth of the Government and its nationals in terms of oil resources, foreign as well as domestic. [...] The good offices of the State Department should be used to the greatest possible extent to promote the expansion of United States oil holdings abroad, and to protect such holdings as already exist, i.e., those in the Persian Gulf area.⁶¹

29 The quote shows the rationale that justified the identification of the national interest with the defense of the role of oil companies abroad. As the control of the key oil-producing regions was a vital instrument for the U.S. ascendance on the world stage, it was imperative for the U.S. government to defend the U.S. oil companies who controlled those resources and to support their expansion.

30 A dense transnational network of joint ventures, consortia and commercial ententes which complemented the already established Iraq Petroleum Company (IPC) provided the oligopolistic architecture necessary to solve the problem of potential overproduction. In 1947, Jersey Standard and Standard Oil of New York (Socony), after an intricate negotiation with their partners within the IPC, freed themselves from the restrictions of the Red Line Agreement and joined Standard Oil of California and Texaco in exploiting the Saudi resources.⁶² Thus, as Matthieu Auzanneau writes: "Transposée, transfigurée et accrue la puissance du vieil empire de John D. Rockefeller va désormais se perpétuer à travers la matrice du pétrole saoudien, comme un dragon change de peau, étendu sur un nouveau trésor fabuleux."⁶³

31 The companies were well aware of the anti-trust implications of this development. As pointed out

by George V. Holton, Vice President and General Counsel of Socony, the threat of an antitrust action was real, but in the end the decision was political:

The arrangement would place practical control of crude reserves in the Eastern Hemisphere in the hands of seven companies. Five of them would be American owned and all of the latter have substantial reserves in the Western Hemisphere also. [...] I cannot believe that a comparatively few companies for any great length of time are going to be permitted to control world oil resources without some sort of regulation. This is a political question.⁶⁴

And indeed the question was answered on the basis of political considerations. The Antitrust Division issued a report recommending that the Attorney General take no action for national security and foreign policy reasons: 32

International oil is a matter of grave concern to many branches of the Government. The State Department interest in the problem is both historic and current [...]. The Department of the Interior, Department of National Defense and National Security Resources Board are also concerned with the shortage of oil reserves in this country. It is doubtful that they would look with favor upon any antitrust case which might affect American positions in foreign oil. [...] Obviously, antitrust policy must be consistent with overall Government policy and with foreign policy and the promotion of national security. For these reasons, it is recommended that no action be taken at this time.⁶⁵

The resurgence of Standard Oil in the sands of Saudi Arabia was complemented by the creation of a system of commercial agreements among the majors, which actually replaced the aborted Anglo-American Oil Agreement in providing for the "orderly development" of Mideast production. Thus, at the end of 1946 Jersey and Socony, 33

⁶¹ Doc. 824, The Secretary of the Navy (Forrestal) to the Secretary of State, 11/12/1944, in Frus 1944, *The Near East, South Asia, and Africa, the Far East*, vol. V, 755-756, 756.

⁶² Sampson, *The Seven Sisters*, 114-119 (cf. note 18). A rich primary documentation can be found in Hearings, part 8, 89-169.

⁶³ Matthieu Auzanneau, *Or noir. La grande histoire du pétrole* (Paris: La Découverte, 2015), 223.

⁶⁴ G.V. Holton to Brewster Jennings, 28/10/1946, Hearings, Part 8, 116-117. See also: Socony-Vacuum, *Board of Directors*, 5/3/1947, Hearings, Part 8, 156-159.

⁶⁵ MNOC, 49-50.

to allay British fears of overproduction, signed a twenty-year supply agreement with the Anglo-Iranian that guaranteed the latter an outlet West of Suez for its Iranian (and Kuwaiti) crude.⁶⁶ Shell entered into a similar agreement on Kuwaiti oil with Gulf, a founding member of the IPC and since 1934 a 50-50 partner of Anglo-Iranian in Kuwait, whose reserves were at the time estimated to be greater than the Saudis'.

34 The geopolitical consolidation of the U.S. hegemony over Western Europe, after 1945, offered the market outlet for the quickly growing Mideast production, making this development compatible with the preservation of the interests of the U.S. domestic producers. The Marshall Plan played a key role in smoothing the transition to a new structure of the oil markets. As indicated by David Painter, between April 1948 and December 1951, 56% of the oil supplied by U.S. companies to Western Europe was financed by the Marshall Plan. Most of this oil was provided by the five U.S. majors producing in the Middle East: 48.8% from Jersey; 14% from Socal and Texaco; and 9.2% from Socony. As he writes: "This aid not only helped provide Europe with the energy it needed for recovery; it also served to maintain markets for U.S. oil companies at a time when their potential customers would otherwise have been unable to obtain the necessary dollars."⁶⁷ The Marshall Plan financed a radical transformation of the geographical pattern of European oil supplies. While in 1946 70% of Western Europe's oil imports came from the Western Hemisphere and only 30% from the Middle East, in 1950 Middle East oil accounted for 75% of those imports.⁶⁸

35 At the same time, the availability of abundant and cheap Mideastern oil was crucial in making

possible the "economic miracles" in Western Europe throughout the 1950s and 1960s, thus permitting the successful application of the U.S. hegemonic recipe based on the spread of the system of mass production for mass consumption:

The open, nondiscriminatory monetary and trade system that the United States sought depended on growth and prosperity in other capitalist countries, which in turn depended on readily available, reasonably priced imports of petroleum, principally from the Middle East. In a material sense, oil was at the center of the redistributive system of American hegemony.⁶⁹

The last bastion of exclusive British influence 36 on the Mideast oil, Iran, was penetrated by the U.S. oil firms in the aftermath of the 1951 nationalization, when the five U.S. majors, Shell and Compagnie Française des Pétroles (CFP) joined Anglo-Iranian in exploiting the local oil resources. The creation of the Iranian consortium in 1954 seemed to definitively consolidate the imperium of Western capitalism over the key oil region of the world. The successful boycott of Iranian oil after the 1951 nationalization and the 1953 coup against Mossadegh that put to rest Iranian nationalization, once again highlighted the importance for the oil multinationals of jumping on the boat of a powerful territorial organization. Backed by U.S. power, the concessionary system guaranteed the seven companies (plus the eighth sister, the CFP), seemingly absolute control over immensely lucrative resources. As calculated by Charles Issawi and Mohammed Yeganeh, the ratio of net income to total net assets amounted, for the period 1948-60, to 21% for the oil operations in Venezuela and to an astonishing 67% for those in the Middle East. To get an idea, the corresponding figure for the U.S. domestic oil industry was 10,8% and for the U.S. manufacturing industry was 13,7%.⁷⁰

Keeping control of the oil of the "free world" in 37 U.S. hands was crucial in the consolidation of U.S.

⁶⁶ Bamberg, *The History*, 305-307 (cf. note 39).

⁶⁷ Furthermore, more than 10% of the Marshall aid was spent on oil, more than any other single commodity, see: David Painter, "Oil and the Marshall Plan", *Business History Review*, n° 3, 1984, 362.

⁶⁸ See Charles Issawi, Mohammed Yeganeh, *The Economics of Middle Eastern Oil*, (New York: Praeger, 1962), 18; Middle East Oil, State Department Policy Paper, 10/9/1950, in Hearings, Part 7, 122-134, 124.

⁶⁹ Robert O. Keohane, *After Hegemony. Cooperation and Discord in the World Political Economy* (Princeton: Princeton UP, 1984), 140.

⁷⁰ Issawi, Yeganeh, *The Economics*, 112 (cf. note 68).

hegemony. In early 1953 a debate raged within the outgoing Truman administration about the advisability of an antitrust legal action against the seven majors, accused by the attorney general and the Department of Justice of having established a world cartel since 1928 (what they actually did). The Departments of State, Defense and the Interior replied to the Department of Justice's allegations in a long, top secret position paper jointly presented to the National Security Council in early January.⁷¹ The document reaffirmed the usual syllogism.

- 38 First, controlling the main oil production regions was vital to assure the prosperity of the free world:

Since Venezuela and the Middle East are the only sources from which the free world's import requirements for petroleum can be supplied, these sources are necessary to continue the present economic and military efforts of the free world. It therefore follows that nothing can be allowed to interfere substantially with the availability of oil from those sources to the free world.

- 39 Second, only American and British oil companies were capable of guaranteeing an adequate development of the oil resources. The previous experiences with nationalization had demonstrated that the producing countries lacked the requisite expertise and capital.

These nationals [the U.S. and British companies] have provided the ingenuity, capital, and technology to bring forth production from those areas on the tremendous scale required to fulfill world requirements. As matters now stand, they alone are capable of maintaining and expanding the production of those areas to meet the rising demand for petroleum of the free world. If United States and United Kingdom companies were for any reason expelled from Venezuela

and the Middle East, the oil from those areas would to a serious extent be lost to the free world.

- Consequently, the document concluded, as 40 Forrester had ten years earlier, it was in the highest interest of the U.S. government to protect these companies and their concessions:

American and British oil companies thus play a vital role in supplying one of the free world's most essential commodities. The maintenance of, and avoiding harmful interference with, an activity so crucial to the well-being and security of the United States and the rest of the free world must be a major objective of United States Government policy.

- On 11 January, President Truman announced the 41 termination of the grand jury investigation for national security reasons.⁷² The majors were thus given a green light to continue untroubled their collusive market practices and to consolidate their hold on the industry by establishing the Iranian consortium, the only one in which the "Seven Sisters" were jointly represented.

- Occasionally the economic and the geopolitical 42 logics constitutive of imperialism seemed to be at variance. This happened more evidently in the 1940s with Ickes' interventionism and his search for a clearer demarcation of the public and the private spheres of interest in oil affairs. It happened again in the 1970s, in the aftermath of the first oil crisis, as we shall see. But even in the heyday of the Seven Sisters' dominance some strains emerged. The clearest case was arguably offered by the Shah's pressing requests for a rise in Iranian oil production during the 1960s.⁷³ The U.S. State Department supported the demands of a key regional ally in

⁷¹ Frus 1952–1954, General: Economic and Political Matters, Volume I, Part 2, Doc. 159, Nsc 138/1, National Security Problems Concerning Free World Petroleum Demands and Potential Supplies, Top Secret, Washington, 6/1/1953, 1317-1329.

⁷² As reported in MNOG, 64, Truman "emphasized, however, that he wished the case to be pursued vigorously in the civil courts". The civil case went on for ten years with no decision made in the end. The text of Truman's letter is in Hearings, part 7, 102.

⁷³ An overview of Iranian requests can be found in John J. McCloy Papers, Amherst College (JMP), Box 36, Folder 33, Oil General 1966, Memo: Current Iranian Situation, 2/11/1966.

search of additional resources to fund its programs of economic and military development. Notwithstanding the State's efforts, the companies resisted a rise in Iran's oil output lest it jeopardize the delicate balance of global oil trade⁷⁴. In the end some form of compromise had to be devised. But on the whole, the companies were successful in circumventing the State's pressures and the compromise reached was much nearer to their positions than to government's.

43 The fact was that they held the whip hand in an asymmetrical relationship. This was due to several factors. First, once the preservation of companies' positions in the producing countries was assumed as a matter of national interest, diplomats and high ranking politicians had to bow to the needs of big business and prioritize the defence of profit over the demands of allies. Second, information on the oil markets was a monopoly of the companies. Even in the U.S. and the UK, the state apparatuses lacked the knowledge and expertise to comprehend the realities of international oil trade.⁷⁵ Finally, the oil companies could boast about their role as energy suppliers for the industrial societies and as an intermediary in the relationship with producing countries. As stated by Socony's chairman, Albert Nickerson: "As long as the privately owned international oil companies continue to act as a bridge and a buffer between governments [...] it will be possible to reconcile and accommodate the conflicting interests of the producing countries and the consuming countries."⁷⁶

⁷⁴ For a vivid illustration of this dialectic between diplomacy and business see for ex. Memorandum to file, Meeting in Washington with State Department, Iranian Problems, 28/3/1968, in Hearings, Part 7, 274-275, which reports a meeting between State's representatives, headed by the Undersecretary for Political Affairs Eugene Rostow and some top executives of American oil companies.

⁷⁵ On the UK situation see Jonathan Kuiken, "Caught in Transition: Britain's Oil Policy in the Face of Impending Crisis, 1967-1973", *Historical Social Research*, n° 4, 2014, 272-290; on the U.S. cf. MNOC, 15-16.

⁷⁶ JMP; Box 36, Folder 15, Oil General 1963, How International Oil Companies Serve the Free World, A talk by Albert L. Nickerson, Chairman of the Board, Socony Mobil Oil Co., San Francisco, 14/9/1962.

THE SHOCK

During the 1960s, the change in the oil market, with the entry of many independent actors undercutting the grip of the majors on the international oil trade and the increasingly autonomous and combative stance of the producing governments, fatally undermined the foundations of the system.⁷⁷ The quadrupling of the oil price in the early 1970s, a consequence of the developments of the preceding decade, brought many in the consuming countries to question the wisdom of delegating the pursuit of the national interest to the action of private companies. The negotiations on the oil price preceding the shock of 1973 represented the last instance of the system inaugurated in Mesopotamia fifty years earlier in which the companies sat directly at the table while the consumers' governments stood backstage.⁷⁸ 44

In the wake of these dismal results, from the consumer's perspective, of the oil negotiations of the early 1970s, there was a wide public backlash against multinationals. In the U.S. the Senate held a comprehensive investigation, that lasted several months and filled a few volumes, on the activities of the oil multinationals since the 1930s. Its findings and conclusions were summed up by Senator Ted Kennedy: 45

The exhaustive hearings conducted by Senator Frank Church before the Senate Subcommittee on Multinational Corporations conclusively demonstrated that for most of the postwar era the US Government viewed the multinational oil companies as instruments of US foreign policy, especially in the Middle East, and that the US Government also considered the interests of the companies basically identical with the US national interest. Out of these two assumptions evolved the system of oil allocation

⁷⁷ Steven A. Schneider, *The Oil Price Revolution* (Baltimore: The Johns Hopkins UP, 1983).

⁷⁸ Francesco Petrini, "Eight Squeezed Sisters. The Oil Majors and the Coming of the 1973 Oil Crisis", in Elisabetta Bini, Giuliano Garavini, Federico Romero (eds), *Oil Shock: The Crisis of 1973 and its Economic Legacy* (London: I.B. Tauris, 2016).

administered by the majors and relied upon by the consumer nations. This system has now collapsed. As a consequence, the policy assumptions on which the system was founded can no longer be relied upon.⁷⁹

46 As a reaction to the crisis and to the ambiguous role played by the companies in it, criticisms of the identification of the national interest with that of the companies and proposals for a more autonomous profile of the public action in the energy domain flowed throughout the Western world.⁸⁰

47 In the U.S., the Senate Subcommittee on Multinational Corporations pleaded for a democratization of the process of definition of the national interest:

In a sense, this is the overriding lesson of the petroleum crisis: in a democracy, important questions of policy with respect to a vital commodity like oil, the life blood of an industrial society, cannot be left to private companies acting in accord with private interests and a closed circle of government officials. They must be surfaced for public debate and education so that a coherent policy can be evolved with a firm base of public support.⁸¹

48 In the UK, the wisdom of delegating the oil policy to the companies was put in doubt. As a report on British oil policy concluded: “up to now HMG has been able, in the main, to achieve [...] secure oil supplies at reasonable prices with a basically *laissez-faire* policy”, yet the recent developments in the oil markets “suggest that, despite the hazards of interfering in such a complex industry, HMG will have to play a more positive role than

hitherto, in co-operation with other major consumer governments [...]”⁸² The companies, had spent almost all their credibility at the negotiating table with OPEC. As Nicholas Fenn, Deputy Head of the Foreign Office Energy Department wrote in June 1973: “The companies themselves have reached the end of the road. They can no longer guarantee oil delivery, let alone at reasonable prices. They will continue to resist OPEC demands as skilfully as possible, but we must be under no illusion – they will surrender every time in the end.”⁸³

In the effervescent political climate of the time, many predicted the end of the oil imperialism. A British backbencher declared: “the era of [...] Western oil imperialism in the Middle East [had come] to an end”.⁸⁴ His name was Winston Churchill, the nephew of the man we can consider the founding father of oil imperialism in the Middle East. 49

EPILOGUE

Actually things didn’t change as radically as the young Churchill predicted. The neo-liberal revolution brought about the shelving of the proposals directed at breaking off, or at least at loosening, the connection between state power and big business. In the “actual pragmatics of neoliberalism”, in David Harvey’s words,⁸⁵ the dose of state support to capitalist interests might be obfuscated by an omnipresent *laissez-faire* rhetoric but it is actually heavy and crucial in supporting the level of profitability. In the oil industry the need for a strong public boat on which to jump became even more pressing after the Western companies found themselves facing states and public companies that were 50

⁷⁹ 94th Congress, *Hearings Before the Subcommittee on Energy of the Joint Economic Committee of the United States Congress, Multinational Oil Companies and OPEC: Implications for U.S. Policy, June 2, 3 and 8, 1976* (Washington: U.S. Government Printing Office, 1977), 3-4.

⁸⁰ Francesco Petrini, “Oil: Too Important to be Left to the Oilmen? Britain and the First Oil Crisis, 1970-3”, in John Fisher, Effie Pedaliu, Richard Smith (eds), *The Foreign Office, Commerce and British Foreign Policy since 1900: Volume II: 1945-to date* (London: Palgrave, 2016).

⁸¹ MNOC, 17-18.

⁸² Documents on British Policy Overseas, S. III, vol. IV, The year of Europe: America, Europe and the energy crisis, 1972-1974, edited by Keith Hamilton and Patrick Salmon (London: Routledge, 2006), CAB 134/3606, Memo by P. E. Walker, 8 February 1973.

⁸³ The National Archives of the United Kingdom, Kew Gardens (TNA), FCO 55/1057, Fenn, Oil Talks with the Companies, 29 June 1973.

⁸⁴ TNA/FCO 55/1059, Note for the record, Energy, 31/1/1973.

⁸⁵ David Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford UP, 2005), 21.

no longer the weak semi-sovereign entities of the immediate postcolonial past.

51 In the aftermath of the oil crises of the 1970s, the majors lost their role as sole intermediary between consumers and producers and their absolute control over international oil, but this development only slightly diminished their wealth and their political clout. During the 1980s, they acted to curb the role of OPEC as the main price-setting entity for international oil. New areas of production in politically safe regions (North Sea, Alaska) were quickly developed while spot prices and future contracts were replacing posted prices and intergovernmental contracts.⁸⁶ Since the early 1990s, Middle East wars have played a key role in producing a condition of "scarcity", thus helping to keep the oil supply and offer in balance. Once again, as already happened in the 1950s and 1960s, Iraqi oil production (and then Iran) was penalized by the needs of the "market". The imperative of the "creation of scarcity"⁸⁷ has become even more pressing after the boom of oil shale production within the USA.

52 In all of this the cooperation with the power of the U.S. state was crucial. Politicians and state officials nurtured a geopolitical agenda of their own and maintained as a key objective of U.S. foreign policy the conservation of a form of direct or indirect control of the main sources of oil.⁸⁸ As Harvey put it:

Not only does [the invasion of Iraq] constitute an attempt to control the global oil spigot and hence the global economy through domination

⁸⁶ Francesco Petrini, "Counter-shocked? The oil majors and the price slump of the 1980s", in Duccio Basosi, Giuliano Garavini, Massimiliano Trentin (eds), *Countershock: The Oil Counter-Revolution of the 1980s* (London: I.B. Tauris, 2018), 76-96.

⁸⁷ On the centrality of this concept in the oil industry's history see Timothy Mitchell, *Carbon Democracy. Political Power in the Age of Oil* (London: Verso, 2011), 39-42.

⁸⁸ See for example, as an influential statement of the goals of U.S. foreign policy in the post-Cold War world which explicitly affirms this objective, the "Defence Planning Guidance" circulated within the George H.W. Bush administration in 1991/92 (<https://nsarchive2.gwu.edu/nukevault/ebb245/index.htm>, accessed 18/02/2020).

over the Middle East. It also constitutes a powerful U.S. military bridgehead on the Eurasian land mass which, when taken together with its gathering alliances from Poland down through the Balkans, yields it a powerful geostrategic position in Eurasia with at least the potential to disrupt any consolidation of a Eurasian power.⁸⁹

53 However, the preliminary impression is that, as in the past, in a clash between the logic of capitalism and that of geopolitics, the former prevails. From the history we have reviewed, we have evidence that, once the national interest is assumed as coincident with that of private companies, the result is the defence of the companies' aims and objectives at all costs. As Keynes said, a firm "has no object in the world except to end up with more money than it started with."⁹⁰ In other words, the protection of private profit ends up prevailing over political and diplomatic considerations. *Still, government officials could consider themselves – as Ralph Miliband wrote – "above the battles of civil society, as classless, as concerned above all to serve the whole nation, the national interest."⁹¹*

54 Finally, one fundamental change occurred in the last decades: the weakening of the hegemonic capacity of the United States and the emergence of new rivals on the global energy scene has made oil imperialism deadlier with a more frequent recourse to force. To paraphrase Karl Polanyi, to maintain the sway of the Western imperialism on some of the key world oil reserves it has become increasingly necessary to have recourse to the ominous poise of a heavy ship's cannon rather than to the timely pull of a thread in the international energy network.⁹²

⁸⁹ Harvey, *The New Imperialism*, 85 (cf. note 6).

⁹⁰ John M. Keynes, *The Collected Writings*, vol. 29 (London: Macmillan Press, 1971), 89.

⁹¹ Miliband, *The State*, 72 (cf. note 10).

⁹² Karl Polanyi, *The Great Transformation. The Political and Economic Origins of Our Time* (Boston: Beacon Press, 2001), 14.

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Stains of Empire: accumulation by contamination in the Gulf

Abstract

La découverte du pétrole au Moyen-Orient a contribué à l'éclosion et à l'enrichissement massif du complexe militaro-industriel. Le corollaire de cette accumulation de capital est la contamination de la région, cannibalisant la vie quotidienne de populations entières vivant parmi les décombres de la guerre et les déversements d'hydrocarbure. Militarisés à des fins d'extraction, les territoires des États pétroliers du Golfe sont irrémédiablement contaminés par un double héritage : la pollution militaire d'une part, et la pollution pétrolière de l'autre. Le cas emblématique de l'Iraq postcolonial illustre ce double héritage. Inspiré du marxisme écologique, le concept d'accumulation par contamination offre une grille d'analyse critique pour montrer comment l'impérialisme énergétique a contribué à la répartition inégale de richesses et de pollution toxique entre les firmes transnationales et les groupes sociaux du Moyen-Orient.

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Plan of the article

- Contamination by the war machine
- Contamination by extraction régimes
 - Iraq as the archetype of accumulation by contamination in the Middle East
 - Resistance to extraction by explosion
 - War pollution by oil accumulation
 - The Iran-Iraq war
 - The 1991 Gulf War
 - The 2003 Gulf War
 - The rise of ISIL and contamination by repetition
- Conclusion

1 The Anthropocene typically refers to a new geological epoch where humanity is “literally making” the planet.¹ Stratigraphically, anthropogenic deposits form part of a new geological record, a new layer of the earth crust on the top of the lithosphere. This crust of civilizational waste (*littersphere*) has deprived the environment to the extent that we now live in an ecological state of permanent exception, illustrated by systematic toxicity and mass extinction.² According to the Stockholm Resilience Centre, resource extraction has surpassed the Earth’s natural regeneration rates and the production of wastes is greater than what can be absorbed by the planet’s sink mechanisms.³ This colossal colonization by waste prompts the question: have we entered a corollary era of the Anthropocene, called the Molysmocene? The Molysmocene was coined in the 1960s by French marine biologist Maurice Fontaine to refer to a future wasteland era, an era which we now live in.⁴

2 In this article, which is part of a broader research agenda on the Molysmocene, we investigate one of the driving forces behind a world colonized by heavy toxic waste, namely the ecological impact of the military-industrial complex. Aside from well-known critiques of the term Anthropocene raised by many scholars⁵ across disciplines, and

contrary to the belief that humanity is “literally making” the planet, we argue that a certain military organization of capital and labor is *littering and breaking* the planet. Military industrialized countries have applied “brute force technologies” to destructive capacity, deliberately targeting the natural environments sheltering the enemy, including forests in Vietnam, and mountains in Afghanistan.⁶ This form of Energy Imperialism uses a host of destructive and extractive technologies to alter human ecology.

For instance, the largest single institutional consumer of hydrocarbons in the world is the US Army. With an annual military budget of \$500 billion, the United States in 2017 alone purchased about 270,000 barrels of oil a day and emitted the equivalent of 25,000 kt-CO₂.⁷ Relying upon a global network of oil supply and heavy equipment on military bases deployed around the world, the US pollutes more than 140 countries combined.⁸

In the name of national security, military spending fuels global warming and planetary turbulence. Therefore, it is critical to assess the ecological destruction of war machines, in order to question the prevalent logic of security harnessed by belligerent governments worldwide. As contributors to the special issue on *Energy Imperialism*, we wish to ask: How are forms of military aggression entangled with the violence of extraction, contamination, fallout, toxicity and extinction? And how are these forces reshaping the very material possibilities and conditions of human lives? In sum, has the military-industrial complex become a planetary force?

1 Simon Dalby, “Environmental geopolitics in the twenty-first century”, *Alternatives* vol. 39, n° 1, 2014, 3-16.

2 Ubaldus de Vries, “Sustainable uncertainty: Normalising the ecological state of exception”, *Water Law* vol. 24, n° 3, 2014, 92-99; Justin McBrien, “Accumulating extinction: Planetary catastrophism in the Necrocene”, *Anthropocene or Capitalocene*, 2016, 116-137.

3 “Sinks are, in the physical-sciences sense of the word, those environmental zones that receive, absorb, and contain wastes” They are sites for storing, processing, discarding, and filtering waste. Jennifer Gabrys, “Sink: The dirt of systems”, *Environment and Planning: Society and Space*, vol. 27, n° 4, 2009, 666-681; Will Steffen et al. “The Anthropocene: from global change to planetary stewardship” *Ambio* vol. 40, no° 7, 2011, 739.

4 Molusma means “filth” or “stain” in Greek (μολυσμός).

5 Among these scholars, Jason Moore and Donna Haraway pointed out the questionable politics of the neologism Anthropocene and argued that the epoch can be more properly referred to as respectively “the Capitalocene” or “Chthulucene”, so that an undifferentiated humanity is not held accountable and rather the legacy is deviated towards a system: capitalism or the global economic system. Jason

W. Moore, *Capitalism and the Web of Life: Ecology and the Accumulation of Capital* (London: Verso, 2015). Donna Haraway, “Anthropocene, capitalocene, plantationocene, chthulucene: Making kin” *Environmental humanities* vol. 6, n° 1, 2015, 159-165.

6 Paul Josephson, *Industrialized nature: Brute force technology and the transformation of the natural world* (Washington D.C.: Island Press, 2002).

7 Oliver Belcher et al. “Hidden carbon costs of the ‘everywhere war’: Logistics, geopolitical ecology, and the carbon boot-print of the US military”, *Transactions of the Institute of British Geographers* vol. 45, n° 1, 2020, 65-80.

8 *Ibid.*

5 Already, environmental historians have provided clues to answer questions about the role of military ecocide.⁹ For instance, Western rivalry over access to oil played a fundamental role in the Great Acceleration of the 20th Century. As the discovery of oil combustion accelerated the speed, power and performance of warships and other military equipment, control over vast reserves of oil became a strategic war aim for Western powers. At the time of the First World War, the conversion of the British Royal Navy to oil decided its superiority over its German rival and engaged the British Government in a belligerent policy of oil appropriation in the Persian Gulf. Western rivalry for oil in the Gulf peaked in response to military needs of the Second World War, which militarized the region to protect the increasingly complex network of pipelines and oil tankers. Conversion to oil gave rise to a military industrial complex, which multiplied public expenditure in aircraft, munition and chemical production, all energy-intensive and extremely polluting activities. Ultimately, the feedback loop of oil dependence and war economies provoked what Bonneuil and Fressoz call the Thanatocene – or Age of Death.¹⁰

6 In light of these considerations, this article proposes to understand Energy Imperialism as a phenomenon driven by a double logic of extraction and pollution. The capitalist logic of energy extraction depends on the expansion of modes of exploitation outside of the boundaries of capitalist States, in geographical areas which are conquered, plundered and stripped of their previous social relations. This “primitive accumulation” of capital exists because, according to Marx, the creation of surplus value presupposes workers’ complete alienation from self-sufficiency.¹¹ However, Ecological Marxist (Ecomarxist)

readings of primitive accumulation stress the equally important ecological underpinnings of this estrangement: an alienation from the natural world.¹² The coercive expropriation of peoples from their land allows for the overexploitation and degradation of this land: marginalized people are made redundant or “superfluous” by capitalist restructuring to better plunder their land.¹³ Under Ecomarxist terms, Energy Imperialism may be conceptualized as a process of *accumulation by contamination*, by which corporate and military interests endanger, through drilling and bombing, sustainable means of collective subsistence and coexistence in order to reproduce capitalist modes of accumulation.¹⁴

Ecomarxism contends that the intoxication of postcolonial peoples and contamination of their peripheral land is the driving force of profit accumulation at the heart of the metabolic rift between core and peripheral states.¹⁵ Heavy metal pollution, oil spillage, landmines, mortars, rockets, white phosphorus, sniper fire and high explosives, tear gas and barbed wire constitute the elements of the landscape of extraction and pollution in the postcolonial era.¹⁶ Pollution weakens the possibilities of subsistence, let alone resistance of postcolonial peoples, whose ecologies are degraded for purposes of global or transnational value extraction. Postcolonial people suffer from material pollution – such as military-industrial waste – and forms of political

⁹ Richard Tucker and Edmund Russell (ed.), *Natural enemy, natural ally: toward an environmental history of warfare* (Oregon State University Press, 2004).

¹⁰ Christophe Bonneuil and Jean-Baptiste Fressoz, *The shock of the Anthropocene: The earth, history and us* (London: Verso Books, 2016).

¹¹ Dionysios Drosos, “Adam Smith and Karl Marx: alienation in market society” *History of Economic Ideas*, 1996, 325-351.

¹² John Bellamy Foster, “Marx’s ecology in historical perspective”, *International Socialism*, 2002, 71-86.

¹³ David Harvey, *The new imperialism* (Oxford: OUP, 2005); Mark Neocleous, “War on waste: Law, original accumulation and the violence of capital”, *Science & Society* vol. 75, n° 4, 2011, 506-528.

¹⁴ Although we amend its definition to adapt it to an Ecological Marxist framework, the concept is taken from, Federico Demaria, “Can the Poor Resist Capital? Conflicts over ‘Accumulation by Contamination’ at the Ship Breaking Yard of Alang (India)”, *Nature, Economy and Society*, 2016, 273-304.

¹⁵ John Bellamy Foster, *Marx’s ecology: Materialism and nature* (New York: NYU Press, 2000); John Bellamy Foster, Brett Clark & Richard York, *The ecological rift: Capitalism’s war on the earth* (New York: NYU Press, 2011).

¹⁶ Martín Arboleda, *Planetary Mine: Territories of Extraction Under Late Capitalism* (London: Verso, 2020).

pollution – such as military coups and self-perpetuating corruption.

- 8 The abstract process of accumulation by contamination embeds itself in postcolonial peoples' daily interactions. Contamination pervades the most intimate confines of social life, complicating basic access to freshwater or public education. In the postcolonial world, residues of imperial design create the distinct sociopolitical condition of marginalized communities, who have to live in the rubble of war, the spills of oil, and a corrupt political landscape.¹⁷ As we shall see, a century of war-making and oil drilling reduced the autonomy and sustainability of communities in the Gulf.
- 9 The story of accumulation by contamination in the Gulf begins in the new age of engine combustion born out of the world's first oil-based military conflict of 1914–18. At the time, the “Middle East” was carved by a line drawn in the sand to protect British and French imperial interests.¹⁸ Intoxicated by the “vapors of black gold”, which had so valuably contributed to the war effort, the Western military and industrial classes detached Arabia from the Ottoman enemy to secure their grip over the riches of the Gulf.¹⁹ This process of primitive accumulation on a land previously void of large-scale industrial relations created pockets of “humans-as-waste”, or surplus populations separated from domains of capitalist exchange.²⁰ Energy Imperialism divorces labor from its means of subsistence and marginalizes self-sufficient people made redundant in the context of capitalist restructuring.²¹ For exam-

ple, military operations during the First World War disrupted local pearl-diving fisheries in the Arabian Gulf.²² After the war, aerial raids, mining, drilling and piping operations, as well as property enclosure expropriated the *fellahin* (traditional peasantry) in Kut, Amhara and Bagdad.²³ Then, throughout the 1920s and 1930s, military bombing and industrial drilling within artificially-created State boundaries threatened the livelihood of Bedouins, Assyrians and Kurds, who had until then operated along variable relays of exchange across Mesopotamia.²⁴

Therefore, one of the striking features of Energy Imperialism in the Gulf is the dynamic process of accumulation (*extraction*) by contamination (*explosion*). Over the course of a century, surveillance from above and extraction down below fueled successive rounds of oil wars.²⁵ Both kinds of pollution – war pollution and oil pollution – simultaneously converge around the capitalist necessity to feed productivity gains of the combustion engine, which propels war machines and irrigates the global political economy. These two methods of contamination by war (1) and oil (2) have persistently created “land- and humans-as-waste” in the postcolonial Middle East. Many aspects of military-industrial capitalism excrete nature and human labor from the process of accumulation and render it superfluous. This article specifically turns to the history of postcolonial Iraq to illustrate this enduring dynamic of Energy Imperialism in the Middle East. It thus

¹⁷ Gastón Gordillo, *Rubble: The afterlife of destruction* (Durham: Duke University Press, 2014).

¹⁸ James Barr, *A Line in the Sand: The Anglo-French Struggle for the Middle East, 1914–1948: The Anglo-French Struggle for the Middle East, 1914–1948* (New York City: WW Norton & Company, 2012).

¹⁹ Edwin Black, *Banking on Baghdad: Inside Iraq's 7,000-year history of war, profit and conflict* (Hoboken: Wiley, 2004), 165.

²⁰ Michelle Yates, “The human-as-waste, the labor theory of value and disposability in contemporary capitalism”, *Antipode* vol.43, n° 5, 2011, 1679–1695.

²¹ See Susan Marks, “Law and the production of superfluity”, *Transnational Legal Theory* vol. 2. n° 1, 2011, 1–24.

²² Richard LeBaron Bowen, “The pearl fisheries of the Persian Gulf”, *Middle East Journal* vol. 5, n° 2, 1951, 161–180.

²³ Hanna Batatu, *The Old Social Classes and the Revolutionary Movements of Iraq: A Study of Iraq's Old Landed and Commercial Classes and of its Communists, Baathists and Free Officers* (New York: Princeton University Press, 1982).

²⁴ Daniel Silverfarb, *Britain's Informal Empire in the Middle East. A Case Study of Iraq. 1929–1941* (Oxford: Oxford University Press, 1986), 33–47; Martin Thomas, “Bedouin Tribes and the Imperial Intelligence Services in Syria, Iraq and Transjordan in the 1920s”, *Journal of Contemporary History* vol. 38, n° 4, 2003, 539.

²⁵ An oil war is a conflict over petroleum resources, their transportation, consumption, or regulation. The term may also refer generally to military conflicts in oil-rich countries. Mary Kaldor, Terry Lynn Karl & Yahia Said, *Oil wars* (London: Pluto Press, 2007).

investigate how the war machine (1) and the extractive regime (2) have accelerated the rate of accumulation by contamination since the global energy transition to petroleum.

CONTAMINATION BY THE WAR MACHINE

- 11 The Western war machine in the Middle East arose in connection with efforts to absorb vast quantities of oil. At the heart of the Persian Gulf sits the golden stock of 680 billion barrels of proven oil reserves, which represent approximately 66% of the total world oil reserves. As a highly concentrated source of energy, petroleum rapidly became a source of competitive interference in the Gulf during the 20th Century.²⁶ The rivalry for access to oil reserves violently broke out during the First World War²⁷, peaked during the Second World War, morphed during the Cold War into two oil crises in the 1970s, the Iraq-Iran War in the 1980s and heated up again with the more recent Gulf Wars of 1991 and 2003.²⁸
- 12 The war machine relies on oil to function, to the point where a self-perpetuating mode of military coercion, such as jet-propelled bombing, prepares the terrain for further rounds of oil accumulation in the Middle East, upon which the war machine depends for its own survival.²⁹ Whereas the war machine pursues oil extraction underground, the bombing campaigns destroy communities and ecologies overground, either by sudden death or by the slow violence of toxic pollution.³⁰
- 13 As a result of war, Bahrain, Kuwait, Oman, Saudi Arabia, Qatar, and United Arab Emirates have all been polluted by heavy toxic metal, and petroleum hydrocarbon contamination. In the

aftermath of the 1991 Gulf War for example, oil field fires have chronically contaminated coasts, seas, soil, and air.³¹ As much as wealth from oil extraction is unevenly distributed, the pollution from oil wars is disproportionately dumped on vulnerable and marginalized communities in the region. Along the Tigris river, in Basra and in the Shatt al-Arab, the prevalence of disease is especially high among the impoverished and malnourished, which are exposed to water sources contaminated with mercury, arsenic, lead, cobalt, cadmium, petroleum products, oil, soot from oil fires, and depleted uranium.³²

CONTAMINATION BY EXTRACTION REGIMES

Tied in with the aforementioned importance of the war machine in the production and reproduction of accumulation by contamination is the role of oil extraction. The environmental legacy of oil extraction in the Gulf reveals the extent to which the petroleum industry is responsible for global contamination today. Oil cartels are linked to 71% of industrial greenhouse gas emissions since 1988. Over half of global industrial emissions since 1988 can be traced to twenty-five corporate and state producers. The state producers are mostly located in the Gulf region, while the corporate producers are mostly headquartered in the West, such as ExxonMobil, Shell and BHP Billiton.³³ Beyond the harmful effect of CO₂ pollution, the physical attrition of environments from exploration, drilling, and extraction can be greater than from a large oil spill. Major impacts of the oil industry include deforestation, ecosystem destruction, chemical contamination of land and water, long-term harm to animal populations (particularly migratory birds and marine mammals),

²⁶ Richard Cottam, *Competitive Interference and Twentieth Century Diplomacy* (Pittsburgh: University of Pittsburgh Press, 1967).

²⁷ Donald McKale, *War by revolution: Germany and Great Britain in the Middle East in the era of World War I* (Ohio: Kent State University Press, 1998).

²⁸ Kaldor et al., supra note 25.

²⁹ Jeff Colgan, *Petro-aggression: When oil causes war* (Cambridge: Cambridge University Press, 2013).

³⁰ Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge: Harvard University Press, 2011).

³¹ Afnan Mahmood Freije, "Heavy metal, trace element and petroleum hydrocarbon pollution in the Arabian Gulf" *Journal of the Association of Arab Universities for Basic and Applied Sciences* vol. 17, n° 1, 2015, 90-100.

³² Tara Rava Zolnikov, "The maladies of water and war: addressing poor water quality in Iraq" *American journal of public health* vol. 103, n° 6, 2013, 980-987.

³³ The Carbon Majors Database & Climate Accountability Institute, "Disclosure Insight Action Report", July 10, 2017, Url: <https://www.cdp.net/en/articles/media/new-report-shows-just-100-compani...> (accessed 20/03/2020).

human health and safety risks for neighboring communities and oil industry workers, and displacement of communities.³⁴

15 On- and off-shore exploration, drilling, and extractive activities are inherently invasive and affect ecosystems, human health, and local cultures. After identifying potential oil reserves using remote sensing techniques and satellite mapping, companies build roads, platforms, and pipelines, bring in crews and vehicles, and drill exploratory test wells. Exploration activities expand a hundredfold, and more wells and infrastructure are built once oil is discovered. Oil extraction includes a range of drilling techniques and the use of subsurface explosives, including in a few historical cases the use of nuclear charges.³⁵

16 Historically, the polluting effects of accumulation by contamination have been disproportionately experienced in the peripheries of the global economy. Political ecologists call this plundering of poorer countries by the exploitation of their resources, the degradation of their natural habitat, which cause an asymmetric global distribution of wealth and waste, an Ecological debt.³⁶ Ecological debt is an indicator of the cumulative historical socio-ecological subsidy “paid” by the peripheries necessary to maintain the core’s industrial techno mass.³⁷ Research on total energy and material consumption shows that core regions within the world economy have significantly higher “metabolic” rates than peripheral regions.³⁸

³⁴ Dara O'Rourke and Sarah Connolly, “Just oil? The distribution of environmental and social impacts of oil production and consumption” *Annual Review of Environment and Resources* vol. 28, n° 1, 2003, 587-617.

³⁵ *Ibid.*

³⁶ Erik Paredis, *The concept of ecological debt: its meaning and applicability in international policy* (Cambridge: Academia Press, 2009).

³⁷ Rikard Warlenius, Gregory Pierce and Vasna Ramasar, “Reversing the arrow of arrears: The concept of “ecological debt”, and its value for environmental justice”, *Global Environmental Change* vol. 30, 2015, 21-30.

³⁸ Shweta Singh, Chris Kennedy, “Estimating future energy use and CO2 emissions of the world’s cities”, *Environmental Pollution* vol. 203, 2015, 271-278.

As an extractive periphery, the Gulf has been particularly subjected to this Ecological debt. The nexus of war and environmental degradation demonstrates that the Gulf is plagued with toxic rubble, dust, oil fire pollution and war contamination. One country within this localized periphery has been particularly targeted by the process of accumulation by contamination: Iraq. Iraq has become an extractive wasteland through a succession of military bombing campaigns. Coercive oil accumulation contributed to the asymmetric stock distribution of energy and toxic waste between Western corporations and Middle Eastern populations.

Iraq as the archetype of accumulation by contamination in the Middle East

18 In Iraq, the century-long accumulation of extractive policies for the benefit of Western corporations has been accompanied by the correlative bombing and contamination of the Iraqi soil, peoples and culture. By the time British-appointed King Faisal ascended the throne of Iraq in 1925, the Persian Gulf had effectively become a military-industrial site of Western imperialism, where financial speculation and sovereign debt consolidation funded the construction and maintenance of environmentally-costly military bases, roads, railroads, pipelines, canals, residences and embassies.³⁹ Such capital-intensive projects weighed heavily on the populations, depriving them of prior social arrangements and binding them by indenture on the estates of a landed ruling minority. The mechanized oil boom transformed social relations and fixed new boundaries, incorporated a local landed class into the global economy, while excluding and inflaming the resistance of the wider community. Those who resisted the drilling down below were subjected to military repression from above, under the euphemistic policy of “morale bombing”, which was the

³⁹ Geoff Burrows, Phillip Cobbin, “Budgetary and financial discontinuities: Iraq 1920-32”, *Accounting History Review* vol. 21, n° 3, 247-259; Toby Dodge, *Inventing Iraq – The Failure of Nation-Building and a History Denied* (Oxford: Oxford University Press, 2003).

weapon of choice of the British Royal Air Force against Arab rebellion in Iraq.⁴⁰

19 Our Ecomarxist analysis of accumulation by contamination in the Gulf emphasizes the entanglement between bombing and drilling, which shaped and transformed the entire system of property rights in the Gulf, but also its ecology.⁴¹ With the full military support of the British Royal Air Force, foreign oil cartels and agricultural engineers restructured the land to guarantee extraction.⁴² Under British trusteeship, Iraqi representatives were coerced into ceding exclusive oil concession rights to a Western syndicate, which bore the deceiving name of the Turkish Petroleum Company (TPC). The 1925 TPC monopoly contract distributed equal shares amongst British, American, Dutch and French shareholders.⁴³

20 Rising militarization costs had to be reimbursed by collecting taxes. Therefore, pursuant to a 1924 bilateral Anglo-Iraqi Treaty, British civil servants controlled public expenditure and made sure that half of British spending was financed by the Arab Kingdom's treasury.⁴⁴ Iraq was essentially controlled by a new military regime of panoptical vision to protect the new boundaries of oil concessions, which terrorized rural populations in the name of foreign oil extraction.⁴⁵ The British Royal Air Force became the bailiff of powerful oil men, revealing the symbiotic relationship between the military and corporate sector.⁴⁶

⁴⁰ Jafna Cox, "A splendid training ground: the importance to the Royal Air Force of its role in Iraq, 1919–32", *The Journal of Imperial and Commonwealth History* vol. 13, n° 2, 1985, 157–184.

⁴¹ Jairus Victor Grove, *Savage ecology: War and geopolitics at the end of the world* (Durham: Duke University Press, 2019).

⁴² Gareth Jones, "The British Government and the Oil Companies 1912–1924: The Search for an Oil Policy", *The Historical Journal*, 1977, vol. 20, n° 3, 666.

⁴³ Turkish Petroleum Company, "Limited Convention with the Government of Iraq", Mar 14, 1925: PRO CO730/158/9/119238.

⁴⁴ Burrows & Cobbin, *supra* note 39.

⁴⁵ Foreign Office, FO 371/12260, E4432/86/65; Llewellyn Woodward (ed.), *Documents on British Foreign Policy, 1919–1939* (London: HMSO, 1946–1986); Dodge, *supra* note 39.

⁴⁶ Peter Sluglett, *Britain in Iraq: Contriving King and Country* (New York: Columbia University Press, 2007), 187; Phillip Meilinger, "Trenchard and 'Morale Bombing': The

Winston Churchill, then Colonial Secretary and Hugh Trenchard, founder of the Royal Air Force, waged a deadly and toxic bombing campaign, which satisfied the need to protect oil field exploration from Bedouin looting activity over a vast and remote territory.⁴⁷ Stripped of their means of survival, Bedouin tribes flocked to privately owned estates and the cities, looking for work.

In the 1920s, fumigating air raids turned the tribes into servitude on the estates of a landed ruling minority backed by the British military. One such onslaught was launched by the Royal Air Force in 1923–24 in Southern Iraq, where the peasants and nomadic tribesmen from the Euphrates refused to pay up taxes to the tribal leaders responsible for collecting them. Later, Air Force operations raided the Kurds and Assyrians, confining them to an insular existence.⁴⁸

While indigenous rulers became landed aristocrats, the British, US, French and Dutch oil company shareholders monopolized underground property rights. Engineers built railways, oil depots, wells and equipment, while senior civil servants held power over the Kingdom's revenue to buy peace among a client network of regional bureaucrats and local tribal leaders. From the beginning of Iraq's history, the uneven distribution of capital created ostentatious wealth on one side of the spectrum, and "superfluous" or "disposable" categories of population on the other. In the new Kingdom, the old Ottoman bureaucracy was replaced by British administrators: only 3.74 percent of civil servants were Arabs, the rest were members of the British imperial service.⁴⁹ The region's extractive economy became a treasure chest for British shipping lines, engineering firms and the

Evolution of Royal Air Force Doctrine Before World War II" *The Journal of Military History*, 60, n° 2, 1996, 243.

⁴⁷ Cox, *supra* note 40.

⁴⁸ David Omissi, "Britain, the Assyrians and the Iraq Levies, 1919–1932", *The Journal of Imperial and Commonwealth History* vol. 17, n° 3, 1989, 301–322.

⁴⁹ Philip Willard Ireland, "Iraq: a Study in Political Development: A Study in Political Development", *Russell & Russell*, 1970, 146.

armament industry. Annual reports to the League of Nations demonstrate that Britain held the financial authority to control the flow of external capital and establish sovereign debt repayment schemes over Iraq for the purpose of accumulation.⁵⁰ The violence of coercive extraction inflamed the resistance.

Resistance to extraction by explosion

23 As the locals were progressively dislodged and contaminated by foreign bombing campaigns, the indignity of British tactics ignited armed resistance across the country. In June 1920, a coalition of disgruntled tribal sheikhs, religious dignitaries and vociferous nationalists rebelled against the British policy of extraction and displacement. In “the Year of the Catastrophe” (*Am al-Nakba*), the “Awakening” (*Thawra*) was considered the catalyst of Arab nationalist sentiment against Energy Imperialism.⁵¹

24 In a coordinated effort to disrupt the enemy’s objectives, nationalists targeted the new transportation routes and building sites. Raids on British lines of communication increased. The rebels ambushed political officers, rampaged British garrisons, burnt local bridges, blew up railroad lines, drowned supply ships and massacred their crew.⁵² Trains were looted. Petrol dumps blew up. “Everywhere and every day, the rebels sniped, murdered, pillaged, burned, kidnapped, robbed, laid siege, sabotaged, and unwove the very fabric of

Britain’s presence”.⁵³ The 1920 revolt was a violent reaction to Energy Imperialism. However, one cannot deny the pollution that endogenous resistance inflicted upon the land. Iraqis were constrained in their resistance tactics by the industrial infrastructure and military equipment imported by the occupying power: by targeting sources of extraction and arms depots, the resistance to accumulation by contamination aggravated the ecological impact of fossil extraction.

25 Encouraged by the wave of nationalism, Iraqi delegates requested the election of a Convention and appealed for a united Arab Government elected by universal suffrage.⁵⁴ Instead, Great Britain continued its policy of extraction by explosion. “The Royal Air Force used aerial bombings to level whole villages. Karbala, Najaf, and Kufa surrendered in mid-October [...]. With most of the leaders under arrest or in exile, the tribes and towns of southern Iraq submitted to British authority.⁵⁵” In the end, airstrikes and military blockades succeeded in locking the agricultural workforce onto landed estates modelled on English aristocratic domains.⁵⁶ Once the revolt had been crushed, the British High Commission established a network of military airbases across the Gulf, backed by a local central authority capable of protecting the flow of crude across large stretches of sand. High-tech weaponry, especially oil-fueled planes, prevented the sabotage of pipelines and shipping routes.

26 By the time the British Mandate was over in 1932, vast tracts of Iraqi land had become militarized to protect the growing oil revenue of the

⁵⁰ Report by H.M. Government to the Council of the League of Nations on the Administration and Progress in Iraq during the Period 1920-1931, Colonial, no 58, H.M.S.O., London, 1931; British embassy in Iraq, “Annual Report on Iraq for 1933”. 28 March 1934, FO 371/17871, E2204/2204/93; Newton to foreign office, 10 June 1940 and 19 Oct. 1940, FO 371/24556, E2198/E2913/203/93. For general discussion, see Burrows & Cobbin, *supra* note 39.

⁵¹ The nationalist coalition brought together four distinct groups: the rural tribes, the Shiite religious community, the urban masses guided by notables and intellectuals, and finally the old guard of Arab officers of the Ottoman army, who had sought refuge in neighboring Syria. See Batatu, *supra* note 23.

⁵² Winston Churchill, “Situation in Mesopotamia, 2nd September 1920”, *Secret Cabinet memo*, Aug 2, 1920: BL L/MIL/5/800, Wilson, 294.

⁵³ Edwin Black, *Banking on Baghdad: Inside Iraq's 7,000-Year History of War, Profit and Conflict* (Hoboken: John Wiley & Sons, 2004), 256.

⁵⁴ Acting Civil Commissioner. Review of the Civil Administration of Mesopotamia to His Majesty’s Government, Indian Office, December 3, 1920 [Cmd. 1061], 141.

⁵⁵ Judith Yaphe, “Until They Leave: Liberation, Occupation, and Insurgency in Iraq” in Amatzia Baram, Achim Rohde and Ronen Zeidel (eds.), *Iraq Between Occupations* (New York: Palgrave Macmillan, 2010).

⁵⁶ Martin Thomas, “Bedouin Tribes and the Imperial Intelligence Services in Syria, Iraq and Transjordan in the 1920s”, *Journal of Contemporary History* vol. 38, n° 4, 2003, 539.

State. The panoptical power of airplanes played a major role in asserting the coercive violence of the State, which collected land rent adjusted to profit margins of foreign oil companies.⁵⁷ The legacy of the British mandate in Iraq created an atmosphere of suspicion, betrayal and revolt.⁵⁸ Soon enough, rival military factions fought for the control of the State.

- 27 In 1933, the Iraqi army crushed the rising Assyrian autonomous movement with British military support, which dropped a hundred bombs on Assyrian positions.⁵⁹ To protect plans for the construction of a new pipeline in Northern Iraq, ground forces led by army officer Bakr Sidqi waged a campaign of terror, indiscriminately massacring, men, women and children in the Simile district. In October 1936, Sidqi, by then acting commander of the Royal Iraqi Army, staged a military coup by dropping leaflets over Baghdad with military planes. Nine months later, in August 1937, Sidqi was assassinated on the Mosul air force base along with the commanding officer of the Royal Iraqi Air Force.⁶⁰ The violent history of postcolonial Iraq shows the extent to which British planes and oil revenue provided the fuel for modernized feudal warfare.
- 28 The cycle of oil extraction and military violence produced political instability in the Kingdom, which is revealed by the fact that fifty-eight governments succeeded each other between 1921 and the nationalist revolution of 1958.⁶¹ The

dazzling spectacle of oil extraction and bomb explosion created an endless appetite for power among rival factions, which claimed to offer a postcolonial alternative, while effectively replicating the hegemonic military structure of government. By using oil as a revenue stream for political repression instead of wealth redistribution, the Iraqi State mirrored the very process of accumulation by contamination established by British Energy Imperialism.⁶² While military officers controlled oil revenue in Baghdad, a landed aristocracy ruled over enclosed agricultural estates in the countryside. As a result of this “great transformation”⁶³ where Iraqis became part of a market society, farmers were not only economically dispossessed from their land by accumulating sheikhs, they were also “contaminated” by new social arrangements. Although the entire society transformed, the shifting political economy of the Oil Kingdom weighed most heavily on the poor, such as small-scale farmers. Between 1932 and 1958, the State relegated the “superfluous categories” of peasants and farm laborers to the slums of urban centers, ravaged by water pollution, trachoma, and dysentery. While oil revenues kept coffers filled to the brim, the military regime was incapable of providing elementary social services.⁶⁴ In contrast to exogenous extraction by explosion, the endogenous exploitation of oil resources led to a dynamic of social exclusion and fragmentation.

The Saddam years: contamination by exclusion

By 1958, Iraq had entered a new historical phase, 29 characterized by the internal adoption of a violent cycle of accumulation by contamination. Throughout the second half of the 20th Century, postcolonial Iraq would follow a path dependency founded on British Energy Imperialism. Since its cartel origins, the country had been an inherently weak client State ruled by a military

⁵⁷ See Art. 32 Convention of the British Oil Development Company with Iraq signed on January 5th. 1931 by the High Commissioner John Chancellor & J. Skliros, on behalf of the Company, published in Iraq's Official Gazette, Bagdad, February 4, 1931; Edward Peter Fitzgerald, “The Iraq Petroleum Company, Standard Oil of California, and the Contest for Eastern Arabia, 1930-1933”, *The International History Review* vol. 13, n° 3, 1991, 441.

⁵⁸ Marion Farouk-Sluglett and Peter Sluglett, *Iraq Since 1958. From Revolution to Dictatorship* (London: KPI, 1987).

⁵⁹ Khaldun Husry, “The Assyrian affair of 1933.” *International Journal of Middle East Studies*, vol. 5, n° 2, 1974, 161-176.

⁶⁰ Phebe Marr, *The modern history of Iraq* (Oxfordshire: Routledge, 2018).

⁶¹ Christopher Catherwood, *Churchill's Folly: How Winston Churchill Created Modern Iraq* (New York: Carroll & Graf, 2004), 221.

⁶² Toby Dodge, *Inventing Iraq – The Failure of Nation-Building and a History Denied* (Oxford: Oxford University Press, 2003).

⁶³ Karl Polanyi, *The great transformation* (Boston: Beacon press, 1944).

⁶⁴ Uriel Dann, *Iraq under Qassem: a political history, 1958-1963* (New York: Praeger, 1969), 5.

minority elite prone to corruption and authoritarian rule.⁶⁵ Under the new nationalist regime of 1958, the State's petroleum assets provided vast powers of patronage to a military elite.⁶⁶ Repeating the criminal foundations of the State, rival military factions fought for the control of its coercive apparatus.⁶⁷ The result was a succession of coups and countercoups between opposing kin-based alliances (1963, 1968) to control and redistribute oil revenue among their respective client networks.⁶⁸

30 In 1968 the Baath Party ruthlessly emerged as the victor of the political struggle for the control of Iraq's extractive economy. Under the growing influence of Saddam Hussein, the nationalized oil industry (1972) became a "slush fund" for high officials within the State apparatus.⁶⁹ Saddam Hussein effectively held patronage over a client network of military officers, bureaucrats, landowners, and tribal leaders loyal to his cause.⁷⁰ In an unprecedented escalation of violence, Iraqi oil greased the process of accumulation by contamination. After having eliminated external opponents to the Baath regime during the 1960s, Hussein waged a fierce power struggle inside the Baath party to expunge his rivals, culminating in his 1979 seize of undisputed power. The purge of the party allowed Hussein to centralise State power and concentrate the means of coercion and oil production in the hands of loyalists.⁷¹

⁶⁵ Marion Farouk-Sluglett, Peter Sluglett, *Iraq Since 1958: From Revolution to Dictatorship* (London: Bloomsbury Publishing, 2003), 217.

⁶⁶ Charles Tripp, *A History of Iraq* (Cambridge: Cambridge University Press, 2007), 143.

⁶⁷ Charles Tilly, "War making and state making as organized crime", *Collective Violence, Contentious Politics, and Social Change*, Routledge, 2017, 121-139.

⁶⁸ Tripp, supra note 66.

⁶⁹ Phil Williams, *Criminals, militias, and insurgents: organized crime in Iraq* (US Army War College: Strategic Studies Institute, 2009).

⁷⁰ Tripp, supra note 66, 318.

⁷¹ "From 1920 until 1979, Iraq had experienced thirteen coups d'état. Saddam was determined that this would be the last." Judith Miller, Laurie Mylroie "The Rise of Saddam Hussein", *The Iraq war reader: History, documents, opinions*, 2003, 18-29, 28.

War pollution by oil accumulation

Under the Baath regime of Saddam Hussein, 31 Iraq's oil revenue stream reinforced the criminal foundations of the Iraqi State. Although Hussein's regime used the rent from the Iraq National Oil Company to fund industrialization and educational reforms – women literacy, for instance –, oil revenue was diverted to the acquisition of foreign military equipment. As we shall see, Iraq's internal capital accumulation ultimately led to regional ecological contamination at the expense of equal resource distribution among the population.

Hussein's fear of an internal coup was partly 32 deflected by the projection of violence outwards, during the 1980-88 war against Iran, and in 1990-91 against Kuwait. These wars fueled by oil revenue targeted industrial and military sites, armaments factories and oil refineries, which led to acute chemical pollution over the course of successive airstrikes. The endogenous process of accumulation would unleash a wave of military contamination, which peaked against the Kurdish people, collectively punished for siding with Iran. In 1988, the Kurds were targeted by artillery shells and airstrikes in the city of Halabja and gassed with nerve agents and mustard gas. As many as 5,000 Iraqi Kurds, mostly women and children, were killed by the deadly gas attack, and many more – maybe 10,000 – were poisoned. Decades after the attack, unexploded shells and residue from the gas that spread over the city still cause congenital defects.⁷²

The Iran-Iraq war

The Iran-Iraq war of 1980-1988 incurred as 33 many as 1.5 million casualties. Belligerents on both sides used Western military equipment purchased with their national oil revenue. Environmental damage inflicted by the war is

⁷² Michael Kelly, "The Anfal trial against Saddam Hussein" *Journal of Genocide Research* vol. 9, n° 2, 2007, 235-242; Karin Mlodoč, "The Indelible Smell of Apples: Poison Gas Survivors in Halabja, Kurdistan-Iraq, and Their Struggle for Recognition", in Bretislav Friedrich, Dieter Hoffmann, Jürgen Renn, Florian Schmaltz and Martin Wolf (eds.), *One Hundred Years of Chemical Warfare: Research, Deployment, Consequences* (New York: Springer, 2017), 349-362.

scattered and inconclusive, because of a general lack of concern for monitoring or clean-up.⁷³ Some effects are known, such as the fact that ground battles and aerial bombardments caused extensive forest destruction and soil erosion. Tar and asphalt dumped on the coastal region between Abadan and the straight of Hormuz posed a great threat to already endangered species. Leaks from oil tankers in the Gulf are believed to be the cause.⁷⁴ The bombing of oil platforms polluted the Gulf, while sunken ships and bombed wrecks have contaminated the Shatt-al-Arab waterway, threatening its ecosystem and the fishing industry.

34 The impact of war on farmland was equally devastating: in Kermanshah, the conflict contaminated more than 300,000 hectares of irrigated farmland.⁷⁵ Millions of date palms and “5,000 hectares of orchards were destroyed, some 130,000 hectares of natural forest and 753,000 hectares of pasture land in the war-afflicted provinces were also rendered unusable.⁷⁶” All five Iranian provinces impacted by the war appeared to be contaminated by toxic materials emanating from chemical and biological weapons. The situation was compounded by soil compaction, flooding and salinization where irrigation canals were destroyed.⁷⁷ On coastal strips and in mainland waterways, military waste destroyed the prawn-fishing industry and intoxicated the rural population. As a result of war, studies have shown a higher rate of disease incidence, such as eye infection, skin ailments, stomach illness and acute respiratory disease.⁷⁸ The Karoun river in the South-western province of Iran, once the mainstay of economic activity, is now heavily

polluted.⁷⁹ Since the end of the war, there has been an alarming increase in health-threatening insects and pests. Decades later, civilians exposed to chemical attacks show high rates of chronic anxiety, depression, and post-traumatic stress disorder.⁸⁰ Finally, unidentified minefields and unexploded war materials demonstrate the enduring sanitary impact of the Iran-Iraq war.⁸¹

The 1991 Gulf War

A mere two years after the end of the Iran- 35 Iraq war (August 1988), the Gulf War (August 1990-February 1991) sparked a deadly combination of air power from above and oil sabotage down below. Due to the overwhelming fire storm of Western air power⁸², the Iraqi forces opened oil valves of the Sea Island pipeline, releasing oil from numerous tankers, oil lakes and fire trenches, as part of a scorched earth policy in a desperate retreat from Kuwait in 1991. The goal of the spill was to impede Coalition troops from attempting beach landings, but in the end the spill simply resulted in over 240 million gallons of crude oil being dumped into the Persian Gulf.⁸³ For the first time on a regional scale, oil pollution was used as a tactic of war and devastated the biodiversity of uninhabitable coastlines.

Oil spillage in the Persian Gulf tarred beaches 36 and killed more than 25,000 birds, whereas oil

⁷³ Amanda Walker, 1989, “Recessional and Gulf War impacts on port development and shipping in the Gulf States in the 1980s”, *GeoJournal* vol. 18, n° 3, 273-284.

⁷⁴ *Ibid.*

⁷⁵ UN Secretary-General, “Report on Iran’s reconstruction efforts in the wake of the conflict between the Islamic Republic of Iran and Iraq”, 24 December 1991, 40-41.

⁷⁶ Hooshang Amirahmadi, “Iranian recovery from industrial devastation during war with Iraq”, in James Mitchell, *The long road to recovery: community responses to industrial disaster* (New York: United Nations University Press, 1996).

⁷⁷ *Ibid* 28-48.

⁷⁸ *Ibid.*

⁷⁹ Hassan Nasirian, Kim Irvine, “Odonata larvae as a bio-indicator of metal contamination in aquatic environments: application to ecologically important wetlands in Iran”, *Environmental monitoring and assessment* vol. 189, n° 9, 2017, 436.

⁸⁰ Farnoosh Hashemian, Kaveh Khoshnood, Mayur M. Desai, Farahnaz Falahati, Stanislav Kasl, and Steven Southwick, “Anxiety, depression, and posttraumatic stress in Iranian survivors of chemical warfare” *Jama* vol. 296, n° 5, 2006, 560-566.

⁸¹ UN Secretary-General, “Report on Iran’s reconstruction efforts in the wake of the conflict between the Islamic Republic of Iran and Iraq”, 24 December 1991.

⁸² Richard Hallion, *Storm Over Iraq: Air Power and the Gulf War* (Washington: Smithsonian Books, 1992).

⁸³ Thomas Hawley, *Against the Fires of Hell: The Environmental Disaster of the Gulf War* (New York: Harcourt Brace Jovanovich Publishers, 1992); Muhammad Sadiq and John McCain, *The Gulf War Aftermath: An Environmental Tragedy* (Dordrecht: Kluwer Academic Publishers, 1993); Gar Smith, *The War and Environment Reader* (Washington: Just World Books, 2017).

spilled on land formed huge pools in lowlands, covering fertile croplands. The deposition of oil, soot, sulfur, and acid rain spread up to 1,200 miles in all directions from the oil fires. They turned fields untillable, which led to food shortages. The fires released nearly half a billion tons of carbon dioxide, the leading cause of global warming, emissions greater than all but the eight largest polluting countries for 1991 that will remain in the atmosphere for more than a century. The oil that did not burn in the fires traveled by air in the form of nearly invisible droplets resulting in an oil mist or fog that poisoned trees and grazing sheep, contaminated fresh water supplies, and found refuge in the lungs of people and animals throughout the Gulf.⁸⁴

37 Following the Gulf War, Iraqi Shia in the South rebelled in March 1991. The uprising was crushed by the Iraqi Government, which launched a brutal campaign to drain the marshes of southern Mesopotamia and economically siege a previously self-sufficient population. “The state used hydrological infrastructure to divert water from the wetlands, permanently desiccating the area.⁸⁵” Here again, the State coercively degraded the environment to expropriate peoples and restructure their land to better submit them to State discipline. Between 1991 and 1997, a system of dams, dikes and canals was built to turn the wetlands into dry, salty lands. Once drained, the land would be leased to coopted tribal leaders for commercial agriculture and oil exploration, making survival contingent on cooperation with the State.⁸⁶

The 2003 Gulf War

38 The 2003 invasion of Iraq by the forces of the Coalition removed Hussein from power after his twenty-four-year rule. While mirroring previous practices of accumulation by contamination, this second Gulf war displayed the use of specific weapons responsible for environmental

and sanitary damage. The indiscriminate use of prohibited chemical weapons and toxic gases may have contributed to the high percentage of civilian casualties. Reports indicate that women and children mortality rates exploded fifty-fold since the US invasion and bombardment campaigns.⁸⁷ During the November 2004 battle of Fallujah, codenamed *Operation Phantom Fury*, the US army had recourse to highly toxic white phosphorus to clear the city of insurgents. White phosphorus was used to “flush out combatants from fortified positions⁸⁸” – otherwise known as “spider holes⁸⁹” – to expose them to sniper fire and high explosives. The chemical agent was also reported to have directly affected civilians in the densely populated areas of Nasariyah, Fallujah, and Baquba.⁹⁰

In a 2005 report entitled “Assessment of environmental hot spots in Iraq”, the United Nations Program for Environment estimated that industrial and military pollution contaminated ten sites with high levels of radioactive waste and forty-two sites with dioxin and depleted uranium.⁹¹ Depleted Uranium (DU) used by Coalition forces in 2003 is a heavy metal particularly favoured by the military industry for its penetrating properties of armoured equipment. Previously used during the 1991 Gulf War, DU widely spreads in the air, soil and water, particularly in dust storms over dry landscape. An estimated 250.000 to 300.000 small-caliber munitions were shot for every Iraqi insurgent killed in the Iraq War. When the hardened shell casings of ammunition explode, their toxic components contaminate soil and water. The following “atomisation” of depleted uranium, mercury and lead caused

⁸⁴ Paul Carr, “‘Shock and Awe’ and the Environment”, *Peace Review* vol. 19, n° 3, 2007, 335-342.

⁸⁵ Ariel Ahram, “Development, counterinsurgency, and the destruction of the Iraqi marshes”, *International Journal of Middle East Studies* vol. 47, n° 3, 2015, 447-466.

⁸⁶ *Ibid.*

⁸⁷ Gilbert Burnham, Riyadh Lafta, Shannon Doocy and Les Roberts “Mortality after the 2003 invasion of Iraq: a cross-sectional cluster sample survey”, *The Lancet* vol. 368, n° 9545, 2006, 1421-1428.

⁸⁸ Joseph Tessier, “Shake & Bake: Dual-Use Chemicals, Contexts, and the Illegality of American White Phosphorus Attacks in Iraq”, *Pierce L. Rev.* 6, 2007, 323.

⁸⁹ *Ibid.*

⁹⁰ *Ibid.* 355.

⁹¹ United Nations Environmental Program, “Assessment of Environmental ‘Hot Spots’ in Iraq”, 2005, Url: http://postconflict.unep.ch/publications/Iraq_ESA.pdf (accessed 05/05/2020).

morbid levels of pollution in streets, gardens, fields and children's playgrounds.⁹² "Between 1.000 and 2.000 tons of toxic and radioactive depleted uranium [...] have been used in Iraq by American and British forces during the war."⁹³ The high prevalence of radioactive and toxic uranium in Iraqi soil and infrastructures constitutes a widespread and long-lasting threat to the health of the Iraqi population, which has been plagued by a high rate of cancers and birth defects.⁹⁴ In some rural areas potable water was unavailable to half the population, and caused forced displacement.⁹⁵ According to post-war studies, high levels of carcinogenic pollution in the most targeted areas of war contributed to the epidemic of congenital birth defects, extending the thanatological effects of war well beyond the official cessation of hostilities.⁹⁶ Still today, decontamination of depleted uranium requires the removal of contaminated soil and its treatment as radioactive waste.

40 In synchrony with war contamination, the U.S. occupation established a regime of accumulation for the corporate members and political allies of the Coalition. The Occupying Power siphoned 90% of the Development Fund for Iraq (made of frozen assets and oil revenue from the previous regime), by awarding 74% of contracts to U.S. firms such as Bechtel (electricity), Halliburton (logistical support), Dyn-Corp, Vinnell and USIS (security firms and defense), Creative Associates (education) and Research Triangle Institute (local democracy). Only 2%

of contracts were awarded to Iraqi companies. Refusing to hire Iraqi nationals for security reasons, the Department of Defense outsourced its labor tasks to private security and service companies such as Kellogg, Brown & Root and Blackwater Worldwide. Shortly after the transfer of the Fund to the CPA President Bush signed Executive Order 13303 granting all U.S. entities which were awarded payment under the Fund immunity from legal proceedings.⁹⁷ The Occupying Power also destroyed national public monopolies and replaced them with private extractive activities of foreign corporations. A dozen rounds of oil and gas licensing bids took place during the occupation campaign of 2003-2011, awarding contracts to foreign investors and contractors, such as Halliburton, Baker Hughes, Weatherford International and Schlumberger, which won the largest portion of the subcontracts to drill for oil, build wells and refurbish old equipment. To conclude this section, the U.S.-led process of accumulation by contamination further accentuated the asymmetric distribution of energy and toxic waste between corporate bodies and social metabolisms in Iraq.

The rise of ISIL and contamination by repetition

By the time the US left Iraq in December 2011 in compliance with the terms of a bilateral *Status of Forces Agreement*⁹⁸, the Pentagon had sold the Iraqi Defense Ministry \$1.3 billion in tanks, helicopters, planes and guided missiles.⁹⁹ The US also spent \$1.4 billion of Iraqi treasury funds to finance the Ministry of Interior's secret prison

⁹² Souad Al-Azzawi, "Depleted Uranium Radioactive Contamination in Iraq: An Overview", *Global Research*, 2006.

⁹³ Barry Levy and Victor Sidel, "The Iraq War" in Levy & Sidel (eds.), *War & Public Health* (Oxford: Oxford University Press, 2008), 260.

⁹⁴ Riyadh Abdullah Fathi, Lilyan Yaqub Matti, Hana Said Al-Salih, and Douglas Godbold. "Environmental pollution by depleted uranium in Iraq with special reference to Mosul and possible effects on cancer and birth defect rates" *Medicine, conflict and survival* vol. 29, no° 1, 2013, 7-25.

⁹⁵ United States Government, Special Inspector General for Iraq Reconstruction, "Quarterly Report" 2009, 79.

⁹⁶ Sadik Al-Sabbak, Ali Savabi, Ghazal Savabi, Saeed Dastgiri, and Mozghan Savabieasfahani. "Metal contamination and the epidemic of congenital birth defects in Iraqi cities" *Bulletin of Environmental Contamination and Toxicology* vol. 89, no° 5, 2012, 937-944.

⁹⁷ Coalition Provisional Authority Order Number 17 (Revised), "Status of the Coalition Provisional Authority, MNF – Iraq, Certain Missions and Personnel in Iraq", CPA/ORD/27 June 2004/17, Article 1, Section 4: "the multinational force, foreign liaison missions, their personnel, property, funds and assets and all international consultants shall be immune from Iraqi legal process."

⁹⁸ See "Agreement Between the United States of America and Republic of Iraq On the Withdrawal of United States Forces from Iraq and the Organization of Their Activities during Their Temporary Presence in Iraq", 2008 in Mason Chuck, "US-Iraq Withdrawal/Status of Forces Agreement: Issues for Congressional Oversight" (DIANE Publishing, 2010).

⁹⁹ Paul James, Céline Nahory, "War and Occupation in Iraq", *Global Policy Forum*, 2013, Chapter 9: Corruption, Fraud and Gross Malfeasance, 90.

program, train militias and arm the new police force.¹⁰⁰ As a result, al-Maliki's Government of Iraq leveraged the new security apparatus to systematically marginalize, arrest and torture Sunni elected officials.¹⁰¹ This power imbalance, sowing the seed of Sunni resentment, coincided with the growing instability in Syria, which ultimately led to the rise of the Islamic State of Iraq & the Levant (ISIL). Once the U.S. Army departed, ISIL rose out of the rubble to become a profitable multinational oil business operation. ISIL was "adept at exploiting decades-old transnational gray markets for oil and arms trafficking."¹⁰²

42 Because they stretch across desert land, pipelines are easily tapped into. Once tapped, the oil can be "bunkered" into tanks and sailed off into the Gulf. Resource extraction and armament depot looting provided ISIL with the material arsenal necessary to back its political claims.¹⁰³ ISIL grew stronger by reviving old ties on a deregulated oil market.¹⁰⁴ The network used the proceeds of the dark oil trade to capture Raqqa in March 2013 and Mosul in June 2014.¹⁰⁵ Between 2011 and 2016, ISIL orchestrated attacks by funneling cash, arms and oil through similar channels of undercover networks as those used by

the Baath shadow State to smuggle oil out of Iraq during the US embargo of 1991-2003.¹⁰⁶

ISIL seized control of dams, oil wells, refineries, ports, banks and wheat crops to establish its mercenary extractive sovereignty.¹⁰⁷ At the height of its power, ISIL banked in between \$80,000 and \$1.6 million a day from oil sales, bank robberies, extortion, smuggling and punitive taxes.¹⁰⁸ Most of its oil was believed to be smuggled through Turkey at the rate of \$1 million per day.¹⁰⁹ Because the oil trade was illegal, the barrels were sold at a discounted price, which undercut international oil prices and left room for sizable profits.¹¹⁰

By seizing oil wells and military equipment left behind by the American occupation, ISIL reproduced the accumulation by contamination of the occupying forces.¹¹¹ ISIL acquired the extractive means to finance war-making, thereby adding another layer of rubble and dust to the ground they regained among the exploited people they pledged to protect: this pollution has come to be referred to as "the ISIL winter", which depicts the toxic fallout of three years of armed conflict.¹¹² By detonating oil wells and torching sulfur plants across Iraqi provinces to fight against

100 Robert Perito, "Reforming the Iraqi Interior Ministry, Police and Facilities Protection Service" *US Institute of Peace*, February 2007; Mark Sedra, "Security sector reform in Afghanistan and Iraq: exposing a concept in crisis", *Journal of Peacebuilding & Development* vol. 3, n° 2, 2007, 7.

101 Maliki purged Government ministries of their Sunni representatives, such as Vice President Tariq al-Hashemi and Sunni Finance Minister Rafi al-Issawi, who were charged of having links to terrorism. See Kenneth Katzman, "Iraq: Politics, Security, and U.S. Policy", *CRS Report for Congress. RS21968, Washington, D.C, GPO*, April 16, 2015, 17.

102 Michael Weiss, Hassan Hassan, "ISIS: Inside the Army of Terror", *New York: Regan Arts*, 2015. Url: <https://www.nytimes.com/2015/04/05/books/review/isis-inside-the-army-of...> (accessed 09/03/2020).

103 Shiv Malik, "The Isis Papers: Behind 'Death Cult' Image Lies a Methodical Bureaucracy", *Guardian*, 7 December 2015.

104 ISIL is "a mafia adept at exploiting decades-old transnational gray markets for oil and arms trafficking", Michael Weiss, Hassan Hassan, *ISIS: Inside the Army of Terror* (New York: Regan Arts, 2015).

105 Ali Nehme Hamdan, "Breaker of barriers? Notes on the geopolitics of the Islamic State in Iraq and Sham", *Geopolitics* vol. 21, n° 3, 2016, 605-627.

106 Denise Natali, 'The Islamic State's Baathist Roots.', *Al-Monitor*, 24 April 2015. Url: <https://www.al-monitor.com/pulse/originals/2015/04/baathists-behind-the...> (accessed 09/06/2020).

107 Jeremy Bender, "ISIS Is Turning Food And Water Into A Weapon In Iraq", *Business Insider*, Aug. 15 2014. Url: <https://www.businessinsider.com/isis-has-two-major-weapons-in-iraq-2014...> (accessed 09/06/2020).

108 Orlando Crowcroft, "Inside the Struggling Islamic State Economy in Iraq and Syria" *International Business Times* 2015.

109 Dilly Hussain, "ISIS: The 'unintended consequences' of the US-led war on Iraq", *Foreign Policy Journal*, March 23, 2015. Url: <https://www.foreignpolicyjournal.com/2015/03/23/isis-the-unintended-con...> (accessed 09/06/2020).

110 Benoit Faucon, Margaret Coker, "The Rise and Deadly Fall of Islamic State's Oil Tycoon", *Washington Post*, April 24, 2016. Url: <https://www.wsj.com/articles/the-rise-and-deadly-fall-of-islamic-states...> (accessed 09/06/2020).

111 Jessica Stern, John Berger, *ISIS: The state of terror* (New York: Harper Collins, 2015).

112 The Open University, "The ISIS winter: The environmental impact of Middle East conflict", 31st January 2018, Url: <https://www.open.edu/openlearn/nature-environment/environmental-studies...> (accessed 02/03/2020).

Government security forces, ISIL orchestrated environmental sabotage. “The burning of the [Mishraq Sulphur Plant] was a real case of using environmental damage as a weapon of war.¹¹³”

45 Furthermore, the wreckage of twenty-five oil wells in Qayyarah provoked thick blinding smoke clouds stretching over tens of kilometers, turning people’s skin and sheep’s coats black from soot. This toxic legacy includes wide-scale cattle deaths, fields that no longer yield edible crops and chronic breathing complications in children and the elderly. As a result, over 1,500 people were reportedly treated for suffocation in the Qayyarah, Makhmour and Ijhala according to the Ministry of Health and the WHO.¹¹⁴ Large tracts of farming and grazing land have also been affected by oil spills, seriously endangering livelihoods.¹¹⁵ Much of the oil has seeped into the ground and the Tigris river, affecting the supply of drinking and agricultural water. Heavily polluted waterways in the Basra region led to the collapse of agriculture and the displacement of entire communities from rural areas. As they flee, refugees in the city of Basra settle in severely polluted shanti towns, which pump their water in the Shatt-al-Arab river, now littered with debris, bacteria, chemicals and salt. The Norwegian Refugee Council and the Displacement Monitoring Center reveal that systematic pollution and hazardous sanitation have resulted in more than 100,000 cases of waterborne disease in the first months of 2020, fueling the anger and protests of contaminated communities.¹¹⁶ Moreover, damaged ISIL ammunition manufacturing plants, as well as polychlorinated biphenyl (PCB) contamination

from attacks on energy infrastructure disseminated vast quantities of debris and waste across the landscape.

In the end, ISIL used oil both as a revenue stream 46 and as an environmental weapon. The insurgency mirrored the very process of accumulation by contamination, which had been adopted by its enemy, the State. The fight by Government forces to regain control over ISIL-conquered territory, as well as the Coalition’s systematic bombardment of Mosul, fueled another round of contamination, leaving behind a trail of blood and rubble in the ancient city.¹¹⁷

CONCLUSION

A century of Energy Imperialism in the Gulf 47 ultimately contaminated the human ecology of the region. This contamination was the product of the dynamic relationship between fire-bombing from above and oil drilling from below. From British “indirect rule” to American “regime change”, bombs were systematically dropped to secure oil concessions and military alliances. As we tried to demonstrate in our contribution, these foreign rounds of accumulation by contamination were reproduced internally by local actors, who used oil as a political weapon for war-making and State-building, and often consciously using oil pollution as a weapon of ecological warfare. Paradoxically, nationalist movements of the 1950s and rebel forces of 2010s, which claimed to offer an alternative, ultimately replicated the hegemonic model of accumulation by contamination sustained by a regime of legal impunity for ecological destruction during wartime.¹¹⁸

113 PAX Netherlands, “Living Under A Black Sky: Conflict pollution and environmental health concerns in Iraq”, *Report*, 05 December 2017.

114 UN Environment Technical Note: Environmental Issues in Areas Retaken From ISIL, Mosul, Iraq, 2017. Url: https://reliefweb.int/sites/reliefweb.int/files/resources/UNEP_Iraq_Tec... (accessed 09/06/2020).

115 *Ibid.*

116 Norwegian Refugee Council and the Internal Displacement Monitoring Center, “When canals run dry: displacement triggered by water stress in the south of Iraq”, February 2020. Url: <https://www.internal-displacement.org/publications/when-canals-run-dry-...> (accessed 09/06/2020).

117 Michael Knights, Alexander Mello, “Defeat by Annihilation: Mobility and Attrition in the Islamic State’s Defense of Mosul”, *CTC Sentinel* vol. 10, n° 43. 2017.

118 Katherine Kelly, “Declaring War on the Environment: The Failure of International Environmental Treaties During the Person Gulf War” *Am. UJ Int’l L. & Pol’y* 7, vol. 7, n° 4, 1991, 921-950. In 2011, the International Committee of the Red Cross concluded that the law protecting the environment during armed conflicts is unclear and insufficiently developed. See 31st International Conference of the Red Cross and Red Crescent held in Geneva, Switzerland, 28 November-1 December 2011. For recent scholarship, see Britta

- 48 The Gulf is today one of the most militarized regions of the world, since oil extraction offered ceaseless occasions for military spending and war profiteering. As much as slaves working in plantations contributed to primary accumulation by dispossession in the colonial era¹¹⁹, planes over pipelines contributed to another round of accumulation by contamination in the postcolonial era.
- 49 With the discovery of new petroleum reserves on other continents and offshore, the Western process of accumulation by contamination initiated a century ago in the Gulf has now colonized the planet. Our Ecomarxist study of the Gulf could find resonance elsewhere, in extractive regions of Latin America and Africa, which have come to symbolize the new geographies of dirty wars and mineral plunder. The primitive accumulation by contamination is in a process of constant relocation, revealing new actors. The Far East is now land-grabbing and drilling in the postcolonial world¹²⁰, while the West is pumping and fracking its own underground, with devastating effects on the quality of the water tables. As Michel Serres convincingly argued in his essay *Malfeasance: Appropriation Through Pollution?*, globalization paradoxically leads to worldwide dispossession of a polluted earth: *Res Nullius Mundus*.¹²¹ The world has been turned into a wasteland, which prompts us to revisit the question asked in the introduction: have we entered to a new anthropogenic era – the Molysmocene – representing a general accumulation and dispersion of pollution across the globe?

Sjostedt, *The Role of Multilateral Environmental Agreements: A Reconciliatory Approach to Environmental Protection in Armed Conflict* (London: Bloomsbury Publishing, 2020).

¹¹⁹ Sven Beckert, *Empire of cotton: A global history* (New York: Vintage, 2015).

¹²⁰ Arboleda, supra note 16.

¹²¹ Michel Serres, *Malfeasance: Appropriation Through Pollution?* (Stanford: University Press, 2010).

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French energy imperialism in Vietnam and the conquest of Tonkin (1873-1885)

Abstract

Cet article montre que la conquête française du Vietnam a été entreprise notamment dans l'optique de l'appropriation de ses ressources en charbon, et que l'impérialisme française était dans ce cas un « impérialisme énergétique ». Il défend ainsi l'idée qu'on peut analyser la conquête française du Tonkin et de l'Annam (1873-1885) comme étant notamment le résultat d'une combinaison des impérialismes énergétiques de la Marine, de l'administration coloniale cochinchinoise, des politiciens favorables à la colonisation et des hommes d'affaires. Au travers des archives militaires, diplomatiques et administratives et d'une réinterprétation de l'historiographie existante, il explore la dynamique de l'impérialisme énergétique français au Vietnam durant la phase de conquête.

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"French colonial policy [...] was inspired by [...] the fact that a navy such as ours cannot do without safe harbors, defenses, supply centers on the high seas [...] The conditions of naval warfare have greatly changed [...]. At present, as you know, a warship, however perfect its design, cannot carry more than two weeks' supply of coal; and a vessel without coal is a wreck on the high seas, abandoned to the first occupier. Hence the need to have places of supply, shelters, ports for defense and provisioning [...]. And that is why we needed Tunisia; that is why we needed Saigon and Indochina; that is why we need Madagascar [...] and why we shall never leave them!"¹

Plan of the article

- Introduction
- The "primitive accumulation" of French energo-imperialist intelligence on Tonkin and Annam's coal resources (1873-1876)
- Franco-Chinese energo-imperial rivalries in Tonkin and Annam (1877-1881)
- The climax of French energo-imperial interest for Tonkin and Annam's coal resources (1881-1882)
- The conquest of Tonkin and the colonial appropriation of its coal resources (1883-1885)
- Conclusion

¹ Jules Ferry, "Speech Before the French Chamber of Deputies, July 28, 1885," *Discours et Opinions de Jules Ferry*, Paris, Paul Robiquet, 1897.

INTRODUCTION

- 1 This article posits that the French conquest of Tonkin (and Annam to a lesser extent) was undertaken notably to appropriate its coal resources for the energy supply of the French Navy, and that French imperialism was in that case an “energy imperialism”. “Energy imperialism”, here defined as a process of appropriation of energy resources by a foreign body through formal or informal colonization, is a distinct form of imperialism due to its high geo-strategic and economic importance, as shown by former Prime Minister Jules Ferry’s speech before the French Parliament in July 1885. It was a significant aspect of the late French colonial empire, in Gabon as in Algeria,¹ but the conquest of Tonkin and Annam has not been assessed in that light.²
- 2 This article intends to make up for that gap in the existing literature, and to determine the role of energy imperialist forces in the conquest of Tonkin and Annam, casting a new light on the history of the French colonialization of Vietnam.³ Although it has already been argued that “naval imperialism” was the driving force behind the conquest of Vietnam, and that coal played an important role in that conquest,⁴ the role of energy imperialist forces in the conquest of Tonkin and Annam has not been assessed systematically. The case of the conquest of Tonkin and Annam is particularly original and stimulating

as it sheds light on the economic and geo-political rivalries, notably about Tonkin and Annam’s coal resources, between France and China.

The concept of energy imperialism has been 3
mainly applied to cases of “oil imperialism”, from Persia to Saudi Arabia.⁵ However, “coal imperialism” was also an important historical phenomenon from the second half of the 19th century, with the general and progressive transition from sail to steam in several military and merchant navies, up to the transition to fuel of the main military navies from the beginning of the 20th century.⁶ Indeed, the necessity for vessels to be supplied in coal required the construction of coaling stations and bases on a global scale, as in the case of the British Navy in preparation of a potential conflict,⁷ or in the case of the United States Navy in the Pacific at the end of the 19th century.⁸ It also led, in order to secure local coal sources for the British Navy, to the rise of a global British geological imperialism and to the conquest of coal islands such as Labuan, off the coast of Borneo.⁹

Just as the British empire was dependent on the 4
military strength of its Navy and its adequate supply in coal, French imperialism in South-East Asia in the second half of the 19th century was bound to the military might of the French Navy,

¹ Roberto Cantoni, “Energio-Colonialism: The Role of the Oil Industry in Gabon in the Trente Glorieuses” (presented at the Doctoriales, Blois, 2015); Samir Saul, *Intérêts économiques français et décolonisation de l’Afrique du Nord* (Genève: Librairie Droz, 2016).

² Jeoung Jaehyun, “Exploitation minière et exploitation humaine : les charbonnages dans le Vietnam colonial, 1874-1945” (Doctoral Thesis, Université Paris Diderot - Paris 7, 2018) focuses more on the French attempts to appropriate Vietnam’s coal resources than on the role of energy imperialism in the broader colonization process, although it is the most valuable contribution to the literature on that matter to that day. In my PhD research I try to fill that gap more extensively.

³ On the history of French colonialism in Vietnam, see e.g. Pierre Brocheux and Daniel Hémerly, *Indochina: An Ambiguous Colonization, 1858-1954* (Berkeley: University of California Press, 2011).

⁴ *Ibid.*, 21 and 33; Jaehyun.

⁵ Marian Kent, *Moguls and Mandarins: Oil, Imperialism, and the Middle East in British Foreign Policy, 1900-1940* (London: Frank Cass, 1993); Robert Vitalis, *America’s Kingdom: Mythmaking on the Saudi Oil Frontier* (London: Verso, 2009); Guillemette Crouzet, *Genèses du Moyen-Orient: le Golfe Persique à l’âge des impérialismes (vers 1800-vers 1914)* (Ceyzérieu: Champ Vallon, 2015).

⁶ Volkan Ş. Ediger and John V. Bowlus, “A Farewell to King Coal: Geopolitics, Energy Security, and the Transition to Oil, 1898-1917”, *The Historical Journal*, 62.2 (2019), 427-49.

⁷ Steven Gray, *Steam Power and Sea Power: Coal, the Royal Navy, and the British Empire, c. 1870-1914* (London: Palgrave Macmillan, 2018).

⁸ Peter A. Shulman, *Coal & Empire: The Birth of Energy Security in Industrial America* (Baltimore: Johns Hopkins University Press, 2015).

⁹ Robert A. Stafford, *Scientist of Empire: Sir Roderick Murchison, Scientific Exploration and Victorian Imperialism* (Cambridge: Cambridge University Press, 1989); Andreas Malm, “Who Lit This Fire? Approaching the History of the Fossil Economy”, *Critical Historical Studies* vol. 3, n° 2, 2016, 215-48.

and thus to its coal supply as it had transitioned from sail to steam since 1846–51.¹⁰ The French navy was not merely a military lobby pushing for its own interests. Without a powerful navy, the expansion of French commerce and geopolitical influence would have been impossible, and so therefore the acquisition of a status of global power.¹¹ And to that great imperial design, the conquest of Tonkin and Annam and their coal mines was crucial. It would allow in theory the French Navy not only to become more independent from British coal infrastructure,¹² but also to have its own source of coal supply.¹³ This led Brocheux and Hémery to argue that “the acquisition of the [coal] mines of Hon Gai [...] was a driving motivation for the conquest of Tonkin”.¹⁴ Similarly, Fichter argued that “the seizure of the mines in Tonkin and Annam were [...] inspired by a desire to have Asian mines under French control” as they “seemed to promise carbon independence and [thus] constituted one of France’s objective in the Sino-French War by which Tonkin was conquered”. Hence, both underlined the crucial role of the French Navy’s energy imperialism in the conquest of Tonkin and Annam. In addition, this “colonization” of Tonkin and Annam was framed as a step towards the conquest of southern China,¹⁵ notably its mineral riches, and the affirmation of French naval power in the Pacific.¹⁶ And indeed, coal was not only a motivation for military conquest, but also what allowed energetically this conquest and an

energy source necessary for further conquests. Coal was fueling French imperialism.

However, Tonkin and Annam’s coals were not only 5
coveted by the French Navy, but also by various private investors with significant connections with pro-colonial politicians, and even by the authorities of French Cochinchina.¹⁷ Therefore, this paper argues that the conquest of Tonkin and Annam can be analyzed as being notably the combined product of French naval, economic and political energy-imperialisms: the Navy sought to supply its vessels with good quality coal from independent sources; businessmen sought to appropriate and exploit coal to produce profit; pro-colonial politicians sought to supply their colonial enterprise with a steady and cheap supply in coal; and colonial administrators sought to secure fiscal revenues for their budget and coal supply for their colony.

These energy-imperial actors, inextricably bound, 6
were more or less predominant depending on the historical context, their strategies were constantly in evolution in order to adapt to the historical conjecture, and their interests could converge as well as diverge partially. Thus, opposing the reductionist views of energy imperialism as a monolithic phenomenon with its impersonal and automatic dynamics, this article argues that energy imperialism is a complex, transforming and combined product of different energy-imperial actors, with their respective aims and strategies. The case of Vietnam particularly sheds lights on this non-monolithical dimension of energy imperialism. It also illustrates the “tensions of empire”,¹⁸ those between political, naval and economic imperialists in a sector – energy – which is often assumed erroneously to be that of complete consensus between public and private actors.¹⁹

¹⁰ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 21.

¹¹ *Ibid.*, 22.

¹² On the dependency to British coal infrastructures of the French Navy, see James R. Fichter, “British Infrastructure and French Empire: Anglo-French Steam Interdependency in Asian Waters, c.1852–1870”, *Britain and the World*, 5.2 (2012), 183–203 and James R. Fichter, “Imperial Interdependence on Indochina’s Maritime Periphery: France and Coal in Ceylon, Singapore, and Hong Kong, 1859–1895”, in *British and French Colonialism in Africa, Asia and the Middle East*, ed. by James R. Fichter (Cham: Springer International Publishing, 2019), 151–79.

¹³ *Ibid.* and Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 34.

¹⁴ *Ibid.*, 21.

¹⁵ Brocheux and Hémery, 67.

¹⁶ Patrice Morlat, *Indochine années vingt : le balcon de la France sur le Pacifique* (Paris : Indes savantes, 2001).

¹⁷ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 33–34.

¹⁸ Frederick Cooper and Ann Laura Stoler (eds.), *Tensions of Empire: Colonial Cultures in a Bourgeois World* (Berkeley: University of California Press, 1997).

¹⁹ Gregory Nowell, *Mercantile States and the World Oil Cartel, 1900–1939* (Ithaca: Cornell University Press, 1994).

- 7 Overall, this article analyses energy imperialism as a specific, plural, situated, partly unsuccessful and complex historical phenomenon, different in nature and in importance from other imperialisms due to both its high economic and geo-strategic importance; plural, due to the plurality of actors involved; situated, as French energy imperialism was very different in Vietnam and in Algeria;²⁰ partly unsuccessful, as the promised Eldorado was partly deceptive and finally lost and as companies faced unsolvable workforce problems and labor resistance;²¹ and complex, as the combination of energy imperialisms tends to shift constantly, especially in times of conquest and war.
- 8 Within that framework, this article assesses the history of French energy imperialism in Vietnam from early French energo-imperial interests in Tonkin and Annam's coal resources to the establishment of a French protectorate over Tonkin and Annam. Through military, diplomatic and administrative archives and a reinterpretation of existing literature, it investigates the dynamics of French energy imperialism in Vietnam during the conquest phase.

THE "PRIMITIVE ACCUMULATION" OF FRENCH ENERGO-IMPERIALIST INTELLIGENCE ON TONKIN AND ANNAM'S COAL RESOURCES (1873-1876)

- 9 French energo-imperialist intelligence about Tonkin and Annam's coal resources started being collected first through naval and commercial expeditions from China and Cochinchina (southern Vietnam) in the 1860's-1870's. China had been, since the First Opium War (1838-1842) lost against the British Navy, progressively commercially penetrated and politico-militarily weakened, while French Cochinchina had been conquered from the declining Annam Empire

in 1858-66 due to a convergence of commercial, religious, naval and political imperialisms, and was then ruled by the French navy until the 1880's, "which was more important in Indochina than in any other colony".²² French imperialist projects in China and Indochina went hand in hand, as the economic penetration of the former was "the initial goal of the conquest of Indochina".²³ Further, Cochinchina was conquered during the Second Opium War (1856-1860), and this conquest was made possible because of the military weakening of China, Vietnam's traditional "suzerain".²⁴ This connection between French imperial projects in China and Vietnam would continue well after the conquest of Tonkin, with the economic penetration of Yunnan in 1895-1898.²⁵ This informal colonization was notably driven by energo-imperial considerations, with "projects of liaisons between the Yunnan tin, copper, and iron mines and the Tonkin coal mines" emerging from exploratory missions sponsored by the *Comité des forges* (French's main patronal organization);²⁶ the construction of a coaling station on the bay of Guangzhouwan;²⁷ and various imperial projects aiming – in relation with the envisioned railway line between Tonkin and Yunnan – to exploit coal mines in Yunnan.²⁸

The French Navy's Mekong Expedition (1866-1868), which aimed to find a path from French Cochinchina to Yunnan, had already mentioned the existence of coal mines in the South of

²⁰ André Nouschi, *La France et le pétrole* (Paris : Picard, 2000); Saul, *Intérêts économiques français et décolonisation de l'Afrique du Nord*, 2016; Roberto Cantoni, *Oil Exploration, Diplomacy, and Security in the Early Cold War: The Enemy Underground* (London: Routledge, 2017).

²¹ Jaehyun, "Exploitation minière et exploitation humaine", 2018.

²² Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 17-27.

²³ *Ibid.*, 67.

²⁴ *Ibid.*, 17-27. "Suzereignty" is, however, a partly misleading term to describe Sino-Vietnamese pre-colonial relations: on that issue, see e.g. Charles Fourniau, *Vietnam: domination coloniale et résistance nationale, 1858-1914* (Paris : Indes savantes, 2002).

²⁵ Robert Lee, *France and the Exploitation of China, 1885-1901: A Study in Economic Imperialism* (Hong Kong ; New York: Oxford University Press, 1989).

²⁶ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 67.

²⁷ *Id.*

²⁸ Archives Nationales d'Outre-Mer [ANOM], *fonds du Gouvernement général de l'Indochine* [GGI], cote n°24706.

Yunnan.²⁹ Indeed, Yunnan was the object of an imperial race with Great Britain,³⁰ as it was seen as a commercial and mineral Eldorado at least since 1857.³¹ But it was first Dupuis, a French arms trafficker, following an indication made by Francis Garnier (who Dupuis had probably encountered) during the Mekong Expedition, who publicized the existence of coal deposits in Tonkin after his 1873 expedition along the Red River.³²

- 11 Indeed, during his 1873 expedition to explore the Red River as a potential crossing point to Yunnan, Dupuis had encountered pirates who supposedly also exploited several gold and coal mines.³³ This expedition was required by the intensification of his activity as an arms trafficker, which required the acceleration of his arms shipments to his client the Chinese governor Ma Hulong in Yunnan.³⁴ Thanks to the support of the Minister of the Navy and the Colonies and Cochinchina's governor Marie-Jules Dupré, and despite aborted negotiations with Vietnamese authorities (and their opposition to that project), Dupuis and his associate's convoy of steam-ships full of weapons arrived in Yunnan in January 1873 after having taken the Red River path through Tonkin.³⁵ However, on its return to Hanoï in April 1873, its fleet was blocked by Vietnamese authorities, and Cochinchina's colonial governor seized this opportunity to order Garnier to "liberate" Dupuis' fleet – and, more importantly, impose a French presence in Tonkin and Franco-Chinese commerce on the Red River, which according to Dupuis would have included mineral products from Yunnan.³⁶ Having arrived in Hanoï in

October 1873, Garnier decided a month later, and after the failure to obtain satisfaction on these points through negotiations with Vietnamese authorities, to conquer (with Dupuis' assistance) Hanoï and other strategic points in Tonkin, setting out a precedent that would be important in the French decision to conquer Tonkin ten years later. Villemagne even estimates that "the conquest of this territory [Tonkin] was initiated by a merchant, Jean Dupuis, in a purely private initiative",³⁷ echoing the *Petit parisien* who described him as the "inventor of the Tonkin question".³⁸ However, Garnier's killing in December 1873 in an encounter with the Black Flags (probably hired by Vietnamese mandarins),³⁹ the limited number of French soldiers in Tonkin, the mounting anti-Christian revolt and the opposition of the French government to send more troops ultimately forced the French authorities to decide on the evacuation from Tonkin in January 1874.⁴⁰ The French pro-monarchist government decided to put an end to the Garnier expedition due to its hostility to extra-European conquests, its priority given to continental affairs and its fear of an open conflict with China.⁴¹

12 However, this episode had two decisive outcomes: the signing of an unequal treaty of "protection" – although not establishing a formal protectorate – in March 1874 between France and the Vietnamese authorities, which included the acceptance of French consulates (article 13) and of a diplomatic representation in the capital city of the Annam Empire (Hue) – a French legation, with a chargé d'affaires at its head – (article 20), and the confiscation of Dupuis' shipment by the Vietnamese authorities, which resulted in his financial ruin.⁴²

²⁹ Francis Garnier, *Voyage d'exploration en Indochine*, (Paris: Hachette, 1873) 567, 619 and 632.

³⁰ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 28.

³¹ Jean-François Klein, "Une histoire impériale connectée ? Hâi Phòng : jalon d'une stratégie lyonnaise en Asie orientale (1881-1886)", *Moussons*, 13-14, 2009, 55-93.

³² *Ibid.*, 32.

³³ Hippolite Gautier, *Les Français au Tonkin (1787-1886)*, (Paris: Challamel, 1887), 101.

³⁴ Claire Villemagne, "Du Tonkin des pionniers à la mise en valeur de l'Indochine. Le symbole de « l'affaire Dupuis » (1872-1912)", *Outre-mers* vol. 99, n° 376, 2012, 157-77.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ "Monsieur Dupuis repaît", *Le Petit parisien*, lundi 21 décembre 1885, 1-2.

³⁹ On the Black Flags, see Bradley Camp Davis, *Imperial Bandits: Outlaws and Rebels in the China-Vietnam Borderlands, Critical Dialogues in Southeast Asian Studies* (Seattle: University of Washington Press, 2017).

⁴⁰ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 29.

⁴¹ *Ibid.*, 29.

⁴² *Id.*

13 The acceptance of French consulates had short-term consequences, as it would allow French agents to gather more intelligence on Vietnamese coal deposits, of which only little was known.⁴³ Indeed, as early as 1875, the French Consul in Haiphong, conducted an evaluation of a coal sample that had been given to him by some Vietnamese. Although the results were deceptive, the Consul thought it was due to the fact that the sample had been collected on the surface, and hence asked the General Governor of Hai Duong and Quang Yen to dig a small gallery in order to evaluate deep coal deposits, which he believed to be potentially better.⁴⁴ From February to May 1876, an agent of the Consul, Espitalier, eventually undertook a series of coal prospecting in Hongai (20th century major coal producing site in Vietnam), Quang Yen (the largest coal reserve in contemporary Vietnam) and Dong Trieu (20th century second major coal producing site in Vietnam), and found everywhere coal deposits at the surface.⁴⁵ Hence, the French authorities started searching for coal in Tonkin as soon as their consulates had been established, and within a few months they had spotted the major Vietnamese coal deposits. In contrast with the case of Algerian oil and gas, which discovery was only possible through an enormous techno-scientific apparatus,⁴⁶ in Vietnam geologists did not discover coal deposits but rather corrected, deepened, centralized and completed what had been mainly empirical research of local imperial agents.⁴⁷ The very technological “primitive accumulation” of ergo-imperial intelligence in the Algerian case contrasted with the very empirical “primitive accumulation” of ergo-imperial

intelligence in the Tonkin case. However, this disparity was mainly due to the difference between coal and other hydrocarbons, as the Algerian coal was also spotted through empirical research.⁴⁸

The Vietnamese coal deposits also aroused interest at a higher level right after the 1874 Treaty, as the incumbent of the newly created position of chargé d'affaires in Hué mentioned to the General Governor in August 1875 his intention – with his approval – to obtain the authorization of the Annam Empire, in poor financial condition, to prospect coal mining sites and to concede them to the prospectors in case those sites were deemed valuable for both them and the Annam Empire.⁴⁹ The French consul in Haiphong also envisioned that the mineral resources of Tonkin could be exploited profitably, but only if the local administration was under French control, whether due to its leasing to French agents, through the establishment of a protectorate over Tonkin or following its military conquest.⁵⁰ The consul specified later that it was necessary to ensure the suitability of this coal for the engines of steamboats, hence showing that these prospects were undertaken to secure the coal supply of the French Navy, who had been put in difficulty during the Franco-Prussian war of 1870 due to the British policy of refusing to supply belligerent steamboats.⁵¹ But according to the consul, the Vietnamese authorities in Tonkin were doing everything to deter French searches despite their apparent goodwill.⁵² Hence, as early as 1876, the “sincere fiction”⁵³ of a coal Eldorado from Yunnan to Hongay that could supply the French Navy

⁴³ Fourniau, *Vietnam : domination coloniale et résistance nationale*, 288.

⁴⁴ ANOM, *Amiraux*, côte n°13122, lettre du Consul de France à Haïphong au Gouverneur de la Cochinchine, 12 octobre 1875.

⁴⁵ ANOM, *GGI*, côte n°13134, lettre du Consul de France à Haïphong au Gouverneur de la Cochinchine, 9 mai 1876.

⁴⁶ Cantoni, *Oil Exploration, Diplomacy, and Security in the Early Cold War*.

⁴⁷ Archives nationales des mondes du travail [ANMT], *fonds de la Compagnie financière de Suez – Banque de l’Indochine* [CS-BI], côte n°2011 030 5922, Extrait du mémoire de D. Lucas, “Le Bassin Houiller de Hongay”, mémoire de géographie, mai 1949, 6-7.

⁴⁸ ANOM, Gouverneur Général de l’Algérie, Série “Mines et pétrole” [5N], côte n°57, Rapport de l’Ingénieur des T.E du Service des Mines, “Houillère de Kenadsa (Sud-Oranais)”, 3 juillet 1922, 1-2.

⁴⁹ Jaehyun, “Exploitation minière et exploitation humaine”, 2018, 40.

⁵⁰ Jaehyun, “Exploitation minière et exploitation humaine”, 2018, 38.

⁵¹ Fichter, “Imperial Interdependence on Indochina’s Maritime Periphery”, 159–63.

⁵² ANOM, *GGI*, côte n°13134, lettre du Consul de France à Haïphong au Gouverneur de la Cochinchine, 9 mai 1876.

⁵³ Pierre Bourdieu, *The Logic of Practice* (Stanford: Stanford University Press, 2008), 112.

had started to spread in the French colonial administration, and the Vietnamese authorities were (rightly) seen as the main obstacle to the French potential appropriation of coal deposits.⁵⁴ However, this opposition was mainly motivated by a defense of their interests, as they asked without success patterns of mining concessions to the French authorities,⁵⁵ and as they even envisioned to send to France young literate Vietnamese to receive an engineering (“*génie*”) training – a project that eventually aborted.⁵⁶

15 Meanwhile, due to his financial situation, Dupuis started a lengthy political and juridical fight to obtain financial compensation from the French government, which he accused of being responsible for his ruin. He was helped in that task by pro-colonial politicians, Eugène Etienne (the future leader of the *parti colonial*) and the Gambetta clan, who used this “affaire Dupuis” as a pro-colonial Trojan horse.⁵⁷ With this political support, Dupuis became a notorious and self-proclaimed expert of Tonkin and its mineral resources, publishing his propaganda articles in several journals, writing books and multiplying his interventions in influential places.⁵⁸ Logically, he was accused by the anti-colonial opinion of influencing the government to conquer Tonkin for his own interests:⁵⁹ and truly, as he was one of the main “founders” of “Tonkin” as a powerful colonial myth.⁶⁰ Altogether with other actors such as former missionaries and former colonial

administrators,⁶¹ Dupuis spread the sincere fiction of the “Tonkin-Mines” in various geographic societies – which functioned as imperial think-tanks –, in writings aimed at a large audience and in conversations with pro-colonial politicians.

FRANCO-CHINESE ENERGO-IMPERIAL RIVALRIES IN TONKIN AND ANNAM (1877-1881)

The arrival into power in 1877–79 of the pro-colonial “Opportunist Republicans” led by Ferry and Gambetta put an end to the 1867–1878 “pause” of French colonial expansionism in Vietnam.⁶² This era was marked by the rise of the “colonial idea” in France (and elsewhere), without which the conquest of Tonkin was unconceivable. Colonization started to be perceived by a growing informal “colonial party” – with Gambetta and Ferry at its head – as the best way to restore the power and prestige of France after the trauma of 1870–71, that of the French defeat against Prussia, the Paris Commune, the loss of Alsace-Moselle and the decline of French continental power. It was also assumed to be the only way to soften social conflicts, the agrarian, industrial and commercial crisis of 1873–1897 and the declining social status of the traditional elites and middle classes through the opening of new protected markets.⁶³ Finally, the conquest of new territories would provide, according to the liberal economist Paul Leroy-Beaulieu and his followers,⁶⁴ new opportunities for capital investments, in an era of stagnating profits and falling industrial prices due to sharp market competition.⁶⁵ Hence, colonization appeared as the best solution to France’s political, social and economic crisis, and Tonkin with its alleged enormous mineral

54 Philippe Devillers, *Français et Annamites, partenaires ou ennemis ? 1856-1902*, Paris, Denoël, 1998.

55 Jaehyun, “Exploitation minière et exploitation humaine”, 2018, 40.

56 ANOM, *Amiriaux*, côte n°12916, Lettre du chef du bureau des relations extérieures et du commerce du royaume du Vietnam au chargé d’affaires de la légation française à Hué, 10 octobre 1880; ANOM, *Amiriaux*, côte n° 12916, Lettre du chargé d’affaires de la légation française à Hué au Gouverneur de la Cochinchine, 31 octobre 1880.

57 Villemagne, “Du Tonkin des pionniers à la mise en valeur de l’Indochine”.

58 *Id.*

59 *Id.*; “Informations”, *L’Intransigeant*, 27 décembre 1882 et Henri Rochefort, “La Chine et son magot”, *L’Intransigeant*, 20 juin 1883.

60 Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 32.

61 Jaehyun, “Exploitation minière et exploitation humaine”, 2018, 62–63.

62 Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 27.

63 *Ibid.*, 33–42.

64 Paul Leroy-Beaulieu, *De la colonisation chez les peuples modernes*, (2nd éd. revue, corrigée et augmentée), (Paris: Guillaumin, 1882) 528–543.

65 Xavier Lafrance, *The Making of Capitalism in France: Class Structures, Economic Development, the State and the Formation of the French Working Class, 1750-1914* (Boston: Brill, 2019), 228–41.

resources and its proximity to southern China was a choice morsel in that regard.⁶⁶ However, China's restored power opposed France's growing imperial pretensions over Tonkin, leading to mounting tensions eventually culminating in the Sino-French war of 1883-85.⁶⁷

17 These tensions were also about Tonkin and Annam's coal resources. Indeed, in 1880, the chargé d'affaires in Hué sought to oppose the concession of a coal mine in Annam to a Chinese national.⁶⁸ Chinese entrepreneurs, due to their more advanced technology, were granted at that time most of Vietnamese mines against a fixed annual payment to the Royal Treasure.⁶⁹ Chinese expertise and interest in coal mining is to be traced-back more specifically to China's coal-intensive modernization since the 1860's.⁷⁰ This modernization had also been envisioned by Vietnamese reformer *Nguyễn Trường Tộ* at that time, but although coal mines were reported in 1868 following Emperor Tự Đức's orders, coal production remained limited,⁷¹ with coals only used for local and artisanal needs, notably to produce lime (in the case of the Dong Trieu coals)⁷² or to treat zinc.⁷³ However, coal aroused new interest in 1877, as the Court made published a Chinese book dictated by an English on modern

coal extraction methods.⁷⁴ It was prefaced by the pro-modernization General Governor of Hai Duaong and Quang Yen, who had authorized and even encouraged Espitalier to prospect coal regions in 1876 for these reasons,⁷⁵ in addition to the Court's desperate need for new sources of revenue.⁷⁶ This Governor had even declared to the French consul that the Annam Court was disposed to grant concessions,⁷⁷ although the chargé d'affaires in Hue doubted that this was the case for French nationals.⁷⁸ Indeed, in the years 1876-1878, a first coal mine was conceded to a Chinese national, although several demands, notably by French nationals, were rejected.⁷⁹ The Vietnamese authorities may have found it more profitable and in line with traditional practices to grant concessions to Chinese nationals than to French ones, in addition to resisting French colonial penetration.

In face of this attempt by a Chinese entrepreneur 18 to take over a Vietnamese coal mine, the chargé d'affaires proposed to persuade the Vietnamese government to undertake an evaluation of their coal mines by a French engineer and then to divide them equally to Vietnamese and French capital.⁸⁰ The latter proposition might have just been a diplomatic maneuver to outwit Chinese energo-imperial pretensions. Eventually, in the impossibility for the Governor of Cochinchina to send an engineer, the chargé d'affaires was encouraged to concentrate its efforts on blocking the concession to the Chinese entrepreneur, and hence sent a letter to the emperor warning him about the downsides of granting the

⁶⁶ *Ibid.*, 33-42.

⁶⁷ On this issue, see e.g. Lloyd E Eastman, *Throne and Mandarins: China's Search for a Policy during the Sino-French Controversy, 1880-1885* (Cambridge: Harvard University Press, 1967).

⁶⁸ ANOM, GGI, côte n°12712, télégramme du chargé d'affaires de la légation française à Hué au Gouverneur général de la Cochinchine, 9 avril 1880.

⁶⁹ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 33.

⁷⁰ Shellen Xiao Wu, *Empires of Coal: Fueling China's Entry into the Modern World Order, 1860-1920* (Stanford: Stanford University Press, 2015).

⁷¹ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 34; Mark W. McLeod, "Nguyen Truong To: A Catholic Reformer at Emperor Tu-Duc's Court", *Journal of Southeast Asian Studies*, 25.2 (1994), 313-30 <<https://doi.org/10.1017/S0022463400013527>>; Sinh Vinh, "Nguyen-Truong-To and the Quest for Modernization in Vietnam", *Japan Review* 11, 1999, 55-74.

⁷² ANOM, GGI, côte n°13134, lettre du Consul de France à Haiphong au Gouverneur de la Cochinchine, 9 mai 1876.

⁷³ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 33.

⁷⁴ *Ibid.*, 40-41.

⁷⁵ *Ibid.*, 41.

⁷⁶ Thế Anh Nguyễn, *Monarchie et Fait Colonial Au Viêt-Nam, 1875-1925: Le Crépuscule d'un Ordre Traditionnel*, *Collection Recherches Asiatiques* (Paris: Editions l'Harmattan, 1992), pp. 21-25.

⁷⁷ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 41.

⁷⁸ ANOM, *Amiraux*, côte 12785, Lettre du chargé d'affaires de la légation française à Hué au Gouverneur de la Cochinchine, 20 janvier 1876.

⁷⁹ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 42.

⁸⁰ ANOM, GGI, côte n°12712, télégramme du chargé d'affaires de la légation française à Hué au Gouverneur général de la Cochinchine, 9 avril 1880.

concession to a foreigner, resulting in the suspension of the concession procedure.⁸¹ However, the Nong Son mine in Annam was finally conceded to a Chinese entrepreneur in March 1881, despite fierce French opposition, although the loss was not so dire as the French Navy had tested its coals on its vessels and had found them low-grade.⁸² This substandard quality of Nong Son coals did not impede a strong reaction to this decision from the French authorities, as it jeopardized both French interests and imperial prestige. However, the mine was still conceded at the time of the French conquest.⁸³

19 Just two months before this setback, the chargé d'affaires had also urged the Governor to oppose the impending concession to a Chinese entrepreneur of the promising Hongai coal basin, despite similar demands by European merchants in Haiphong.⁸⁴ Indeed, the Hongay deposit had been coveted from 1878 by the China Merchants' Steam Navigation Company.⁸⁵ This company, founded in 1872 by the Qing official Li Hongzhang, who was also an important sponsor of the only Chinese "modern" coal mine,⁸⁶ was one of the first modern Chinese corporations.⁸⁷ It was established in Haiphong shortly after the opening of the commerce imposed on

Vietnamese authorities by the 1874 treaty,⁸⁸ while also having several liaison officers in Huê.⁸⁹ This competition revived the French interest for the Hongay coals, as in May 1881, the French Consul in Haiphong deemed them as valuable as the best English ones, and after testing them on a French war vessel, declared that they were readily usable for the supply of French war vessels.⁹⁰ This resulted in the decision of the Governor of Cochinchina to grant 2 000 francs to the Consul in order to extract coal in Hongay.⁹¹ With that money, digs were undertaken in Hongay from November to December 1881, confirming the French Navy's interest in the Tonkinese coal as the commanding officer even evoked a possible large-scale exploitation due to the accessibility of the site to large tonnage boats,⁹² a fact that had also been stressed by the chargé d'affaires a few months before.⁹³

In reaction to the potential concession of the Hongay deposit to Chinese interests, the chargé d'affaires had advocated the establishment of a protectorate in order to attract French capitals to Tonkin.⁹⁴ The strong opposition to this concession and to any concession to non-French nationals soon became widespread amongst diplomats and Navy officers, who depicted these concessions as tools of foreign penetration and as potential obstacles to future French imperial designs in Vietnam.⁹⁵ Indeed, at that time,

⁸¹ ANOM, GGI, côte n°12921, télégramme du chargé d'affaires de la légation française à Huê au Gouverneur général de la Cochinchine, 13 janvier 1881.

⁸² Jaehyun, "Exploitation minière et exploitation humaine", 2018, 45. On the Kaining mines, see Tim Wright, *Coal mining in China's economy and society, 1895-1937* (Cambridge: Cambridge University Press, 1984) and Elsworth C. Carlson, *The Kaiping mines, 1877-1912* (Cambridge: Harvard University Press, 1971).

⁸³ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 42.

⁸⁴ ANOM, GGI, côte n°12921, télégramme du chargé d'affaires de la légation française à Huê au Gouverneur général de la Cochinchine, 13 janvier 1881.

⁸⁵ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 21; Fourniau, *Vietnam: domination coloniale et résistance nationale*, 321.

⁸⁶ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 61.

⁸⁷ Chi-Kong Lai, "Li Hung-Chang and Modern Enterprise The China Merchants' Company, 1872-1885", *Chinese Studies in History* vol. 25, n° 1, 1991, 19-51.

⁸⁸ Julia T. Martinez, "The Chinese Traders in French Indochina: Partners or Rivals?", in *Asia Reconstructed: Proceedings of the 16th Biennial Conference of the ASAA Canberra: Asian Studies Association of Australia* (University of Wollongong, 2006).

⁸⁹ Fourniau, *Vietnam : domination coloniale et résistance nationale*, 321.

⁹⁰ Jaehyun, 38-39

⁹¹ *Ibid.*, 39.

⁹² ANOM, GGI, côte n°12712, lettre du capitaine de frégate Escudier au commandant de la Marine à Saïgon, 24 novembre 1881.

⁹³ ANOM, GGI, côte n°12921, télégramme du chargé d'affaires de la légation française à Huê au Gouverneur général de la Cochinchine, 13 janvier 1881.

⁹⁴ ANOM, GGI, côte n°12921, télégramme du chargé d'affaires de la légation française à Huê au Gouverneur général de la Cochinchine, 13 janvier 1881.

⁹⁵ ANOM, *Indochine – Ancien fonds* [Indo AF], T41(1), Lettre du capitaine de frégate Escudier au commandant de la Marine à Saïgon, 13 mai 1881; ANOM, *Amiraux*, 13220,

the first Ferry government (1880-1881) was considering annexing Tonkin, and hence opposed any concession of Vietnamese coal mines to a non-French national.⁹⁶ For the first time, coal resources in Vietnam aroused interest at the governmental level, showing that French energy-imperial interest for Tonkin and Annam's coal resources had reached a new level, just as French appetites for Tonkin more broadly.

21 Following that governmental decision, the chargé d'affaires finally declared to the Huê government, despite the lack of any legal base, that the French government would not consider valid any mine concession that had not been anteriorly approved by it.⁹⁷ Under the French pressure, the Vietnamese Court was forced to announce that it would not grant any other concession in the near future, but required French technical assistance in exchange.⁹⁸ This forced the chargé d'affaires to request the Governor to make sure that the French government, to give credibility to its declaration, would promptly send mine engineers to study mining regions, evaluate their value and facilitate their future exploitation. Otherwise, the Vietnamese government would pretext that lack of assistance to concede these mines to Chinese companies, in order to earn at least minimal revenues from their concession, concessions that the French government could not legally impede.⁹⁹ The French mine engineers would then have two main functions: to gather more energy-imperial intelligence and, on the pretext of "assistance", exclude Chinese companies from coal concessions. This must have decided the French Government to take action,

Lettre du Consul de France à Haiphong au Gouverneur de la Cochinchine, 14 mai 1881.

⁹⁶ ANOM, *Indo AF*, T41(1), Télégramme du Ministre de la Marine et des Colonies au Gouverneur de la Cochinchine, 27 juin 1881.

⁹⁷ ANOM, *GGI*, côte n°12921, télégramme du chargé d'affaires de la légation française à Huê au Gouverneur général de la Cochinchine, 18 juillet 1881.

⁹⁸ ANOM, *GGI*, côte n°12921, télégramme du chargé d'affaires de la légation française à Huê au Gouverneur général de la Cochinchine, 28 août 1881.

⁹⁹ ANOM, *GGI*, côte n°12921, télégramme du chargé d'affaires de la légation française à Huê au Gouverneur général de la Cochinchine, 28 août 1881.

as two "imperial engineers"¹⁰⁰ eventually arrived in Vietnam in November 1881.

THE CLIMAX OF FRENCH ENERGO-IMPERIAL INTEREST FOR TONKIN AND ANNAM'S COAL RESOURCES (1881-1882)

The two mine engineers, Fuchs and Saladin, 22 carried out their prospecting campaign from November 1881 to February 1882, despite the hostility of the Vietnamese authorities who had only been informed belatedly. They visited the Nong Son colliery and tested its coals on a war vessel, before heading to Tonkin and surveying the Hongay coal basin, where Saladin was able to collect underground coals to have them tested in Paris at their return, in addition to his mapping of the basin.¹⁰¹ In their report, Fuchs and Saladin claimed that the chemical analyses and test in factory of the Hongay coals indicated their quality and suitability for various industrial purposes, and hence their ability to compete successfully with other coals on the regional markets.¹⁰² Fuchs and Saladin envisioned a large-scale extraction to be launched with several millions of francs, motivated by the estimation of 5 million tons of coal reserve, the profusion of commercial outlets in South-East Asia, Hongay's proximity to the sea – in contrast with the Nong Son mine – and the abundance and cheapness of the workforce.¹⁰³ However, as Hongay was also coveted by Chinese trading firms,¹⁰⁴ and as Vietnamese authorities were deemed to be inherently hostile to any large-scale industry, the report argued for the necessity of a French protectorate on Tonkin to develop its industrial production.¹⁰⁵ This report, which downplayed the difficulties of a large-scale extraction of coal in Tonkin, notably in

¹⁰⁰ Davis, 81.

¹⁰¹ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 51–52.

¹⁰² ANOM, *GGI*, côte n°11899, Rapport de 1882 de Fuchs-Saladin.

¹⁰³ ANOM, *GGI*, côte n°11899, Rapport de 1882 de Fuchs-Saladin.

¹⁰⁴ ANOM, *GGI*, côte n°11899, Rapport de 1882 de Fuchs-Saladin.

¹⁰⁵ ANOM, *GGI*, côte n°11899, Rapport de 1882 de Fuchs-Saladin.

terms of climatic conditions and recruitment of workforce, offered a scientific and economic foundation to French energo-imperial appetites, and was widely publicized in the upper-class press, notably in *Le Temps*, the reference journal of the Third Republic's elites.¹⁰⁶ Fuchs also promoted the instauration of a French protectorate over Tonkin to allow for the exploitation of its mineral resources before the influential French Geographic Society.¹⁰⁷ From the end of 1881 to the beginning of 1883, there was a growing impatience to seize Tonkin in both economic, political, scientific, journalistic and naval circles, materialized in Gambetta's plan in November 1881 to completely occupy militarily Tonkin,¹⁰⁸ followed a month later by an intervention plan of Le Myre de Vilers urging the French government to seize Tonkin.¹⁰⁹ This limited intervention plan implied was finally adopted by the Freycinet government, with the sending of a military detachment commanded by Rivière to Hanoi on the 26 of March 1882.¹¹⁰ Rivière was ordered to use force only in case of absolute necessity, but alike Garnier in 1873, he took the initiative of seizing the Hanoi citadel on the 25th of April 1882.¹¹¹

23 In reaction to these growing French imperial pretensions, reiterated through a demand in December 1881 of exclusive concession to French nationals of several mining zones by the chargé d'affaires in Hué,¹¹² the Annam Court responded that it was only willing to concede to French

nationals the Quang Yen coal deposit, close to Haiphong, pretexting the presence of "pirates"¹¹³ notably in the zone of Hongay to refuse any other demand.¹¹⁴ The Court accused the French authorities of having send the mine engineers without prior notification, perhaps seeing them as energo-imperial spies. Finally, they reaffirmed their sovereignty over Tonkinese coal deposits, informing the French colonial authorities that concessions would be granted only to the best bidders and if there was no risk for the "underground dragon" who supposedly lived under Vietnam.¹¹⁵

Faced with that mounting Vietnamese resistance, 24 the chargé d'affaires claimed that as it would be easy for the Vietnamese government to turn against French demands for the best bidding condition, the only solution was a demonstration of military might, as the presence of two military steam-boats off the Annam coast would force the Vietnamese authorities to cede to French demands.¹¹⁶ The Governor of Cochinchina shared this view, drawing the attention of the French government on this issue in February 1882 and urging it to solve it without delay.¹¹⁷

Admiral Jauréguiberry, the personification of 25 naval imperialism as the Minister of the Navy and the Colonies in 1879–80 and 1882–83, who had proposed in 1879 the first plan for a complete occupation of Tonkin,¹¹⁸ was also getting eager. On the 31st of March 1882, he informed the Governor of Cochinchina that the exclusive concession of coal mines to French nationals by the Annam Empire was a top priority

¹⁰⁶ "Dernières nouvelles", *Le Temps*, 9 novembre 1881, 4; "Dernières nouvelles", *Le Temps*, 5 mars 1882, 4; "Académie des sciences (10 juillet)", *Le Temps*, 12 juillet 1882, 2; "Courrier de l'Indochine", *Le Temps*, 15 août 1882, 2; "Dernières dépêches Havas", *Le Temps*, 21 décembre 1882, 1; "Société de géographie (2 mars)", *Le Temps*, 6 mars 1883, 3; "Société de géographie (2 mars)", *Le Temps*, 6 mars 1883, 3-4.

¹⁰⁷ *Journal officiel de la République française. Lois et décrets*, 5 mars 1883, 1170-1171.

¹⁰⁸ *Ibid.*, 33.

¹⁰⁹ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 58.

¹¹⁰ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 42.

¹¹¹ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 58.

¹¹² ANOM, *Amiraux*, côte n°12712 Lettre du chargé d'affaires de la légation française à Hué au Gouverneur de la Cochinchine, 25 décembre 1881.

¹¹³ Julie D'Andurain and Jonathan Krause, "Pirates, Slavers, Brigands and Gangs: The French Terminology of Anticolonial Rebellion, 1880–1920", *French History*, 31.4 (2017), 495–511.

¹¹⁴ ANOM, *GGI*, côte n°12712, Lettre du chargé d'affaires de la légation française à Hué au Gouverneur général de la Cochinchine, 10 février 1882.

¹¹⁵ ANOM, *GGI*, côte n°12712, Lettre du chargé d'affaires de la légation française à Hué au Gouverneur général de la Cochinchine, 10 février 1882.

¹¹⁶ *Id.*

¹¹⁷ ANOM, *Amiraux*, côte n°12712, Lettre du Gouverneur de la Cochinchine au Ministre de la Marine et des Colonies, 10 février 1882.

¹¹⁸ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 34.

to increase French influence in Tonkin.¹¹⁹ The Minister advocated an exclusive appropriation of those mines. He urged the Governor to study the means to obtain it through the Annam Empire and to define the preconditions to grant concessions to French investors, as if the French State had already established a protectorate over Tonkinese and Annamese coal deposits.¹²⁰ Moreover, in July 1882, three months after the conquest of Hanoi, the Minister ordered the Governor to send twenty barrels of Tonkinese coals to Toulon, the main military base of the French navy, displaying the growing interest of French naval imperialists towards these coals.¹²¹ These coals were compared by the Governor to those of Pennsylvania, the main source of anthracite for the United States Navy, urging their prompt appropriation to supply the French navy in South-East Asia and avoid their seizure by foreign powers.¹²² Finally, in September 1882, “as France ha[d] an overriding interest to seize the coal mines”, the Governor asserted that, in case of Vietnamese refusal to grant coal mines concessions to France, he would “be forced to act directly as a Governor”, implying the recourse to a military action.¹²³ At the same time, Dupuis and Millot established the *Société d'études et d'exploitation du Tonkin*, which aimed to invest French and Hong-Kong capitals in the Tonkinese coalfields.¹²⁴ This demonstrated the growing importance of economic energo-imperial interests, especially as Dupuis and his associate Millot had close links with Freycinet, Ferry and

Gambetta, who led sequentially the French government from 1879 to 1885.¹²⁵ By the end of 1882, French energo-imperial aims were not only to be found amongst French local imperial agents, but had spread to all the scales of the French State, prompting it to take military action.

However, French growing (energo)imperialist impatience and its conquest project faced China's increasing military pressure in Tonkin and threat of war in the case of a general occupation of Tonkin. This situation resulted in the Bourée convention of December 1882, which divided Tonkin into two spheres of influence: the French in the South of the Red River, including Hanoi, and the Chinese in the North.¹²⁶ Rivière criticized the Bourée convention for attributing the northern part of Tonkin, which he called the “Tonkin-mines”, to China, depriving France of its mining resources at the alleged benefit of Chinese, English and German interests.¹²⁷ Similarly, the chargé d'affaires warned vigorously the Governor against an alleged attempt of China's Merchants Company, through its liaison officers in Hue, to be granted a concession over the Hongay basin and as a consequence to put an end to French energo-imperial aims in that region.¹²⁸ Finally, Dupuis, Milot and a top French businessman in Vietnam, Victor Roque, suspected that this convention, negotiated by Bourée with Li Hongzhang, the main shareholder of the China's Merchants Company, intended to deprive France of the Hongay coal basin and to satisfy alleged British energo-imperial interests in Tonkin.¹²⁹ Victor Roque had strong reasons to oppose to the Bourée Convention as his company, the Steamer Shipping Company of Cochinchina (“*Messageries à Vapeur de Cochinchine*”), was in competition

¹¹⁹ ANOM, *GGI*, côte n°12712, télégramme du Ministre de la Marine et des Colonies au Gouverneur de la Cochinchine, 31 mars 1882.

¹²⁰ ANOM, *GGI*, côte n°12712, télégramme du Ministre de la Marine et des Colonies au Gouverneur de la Cochinchine, 31 mars 1882.

¹²¹ ANOM, *GGI*, côte n°12712, télégramme du Ministre de la Marine et des Colonies au Gouverneur de la Cochinchine, 7 juillet 1882.

¹²² ANOM, *GGI*, côte n°12712, télégramme du Gouverneur de la Cochinchine au Ministre de la Marine et des Colonies, 16 juillet 1882.

¹²³ ANOM, *GGI*, côte n°12712, télégramme du Gouverneur de la Cochinchine au Ministre de la Marine et des Colonies, septembre 1882.

¹²⁴ Andrieux, “Mines et pépites”, *Le Matin*, 8 octobre 1884; “Mines et pépites”, *L'intransigeant*, 10 octobre 1884; Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 33.

¹²⁵ *Ibid.*, 33-42.

¹²⁶ Lloyd E. Eastman, *Throne and Mandarins: China's Search for a Policy during the Sino-French Controversy, 1880-1885* (Cambridge: Harvard University Press, 1967), 60.

¹²⁷ Henri Rivière, “Lettre au chargé d'affaires de la légation française à Huê du 15 janvier 1883”, in André Masson, *Correspondance politique du Commandant Rivière au Tonkin* (Avril 1882-Mai 1883), (Paris: Société de géographie 1933), 175.

¹²⁸ Jaehyun, “Exploitation minière et exploitation humaine”, 2018, 59.

¹²⁹ Fourniau, *Vietnam : domination coloniale et résistance nationale*, 322.

with the China's Merchants Company and needed in particular to supply its steam-boats with coal.¹³⁰ This merchant naval and economic energo-imperialist also advocated the conquest of Tonkin, to which he was materially interested and committed as he supplied Rivière's military detachment in Hanoi.¹³¹

THE CONQUEST OF TONKIN AND THE COLONIAL APPROPRIATION OF ITS COAL RESOURCES (1883-1885)

27 The Ferry government, probably pressured by the business world (notably Dupuis, Millot and Roque) and the French navy, rejected outright the Bourée Convention on the 5th of March 1883. The fact that the Bourée convention granted to China the whole coal mining region, the "Tonkin-mines", might have been a major incentive for such refusal. Eleven days later, the government opted for the total conquest of Tonkin.

28 However, an energo-imperial military initiative at a local level had already been taken in between. On the 9th of March 1883, Rivière decided to conquer the Hongay coal basin, despite the risks posed by such division of already meagre military forces.¹³² Following months of inaction, this operation was the result of a coalition of energo-imperialist forces who had urged Rivière to occupy Hongay to attenuate the effects of the Bourée convention. In reaction to this convention, the chargé d'affaires in Huê had suggested to Rivière to act promptly in order to avoid the concession of Hongay deposit to the *Merchant's Company*, and ultimately its retrocession to an English company.¹³³ On the other hand, Victor Roque, after having been warned by

Admiral Meyer, commander of the French Naval Division in China, that the Bourée convention gave the Hongay coal basin to China, urged the Governor to intervene in Tonkin to prevent an alleged potential British seizure of Hongay and rushed to Hanoi on the 8th of March.¹³⁴ There, he pressed Rivière to take action to impede the alleged imminent concession of the Hongay basin to China's Merchant Company and its retrocession to British interests.¹³⁵ The next day, a French contingent marched on Hongay, successfully conquered the 12th, seizing *au passage* the buildings and stocks of the China's Merchants Company in Haïphong.¹³⁶ The contingent established there a military post which dominated the Halong Bay, a "small Gibraltar" as Rivière coined it.¹³⁷

Rivière's death in battle on May 19th resulted in a series of parliamentary debates. Dupuis had distributed to the deputies maps of Tonkin's supposed mineral resources,¹³⁸ including coal located near the Dong Trieu coalfields in the Quang Yen region.¹³⁹ These maps, despite having been ridiculed by anticolonialist MP George Périn with his comparison to Voltaire's Eldorado,¹⁴⁰ might have contributed decisively to the parliamentary vote of the 26 May 1883, where deputies unanimously attributed significant credits (5,5 millions of francs) for a military expedition

Commandant Rivière au Tonkin (Avril 1882-Mai 1883), (Paris: Société de géographie 1933), 187.

¹³⁴ Fourniau, *Vietnam : domination coloniale et résistance nationale*, 320-22.

¹³⁵ Jaehyun, "Exploitation minière et exploitation humaine", 2018, 61.

¹³⁶ Fourniau, *Vietnam : domination coloniale et résistance nationale*, 320-22

¹³⁷ Henri Rivière, "Lettre au chargé d'affaires de la légation française à Huê du 14 mars 1883", in André Masson, *Correspondance politique du Commandant Rivière au Tonkin (Avril 1882-Mai 1883)*, (Paris: Société de géographie 1933), 192.

¹³⁸ "Monsieur Dupuis reparait", *Le Petit parisien*, lundi 21 décembre 1885, 1-2.

¹³⁹ "Le Tong-Kin et le bassin du Fleuve Rouge d'après les documents de J. Dupuis", *Supplément au journal Le Monde*, samedi 9 juin 1883, 3 (<https://gallica.bnf.fr/ark:/12148/bpt6k6783970s/f3.item>).

¹⁴⁰ Edouard Durranc, "La Chambre", *La Justice*, jeudi 17 mai 1883, 1.

¹³⁰ *Id.*

¹³¹ Gilles De Gantès, "Le particularisme des milieux d'affaires cochinchinois (1860-1910) : comment intégrer un comptoir asiatique à un empire colonial protégé", in Hubert Bonin, Catherine Hodeir et Jean-François Klein, *L'esprit économique impérial, 1830-1970: groupes de pression & réseaux du patronat colonial en France & dans l'empire* (Paris: Publications de la SFHOM, 2008).

¹³² Fourniau, *Vietnam : domination coloniale et résistance nationale*, 321.

¹³³ Pierre-Paul Rheinart des Essarts, "Lettre du 9 février 1883", in André Masson, *Correspondance politique du*

to secure the French protectorate in Tonkin.¹⁴¹ Indeed, during the parliamentary debate, a senator argued that Tonkinese coals would be precious resources for the French military and commercial navies, while the MP of Cochinchina wrote in its parliamentary report that the coal deposits next to the Tonkin gulf would allow for the rise of the French merchant navy in that region.¹⁴²

30 More generally, the widespread sincere fiction of Tonkin (and Yunnan) as a mineral and commercial Eldorado,¹⁴³ in addition to a more general pro-imperialist propensity towards the conquest of Tonkin amongst French politicians, and significant pressures from the French navy, the Government of Cochinchina and French merchants and colonists,¹⁴⁴ definitely played a role in this vote. As Brocheux and Hémery argue, although the conquest of Tonkin cannot be attributed “to the actions of a small lobby and speculators aided by a handful of officers and priests”, the pressure of this lobby “should not be underestimated either, especially that of Dupuis and Millot”.¹⁴⁵

31 Due to French military pressure, the Annam Empire was compelled to accept a French protectorate in Tonkin on the 25th of August 1883. The French military successes against China in northern Vietnam then forced its government in May 1884 to recognize the French protectorate in Tonkin, to pull off its army from Tonkin, and to open southern China to French commerce.¹⁴⁶ The French protectorate over Annam and Tonkin was hence enforced on the 6th of June 1884. As it was a protectorate and not an annexation, the French authorities needed to launch coal production a treaty with the Annam Empire that would have granted them full control over

Tonkin’s mineral resources. Hence, the elaboration of a mining regime started right after the signature of the 1884 treaty, with the creation of a commission in September 1884 and the drafting of a mining convention by December 1884.¹⁴⁷ The draft convention, sent in December 1884 to the resident general of France in Hue, dismissed all existing concessions apart from that of Nong Son, specified that mining activities in Annam and Tonkin were to be subject to French-made regulations, and granted the protectorate the revenues of all mining taxes in Tonkin.¹⁴⁸ The Vietnamese government, which retained only the tax revenues of the Annam mines, was eventually forced by the French general resident to sign the mining convention in February 1885, despite its initial opposition to it.¹⁴⁹ The mineral resources of Tonkin were hereafter legally under French control.

Meanwhile, China had been determined not to evacuate militarily Tonkin before a definitive diplomatic resolution of the conflict. Consequently, a new phase of the conflict had started in June 1884, and after a French ultimatum in July 1884 and China’s refusal to pay a 250 million francs indemnity, two coal-mining harbors of Formosa (Taiwan) had been seized by the French Navy in January 1885.¹⁵⁰

Nonetheless, the Sino-Vietnamese counter-offensive in Tonkin, the diplomatic pressure from Great Britain and a political crisis in France eventually forced the French government to renounce its indemnity claim and its military conquests in China. The French government obtained, in exchange, the Chinese recognition of its protectorate over Tonkin, as well as the evacuation of Chinese troops, the commercial opening of Yunnan to French interests and the construction of a railway line from Tonkin to Yunnan. With the March 1885 Sino-French agreement on Tonkin, the protectorate over Tonkin eventually came

¹⁴¹ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 44.

¹⁴² Jaehyun, “Exploitation minière et exploitation humaine”, 2018, 64.

¹⁴³ Villemagne, “Du Tonkin des pionniers à la mise en valeur de l’Indochine”.

¹⁴⁴ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 33-34.

¹⁴⁵ *Ibid.*, 33.

¹⁴⁶ *Ibid.*, 44-45.

¹⁴⁷ Jaehyun, “Exploitation minière et exploitation humaine”, 2018, 67-68.

¹⁴⁸ *Ibid.*, 68.

¹⁴⁹ *Ibid.*, 69.

¹⁵⁰ Brocheux and Hémery, *Indochina: An Ambiguous Colonization*, 45-46.

into existence, although Tonkin was not “pacified” until the 1890’s,¹⁵¹ delaying the exploitation of the Dong Trieu coalfields until the 1900’s.¹⁵² Indeed, Victor Roque was granted these coalfields in 1890,¹⁵³ but he was captured by “pirates” during his visit there,¹⁵⁴ putting an end to his dreams of commercializing Dong-Trieu coals as he seemed to have returned to France just after having been liberated. Similarly, the Hongay coal basin was not pacified until 1895.¹⁵⁵

- 34 Overall, the conjunction of naval (stemming from the Minister of the Navy and the Colonies and its local agents), political (that of Cochinchina’s governor, of the chargé d’affaires and of pro-colonial politicians), and economic (of Dupuis, Millot and Roque) ergo-imperialist interests led, amongst other causes, to the conquest of Tonkin and of its coal resources. The bottom-up collection of ergo-imperial intelligence on Tonkin and Annam’s coal resources from the 1870’s resulted in an ever increasing interest of all these imperialist actors for them, and a subsequent pressure on politicians to conquer Tonkin. Of course, the conquest of Tonkin cannot be attributed only to these ergo-imperial interests, as religious, agricultural, commercial, financial and political interests were also at stake,¹⁵⁶ but it had a permanent and important role in that complex and non-teleological process.

CONCLUSION

- 35 The conquest of Tonkin and the establishment of a protectorate over it were not the only conditions to launch a profitable and productive extraction of its coal resources. The mining regime had to be drafted,¹⁵⁷ concessions to be attributed, coal regions to be pacified, capitals to be lifted massively and invested profitably and

workers to be recruited and put at work effectively. However, the establishment of a French protectorate over Tonkin was a decisive step in that process: by 1888, the *Société française des charbonnages du Tonkin* was founded by Bavier-Chauffour with 4 million of capitals, mainly Hong-Kongese;¹⁵⁸ in 1889, under special military protection,¹⁵⁹ it had started extracting coal in Hongay while facing its first strike;¹⁶⁰ and in 1906, it had already a profit rate of 60 % (85 % in 1913).¹⁶¹ This triumph of big business ergo-imperial interests, first in Hongay and then in Dong-Trieu from the 1920’s (although not in Kebao in the 1890’s), led to the rise of coal production in Vietnam up to 250 000 tons in 1901, 500 00 tons in 1910, 1 million in 1923 and 2 million in 1928, its highest point in Vietnam’s colonial history.¹⁶²

Meanwhile, the ergo-imperial interests of the Navy and the colonial administration had also been satisfied. The compromise with Bavier-Chauffour established in 1888 secured for the Navy a steady and cheap supply in coal and for the colonial budget a regular source of revenue, while leaving to private French capitals the task to create productive and profitable businesses which would contribute to the pacification of Tonkin and the growth of the colonial economy.¹⁶³ Dupuis was granted the Kebao island on conditions that were also favorable to the colonial administration.¹⁶⁴ Hence, far from being

¹⁵¹ *Ibid.*, 46-47.

¹⁵² *Ibid.*, 53.

¹⁵³ *Courrier d’Haiphong*, 5 janvier 1890.

¹⁵⁴ “Tonkin”, *Les Tablettes coloniales*, 23 février 1890.

¹⁵⁵ ANOM, *fonds de la Résidence Supérieure du Tonkin – Ancien Fonds* [RST-AF], côte n° 27655; Jaeyung, “Exploitation minière et exploitation humaine”, 2018, 114.

¹⁵⁶ *Ibid.*, 17-39.

¹⁵⁷ *Ibid.*, 2.

¹⁵⁸ “La fusion des sociétés charbonnières du Tonkin”, *L’Echo des mines et de la métallurgie*, 24 novembre 1895.

¹⁵⁹ Centre des archives nationales du Vietnam n°1, *Fonds de la Résidence supérieure au Tonkin*, côte n° 37737, “Demande formulée par le Directeur de la Société Française des Charbonnages du Tonkin en vue d’obtenir l’occupation de certains postes à Quang Yen par la garde civile ou par les troupes militaires”, 1889-1892

¹⁶⁰ Centre des archives nationales du Vietnam n°1, *Fonds de la Résidence supérieure au Tonkin*, côte n° 69910, “Grève des ouvriers éclatés à la mine de Ha Tou (Quang Yen)”, 1889

¹⁶¹ Pierre Brocheux, *Une histoire économique du Viet Nam, 1850-2007 : la palanche et le camion* (Paris : Indes savantes, 2009), 101.

¹⁶² Association des mines du Tonkin, *L’industrie minière en Indochine en 1933, Hanoï, Imprimerie d’Extrême-Orient*, 60.

¹⁶³ Emile Sarran, *Etudes sur le bassin houiller du Tonkin* (Paris: Challamel, 1888).

¹⁶⁴ ANOM, *Indo AF*, côte n°A60(5), Acte de concession de terrains domaniaux, 4 avril 1888.

a puppet regime of big business energo-imperialism, as shown by its four year of tough negotiations with Bavier-Chauffour,¹⁶⁵ the French colonial administration, in constant coordination with the French government, managed to shape an energo-imperial scheme that fulfilled its energo-imperial objectives and offered a financial and energy justification for the colonization of Tonkin.

37 Colonial Vietnam's energo-imperial scheme would therefore be until its final demise in 1954-55 the product of a settlement between big business, the Navy and the colonial administration energy imperialisms. In that sense, it was different from Algerian energo-imperial scheme regarding coal, which aimed solely to satisfy colonial energy needs at whatever economic cost.¹⁶⁶ In contrast, that of Vietnam also allowed for the profitable exportation of coal on South-East Asia

markets,¹⁶⁷ in concert with the imperial politics of limited industrialization in Vietnam.¹⁶⁸ Indeed, the dominant share of its coal production was exported, apart during the early 1920's and the Indochinese war.¹⁶⁹ As in addition, Vietnam's domestic consumption was mostly a colonial one,¹⁷⁰ energo-imperialism in Vietnam resulted in an "unequal ecological exchange"¹⁷¹ between France and Vietnam, in terms of energy, benefits from coal extraction and localization of ecological destruction (water contamination).¹⁷² This unequal ecological exchange, which went with the unequal socio-economic exchange between French capitalists and managers and Vietnamese workers,¹⁷³ is henceforth to be studied altogether with colonial deforestation on the one hand,¹⁷⁴ and plantation capitalism on the other,¹⁷⁵ in order to have a full picture of the lasting impact of French energy and environmental colonialism in Vietnam.¹⁷⁶

¹⁶⁷ Association des mines du Tonkin, *L'industrie minière en Indochine en 1933* (Hanoï: Imprimerie d'Extrême-Orient), 74.

¹⁶⁸ Brocheux and Hémerly, *Indochina: An Ambiguous Colonization*, 125.

¹⁶⁹ Association des mines du Tonkin, *L'industrie minière en Indochine en 1933* (Hanoï: Imprimerie d'Extrême-Orient), 10.

¹⁷⁰ *Ibid.*, 82.

¹⁷¹ Alf Hornborg, *Global Ecology and Unequal Exchange: Fetishism in a Zero-Sum World* (New York: Routledge, 2011).

¹⁷² ANOM, *Fonds ministériels, Mission Dimpault (1936-1937)*, 1AFFECTO/104, Rapport Tupinier du 5 mai 1937. The absence of archival sources on pollution and environmental issues is telling much about the colonial disinterest in these issues.

¹⁷³ Jaehyun, "Exploitation minière et exploitation humaine", 2018.

¹⁷⁴ Frédéric Thomas, "Protection des forêts et environnementalisme colonial : Indochine, 1860-1945", *Revue d'histoire moderne et contemporaine*, 56-4.4 (2009), 104; Pamela D. McElwee, *Forests Are Gold: Trees, People, and Environmental Rule in Vietnam* (Seattle: University of Washington Press, 2016).

¹⁷⁵ Martin J. Murray, *The Development of Capitalism in Colonial Indochina (1870-1940)* (Berkeley: University of California Press, 1980); Marianne Boucheret, "Les plantations d'hévéas en Indochine (1897-1954)" (Paris 1, 2008); Xuan Tri Tran, "Les plantations d'hévéa en Cochinchine (1897-1940)" (Aix-Marseille, 2018); Michitake Aso, *Rubber and the Making of Vietnam: An Ecological History, 1897-1975* (Chapel Hill: The University of North Carolina Press, 2018).

¹⁷⁶ On that issue, see Armel Campagne, "La ecología-mundo del imperio colonial francés", *Relaciones Internacionales*, "Ecología-Mundo, Capitaloceno y Acumulación Global", nos. 46 y 47 (forthcoming, 2021).

¹⁶⁵ ANMT, CS-BI, côte n°2011 030 5922; ANOM, Indo AF, côte n°T41(2); ANOM, Indo AF, côte n°T41(3).

¹⁶⁶ Saul, *Intérêts économiques français et décolonisation de l'Afrique du Nord*, 2016.

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Building "oil" in British India: a category, an infrastructure

Abstract

This paper traces the history of oil being reined in by the British Raj, from the 1870s to the early 20th C. I argue that oil is not a self-evident object, but a category built by regimes of thought. Second I argue that oil became an infrastructure, used by the colonial state to elaborate itself. Nonetheless, neither the disciplining of petroleum, nor that of its popular use were straightforward because it involved several actors and was not driven by the Crown alone, presenting obstacles and surprises. Being a slippery substance, oil stealthily exposes the chinks in the armour of the colonial state. Being a networked system, it draws attention to distributed sovereignty within colonialism. By tracing the encounters between oil companies, the state and oil's materiality, I chart a journey of oil as it became government but also escaped government.

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Plan of the article

- Introduction
- Who is Sovereign?
- The State Takes Charge
- Infrastructure of the State and the Subject
- Conclusion

INTRODUCTION

- 1 “Dig boy, dig”, bellowed the Canadian engineer W.L. Lake, as workers gazed at the oil-stained feet of elephants emerging from the dense woods of Assam in north-eastern India. Legend has it that in 1882, while constructing a railway line, engineers of the Assam Railways and Trading Company (ARTC) noticed that the mud on the feet of elephants being used for haulage smelt of oil. On retracing the trail of footprints, they found oil oozing to the surface from the ground beneath.¹ Like all legends, however, there are several versions of how the Assamese town Digboi got its name. Although this was not the first sighting of oil by the British in India, it marked the beginning of a concerted effort to understand, make and commercialise a substance called “earth/mineral oil”.
- 2 The phase of exploration for this relatively unknown substance was filled with hesitation and mystification. The improbability of finding it coupled with the ambiguity of its prospects caused a lot of suspicion. Not only was it uncertain that investments would be fruitful, but also what it would bring forth, how it could be used, whether it held any promise for the empire, and if so, how best it could be harnessed, was not clearly known. Different departments of the government were on different sides of the debate; and till the promise of this puzzling liquid wasn’t internationally acclaimed, the imperial government remained wary.
- 3 While large-scale production of petroleum began in India only after the Digboi incident, it was being imported since the 1860s by British companies, who were supplied mostly by Standard Oil in the USA.² At this time petroleum’s primary use was as kerosene for lighting and occasionally as a lubricant for machines. Gradually the shipping and railway industries were discovering the prospects of using oil as a fuel and not just

a lubricant.³ Over time, steamers shifted to oil from coal.⁴ With the turn of the century, petroleum was becoming an ingredient of substances such as waxes, paints, medicines, and was also fuelling cars.⁵ The widespread and multifaceted use of oil in British India – in a matter of a few decades – involved many debates in the bureaucracy, and depended on media reports and scientific journals discussing experiments with oil in the USA.⁶

In this entire period, British India relied heavily on imported petroleum, causing traffic and chaos at ports. Confusion reigned as rules got fleshed out and new categories like “dangerous petroleum” were created. British officials in India, inept at dealing with this substance in its early years and unenthusiastic about its use, often found themselves arguing about laws and practices to be established around it. One such case was the detention of the shipment for Hobson Connor and Co. in the same year as the elephants in Digboi, 1882. This shipment failed the “flashing test” (the standard set for inflaming point) at the port in Calcutta. The practice was for safety certificates to come along with the cargo, declaring that the oil was not “dangerous” and “flashed” (ignited) above 73° Fahrenheit (F). It turned out that in India this kerosene was flashing below 73° F. After a debate over many months between government officials, port authorities, chambers of commerce, scientists, oil companies and certifiers, the British Administration proclaimed that a uniform flashing point for safety could not be drawn, as apparently oil ignites at different temperatures in different climates. Since there was a dispute over a safe flashing point at that moment, the government decided that

¹ I.A. Farooqi, *Story of ONGC* (Dehradun: Sahar Publishers, 1999), 5.

² Public Works Department (PWD), *Railway Stores Branch, Proceeding no. 23-40. (1899, September)* (New Delhi: National Archives of India (NAI)).

³ Finance and Commerce Department (FCD), Statistics and Commerce Branch, Proceeding no. 263-270, Part A. (1898, March), *NAI*.

⁴ FCD, Statistics and Commerce Branch, Proceeding no. 485-486, Part A. (1901, October), *NAI*.

⁵ Revenue and Agriculture Department (RAD), C.V. Administration Branch, Proceeding no. 8-9, File no. 20, s.no. 3-4, Part B. (1904, August); Home Department (HD), Judicial Branch, Proceeding no. 63-67, Part A. (1903, September), *NAI*.

⁶ PWD, Civil Works Branch (Coal and Iron), Proceeding no. 13-16, Part A. (1883, October), *NAI*.

this shipment would have to be shipped back to the USA.⁷

- 5 This opened up a debate at an international level about safety standards, petroleum categories, testing methods and trading. Petroleum science itself came under question as safe and unsafe oil, the ignition point, and oil’s peculiar behaviour were all under doubt. T.B. Redwood and F.A. Abel in London (the scientists who devised the flashing test, after whom it was named the “Abel Test”) confirmed that owing to climatic variations a uniform flashing point to test dangerous petroleum was not advisable. This raised doubts about whether American certificates could unreservedly be accepted in India. It also raised questions about the ways in which oil was transported and stored. The detained kerosene was tested by the chemical examiner of the imperial government and its results showed that different samples flashed at different points. The British Indian Government declared that American certificates did not reflect Indian safety standards.⁸
- 6 The Secretary of the India Office in London wrote to the Viceroy of British India to make an allowance of a few degrees of difference. Clearly, it was not a matter of science, but of politics and profits. In the multiple letters that were exchanged between London and Delhi, there was a lot of pressure from London to release the cargo as a “large trade was endangered” and “heavy losses were accruing to the company” and to relations between the USA and Britain. But the local government in Bengal was adamant that 73° F was the absolute limit in law and could not be relaxed. Schroeder Smidt and Co., which had been abiding by the law, protested against any amendment to relax it, pointing out that it was against public good. The Chamber of Commerce in Bengal was of a similar opinion.⁹
- 7 As the issue escalated, Hobson Connor and Co. wrote to Her Majesty in London. Asserting that

it had abided by every law and that American certificates followed stringent standards, the company maintained that allegations against it had ulterior motives as they were coming from its competitors. Samples of this shipment had by now been tested in Bombay and London and had been declared safe. American certifiers also sent letters explaining the process of testing practised there. Meanwhile, Abel confirmed that American certificates could be trusted. Pressure from the India Office in London continued mounting on the British Indian Government to release the cargo. Government officials finally declared that it could not be stated that Hobson Connor and Co. was trying to cheat its way into the Indian market by selling cheap petroleum.¹⁰ Even the Esquire of New York got involved as he wrote to the Viceroy of India, submitting facts and suggestions regarding this industry.¹¹

This case marks the entry of the expert in the form of the chemical examiner who presided over the entire affair. Experts were what governments used to rein in the material as well as faltering companies. Science and technology that developed around oil were essential in creating the category of oil itself, by fostering an understanding of what it is and isn’t, how it should be handled and used. We see the process of disciplining petroleum through rules, science, documents and practices, which created an object that was knowable, controllable and usable. This case brings in sharp relief how decisions were made, who had the power to make them, who negotiated well, who succumbed to pressure and how much this mattered in formulating petroleum science. It unfolds confusion, change of decision and chaos. It underscores the types of agents involved in building petroleum as well as the state, and the negotiations between them, which decided the laws that came to hold the status of objective and universal truths, such as when oil is dangerous. This case also informs us how roles and responsibilities were divided between shippers, companies, port authorities,

⁷ HD, Judicial Branch, Despatch to Secretary of State no. 22. (1882, July), *NAI*.

⁸ *Id.*

⁹ HD, Judicial Branch, Proceeding no. 24-119. (1882, July), *NAI*.

¹⁰ HD, Judicial Branch, Proceeding no. 342-426, Part A. (1882, September), *NAI*.

¹¹ HD, Judicial Branch, Proceeding no. 275-277, Part A. (1883, January), *NAI*.

local governments, the central government, and the Crown, indicating multi-polar sovereignty and conflicts. The interplay between the materiality of oil and human agency, the problems the former throws at the latter, how the latter develops practices that then become forms of government, is well demonstrated here. The involvement of the Crown, the pressure it exerted on the imperial administration in India, and the high stakes in this one shipment of kerosene hint at the importance of oil to British imperialism even before the 20th C. However, this was only in terms of revenue, as the government was not yet using oil as fuel for imperial expansion.

9 In this paper, I trace oil in formation in colonised India, from its humble and chaotic beginnings to becoming an organised infrastructure for colonial elaboration. The harnessing of oil by the colonial state was a protracted journey involving confusion, failures and competing desires. Being a new substance, petroleum puzzled the colonial administration and escaped becoming a subject of the state for some time (a knowable, controllable and usable thing, with definite boundaries and scope for intervention). Documents at the National Archives of India signal perplexity about how this substance should be used, taxed, regulated, things to be included and excluded in its definition, and concessions that companies should be allowed. This indicates that oil was crafted as a category in the colonial bureaucracy through debates, where its boundaries were contested. Power play, trade and taxation influenced decisions which are considered matters of science, such as the definition of oil. Petroleum, although a material category, was socially constructed, and is thus mutable. It is this tension between the material and the social that this paper excavates.

10 Put together through exchanges within and between bureaucracies, international companies and scientists who were deciding what it was through technologies, markets and laws, petroleum as we know and use today did not always exist this way. The processes required to distinguish oil from other subsoil materials, transform it into a knowable and usable thing that can be

manipulated, and the qualities and characteristics of which are fixed and definable, were products of negotiation. Chemical formulae, juridical arrangements, economic calculations, and trade agreements together decided the boundaries of “oil”. Debates over these – zones of negotiation – reduced over time, with a gradually crystallising boundary, definition and understanding of “oil”. Without this progressively emerging discourse, the product would not exist. It would be just another constituent of the underground, and not reified as a separate product. This discourse in the bureaucracy distinguished it and created its boundaries and definition by deciding what oil is and isn’t, its characteristics, behaviour, uses, etc. A different sort of discourse on oil would produce a different type of product with different inclusions and exclusions in its properties and uses. This paper illustrates how a certain type of thinking and political-economic context created this product out of the black viscous liquid found underground, which, in a different context, might include many of the things currently removed from it, or exclude those that are currently left in it. If it was not useful for colonial capital, it could have taken other forms or no form at all. It had to be gradually made sense of and was not easy to ideationally separate from other elements found underground. This process of separation was its creation, in the bureaucracy, among other places.

The method of measuring and identifying an oil reserve, and the procedures in extraction and refining are determined by more-than-scientific ideas. After extraction, oil is towed through a series of socio-techno-economic arrangements to be made into numerous petroleum products. It is thought of as a natural substance, simply extracted from underground and brought into daily use. But once removed from the earth, it is hauled around in ships, railways, trucks and pipes. Heated, cooled, added to, subtracted from, tested, measured and packed, it constantly changes form. Oil lives a socially charged life, with individuals making decisions concerning its form at every stage. The process of making petroleum products is not as a neutral one guided by crude oil’s physicality alone, but also

by state prerogatives, corporate needs, and the decisions of engineers on site.

- 12 Crude oil and petroleum products are categories built by discourse, not self-evident things, easily distinguishable from every other thing, all of which are subterranean elements, mixed together in their natural state. The descriptions qualifying and quantifying oil were political because certain ontologies and epistemologies needed to be mobilised to construct this commodity and resource in this way. Oil, thus, was not *represented* in bureaucratic regimes of thought, it was *produced* in them.
- 13 Despite the links between oil development and colonial capitalism, the history of oil in India illustrates that the companies, bureaucracies and institutions involved in shaping oil, its markets and users, were not guided by well-planned and a unitary politics of colonisation. Rather, they come across as chaotic and faltering, that developed strategies as they went along. Research and development in oil cannot be pinned solely to imperial ambitions as it was also guided by a genuine need to understand oil and use it to ease daily life. Nevertheless, the institutional frameworks these people were limited by and the socio-political contexts they were embedded in were essentially imperial, which defined their broader politics.
- 14 This paper seeks to uncover the ideologies, calculations and accidents that were critical to fabricating oil as a kind of infrastructure: a complicated sedimenting of political, social and technical arrangements which shape the contexts technologies and people function in. This narrative is not a simple tabulation of heroic discoveries and technological change, and so the importance of oil does not emerge as a product of periodic improvement along a narrow evolutionary technological path, but is unpacked as a substance of politics and history.

WHO IS SOVEREIGN?

- 15 The first prospecting licence in India was issued in 1854. Several British wildcatters streamed in thereafter. None accomplished long-lasting

success.¹² Till the 1880s the onus for oil prospecting in India was entirely on private enterprise. After the 1880s too, it is widely understood that the British Indian Government did not pay heed to the development of this industry. The reasons for this, nevertheless, remain debatable.¹³ After the legendary elephants' incident, a few decades were spent in systematising surveying, improving technology and transport.¹⁴ The correspondence between officials of the Geological Survey of India (GSI), the Chief Commissioner of Assam, the Secretary of the British Indian Government and officials at the Department of Agriculture, Revenue and Commerce, regarding granting leases to companies for sequestering oil, was tilted in favour of the companies. Justifying concessions to companies, GSI officials stated that “businessmen risking their money on the development of mineral resources of India, which are in the most backward condition, should be granted very liberal terms”.¹⁵ After much back and forth, decisions were made about royalty, taxes, use of other local resources, lease area and suchlike.¹⁶ These initial agreements became templates for formulating rules in later years. They formed the foundation upon which the edifice of oil was built. Born out of tussles, they went a long way in giving shape to the industry, allocating responsibilities, defining the relations between the government and companies, establishing laws, pricing, taxation, and in effect, the product itself. Hence, the physical peculiarities of oil *alone* cannot be held responsible for the emergence of a certain product, a way of making it, and the resulting governance regimes. Oil was found and built at a time and place where a type of relationship already existed between companies and the government. Oil's colonial context shows that the way it was understood and

¹² Sarah Hilaly, *The Railways in Assam 1885-1947* (Varanasi: Pilgrim Publishing, 2007), 204.

¹³ G. G. Jones, “The State and Economic Development in India 1890-1947: The Case of Oil”, *Modern Asian Studies*, Vol. 13, No. 3, 1979, 353-75.

¹⁴ S.N. Vishvanath, *Summons to Greatness* (New Delhi: Exposure Media Marketing Pvt. Ltd., 2010), 26.

¹⁵ Department of Agriculture, Revenue and Commerce (DARC), Minerals and Geological Survey Branch, Proceeding no. 1-5. (1878, July), *NAI*.

¹⁶ RAD, Minerals Branch, Proceeding no. 15-43. (1881, July), *NAI*.

made was inherently contingent, not a timeless and universal truth. These contracts didn't just make oil, but also made the state. Even if devoid of a coherent colonial ideology, these contracts shaped the development of those areas, their economies and labour practices, and enabled oil extraction on feasible terms, all of which contributed to strengthening the empire.

16 Several actors, including experts from other countries, gave shape to industries like oil, all of whose personal opinions and agendas caused conflicts. Decisions about where oil extraction is feasible and where it isn't have been viewed as scientific, but were also based on politics between these actors, and the important factor of imperial revenue.¹⁷ For instance, R.A. Townsend, an expert from Canada, was hired as the Superintendent of Petroleum Operations in Baluchistan in 1883. He surveyed India's oil fields and published a report in 1889, which pronounced Assam's resources to be voluminous and of very high quality. He believed that the Indian colony could become fuel independent and end imports of American and Russian kerosene that “the eastern populace had been made to get addicted to”. Despite such positive feedback, C.A. Elliot in the Public Works Department (PWD) did not want to make this report public, invite applications for leases, or take action on it. He was sceptical of this substance.¹⁸ Furthermore, at this time revenues from forests were greater than revenues from oil,¹⁹ and destroying forests for oil extraction was not beneficial for imperial coffers.

17 Townsend also advocated that India follows the system prevailing in Pennsylvania regarding royalty and definition of market value between lessor and lessee.²⁰ Some officials in the PWD

suggested that concessions must be given to companies for taking risks and developing this remote region and fledgling industry, as concessions of a similar kind were given in the USA.²¹

The GSI and PWD were now mapping the oil fields of Punjab in north-western India, for companies to start investing there, despite substantial reservations expressed by some bureaucrats. In 1883 B.S. Lyman, a geologist from Pennsylvania, was commissioned by the PWD to study Punjab's oil fields and he published the *General Report on Punjab Oil Lands*.²² This surveillance, creation of knowledge and expertise were the ways in which oil was steadily reined in to act as a state tool. Categories, technologies and knowledge that were produced were what created petroleum as we know it. The idea of what oil is and can be was built with these material and thought inputs. The possibilities and potentials of oil were determined in part, by the intentions behind disciplining it, which were socially produced and circulated within networks and institutions. Research and development within the oil industry would look very different had the institutions conducting it been systemically different, and not under the umbrella of colonial capital.

When petroleum operations commenced in the early 1880s in Khattan, Punjab, there was a race between the central and local governments to control it. The Governor-General of Baluchistan, R. Sandeman, wanted to work the oil wells himself with financial aid from the centre. This was unacceptable to the centre.²³ Faced with such problems, the practices undertaken by the British Administration led to greater centralisation, new boundaries between central and local governments, and the fabrication of a social infrastructure of the oil industry. Who got to control oil was becoming a contentious issue owing to the realisation that it lends enormous powers to its manager and owner.

¹⁷ PWD, Civil Works Branch (Coal and Iron), Proceeding no. 6-8, Part B. (1892, March), *NAI*.

¹⁸ RAD, Minerals Branch, Proceeding no. 4-13, File no. 2. (1889, January), *NAI*.

¹⁹ Arupjyoti Saikia, “Imperialism, Geology and Petroleum: History of Oil in Colonial Assam”, *Economic and Political Weekly*, vol. 46, no. 12., 2011, 48-55.

²⁰ RAD, Minerals Branch, Proceeding no. 7-14, File no. 17. (1891, July), *NAI*.

²¹ RAD, Minerals Branch, Proceeding no. 1-5, Part B. (1890, June), *NAI*.

²² PWD, Civil Works Branch (Coal and Iron), Proceeding no. 13-16, Part A. (1883, October), *NAI*.

²³ Foreign Department (FD), External Branch, Proceeding no. 39-41, Part A. (1885, September), *NAI*.

20 Khattan's oil operations had been the source of much disagreement within the colonial administration. In 1886 H.B. Medlicott from GSI emphatically argued for the government to invest in exploring oil. Referencing a report on oil in Punjab from the 1860s produced by American experts, he asserted that there was enough evidence for the government to take this seriously, especially for the sake of railway fuel. He stated that it had been the practice of the British Government to leave everything to private enterprise, and that companies did not have enough resources to take up such large tasks, which was why the ARTC was not doing a good job in developing Assam's oil resources.²⁴ Medlicott's statement signals the unconscious reliance of the colonial government on private enterprise, and the role of the latter in colonialism. It signals discord within the administration about this, and the push to take matters in its hands and device a workable relationship with private enterprise. It also signals that oil's potential was not self-evident, and had to be created and argued for. Colonial ambitions of expansion via railways, and the hunger for fuel betray the dreams oil had spun and the imperial designs it allowed. The USA's presence in the colonial endeavour lingers. Moreover, it is telling of the USA's interest in surveilling oil resources around the planet.

21 Considerable scholarly attention from across the globe had been given to Khattan's oil. It was considered one of the best in the world, and it was widely acknowledged that very good fuel could be produced from it. Oil wells there, however, were plagued by the problem of flooding with rainwater. After much discussion between officials from local and central government departments, scientists and experts, these wells were shut down in 1891-92.²⁵ Opinions on how to deal with such problems and what their consequences were varied widely. Decisions that were eventually taken *are* what constituted colonial

governance. These were neither given to local bureaucrats from above, nor always followed the script of imperial revenue collection. Not even that of "science". Local administrative sovereignty hence played a noteworthy role in composing the British Empire. As Timothy Mitchell argues, these grassroots decisions rarely get studied in accounts of colonialism, which focus on grand narratives in the metropole, but miss everyday politics in the colony, stripping low-level bureaucrats, colonised subjects, business firms, and materials of agency in giving empires their specific forms.²⁶ The socio-technical arrangements devised over time, in order to procure and supply oil, rarely get factored into colonial histories and are rarely seen as political. Oil and the numerous local actors in its management played a significant role in shaping British colonialism in India.

22 After companies started prospecting for oil in the 1880s and 90s, there seemed to be a general consensus among them and some bureaucrats that without concessions and infrastructural provisions from the government, the oil industry would suffer, as it was finding it hard to take root.²⁷ Economic benefits, control over the region's other resources, transport, and all sorts of assistance from the state were essential for the oil industry to grow. Concessions granted to companies by the government unveil the partnership between them. Oil money was crucial for both, but what oil could do for government was equally important for both. Oil became a hook that forged a deeper alliance between corporations and governments and engineered new possibilities for both. Moreover, developing oil was now portrayed as a public good aiding infrastructural development, not as something done solely for the empire.

23 Joshua Barkan argues that the modern corporation and the modern state emerged in conjunction over a few centuries, defining each other's boundaries, limitations, possibilities and powers. In this co-constitution, he finds that

²⁴ RAD, Minerals Branch, Proceeding no. 15-43 (1881, July), *NAI*.

²⁵ FD, External Branch, Proceeding no. 130, Part A. (1890, May); PWD, Civil Works Branch (Coal and Iron), Proceeding no. 6-8, Part B. (1892, March); Proceeding no. 1-31. (1892, August); Proceeding no. 4-6. (1892, September), *NAI*.

²⁶ Timothy Mitchell, *Rule of Experts: Egypt, Technopolitics, Modernity* (Berkeley: University of California Press, 2002).

²⁷ RAD, Minerals Branch, Proceeding no. 4-13, File no. 2, (1889, January), *NAI*.

corporations, as governing institutions, were an element of the state in their early stages. This explains the place they have held in the modern world – with substantial authority over the populace, important facets of the state, and threatening the government owing to the sovereignty vested in them over matters of society.²⁸ The story of petroleum in colonised India brings out how the government and oil companies used petroleum for state expansion, and how this was never smooth, but peppered with antagonism. The British Administration was never fully decided about the kind of liberties to give to oil companies and their role in the colonial endeavour. There was a constant tussle between oil corporations and the colonial administration over benefits to companies for public services they were seen to be providing on the one hand, or curtailing them as they could be a threat to state power on the other. Governance and the specific form the modern Indian state took, was partially the craft of oil and its management.

24 Philip Stern also writes about the corporation of the early modern period as a sovereign entity and constitutive of the state as well as the empire. With the case of the East-India Company (EIC), he advances an argument about the decentredness of sovereignty in British colonialism.²⁹ The EIC cannot be tethered to the empire or the nation-state, both of which were in formation along with it. Therefore, the empire was informed by the logic of the corporation and the nation-state, which together constituted British imperialism. This analysis can also describe the figure of the oil company in colonised India as an essential element of late British imperialism in South Asia, not by executing orders from the Crown or working solely for it, but by its own logic, sprouting new possibilities for the empire, shaping and propelling it from within. Further, disagreements and shifting sovereignties were common, as matters over which local

and central agencies adjudicated were moved around between them, also pulling in oil companies. Owing to the enormous presence of Standard Oil, the government and companies of the USA too played a sizeable role in shaping the colonial state in India via regulations, pricing and material practices regarding oil. Control over oil then was disputed and distributed.

The British Administration was a lot more dependent on imported than locally produced petroleum, which was still in its nascent stages. American oil companies, thus, had a larger say in shaping petroleum rules in India than British-Indian companies, through their scientists, explorers, certifiers, market influence, packaging and products. In 1883 the Consul-General of the USA wrote to the British Administration of India that some ships carrying oil from the USA to Calcutta were not allowed to dock because of the local rules there and that this was causing difficulties for oil trade. The British Administration responded agreeably with the assurance that immediate steps would be taken to “remove such hardships” faced by American companies. Calcutta authorities, nonetheless, remained defiant, but were forced to eventually relent.³⁰ Thus, there was little clarity on who possessed sovereign authority in such matters between the central and local governments. But American companies often found their way.

The main concern of the local oil-producing industry was the restrictions imposed by the government in the form of taxes, rules, lack of incentives and competition from imported products. The Government of Assam wrote to the central government on behalf of the Assam Oil Company to give the local oil industry greater concessions and remove restrictions, which it should instead impose on importers of petroleum.³¹ Parts of the central government remained hesitant, and a debate on whether to protect and promote the local industry continued for long. One such debate took a lively turn in 1903

²⁸ Joshua Barkan, *Corporate Sovereignty: Law and Government under Capitalism* (Minneapolis: University of Minnesota Press, 2013).

²⁹ Philip J. Stern, *The Company-State: Corporate Sovereignty and the Early Modern Foundations of the British Empire in India* (Oxford: Oxford University Press, 2011).

³⁰ Legislative Department (LD), Legal Opinions Branch, Proceeding no. 33-34, Part B (1883, March), *NAI*.

³¹ HD, Judicial Branch, Proceeding no. 40-41, Part A (1901, December), *NAI*.

when D. Ibbetson from the PWD stated that levying an excise duty on British Indian producers would “severely hamper capitalist interests in the country”. He argued against E. Law of the Revenue Branch who was concerned about filling imperial coffers and believed that the only way was to tax native oil, which was allegedly growing and would oust imported petroleum, reducing the revenue from import duty. Another prominent official in this debate was A.P. Palmer from the East Indian Railway Regiment, who was of the opinion that local industries do not need government assistance, and found it important to safeguard imperial interests by increasing military expenditure, for which more taxes needed to be levied. No decision was immediately taken.³² This again brings to light the knotted relationship between oil and imperialism, as well as the perpetual alliance and conflict between corporations and the government. Government officials were united in the ultimate aim of the imperial state’s expansion but disagreed on the route to it: by allying with and giving liberties to corporations who could act as arms of the state, or by restraining them so they don’t overpower the government, and taxing them, to take the safer and better-known route of revenue. Local governments and chambers of commerce often sided with local oil companies but had little power, and the local industry remained undeveloped in the face of imported petroleum.

27 Fears of international oil corporations becoming global giants fed by government concessions were the fodder of much debate within the British Administration. Standard Oil’s application in 1902 to railway companies for setting up storage tanks near railway stations sparked off such a discussion in the central government. Economic theories of free trade, popular in Europe at the time, propelled this dialogue as officials claimed that this application should be rejected because Standard Oil is monopolistic. Permission was, nevertheless granted, as F.J.E Spring of the PWD, managed to convince other

officials that Standard Oil could not monopolise Indian markets and then raise prices, as Indians had a wide array of vegetable oils to fall back on if kerosene prices went up. He asserted that foreign companies should be allowed such facilities in the country as it would increase the consumption of petroleum and drive out vegetable oils, which were hindering its spread. He also asserted that the “Indian culture of sharing resources” needed to change over to individualised consumption to increase petroleum sales.³³ Much before Henry Ford’s proclamation of the right of every poor man to a car, Spring proclaimed that every Indian had the right to private petroleum, assuming that it was every Indian’s inborn desire. It is unclear whether the forces behind Spring’s machinations were biopolitical motivations of transforming lifestyle patterns of the colonial subjects, lobbying done by Standard Oil, or a belief that kerosene would improve their subjects’ lives and “develop” them.

Kerosene, a poor household’s everyday artefact, 28 fully embraced by the people, was a product of a networked infrastructure created by big capital, and regulated by the state. Petroleum products were organized by big technology and imperial politics (albeit haphazardly), and permeated into the daily lives of common people via small everyday technologies like cars, mills, lamps, etc. This had a double effect: bringing the colonial state into people’s private affairs, but also upsetting state politics and government with people’s commonplace aspirations and actions. By turning into a daily necessity for common people, oil cannot be understood as an imperial tool alone. Its chemical properties have the capacity to generate several kinds of substances (asphalt, petrol, gas, plastics, pesticides, paints etc.), making its political and social possibilities versatile. Although the widespread use of petroleum by common people was a calculated move promoted by the industry and the state, once it became a household item it was no longer just a colonial instrument. Colonised subjects exercised some agency over

³² FCD, Separate Revenue Branch, Proceeding no. 330, Part C (1903, August), *NAI*.

³³ RAD, Geology and Minerals Branch, Proceeding no. 1-4, File no. 136, Part A (1902, November), *NAI*.

this product, beyond the command of the state, and expressed a great demand for it, altering the meanings attributed to it by the state. The production and use of this substance were shaped partially by local people, giving its receivers partial influence over its politics.

THE STATE TAKES CHARGE

29 The question of making imported kerosene the subject of imperial taxation was raised by the Finance Department as early as 1878. Later, in 1887 the Government of Bombay wanted to impose town duty on it.³⁴ At this time petroleum’s utility to the state had not been conceived of in a way other than revenue. Its energetic powers were revealed once experiments with it as engine fuel took place, creating its governmental and imperial prowess. Nevertheless, the large kerosene trade was contributing to imperial reserves to such extents that, in this form too, petroleum was an asset. Its taxation was a way of disciplining it: bringing it under state surveillance, indirectly conditioning its use and users. By 1905 the Department of Commerce and Industry had a Petroleum Branch, making apparent the state’s entanglement with oil. Via formulation of acts, the state inserted itself into oil. As Brian Black notes, this was a time when countries in the West were formulating new legal systems. The role petroleum played in this cannot be underestimated according to him. He notes that time and again it “emerged as a significant consideration” while formulating legislations, thereby exercising influence over modern democracies and their legal systems.³⁵

30 In 1880 the Legislative Department proposed formulating a Petroleum Act for India, to regulate the import, transport and storage of “inflammable oils”. This was to be based on the similar English legislation.³⁶ The Petroleum Act of 1881 required all ports to draft their own rules for landing the cargo, storage, transport and

suchlike. Disappointed with the alleged lack of professionalism in these draft rules, the central government asked the Burma, Bengal, Madras and Bombay authorities for revisions owing to their lack of foresight, impracticalities and vagueness.³⁷ Bureaucrats who were ill-equipped to manage this new substance were nonetheless critical in shaping it through the rules they drafted, which had lasting effects on its production, trade and consumption. Material practices these rules enabled and disabled shaped the oil industry, its consumers and their lives, as well as governance patterns. Forms of sociality and constellations of power were allowed and disallowed by these material practices, which were neither entirely determined by oil’s properties, nor entirely by the state’s desires.

Through mass consumption, oil allowed the state to seep into people’s private lives, but also seeped into the state itself, shaping its governance regimes. This was a two-way process: the state was also an active agent, moulding oil by its rules. In the beginning oil’s physical specificities bewildered the government and companies, and they found it hard to control it. In some places it was hard to sequester, in others, it was hard to keep in the ground. Being fluid and inflammable, it was hard to transport. But gradually oil’s physicality was domesticated. Its fluidity and inflammability were turned into opportunities from obstacles. Technology, regulations and methods of handling it were devised to harness the material affordances and limitations of oil for human benefit. Petroleum was muffled by establishing a multi-nodal network for its extraction, refining, import, storage, transport and sale. This gradually emerging network was undoubtedly determined by oil’s materiality, but the state found ways to navigate this slippery terrain and exert its own agency, to be able to deploy it for its use. Through science and bureaucratic discourse, oil was made knowable, controllable and usable. It was disciplined and turned into a productive tool of the empire. In the same way, oil was also wrested out of the

³⁴ HD, Municipalities, Proceeding no. 33-34. (1887, November), *NAI*.

³⁵ Brian Black, *Crude Reality: Petroleum in World History* (New York: Rowman & Littlefield Publishers, 2011), 53.

³⁶ LD, Unofficial Branch, Proceeding no. 2512. (1880), *NAI*.

³⁷ HD, Judicial Branch, Proceeding no. 145-169, Part A. (1882, August), *NAI*.

hands of frontier entrepreneurs by the state, which established greater command over it on the pretext of having expertise.

32 By the 1890s new questions had cropped up and rules needed revision to reflect these. There were questions regarding storage and transport, as “dangerous petroleum” now needed to be defined differently for it was transported throughout the country and passed through warm regions where it could become inflammable. Petroleum was now being used as an ingredient in several products, and how were port authorities to deal with the import of these substances? Should paints, turpentine, varnishes, etc. be treated under “dangerous petroleum rules”? The use of naphtha in various products had increased and the definition of petroleum was now under question.³⁸ New petroleum products flooding the market were causing perplexity in the customs offices as they didn’t know how to classify them for taxing purposes. The categorisation of petroleum jelly was debated between different customs houses as it is solidified petroleum, used as a lubricant, flashes over 200° F, and therefore fell in the category of lubricants. But it was being used to adulterate other oils and some officers believed that duty on it should be under a different category, to discourage its import.³⁹ Yet again, confusion and indecision unravelled. Oil’s properties were contested. When is it “oil” and when is it not “oil”? The sorts of activities and chemical properties subsumed under the name “oil” was a matter of human decision, influenced by taxation and profit.

33 The classifications that were created and dismantled from time to time for taxing, pricing, storing, transporting petroleum products reflect the inevitability of improvisation in colonialism, troubling the notion of it being stable. Materials were vital in doing so, demanding iteration and spontaneity, where local governments took matters in their own hands and went off-script, if there was one. The range of practices this led

to circumscribed the ways in which oil could be used and the social and political organisation possible: how and where people socialise, networks that form because of the storage, transport, sale and use of petroleum products, power dynamics within these, etc. Legislations on oil storage tugged the state into people’s lives by governing the design of their physical spaces, which had ripple effects on numerous everyday matters.

Although such legislations and classifications 34 were solutions to the problem of many kinds of petroleum products, they created further problems by creating restrictions for the mobility of certain products. Here we see oil’s physicality exerting agency over that of colonial capital: because oil was volatile, strict safety measures hiked up costs and created obstacles for easy circulation. The materiality of oil also dictated its packaging, which dictated other industries related to this, and also the ways of consuming it. This foreclosed and enabled certain configurations of sociality, such as whether it can be shared, where it can be bought from, etc. Systems developed in exploration, refining, distribution, storage and sale to deal with oil’s peculiarities – technical and social – had important political consequences. These were not thought about in Britain but were created by practices in the colony. Government lay in the way the state navigated oil’s materiality, and where it exerted its own agency by creating rules, practices and networks. The politics of these can be found in mundane matters at the micro-level: rules for ports, storage, transport, etc., classifications and categories, not only in imperial ambitions of the metropole. These rules and oil’s material qualities together determined oil’s social and political possibilities.

In 1903 the British Administration decided to 35 have one set of rules for all provinces as companies importing at different ports had to constantly refer to different rules.⁴⁰ Importing companies requested the government to appoint

³⁸ HD, Judicial Branch, Proceeding no. 289-338. (1894, February), *NAI*.

³⁹ DARC, Customs Branch, Proceeding no. 7, s.no. 1-3. (1912, February), *NAI*.

⁴⁰ HD, Judicial Branch, Proceeding no. 145, Part A. (1903, August), *NAI*.

a committee consisting of government officials and people from the trade to simplify the rules.⁴¹ These suggestions allude to the intimate link between science and trade: safety regulations, scientific categories such as “dangerous petroleum”, etc. were modified by the demands of trade. This move towards centralisation is fundamental for understanding how oil was becoming crucial to colonial capital and could not be left to local powers. Oil was now a global commodity and smooth circulation was imperative to its commodity status, which meant that easing out rules was of prime importance. For the same reason, standardisation and uniformity were imperative, which foreclosed locally differentiated uses, meanings and politics of oil.

36 Unlike other global commodities, oil was dangerous, requiring umpteen rules. Unlike other fuels, it was more mobile and combustible. This specificity led to a profusion of regulations to ensure its easy circulation without compromising safety. The unique combination of danger, common use, and easy circulation meant that there had to be many rules and they had to be standardised, making centralisation, largeness of industry and network, and biopolitics inherent to the modern way of using petroleum. This meant the intrusion of the state into people’s homes and lives, in the form of regulations.

37 From the history of Standard Oil, other companies knew that control over the industry was not acquired through control over supplies and oil fields but over pipelines and refineries. It was the network that needed to be controlled more than the product.⁴² Owning fields of crude oil was not enough, as this gooey substance needed to be transported, processed and distributed for it to be valued as black gold. Having access to cheap transport facilities for the carriage of petroleum was integral to making it profitable. This kind of organisation of the industry signalled a movement towards the emergence of gigantic corporations with interrelated mechanisms,

large-scale operations and control over a variety of networks and technologies. Oil companies laid stress on acquiring transport facilities and other conveniences, which made liaisons with the government vital.

With the turn of the century, petroleum was being used as a fuel and its importance for imperial expansion had been fully realised. Hence, the imperial government keenly attempted to bring oil under its control. The British Admiralty sent a directive in 1904 to the Indian administration that oil found there should only be in British hands, and be refined only by British companies. Oil was being made to fit nationalist politics. Sovereignty over it could no longer be dispersed. The Admiralty made several demands that imposed restrictions on oil companies and the Indian government, and inserted the British armed forces in supervising petroleum production. The idea was to establish complete control over it to address the insecurity of finding oil, which had become decisive to win battles and extend government. These demands were found impractical by the Indian government and companies alike, whose aspirations about oil were to do with profit, which required easy circulation and not controlled supervision.⁴³ Finally, in 1906 negotiations between the India Office in London, the Admiralty and the Committee of Imperial Defence resulted in an agreement that the Burmah Oil Company, a British oil giant in South Asia, would assure regular supply to the Admiralty, as it was threatened by Standard Oil and needed an assured demand.⁴⁴ According to G.G. Jones, the involvement of the Admiralty in the oil industry steered it in a “nationalistic direction”, clearly placing India’s oil policy “within an imperial context”.⁴⁵

No longer just about trade, but about territorial control, oil was now a national asset and not just a profitable commodity. From being serendipitously discovered on the feet of elephants in

⁴¹ Department of Commerce and Industry (DCI), Petroleum Branch, Proceeding no. 44-50. (1905, June), *NAI*.

⁴² RAD, Geology and Minerals Branch, Proceeding no. 6-18, File no. 108, Part A. (1904, November), *NAI*.

⁴³ *Id.*

⁴⁴ DCI, Geology and Minerals Branch, Proceeding no. 4-6, Part A (1906, March), *NAI*.

⁴⁵ Jones, “The State and Economic Development in India 1890-1947: The Case of Oil”, 363-4 (cf. note 13).

an obscure forest and from no other use than lighting, oil had come a long way to becoming a necessity for the government and people. It had to be teased out of the “reckless” hands of early risk-taking entrepreneurs and transferred to the safe and “expert” hands of the colonial government. The government’s involvement with the industry evolved from a haphazard and uncertain entry via safety regulations and lease agreements to scientific management, precise laws, taxation and use as fuel to run its many networks such as transport and defence.

40 While the imperial state was amassing oil within itself, everyday life too was being saturated by petroleum products. The Automobile Club in London wrote to the British Indian Government in 1903 about difficulties encountered in colonies by car users because of stringent and archaic petroleum rules. State governments too demanded more petrol, less regulation, and an improved infrastructure for storage, as their automobile use was increasing for policing areas under their jurisdiction.⁴⁶ Petroleum allowed policing. Automobiles and oil together changed the face of government. Control over oil was fought over within the state, even for the unitary purpose of expanding government. The central government probably did not trust local governments to remain subservient if supplied with too much oil or if given decision making power over it. To have oil meant to have the power of government and the tool for militarisation. Its possession aided power.

41 This points to another actor in the colonial network that made oil: automobile companies played a role in regulating how oil must be used, sold, stored and priced. It illustrates how consumption patterns and people’s lifestyles also determined the network of oil. The industry would develop differently and the product would be different had consumption and markets looked different. The intimate pairing of oil and everyday life suggests that it wasn’t just high

politics that got determined by oil and vice versa, but also quotidian lives and mundane practices.

Everyday objects which previously did not use 42 petroleum products as ingredients, such as medicines, bottles, etc. became cheaper with petroleum products replacing older raw materials. Petroleum managed to infiltrate several kinds of items and aspects of human life, as oil companies, scientists and governments looked for ways in which oil could replace other materials.⁴⁷ Chemists were engaged in inventing new uses for petroleum to make investments in the industry viable. If enough demand did not exist, investing in it would be unprofitable. This was addressed by increasing petroleum use in civilian life, increasing, alongside, the scope of biopolitical government. The demand for such products was voracious as they were cheaper and made life more convenient. It is this that turned oil into an infrastructure for both, government and everyday life.

INFRASTRUCTURE OF THE STATE AND THE SUBJECT

Because of the ways in which petroleum has 43 oiled people’s lives as well as the state’s, it warrants being thought about as more than a resource or commodity. Given its importance and necessity to state expansion on the one hand, and its perpetual presence in daily life on the other, it could be understood as an infrastructure, using the conception offered by Brian Larkin.⁴⁸ The tool of government that it became and the overwhelming way in which it came to structure people’s practices, choices, motivations and environments was because petroleum became the “grounds on which other objects operated”,⁴⁹ such as machines, transportation, communication, etc., undergirding the very possibility of production, circulation, exchange and consumption. From its early stages, it fashioned the “ambient environment”⁵⁰ people inhabited,

⁴⁶ HD, Judicial Branch, Proceeding no. 63-67, Part A. (1903, September), *NAI*.

⁴⁷ Black, *Crude Reality*, 1. (cf. note 35)

⁴⁸ Brian Larkin, “The Politics and Poetics of Infrastructure”, *Annual Review of Anthropology*, n° 42, 2013, 327-43.

⁴⁹ *Ibid*, p. 329.

⁵⁰ *Ibid*, p. 328.

especially by becoming the fuel for electricity and mobility. In its absence, society, economy and government were severely disrupted and continue to be.

- 44 Indian subjects were thrown into a stunning crisis during war-induced shortages and made consistent demands on the state to continue supply. This led to riot-like situations in many cities, and most daily activities experienced a grinding halt because of an absence of petroleum during the two world wars.⁵¹ Electricity companies fed street lights, public buildings, hospitals, railways, and other services, which shut down without oil-fired electricity.⁵² This is telling of how public dependence on state institutions and services had increased, how communities were no longer self-reliant for health, education, services like lighting, and how all of these state institutions and services were beholden to oil. The state was able to consolidate its hold over populations and properties not only through military power or massive infrastructural projects like the railways, but also through the spread of everyday products, and its control over their supply, pricing, storage, use, transport etc. Petrol pumps, for instance, altered urban landscapes, giving petroleum a role in it, and opening more spaces for the state to make itself present and necessary. And yet, the widespread demand for oil lent to it the quality of becoming a substance of mass politics, going beyond the logic of the state and becoming a tool in the hands of the subjects to hold the state to ransom by demanding its regular provision.

- 45 Penny Harvey and Hannah Knox narrate the trajectory of Peruvian state-making by building roads to infiltrate people’s lives. They posit roads as socio-technical assemblages, relational spaces and infrastructures meant to do the work of the state, while remaining open-ended in their outcomes, carrying the possibility for varying social and political formations. Roads, they write, “enable the networked flow

of goods, labour, and services. They deliver the basic conditions of modern living”; and yet are not wholly determined by the powers that bring them into being.⁵³ This is also the case for oil: used for expansion, enabling circulation, but-tressing modern life’s very possibility, but presenting its own problems and opportunities outside the logic of the state, by being embraced by the people en masse, and because of its own physicality which is hard to control.

Antina von Schnitzler conceptualises infrastructure similarly. For her, it is not just a tool in the hands of the state, but also a site of politics, an entitlement of the people, where citizenship is performed by making demands on the state. In her study of the water metre in South Africa, she traces the biopolitical work done by it to discipline citizens in a particular way, but also unfolds the struggles this device gets mired in, exceeding the tool that the state intended it to be.⁵⁴ This paper strikes a chord similar to both these studies, exploring the social and political worlds opened and closed by oil, while the state struggles to make it a juggernaut of control and expansion. The materiality of an infrastructure, the politics of its production, and the power of its consumers can be seen as locked in a grid of mutual shaping and resistance.

Troubling complete agency attributed to either actor – oil’s materiality, or the state’s use of it – this history of oil highlights their dialectic and sees agency as a product of their conversation. Mitchell notes that oil infrastructures co-emerged with particular political formations and modern lifestyles that made oil seem indispensable.⁵⁵ Penelope Harvey, Casper Bruun Jensen and Atsuro Morita take this as an example of how “infrastructures generate effects that loop back upon society”, in a “recursive

⁵¹ Punjab State Agency, Residency Files, File no. C 8/4-2/46. (1946), *NAI*.

⁵² DARC, Petroleum Branch, Proceeding no. 1-21, Part A. (1919, April), *NAI*.

⁵³ Penny Harvey & Hannah Knox, *Roads: An Anthropology of Infrastructure and Expertise* (Ithaca: Cornell University Press, 2015), 7.

⁵⁴ Antina Von Schnitzler, *Democracy’s Infrastructure: Techno-Politics & Protest after Apartheid* (Princeton: Princeton University Press, 2016).

⁵⁵ Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (New York: Verso, 2013).

movement” that is spatio-temporally contingent in the same way as the co-constitution of petroleum, the colonial Indian state and its subjects.⁵⁶

48 Petroleum was the lifeblood of state elaboration and militaries, but also proliferated into common people’s lives via kerosene, medicines, electricity, fuel, plastics, etc. Armies, corporations and governments were inextricably bound to one another in the act of extracting and using petroleum for state-making. Peculiarly, petroleum tied civilian culture to military life and battlefield activities as no other substance ever had. How people ate, travelled, worked and lived was now under control of the state, which had immense power in deciding over their daily activities. Becoming the lifeblood of militaries, oil was then made to also saturate the veins of civilian life. However, once it did so, it was no longer just a state tool, as consumers exerted power by demanding it, adulterating it, pilfering it, using it for unintended purposes and selling it illegally. This is how oil becomes government, but also escapes government. This characteristic is typical of infrastructures because they are meant for mass use, which tends to pull them out of the boundaries of state control. Despite this, they continue to do the biopolitical work they were created for, albeit distortedly.

49 Michel Foucault’s concept of *raison d’Etat* is useful to advance the argument of oil being turned into an infrastructure for the state as well as for pedestrian life, both of which assist state-making. Foucault explains *raison d’Etat* as a logic of the state, the rationality for its survival, legitimating its power and existence, allowing it to preserve and perpetuate itself. He argues that what enables and justifies state incursion in people’s private lives, and makes the management of people and their productivity its sole mandate, is biopolitics.⁵⁷ Technical infrastructures have been central to such an endeavour,

not only to integrate territories but also to create an imagination of public good around state practices and have subjects/citizens depend on the state for their daily activities, thereby rendering them loyal as well as productive. Oil, thus, and infrastructures in general, formulate the relationship between states and subjects/citizens, where the latter are fashioned in specific manners by laws around petroleum/infrastructures that produce specific forms of government, and modes of sociality. Through these, private lives of people are directed, but, people talk back to the state by mangling these infrastructures or demanding them as a right.

The programme of state making would be incomplete without a corresponding programme of subject/citizen making. High politics cannot manufacture types of subjects/citizens by itself, but requires the assistance of cultural practices, through the deployment of material objects used in the everyday. If the modern Indian state was forged partially by the deployment of oil for securing its grip over territories and populations, what held this system together were the oil captured social imageries below. The site of politics was not just governments or factories, but people’s homes, bodies and minds, where biopolitics was made possible by oil consumption and where dreams of state delivered development were spun. To build a type of state and power structure, a type of subject/citizen needed to be crafted who would buy into the ideology of that power structure. Oil aided the state by spinning dreams of westernised “progress” among the subjects, and by creating a dependence on the state and corporations for petroleum products.

While using oil for state- and subject-making might not have been a conscious and deliberate effort on part of the entire British Administration, it was the result of the laws and practices the administration enabled, as much as it was the result of market demand for petroleum products (which too were created by state and corporate partnership, not by people naturally demanding

⁵⁶ Penelope Harvey, Casper Bruun Jensen and Atsuro Morita, “Introduction: Infrastructural Complications”, in *Infrastructures and Social Complexity*, eds. Penelope Harvey et al. (United Kingdom: Routledge, 2016), 20.

⁵⁷ Michel Foucault, *Security, Territory, Population: Lectures at the College de France, 1977-78; The Birth of Biopolitics:*

Lectures at the College de France, 1978-79 (New York: Picador, 2004).

certain products). Oil as an infrastructure in British India, comprising material, social, political and economic networks, apart from being impelled by the logic of the empire, was also crafted and steered by accidents, negotiations, personal desires and local conditions that lay outside the calculations of the empire.

52 As an infrastructure, oil acted as the playing field of technologies by defining their potentiality and imperial possibilities. It is not, however, inherent in oil to garner such agency. On historicising the evolution of the oil industry in India, certain events, ideologies and surprises that assembled this edifice can be recovered as the driving forces in constructing its politics. Tracing this convoluted journey of oil involves the study of the imagination that went into assembling oil as a state infrastructure, as opposed to taking the view that oil was on an evolutionary path of progression and that it was natural for it to exert such agency.

53 Petroleum, therefore, has functioned as a commodity of rapid circulation like sugar, cotton or tobacco, an energy resource like coal, and an infrastructure of the colonial state like dams, the telegraph or the railways. This attributed to it several political possibilities, which were admixtures arising from its own materiality and from the socio-economic arrangements that harnessed it in these many ways. This also instilled in oil a contradiction: because it became a state infrastructure, nationalising it was imperative, which meant that the state must express complete control and gain sovereignty over it; but because it was a commodity that brought massive profits, it needed to be easily circulated, with minimal state intervention. This contradiction played out perpetually in struggles between the colonial government and oil companies, which nevertheless recognised the need for each other's assistance in building oil.

CONCLUSION

54 To understand how petroleum was put together as a category through gradual reification, and simultaneously built to function as an infrastructure of the state and society, this historical

narrative threw light on how oil was slowly understood and defined, how its network was assembled, and how neither of these were natural or following an internal logic. Gisa Weszkalnys writes,

The relational nature of oil's magical/material efficacy, involving pipelines, platforms, bureaucracies, workers' compounds, and other infrastructures typical of the industry that are partly, but never fully, to do with the specific aspects of the substance we call oil. Oil's magic cannot be reduced to any of the aspects discussed above...Its magic/materiality is not simply an essence, concentrated in its chemical and physical constitution, but is a potentiality that unfolds through a series of material processes of transformation, appropriation, and use.⁵⁸

55 What this story conveys about oil is that its properties do not arise from the viscous liquid alone. Petroleum is made by more than that. Allan Stoekl alludes to this characteristic of oil: that we cannot know it fully by limiting our gaze to its geological properties, but we also cannot know it by inspecting only the power that circulates in oil corporations.⁵⁹ I argue that oil is neither simply a discovered natural material, nor simply a placeholder for power and well planned high politics. It is a socio-material category, made by a multitude of agents, all of which work sometimes in tandem and sometimes against each other, eventually resulting in a collectively produced material, idea(s), way(s) of life and practice(s), that are not purely the result of what was intended but comprise the consequences of contingent forces.

56 Bruno Latour sees “the social” as “associations between heterogeneous elements”, rather than a given whole.⁶⁰ Latour's Actor-Network-

⁵⁸ Gisa Weszkalnys, “Oil's Magic: Contestation and Materiality”, in *Cultures of Energy*, eds. Sarah Strauss et al. (Walnut Creek: Left Coast Press, 2013), 278.

⁵⁹ Allan Stoekl, “Foreword”, in *Oil Culture*, eds. Ross Barrett et al. (Minneapolis: University of Minnesota Press, 2012).

⁶⁰ Bruno Latour, *Reassembling the Social* (Oxford: Oxford University Press, 2005), 5.

Theory (ANT), focussing on widely distributed agency between multiple actors spread across the network, enables us to account for the contingencies faced by the British Empire and the obstacles that frustrated its plans, owing to a variety of agents, causing chaos. This allows us to expose the fallacy of the belief that grand plans hatched in ivory towers get implemented as they are, by pawns bereft of agency. Oil’s history in India points out that plans were not always laid out beforehand, and when they were, they had to be improvised drastically and often. The focus in ANT is on associations and networks they form, processes that lead to products, a web of entanglements which otherwise get black-boxed, and where politics can be seen to lie – on the ground, in everyday practices and decisions. Emphasising the “how” question behind the generation of social forces, ANT facilitates the study of how petroleum came to be and de-naturalises the way we see it. It alludes to the social construction of science – how negotiation, power struggles, profit motives, arbitrariness lead to what we now call “petroleum science”. This category was not based on a sanitised science stripped of politics and disembedded from society but was constructed partly by colonial trade, revenue and power-play, not as outsiders to science, but as organisers of it. And there were multiple actors and agents involved, with varying degrees of influence.⁶¹

57 For Manuel DeLanda, assemblages do not have a natural essence and can be reconfigured. This helps us defetishise oil and look beyond its physical properties, to the networks that decided what physical properties it has. DeLanda highlights the importance of associations between things in creating properties of the amalgam. For him, following Gilles Deleuze, assemblages are not mere sums of their parts, as the properties of the sum arise from the relations between the parts. These “relations of exteriority” create

⁶¹ I do not propose that we read oil as an Actor-Network, as it could be read in many other ways, and applying ANT wholesale to oil would be problematic for many reasons. But I take the assistance of that theoretical frame to read oil as socially produced, and to highlight the processes behind it.

connections that are “contingently obligatory” but not “logically necessary”.⁶² Debates and negotiations in this narrative show us that things came to crossroads many times and could have gone either way, each taking the formation of oil on a different path. The choices that were made were not following an internal logic but were the result of spatio-temporal contingencies. Crude oil could have included and excluded different chemical properties, and there could be an entirely different range of petroleum products from what we have today. What colonial capital made sense of, what it needed, as well as the accidents that took place, determined the nature oil took.

As an infrastructure, oil acts as a vantage point 58 for understanding the state. What can be said about the colonial state from this vantage point is that apart from disorder, uncertainty and backfires, it was also animated by competing interests and distributed sovereignty, and was not a coherent, well organised, top-down and unitary political project. Oil highlights how materials, practices and people on the ground upend the execution of plans made up above, and acquire a life of their own. Specific material practices around oil, giving rise to specific formats of governance, resulted in specific forms of sociality and constellations of power.

Illuminating the chaos that lay at the heart of 59 the colonial state in India, and the way in which oil’s material affordances and limitations were cast over it, I do not wish to dampen the power of the state in disciplining oil and deploying it for its elaboration. By narrating how oil, imperialism and the state co-constituted each other, I have attempted to play up their dialectic, and not attribute agency to a material in an ahistoric way. With this history, I hope to have shown how socio-political structures get encoded into materials, later seen as natural and scientific; and how materials get encoded into socio-political structures, shaping them from the inside.

⁶² Manuel DeLanda, *A New Philosophy of Society* (London: Continuum Publications, 2006), 10, 11.

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Oil, dollars, and US power in the 1970s: re-viewing the connections

Abstract

Petrodollars – the dollars accumulated by oil-producing countries as revenues for oil exports – are usually considered key to our understanding of the renewal and transformation of US power during the 1970s. Yet, in the context of a large and expanding literature, in which the essence of such power is described by terms as diverse as dominance, hegemony, empire or pax americana, scholars hold different views as to the precise nature of the link established between petrodollars and US power at the time. After reviewing the state of the literature, this essay discusses the issue based on declassified documents from US and British national archives by focusing on the way Saudi Arabian authorities allocated their vast oil earnings. While conclusive evidence is still lacking, it appears likely that Saudi choices were shaped by US diplomatic démarches and economic inducements, as well as by US offers of an ambivalent military “protection”.

Plan of the article

- Introduction
- The challenge of petrodollars
- New evidence on US-Saudi agreements
- Detour: why “petrodollars”, by the way?
- Saudi decisions in the context of US-Saudi relations
- Conclusions

INTRODUCTION

1 There is basic agreement among scholars on three main points concerning the link between petrodollars – the dollars accumulated by oil-producing countries as revenues for oil exports – and the renewal and transformation of US power in the 1970s. The first concerns the fact that, with oil priced and sold mostly in dollars, and oil prices abruptly quadrupling in the last two months of 1973, during the 1970s the United States kept benefiting from the central position of the dollar in international monetary affairs, despite the end of its convertibility into gold in 1971.¹ The notion that an oil-dollar standard replaced the gold-dollar one is debatable, but the link with oil – then the major commodity in world trade – did ensure that the dollar keep a major role in world monetary reserves and trade transactions.² With that came what political scientist David Spiro has aptly described as a “double loan” enjoyed by the United States: the US could print dollars both to import oil from OPEC and to import goods and services “from all other economies that had to pay dollars for oil but could not print currency”.³ Thus, in historian Charles Maier’s parallel between the US and British “empires”, it was “especially because OPEC countries continued to price oil in dollars” that the United States could continue to “enjoy the monetary privileges of its imperial predecessor”.⁴ While putting greater emphasis on the new

1 Classic works emphasizing the intertwined nature of the “monetary crisis” and the “oil crisis” of the 1970s are Susan Strange, *Casino Capitalism* (London: Blackwell, 1986), chapters 1-2; Howard Wachtel, *The Money Mandarins. The Making of a Supranational Economic order* (New York: Sharpe, 1990), chapter 5; Harold James, *International Monetary Cooperation Since Bretton Woods* (Washington, DC: IMF, 1996), chapter 11. The most updated and sophisticated treatment of the “oil shock” of 1973 is in Giuliano Garavini, *The Rise and Fall of OPEC in the Twentieth Century* (Oxford: Oxford University Press, 2019), chapters 4-6.

2 On the “oil-dollar” standard see Prabhat Patnaik, *The value of money* (New York: Columbia University Press, 2009) and Prabhat Patnaik, “Response to the Discussion on ‘The Value of Money’”, *Social Scientist*, Vol. 37, n° 3-4, 2009, 46-51.

3 David Spiro, *The Hidden Hand of American Hegemony. Petrodollar Recycling and International Markets* (Ithaca: Cornell University Press, 1999), 121.

4 Charles Maier, *Among Empires. American Ascendancy and Its Predecessors* (Cambridge USA: Harvard University Press, 2009), 266.

challenges that the abuse of such position would soon put before the US government, historical sociologist Giovanni Arrighi concluded that

[f]rom 1973 to 1978, the abandonment of the gold-dollar exchange standard appeared to have resulted in the establishment of a de facto pure dollar standard that enabled the United States to tap the resources of the rest of the world virtually without restriction, simply by issuing its own currency.⁵

The second point of agreement is that a significant portion of the petrodollars accruing to oil-exporting states – around 170\$ billion in 1973-77, according to the IMF⁶ – were not “absorbed” through increased imports, but deposited in dollar-denominated accounts, particularly – though not exclusively – with US banks operating both in the US and in the London Eurodollar market. Of course, in many ways selling oil in dollars and depositing petrodollar revenues in dollar-denominated accounts reinforced each other. Thus, in his history of the dollar’s “exorbitant privilege”, economic historian Barry Eichengreen observed that

there was no shift away from the dollar [after the end of Bretton Woods]. Volatility there was in the share of dollars in foreign exchange reserves in the 1970s, but no secular decline. The dollar’s share of total identified international reserves remained close to 80 percent in 1977, as the United States pumped out dollars and the members of the Organization of Petroleum Exporting Countries (OPEC), having jacked up oil prices, parked their earnings in New York.⁷

5 Giovanni Arrighi, “The world economy and the Cold War, 1970–1990”, in Melvyn Leffler and Odd Arne Westad (eds.), *The Cambridge History of the Cold War, vol. 3: Endings* (Cambridge UK: Cambridge University Press, 2011), 23-44: 31. A recent assessment of the long-term advantages accruing to US power from oil being priced in dollars is in Carla Norrlof, *America’s Global Advantage. US Hegemony and International Cooperation* (Cambridge UK: Cambridge University Press, 2010), 208-218.

6 Data on oil exporters’ surpluses in IMF, *Annual Report 1983* (Washington DC: IMF, 1983), 18.

7 Barry Eichengreen, *Exorbitant Privilege: The Rise and Fall of the Dollar* (Oxford: Oxford University Press, 2011), 63.

- 3 The third point of agreement concerns the transformation induced by petrodollar flows in US power itself. On the one hand, the aforementioned “double loan” facilitated the transition toward a new configuration of the international economy in which the United States, long the world’s industrial powerhouse, now exerted its influence (also) by accumulating external debts. On the other, petrodollar flows contributed to feed the transnational business of Western commercial banks, with US-based banks in a leading position. In Maier’s formulation, this was the beginning of the “striking” transformation of the United States from an “empire of production” to an “empire of consumption”.⁸ In historian Peter Gowan’s more radical view, it was the beginning of a “Dollar-Wall Street Regime” and of “Washington’s Faustian bid for world dominance”.⁹
- 4 There is more controversy, however, on what determined such outcomes. According to a well-established version of the story, “free markets” stepped in autonomously as the multilaterally-managed Bretton Woods system showed repeated symptoms of stress and crisis in the early 1970s, particularly after the second devaluation of the dollar and suspension of fixed exchange rates in March 1973. In this view the financialization of the world economy would be somewhat self-explanatory, the fact that the US dollar was the established currency for international transactions would explain its use in oil transactions, and the superiority of US banks in managing dollar-denominated assets would explain why US banks took the lion’s share of petrodollar deposits. Thus, the renewal and transformation of US power described above would have been only an indirect result of the work of “unfettered private markets” in the “recycling of petrodollars” from oil exporters with limited import capacity – particularly the Arab states of the Gulf – to oil importers with great financing needs – particularly in the developing world. In the words of the former chairman of the Federal Reserve, Paul Volcker,
- the mechanism was simplicity itself. The major oil exporters found it convenient to place large parts of their dollar accumulations in the big, well-known international banks, particularly in the form of short-dated Eurodollars. [...] The banks, now awash with liquidity, found willing borrowers for these huge sums in Latin America and elsewhere.¹⁰
- 5 Dear to “neoliberal” thinkers and policymakers since the 1970s, such interpretation has more to do with conventional wisdom than with factual analysis. As noted by various critics, it suffers from at least two main flaws. First, private banks in London and in the US were indeed the destination of a relatively large portion of OPEC’s investments, but by no means the only one: according to statistical data from the Bank of England, private banks collected roughly 40% of OPEC’s financial surplus (35.5% with Eurodollar banks including US banks in the Eurodollar market, and 4.5% with US banks in the US), while the rest ended in direct bilateral and multilateral aid and loans to developing countries (around 18%), US government securities (11%), portfolio investments in the US (7%), IMF and World Bank facilities (6%), and direct and equity investments in other industrialized countries (15%).¹¹ Secondly, a large portion of the loans issued by private banks actually went to the oil producers themselves, both OPEC members or non-members such as Mexico.¹² To the extent that they did “recycle” petrodollars to oil-importing countries, private banks made loans only to a very small group of rapidly industrializing countries (led

⁸ Charles Maier, *Among Empires*, *op. cit.*, 255 (cf. note 4).

⁹ Peter Gowan, *The Global Gamble. Washington’s Faustian Bid for World Dominance* (London: Verso, 1999), 19-22

¹⁰ Paul Volcker and Toyoo Gyohten, *Changing Fortunes. The World’s Money and the Threat to American Leadership* (New York: Times Books, 1992). Also: Jeffry Frieden, *Global Capitalism. Its Rise and Fall in the Twentieth Century* (New York: W.W. Norton, 2006), 370-371; Robert Aliber, *The International Monetary Game* (New York: Basic Books, 1987), 137-142.

¹¹ Bank of England data, reproduced in David Spiro, *The Hidden Hand*, *op. cit.*, 58 (cf. note 3).

¹² See data in Robert Wood, *From Marshall Plan to Debt Crisis. Foreign Aid and Development Choices in the World Economy* (Berkeley: University of California Press, 1986), 258.

by Brazil, Argentina and South Korea), while the financing of oil-related deficits for most other developing countries came from official bilateral and multilateral channels.¹³

- 6 If private banking was not the sole recipient of petrodollar flows, and if petrodollar flows had governments and international institutions involved at all ends (depositors, intermediaries, and final recipients), the allocation of petrodollars by just “free market” logic appears rather shaky (at least if a “free market” is considered to be incompatible with state activism).¹⁴ In particular, the reason why the oil-producing countries invested predominantly in dollar-denominated assets, including around one-tenth of their total earning in US Treasury securities, becomes open to alternative interpretations. According to one, the explanation lies in a well-orchestrated plan by US President Richard Nixon, who allegedly manipulated OPEC into raising oil prices from the beginning, with the ultimate goal of empowering the US Treasury and Wall Street over the ruins of the embedded liberalism of Bretton Woods.¹⁵ In reality, there is little hard evidence to prove the existence of such a grand plan. It is indeed possible to claim that in the early 1970s various US officials expressed, both privately and publicly, a relatively relaxed attitude toward somewhat higher oil prices: according to some

¹³ *Ibid.*. Also see Ethan Kapstein, *Governing the Global Economy. International Finance and the State* (Cambridge USA: Harvard University Press, 1994), 61-63. Bringing the reasoning to its legitimate conclusion, Spiro questioned whether petrodollars were really “recycled”: David Spiro, *The Hidden Hand, op. cit.*, 131-133 (cf. note 3).

¹⁴ Of course, the “free market” logic could be questioned even if private banks had really been the only intermediaries of petrodollar flows. In Spiro’s terms: “First: the public/private nature of an institution does not necessarily tell us whether the outcome was owing to market forces or to political authority. [...] Second, [the market] view boils down to the idea that whatever economic actors do is market forces. Falsification is hardly possible”: David Spiro, *The Hidden Hand, op. cit.*, 7 (cf. note 3).

¹⁵ Peter Gowan, *The Global Gamble, op. cit.*, 20 (cf. note 9). Various authors have drawn on Gowan to make the same point. See David Harvey, *The New Imperialism* (Oxford: Oxford University Press, 2003), 62; Christopher Doran, *Making the World safe for Capitalism. How Iraq Threatened the US Economic Empire and had to be Destroyed* (London: Pluto Press, 2012), 37 and 76-78.

Treasury officials these could facilitate domestic oil development in high-cost Alaskan fields;¹⁶ according to Secretary of State Henry Kissinger, higher oil revenues to Iran would support the Shah’s military build-up on the southern flank of the Soviet Union;¹⁷ and for some officials with good Wall Street connections, under appropriate policies, higher oil prices might also lead to growing returns of dollars to the US banking community.¹⁸ But from here to the claim that the US government orchestrated the actual “oil shock” – not vaguely “higher prices”, but a four-fold price increase in only two months –, the step seems frankly quite a big one.¹⁹

Alternatively, according to the two authors of a recently published official history of the Saudi Arabian Monetary Agency (SAMA, that is the Saudi Central Bank), there was an active role of the US government in facilitating Saudi investments in the US – and US Treasury securities in particular –, but it was limited to working out the “most practical solution” for a notoriously risk-averse investor as the Saudi state.²⁰ Indeed, the representation of the US as a

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¹⁶ See Pierre Terzian, *OPEC: The Inside Story* (New York: Zed Books, 1985), 144 and 193. Terzian’s rather mild claims are actually the basis of Gowan’s more radical conclusions.

¹⁷ Andrew Scott Cooper, “Showdown at Doha: The Secret Oil Deal That Helped Sink the Shah of Iran”, *Middle East Journal*, Vol. 62, n° 4, 2008, 567-591: 572.

¹⁸ See for example: memorandum from Secretary of the Treasury George Shultz to Henry Kissinger, “Economic mission to Saudi Arabia”, 13.08.1973, *US National Archives* (USNA), RG 56, General Correspondence of the Secretary of the Treasury, Memos 1973, White House, box 52; memorandum from the Undersecretary of State William Casey to George Shultz, 19.09.1973, USNA, RG 56, Records of the Secretary of the Treasury George Shultz (Shultz Files), FRC 5, State Department. Casey had been the chairman of the Securities and Exchange Commission before his appointment to the State department.

¹⁹ The “Nixon grand-plan” story ignores that the “oil shock” was seen in many OPEC quarters as an authentic Third-Worldist “oil revolution”: Christopher Dietrich, *Oil Revolution. Anticolonial Elites, Sovereign Rights, and the Economic Culture of Decolonization* (Cambridge UK: Cambridge University Press, 2017). A balanced judgment on the issue is in Giuliano Garavini, *The Rise and Fall, op. cit.*, 224-226 (cf. note 1).

²⁰ Ahmed Banafé and Rory McLeod, *The Saudi Arabian Monetary Agency, 1952-2016 Central Bank of Oil* (London: Palgrave MacMillan, 2017), 75.

rather passive beneficiary of the consequences of international processes has been recently canonized in Daniel Sargent's claim that "the United States has been [...] exceptionally lucky. Fortune – in the form of outlandish endowments – are [*sic*] what enabled the formulation of a Pax Americana".²¹ In the absence of much evidence from the investors' side, this version of the story cannot be ruled out. After all, ever since Machiavelli, "fortune" (*fortuna* in Italian) is one of the foundational concepts in Western political science, even though the Florentine thinker was much more pessimistic about its effects on human affairs.

8 However, the choice for interpretation is not limited to that between a virtually all-controlling United States and an almost completely passive one.²² Thus, in keeping with a Machiavellian language, the sections that follow attempt to show that, even without the need to resort to Borgia-style conspiracies, the American "prince" did deploy some "virtue" – well beyond that required by working out "practical solutions" – in order to ensure that a large share of petrodollars end up in dollar-denominated assets in general, and in US-banks and the US Treasury in particular.

21 Daniel Sargent, "Pax Americana: Sketches for an Undiplomatic History", lecture presented at the 132nd Annual Meeting of the American Historical Association in Washington, DC, on January 6, 2018, now in *Diplomatic History*, Vol. 42, n° 3, 2018, 357-376: 362. The claim cited here is not specifically about petrodollars, but Sargent's treatment of petrodollars elsewhere seems to fall substantially in line with it: see Daniel Sargent, *A Superpower Transformed. The Remaking of American Foreign Relations in the 1970s* (Oxford: Oxford University Press, 2015), 184. In a previous essay, the same author had reviewed the literature on the subject but refrained from drawing definitive conclusions: Daniel Sargent, "The Cold War and the international political economy in the 1970s", *Cold War History*, Vol. 13, n° 3, 2013, 393-425: 406.

22 Of course, the main term of reference here is the already cited David Spiro, *The Hidden Hand*, *op. cit.* (cf. note 3). The interplay between structural forces and US agency – including in regards to petrodollars in the 1970s – is also at the heart of Hal Brands's recent interpretation of the "renewal" of US power in the late 20th century: Hal Brands, *Making the Unipolar Moment. US Foreign Policy and the Rise of the Post-Cold War Order* (Ithaca: Cornell University Press, 2016), 55-65.

THE CHALLENGE OF PETRODOLLARS

The hike in international oil prices in the early 1970s constituted a challenge to world political and economic equilibria, particularly after the "oil shock" of 1973.²³ As the balance of payments of oil-importing countries fell into trade deficit in 1974, governments were called to decide whether to reduce imports, promote exports or borrow their way out of the "oil crisis". Each of these solutions carried potential problems: reducing imports of oil could lead to shortages of fuel and bring economic activity to a halt; promoting exports could lead to beggar-thy-neighbor policies; borrowing required availability of lenders. In practice, the seven largest industrial economies as a whole quickly turned their trade deficit into a surplus by 1975, shifting the burden of adjustment onto the oil importers in the developing world.²⁴ While some oil exporters, most notably Iran, "absorbed" a large portion of their oil revenues by increasing imports apace, other countries with large oil sales and small populations – particularly Saudi Arabia, the United Arab Emirates, and Kuwait – were "low absorbers", that is they were unable to increase their imports significantly: this is where liquid petrodollars originated.²⁵

Capitalist logic wants that private banks take deposits, on which they pay interest, only if they can make profitable loans. During and after 1973, private bankers increasingly voiced their fears for the incapacity of the banking system to absorb the increasing amount of short-term deposits

23 A recent update to the literature is Elisabetta Bini, Giuliano Garavini and Federico Romero (eds.), *Oil Shock: The 1973 Crisis and its Economic Legacy* (London: IB Tauris, 2016).

24 A detailed disaggregation of the current account performances of, respectively, the seven largest OECD economies, the rest of the OECD, the Newly industrializing Countries (NICs) and the rest of the oil-importing LDCs is in David Spiro, *The Hidden Hand*, *op. cit.*, 68-79 (cf. note 3).

25 On Iran's increased imports: Andrew Scott Cooper, *The Oil Kings. How the US, Iran, and Saudi Arabia Changed the Balance of Power in the Middle East* (New York: Simon & Schuster, 2011), chapter 7. On Saudi Arabia, Kuwait and the United Arab Emirates as "low absorbers": Ethan Kapstein, *Governing*, *op. cit.*, 62-63 (cf. note 13).

by Arab petro-states.²⁶ Thus, in international forums, the “recycling” of petrodollars – from the oil producers in surplus to the oil consumers in deficit – came to be seen as a way to avoid several alternative dangers: that of a steep contraction of oil imports by the developing world, that of the contraction of OPEC’s oil exports, and that of the oil exporters’ use of their newly acquired wealth for “political purposes”.²⁷

11 Under the Bretton Woods system, then in deep crisis but technically still the norm of international monetary affairs, the financing of abrupt deficits in balance of payments was the task of the IMF.²⁸ In reality, as seen above, during 1974 and 1975 the IMF’s role as a lender was rather marginal: it contributed to giving implicit guarantees to private bankers, but in quantitative terms it was limited to the two “oil facilities” established at the initiative of managing director Johannes Witteveen.²⁹ There is substantial agreement that from 1973 to 1975 an insurmountable opposition to a larger role for the IMF came from the US government, increasingly intent in promoting “a new financial liberalism”.³⁰

12 But US opposition was not limited to vetoing theoretical IMF-led recycling schemes. Taking into consideration Saudi Arabia, soon to emerge as the single largest holder of petrodollars, Ahmed Banafe and Rory McLeod explain that

[i]n early 1974, [SAMA governor] Anwar Ali had been in a difficult position. He had historically

²⁶ The point is well illustrated in Edoardo Altamura, *European Banks and the Rise of International Finance. The Post-Bretton Woods Era* (London: Routledge, 2016), pos. 3257-3291 (e-book edition).

²⁷ A chronicle of Western political and financial authorities’ early approaches to recycling is in William Glenn Gray, “Learning to Recycle”, in Elisabetta Bini, Giuliano Garavini, Federico Romero (eds.), *Oil Shock, op. cit.*, 172-197.

²⁸ See the classic Brian Tew, *The Evolution of the International Monetary System, 1945-88* (New York: New York University Press, 1988).

²⁹ The qualitative importance of the IMF’s loans is stressed in Ethan Kapstein, *Governing, op. cit.*, 67 (cf. note 13).

³⁰ Eric Helleiner, *States and the Reemergence of Global Finance. From Bretton Woods to the 1990s* (Ithaca: Cornell University press, 1994), 109-112. New evidence is presented in William Glenn Gray, “Learning”, *op. cit.*, 180-182 (cf. note 27).

placed the bulk of the oil income with commercial banks, mainly in the Eurodollar market. This was unsatisfactory now because it meant placing and then rolling over short-term deposits in huge amounts, stretching SAMA’s investment team and its telex operators to the limit. It also meant that SAMA was exposed to Western banking risk. [...] Meanwhile, he pursued two other routes – setting up a development bank and lending money to the International Monetary Fund (IMF). [...] For Ali, the former IMF official, using the IMF was an obvious route but it foundered on two obstacles. The Fund would not pay him a commercial rate of interest for buying assets, known as Special Drawing Rights (SDRs). If Saudi Arabia could have been given an executive directorship, there might have been a compromise on the rate of interest. But the Americans were concerned about losing their veto over the Fund as their share of the quota declined, and they stalled consideration of this idea, so SAMA made no big SDR purchase.³¹

Thus, it is correct to point out that the IMF had 13 limited resources to deal with recycling.³² But if the long citation above is a reliable interpretation of SAMA’s predicament, it seems it had few resources also because – as another famous Florentine would have put it – “it was so willed, there where the power was”.

NEW EVIDENCE ON US-SAUDI AGREEMENTS

On the basis of abundant evidence, political 14 scientist Eric Helleiner has illustrated how Washington’s (neo-)liberal shift was based also on the expectation that a more liberal system would allow the dollar to exploit the attractiveness of the US financial market and Eurodollar market.³³ Thus, besides containing the role of

³¹ Ahmed Banafe and Rory McLeod, *The Saudi, op. cit.*, 51 and 52 (cf. note 20). Unfortunately, while most likely built on SAMA’s records, this account does not indicate any precise source for the reported claims.

³² See, again, Edoardo Altamura, *European Banks, op. cit.*, pos. 3141-3151 (cf. note 26).

³³ Eric Helleiner, *States, op. cit.*, 110-115 (cf. note 30). Edoardo Altamura’s research has shown that also the Bank of England sponsored recycling through private banks: Edoardo Altamura, *European Banks, op. cit.*, pos. 3141-3151 (cf. note 26).

the IMF, in January 1974 the US administration facilitated the emergence of private finance by unilateral action when it removed all remaining restrictions on the flow of funds to and from the US and allowed US banks – beyond those already active on the London market – to participate in the management of petrodollars.³⁴

15 As the year progressed, despite widespread skepticism among private bankers about their own capacity to meet the great challenges posed by OPEC's funds, the notion that private markets should play a significant role in "recycling" conquered greater acceptance among international policymakers.³⁵ In September a communique by the central bankers of the Group of Ten openly stated that "means are available for that purpose and will be used if and when necessary", *de facto* assuring private banks that they would be rescued with public money, should their petrodollar loans go wrong.³⁶ Yet, the US government's activism was not only aimed at "creating markets", as Karl Polanyi would have it. As shown by Spiro, in the second half of 1974, while Gerald Ford replaced Nixon in the White House, US officials also moved at the highest levels in order to ensure that most of the oil revenues of Saudi Arabia would flow to various US destinations, including directly into the US Treasury.³⁷

16 At the Washington energy conference of February 1974, Western industrialized countries – except France – had pledged not to compete for

preferential agreements with oil exporters.³⁸ In order to avoid preferential financial agreements, discussions were also held throughout 1974 for the creation of a "financial safety net" within the OECD.³⁹ But neither the empowerment of private commercial banks nor the discussions about the OECD safety net served to prevent Western governments from competing in what a specialized magazine called "the battle for the petrodollar".⁴⁰

The US government played its cards skillfully: 17
on 8 June, at a ceremony in Washington DC, Secretary of State Henry Kissinger and Crown Prince Fahd signed before cameras a framework agreement for the creation of two joint US-Saudi commissions (an economic one, and a military one), aimed at the promotion of Saudi investments in the US in exchange for US cooperation in technology and in the modernization of Saudi Arabia's armed forces.⁴¹ In the following months, the meetings aimed at setting up the Joint Economic Commission provided the context in which US Treasury officials negotiated with SAMA a more specific agreement, allowing Saudi authorities to purchase US Treasury bonds outside regular auctions and at preferential rates.⁴² This last agreement, evidence

³⁴ It is appropriate to observe that the Nixon administration had begun to phase out the so-called "capital controls" on US transnational banking as early as 1969: Duccio Basosi, "The Transatlantic Relationship and the End of Bretton Woods, 1969–71", in Giles Scott-Smith and Valérie Auburg (eds.), *Atlantic, Euro-Atlantic, or Europe-America?* (Paris: Soleb, 2011), 468–485: 474–476. Announced in March 1973 by Secretary Shultz, the US decision to completely eliminate capital controls by 1974 had provoked the end of the monetary parities established in the December 1971 "Smithsonian Agreement": Eric Helleiner, *States*, *op. cit.*, 111 (cf. note 30).

³⁵ Edoardo Altamura, *European Banks*, *op. cit.*, pos. 3257–3271 (cf. note 26).

³⁶ *Id.*, pos. 3291.

³⁷ David Spiro, *The Hidden Hand*, *op. cit.*, Chapter 5 (cf. note 3).

³⁸ For a recent assessment of the Washington conference: Henning Türk, "The Oil Crisis of 1973 as a Challenge to Multilateral Energy Cooperation among Western Industrialized Countries", *Historical Social Research*, Vol. 39, n° 4, 2014, 209–230.

³⁹ William Glenn Gray, "Learning", *op. cit.*, 184–187 (cf. note 27).

⁴⁰ "The Battle for the Petrodollar", *Institutional Investor*, n° 11, 1974. Several plans for "recycling" by Western European governments and the European Community are documented in Silvio Labbate, "Il ruolo dei petrodollari nelle relazioni Nord-Sud", in Daniele Caviglia, Antonio Varsori (eds.), *Dollari, petrolio e aiuti allo sviluppo* (Milano: Franco Angeli, 2008), 143–170.

⁴¹ "'Milestone' pact is signed by US and Saudi Arabia", *New York Times*, 9.6.1974. The importance of Saudi investments in the US was repeatedly stressed in the correspondence between the two sides throughout 1975: USNA, RG 56, Chronological files of Gerald Parsky, 1975–1976, FRC 1.

⁴² The new US Secretary of the Treasury William Simon, who had replaced Shultz earlier in the year, visited Saudi Arabia in July. On the occasion, Saudi authorities spoke openly to the press about their intention to invest in "special United States Government securities": "Simon Has Meeting with Saudi King on Investing in US", *New York Times*, 21.7.1974. In general, on this: David Spiro, *The Hidden Hand*, *op. cit.*, 88–91 (cf. note 3).

of which was first uncovered by David Spiro's research in the 1990s, has achieved semi-mythical status over the years for the aura of mystery that surrounded it (until 2016 the US Treasury grouped Saudi Arabia's holdings with those of other nations under the generic heading "oil exporters").⁴³ As declassified US sources now show, US Undersecretary of the Treasury Jack Bennett and the new SAMA Governor, Abd Al Aziz Qurayshi, finalized the so-called "add-on arrangement" at the end of a lengthy negotiating session in Jidda on 11 and 12 December 1974, and Ambassador James Akins immediately notified Kissinger:

The Saudi governor accepted the proposal to have a new confidential relationship through the Federal Reserve with the treasury borrowing operation. When announcement of an issue is made, SAMA will be queried as to its interest in purchasing additional amounts of the same issue at the average price of the auction. Certificates for these additional amounts will be issued and probably deposited in one of the banks on deposit for SAMA. In the event that SAMA wishes to dispose of these issues ahead of their date of maturity for any reason, notification will be given Treasury at least two days ahead so that market forces can be evaluated and an offer made to SAMA if judged necessary to prevent disruption of the ordinary market in such issues.⁴⁴

18 In light of such information, it is easier to understand both the overall context for Saudi investments in dollar-denominated assets, and the more specific rationale for Saudi investments in US Treasury bonds. During the negotiations that led to the arrangement, Saudi negotiators had consistently asked that the US guarantee

"confidentiality" on Saudi investments, while adjusting the tempo of the negotiations with that of the evolution of other openly "political" issues in US-Saudi relations: for example, it is easy to connect the telegram that the US embassy in Jidda had sent to the State Department on 28 August, stressing that SAMA's governor Ali Anwar was "somewhat negative on Treasury issues", with the one the embassy sent one week later, stressing that the "Saudis fear[ed] their oil money might end in Israel".⁴⁵ In general, the US ambassador to the kingdom expressed no doubt that the "decision to pick up special issue at any meaningful level [was] dependent on political factors".⁴⁶ After the conclusion of the negotiation, the "add-on arrangement" duly began to work in early 1975, with a first SAMA purchase of some 2.5\$ billion of Treasury issues through the Federal Reserve Bank of New York.⁴⁷

DETOUR: WHY "PETRODOLLARS", BY THE WAY?

19 Before returning to the political context of US-Saudi financial relations a short detour is required. As mentioned above, with oil prices increasing by 70% between 1970 and 1973, ideas and proposals for "recycling" had been circulating in banking and government circles well before the actual "oil shock".⁴⁸

⁴⁵ Respectively, US Embassy Jidda to State Department, "Governor Ali somewhat negative on Treasury issues", 28.08.1974, confidential; and US Embassy Jidda to State Department, "Saudis fear their oil money might end in Israel", 05.09.1974, secret. Both telegrams, and others on the negotiations, are in the AAD database online.

⁴⁶ US Embassy Jidda to State Department, "Governor Ali", *op. cit.* (cf. note 45).

⁴⁷ For the SAMA purchase see the February 1975 memorandum by Jack Bennett to Henry Kissinger, reproduced in David Spiro, *The Hidden Hand*, *op. cit.*, 111-112 (cf. note 3). The overall budget deficit of the US government had been 6.3\$ billion in 1974, and would grow to 53\$ billion in 1975: Budget of the United States Government, Summary of receipts, outlays and surpluses of deficits 1789-2024, available at <https://www.govinfo.gov/content/pkg/BUDGET-2020-TAB/xls/BUDGET-2020-TAB...> (accessed 6 April 2019).

⁴⁸ For early US reflections on "recycling", cf. note 18. A British government document on the same subject is Rothschild to Marshall, 12.12.1972, strictly confidential, in *Documents on British Policy Overseas, Series III, Volume IV, The Year of Europe: America, Europe and the Energy Crisis, 1972-74* (London: Routledge, 2006), doc. 6. On the rise of oil

⁴³ Andrea Wong, "The Untold Story Behind Saudi Arabia's 41-Year U.S. Debt Secret", *Bloomberg*, 31.05.2016, available at <https://www.bloomberg.com/news/features/2016-05-30/the-untold-story-beh...> (accessed 3 April 2019).

⁴⁴ Telegram from US Embassy Jidda (Akins) to Secretary of State, "SAMA agrees to purchase Treasury issues", 12.12.1974, confidential, in US National Archives, Archival databases online (henceforth AAD), <https://aad.archives.gov/aad/createpdf?rid=270129&dt=2474&dl=1345>.

The neologism “petrodollars” materialized quickly: the *New York Times* used it for the first time in September 1973 in a quote from a congressional testimony by the chairman of Lehman Brothers bank.⁴⁹ *Le Monde* used its French translation for the first time in November 1974, quoting from an interview with the Algerian Minister of Industry and Energy.⁵⁰ But it took some time for “petrodollars” to make their way next to other expressions as “oil earnings”, “oil wealth” or “OPEC funds”: beyond form and style, a good reason for this was that until 1974 the dollar did cover a large portion of international oil transactions (around 75%), but still left a good 20% to the British pound.⁵¹ The latter lost ground as a petro-currency only in the two following years, falling to 11.8% of total transactions in 1975, and to a 6% in 1976, after ARAMCO – the Saudi-American Oil Company – at the end of 1974 decided not to accept it any longer as payment for its oil.⁵²

20 In practice, what is usually considered as the starting point of most accounts of the dollar’s post-Bretton Woods centrality – that oil was inertially priced and sold *only* in dollars – should be seen instead as one of the results of the complex international processes at work in the early 1970s.

21 In the days following the announcement, the American refining companies that kept pound sterling in reserve quickly discharged them, plunging the pound to deep lows.⁵³ From a lon-

prices between 1970 and 1973 see Francesco Petrini, “Eight Squeezed Sisters. The Oil Majors and the Coming of the 1973 Oil Crisis”, in Elisabetta Bini, Giuliano Garavini, Federico Romero (eds.), *Oil Shock, op. cit.*, 89-114 (cf. note 23).

⁴⁹ “Congress Gest Plan to Protect Dollar and Oil Supply”, *New York Times*, 7.9.1973.

⁵⁰ “‘Il existe une convergence dans les préoccupations de la France et de l’Algérie pour établir un nouvel ordre économique mondial’ nous déclare M. Abdesselam”, *Le Monde*, 19.11.1974.

⁵¹ Bank of England data on the pound’s share in oil transactions for several years are cited in “Bank of England linking oil nations to pound drop”, *New York Times*, 17.06.1976.

⁵² Data in *Ibid.*. Also: “M. Healey confirme que l’ARAMCO refuse le paiement en sterling”, *Le Monde*, 14.12.1974. The pound would recover slightly in the latter part of the 1970s, as Britain became an oil exporter itself.

⁵³ “Reported Rebuff by Arabs drives pound to a low”, *New York Times*, 11.12.1974; “La livre sterling est au plus bas”, *Le Monde*, 12.12.1974; “Le refus saoudien d’accepter

ger-term perspective, that was the moment at which the equation between “petrodollars” and “oil earnings” came to be a more precise one and when the oil-dollar link consolidated as a quasi-exclusive one.

Based on the available sources, the dynamics that led to this important Saudi decision are not entirely clear. What is known is that Saudi Arabian authorities enjoined ARAMCO not to sell its oil in any other currency than the US dollar on the same days during which SAMA was finalizing the add-on arrangement with the US Treasury.⁵⁴ Of course, such striking coincidence of dates might be accidental: in the same period, the Saudi government was also discussing oil price indexation within OPEC, negotiating with US majors the complete takeover of ARAMCO, and hosting the British Chancellor of the Exchequer on an official visit to the kingdom.⁵⁵ US sources

les paiements en sterling fait tomber la livre à son plus bas niveau depuis 1971”, *Le Monde*, 13.12.1974.

⁵⁴ “Reported Rebuff”, *New York Times*, *op. cit.* (cf. note 53).

⁵⁵ “Les pays exportateurs de pétrole mettent au point l’indexation du prix du ‘brut’”, *Le Monde*, 13.12.1974; “Le refus saoudien d’accepter les paiements en sterling fait tomber la livre à son plus bas niveau depuis 1971”, *Le Monde*, 13.12.1974. As concerns the coincidence with the visit to Saudi Arabia by the British Chancellor of the Exchequer, Denis Healey, it is interesting to note that his request to visit SAMA’s offices in Jidda was turned down on grounds of logistical complications given by the high numbers of pilgrims directed to Mecca: memorandum of conversation, “Notes of a meeting held at the Ministry of Finance”, 10.12.1974, confidential, UK National Archives, T, 277/2880. Ostensibly the same logistical complications did not apply to Jack Bennet, who was then in SAMA’s offices to finalize the “add-on arrangement”. The documents relative to the preparations for the Chancellor’s visit are in UKNA, Records of the Prime Minister, 15/2018 and UKNA, T, 277/2881. These documents show that the pledge not to seek preferential treatment from oil producers was ignored also by the UK. Healey had come to Riyadh to try and attract Saudi oil revenues well equipped with old colonial paternalism as, according to British officials, the goal of the visit was ostensibly to “open Saudi eyes on the frightening prospects” facing the world economy: Mitchell to Principal Private Secretary, “Chancellor’s visit to Saudi Arabia”, 05.12.1974, confidential, UKNA, T, 277/2881. The Chancellor of the Exchequer received a very cold treatment by high Saudi dignitaries, who did not even reply to his appeals for “expanded financial cooperation”. See various memoranda and memoranda of conversations in UKNA, T, 277/2880 and UKNA, T, 277/2881.

indicate two alternative scenarios. On the one hand, in his telegram to Kissinger announcing the “add-on arrangement”, US ambassador Akins wrote laconically that

[r]egarding yesterday’s (dec 11) *surprise* decision to require sales of oil only in dollars, the governor [Al Qurayshi] said only that it had been unfortunate that the decision had become known while Chancellor of Exchequer was on visit to kingdom [...]. No further explanation given of Saudi decision to leave sterling.⁵⁶

- 23 On the other hand, Fred C. Bergsten, then serving as Assistant Secretary of the Treasury for International Affairs in the Carter administration, drew a different picture some years later – in late 1978 –, when he wrote to the Secretary of the Treasury Michael Blumenthal that

in response to US requests the Saudis have held the line on oil prices and assured the US that they will not denominate oil sales in a currency other than the dollar and will not try to diversify dollar holdings into other currencies.⁵⁷

- 24 Neither document allows a definitive interpretation: ambassador Akins might have been expressing his own surprise (and not necessarily that of the US negotiating team), while Bergsten had not been present in Jidda in 1974 and might have been writing with little knowledge of the facts.⁵⁸ But while the timing of the two Saudi decisions – on oil sales and petrodollar investments – could be merely coincidental, it is frankly hard to believe that either decision could be made without an appreciation of the general developments at work in US-Saudi relations.

⁵⁶ US Embassy Jidda to Secretary of State, “SAMA agrees”, *op. cit.* (cf. note 44), emphasis added.

⁵⁷ Assistant Secretary of the Treasury Fred Bergsten to Secretary Michael Blumenthal, “Briefing for dinner hosted by Saudi Ambassador”, 17.12.1978, USNA, RG 56, Bergsten Files, FRC 2, bp-4, Briefing memos, emphasis added.

⁵⁸ On petrodollars and the Carter administration: David Spiro, *The Hidden Hand*, *op. cit.*, 116–126 (cf. note 3).

SAUDI DECISIONS IN THE CONTEXT OF US-SAUDI RELATIONS

In 1974 the accumulation of dollars was not a self-evident blessing: the US currency had been devalued twice in the previous three years, and the future of the international monetary system was a hotly contested issue, particularly after the passing of the two resolutions of the United Nations General Assembly on the Establishment of a New International Economic Order and the unsuccessful conclusion of the works of the IMF’s “Committee of Twenty”, in May and June 1974 respectively.⁵⁹ Of course, in the aftermath of the Arab-Israeli war of 1973, the Arab “oil embargo” and OPEC’s price hike, it is also hard to believe that the relations between Washington and Riyadh were business as usual.⁶⁰ In short, in that connection, Saudi investment and oil-sales decisions should not be taken as foregone conclusions.

In order to show that Saudi Arabia’s choices were at least in part politically motivated, David Spiro presented as a counterfactual the more diversified investments by Kuwait’s Future Generation Fund, created in 1954 and endowed with a certain degree of independence from the Kuwaiti

⁵⁹ In previous years OPEC members had often justified raising oil prices with the need to recover the purchasing power that they lost with decreasing value of the US currency: Daniel Yergin, *The Prize. The Epic Quest for Oil, Money and Power* (New York: Touchstone, 1991), 624. After the start of floating rates, Arab governments had divested from the dollar into gold at least once on a significant scale: “Dollar off again; Gold price rises on free market”, *New York Times*, 7 May 1973. While not divesting from the dollar such, at the end of 1973, in the context of the “oil embargo”, the *New York Times* reported that “Arab states were stepping up their economic offensive against the United States by withdrawing funds from American banks”: “Arabs cut funds at banks of US”, *New York Times*, 7.12.1973. On the interplay between the negotiations on the reform of the international monetary system in the IMF’s Committee of Twenty and the parallel quest of the Third World for a New International Economic Order, see Giuliano Garavini, *After the Empires. European Integration, Decolonization, and the Challenge from the Global South 1957–1986* (Oxford: Oxford University Press, 2012).

⁶⁰ On US-Saudi relations before the 1970s: Robert Vitalis, *America’s Kingdom. Mythmaking on the Saudi Oil Frontier* (London: Verso, 2007).

central bank and Finance ministry.⁶¹ Banafe and McLeod have written that Spiro's work "is useful when he stops seeing American exploitation of its dominant position behind what was simply the most practical way of resolving the problem" of managing SAMA's abruptly increased wealth.⁶² But if we are to trust their account of SAMA's original preferences quoted above – an IMF-led recycling scheme with an executive directorship in the organization, had they not run against US opposition –, the two authors seem to fall in a quite patent contradiction.⁶³

27 Indeed, Saudi choices seemed rather "political" to qualified US observers: in June 1977, Alan Greenspan, who had just stepped down from his role as chairman of the Council of Economic Advisers in the Ford administration, told Carter's Treasury Secretary that he "would not worry" about the possibility that OPEC divest from a weak dollar, since "the Iranians and the Saudis are non-market decision-makers".⁶⁴ In that connection, it is often noted that by the mid-1970s Saudi Arabia became a major importer of US military equipment, for amounts that jumped from 305\$ million in 1972 to 5\$ billion in 1975.⁶⁵ It also appears likely that the launching of the Joint Military Commission by Kissinger and Fahd in 1974 was the symbol of an implicit US extension of "protection" to the kingdom.⁶⁶

28 Yet, if US-Saudi relations in the mid-1970s eventually ended up in a *quid pro quo* agreeable both to Washington and to Riyadh, the road to reach it was not a linear one. As historian Charles Tilly

would have it, US "protection" came with "two contrasting tones".⁶⁷ In the same months when Washington and Riyadh enhanced their military cooperation, the US government also addressed two discernible kinds of threats against Saudi Arabia and the other oil-exporting countries on the western shore of the Gulf. The first came through the public comments of high-ranking officials which more or less openly threatened the use of force against the oil exporters. In particular, during a television interview in the months of the "embargo", Defense Secretary James Schlesinger declared that

the independent powers of sovereign states should not be used in such a way as would cripple the larger mass of the industrialized world. That is running too high a risk, and it is a source of danger, I think, not only from our standpoint but from the standpoint of the oil-producing nations.⁶⁸

In September 1974, with the "embargo" over but oil prices still high, President Ford and Secretary of State Henry Kissinger delivered two speeches very critical of oil producers, and an unnamed "senior Administration official" was reported as saying that "some form of military action could not be ruled out": Schlesinger's following reassurance that the US "was not contemplating military action against the oil-producing countries in the Middle East" only made the military

⁶¹ David Spiro, *The Hidden Hand*, *op. cit.*, 60 and 113 (cf. note 3).

⁶² Ahmed Banafe and Rory McLeod, *The Saudi Arabian*, *op. cit.*, 75 (cf. note 20).

⁶³ Cf. note 31.

⁶⁴ Memorandum of conversation (Blumenthal, Greenspan), "Review of the economy", 21.07.1977, Jimmy Carter Presidential Library, CEA, Schultze, Box 20.

⁶⁵ Data cited in Rachel Bronson, *Thicker than Oil. America's Uneasy Partnership with Saudi Arabia* (New York: Oxford University Press, 2006), 127. In the late 1970s and early 1980s, Saudi Arabia began massive purchases of US advanced weapon systems: Nicholas Laham, *Selling AWACS to Saudi Arabia* (Westport: Praeger, 2002).

⁶⁶ See Andrew Scott Cooper, *The Oil Kings*, *op. cit.*, 158 (cf. note 25).

⁶⁷ According to Tilly, "With one tone, 'protection' calls up images of the shelter against danger provided by a powerful friend, a large insurance policy, or a sturdy roof. With the other, it evokes the racket in which a local strong man forces merchants to pay tribute in order to avoid damage – damage the strong man himself threatens to deliver": Charles Tilly, "War Making and State Making as Organized Crime", in Peter Evans, Dietrich Rueschemeyer and Theda Skocpol (eds.), *Bringing the State Back In* (Cambridge UK: Cambridge University Press, 1985), 169–187: 170. There is reason to doubt that King Faisal eventually felt as if he was being exacted a tribute. As concerns Saudi society at large, Rosie Bsbeer has documented instead the existence of an active opposition to Faisal's rule and Saudi Arabia's foreign policy alignment to the US at least throughout the 1960s: Rosie Bsbeer, "A Counter-revolutionary state: Popular movements and the making of Saudi Arabia", *Past & Present*, Vol. 238, n° 1, 2018, 233–277.

⁶⁸ Schlesinger TV interview, cited in "A word to Arabs – 'Risk' – is kicking up a storm", *New York Times*, 9.1.1974.

threat more present to the readers (as students of George Lakoff's invitation "not to think about an elephant" know very well).⁶⁹

30 A second form of threat remained in place well into 1975. As documented by Andrew Scott Cooper, Iran's military buildup – again with US weapons – assumed objectively ominous features from the Saudi perspective, also in consideration of the fact that Kissinger did not dislike generating some uncertainty for the Saudis on the matter.⁷⁰ At any rate, US records more than once reported about the bitter complaints by Saudi diplomats, convinced that the US was using Iran to threaten Saudi territorial integrity and security.⁷¹

31 All of this should indeed be taken with caution. In the first place, US troops' morale and will to fight in the wake of Vietnam was not at its highest, nor did Congress look particularly enthusiastic about launching another major war in those days.⁷² Secondly, the possibility of an intervention, or even a US green light to an Iranian operation, had to be weighed against the possibility of a reaction by Moscow, only months after the quasi-showdown of October 1973.⁷³ Yet, even if it were only a bluff, it appears that Saudi

authorities took it seriously: in January 1974, the *New York Times* cited several sources reporting about Riyadh's authorities having "wired their oilfields with explosives that would be detonated in case of an attack by American forces".⁷⁴ Even Banafe and McLeod have written that, in the wake of the price hike and "oil embargo", "King Faysal ordered Prince (later King) Abdullah to reinforce the National Guard's protection of the oilfields with orders to destroy the facilities if the Americans attacked".⁷⁵ Most interestingly, according to the two authors,

[t]he alternative to occupying the Saudi oilfields was for both sides to manage the consequences of the high oil price. Saudi Arabia took the initiative in responding to the crisis and SAMA played a pivotal role in shaping that response. [...] The foreign reserves would be recycled back to the West, and particularly to New York, for investment in US banks and Treasury bonds to help finance the balance of payments deficits that the oil price hike had produced.⁷⁶

All in all, this appears to be another strong proviso to their claim that US-Saudi financial arrangements were only "the most practical solution" to SAMA's accumulation of petrodollars. 32

CONCLUSIONS

The analysis carried out above leads to a set of conclusions. First, "market logic" was more a discursive justification for, than the actual driver of, the process of creation and allocation of petrodollars, at least if "market logic" is considered as inherently opposed to "power logic". Secondly, there does not appear to be sufficient evidence to support the claim that the entire process followed from a machination of the Nixon-Kissinger duo. Third, the US government was extremely 33

⁶⁹ "No war over oil, Schlesinger says", *New York Times*, 26.9.1974. There is some evidence that the US government was actually making contingency plans for military operations in the Arabian Peninsula. On the one hand, historian Andrew Scott Cooper has highlighted that in the summer of 1973 the US army held massive military exercises in the Mojave desert in southern California: Andrew Scott Cooper, *The Oil Kings*, *op. cit.*, 107-108 and 130 (cf. note 25). On the other, recently declassified British diplomatic documents indicate that Secretary Schlesinger told British interlocutors of US military contingency planning for intervention in the Gulf during a meeting in January 1974: Thomas Robb, "The Power of Oil: Edward Heath, the 'Year of Europe' and the Anglo-American 'Special Relationship'", *Contemporary British History*, Vol. 26, n° 1, 2012, 73-96: 80.

⁷⁰ Andrew Scott Cooper, *The Oil Kings*, *op. cit.*, 150-255 (cf. note 25).

⁷¹ *Id.*, 274-275. On US-Iranian relations in the 1970s, also see Roham Alvandi, *Nixon, Kissinger, and the Shah* (Oxford: Oxford University Press, 2014), chapter 3.

⁷² See Andrew Scott Cooper, *The Oil Kings*, *op. cit.*, 107-108 (cf. note 25).

⁷³ On this: Geraint Hughes, "Britain, The Transatlantic Alliance, and the Arab-Israeli War of 1973", *Journal of Cold War Studies*, Vol. 10, n° 2, 2008, 3-40.

⁷⁴ "Kuwait threatens oilfield destruction should the US step in", *New York Times*, 10.1.1974 (while the title mentions only Kuwait, the article's text also referred to Saudi Arabia).

⁷⁵ Ahmed Banafe and Rory McLeod, *The Saudi Arabian*, *op. cit.*, 50 (cf. note 20).

⁷⁶ *Ibid.*. As in the case the account of SAMA's investment preferences, no specific source is cited as basis for such a conclusion.

active throughout 1974 on the petrodollar front. Of course, in the following months and years, all other actors – some easily, some grudgingly – adapted to the realities that US unilateral moves and US-Saudi bilateral relations had helped to shape: in November 1975, at a summit in the castle of Rambouillet, the heads of state and government of the six largest Western economies ratified the changes that had occurred in the international monetary and financial system since 1971.⁷⁷ And in April 1978 the second amendment to the IMF’s charter marked the formal beginning of a pure dollar standard.⁷⁸ But the eventual acceptance of the changes by other actors does not automatically imply the “naturalness” of the process itself.

decisions would need to be investigated further through Saudi sources, which are currently unavailable. What seems difficult to believe is that US actions did not weight at all, also in consideration of the fact that those who hold such a view often fall in contradiction in their own terms. While conclusive evidence is still lacking, it appears likely that Saudi choices were shaped by US diplomatic *démarches* and economic inducements, as well as by US offers of an ambivalent military “protection”. Thus, if such indications are correct, the renewal and transformation of US power in the 1970s – to the extent that it depended on petrodollars – should not be considered the result of mere “fortune”, but of the active deployment of US power itself.

- 34 In particular, as far as the Saudi role as a large investor of petrodollars in the US was concerned, the precise weight of US actions on Riyadh’s

⁷⁷ Emmanuel Murlon-Druol and Federico Romero (eds.), *International Summitry and Global Governance: the Rise of the G7 and the European Council, 1974-1991* (London: Routledge, 2014).

⁷⁸ Margaret Garritsen De Vries, *The International Monetary Fund, 1972-1978: Cooperation on Trial, Vol. 1* (Washington DC: IMF, 1985). Incidentally, in the same 1978 Saudi Arabia was granted an executive directorship in the IMF.

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Transnational Capital Markets and Development Policies: The OPEC Countries, the Eurocurrency Markets, and the LDCs from the 1960s to the 1970s

Abstract

In the wake of a recent literature in international banking and financial history focused on the role of western commercial banks in placing the OPEC nations' assets with international borrowers, this article examines the role of leading Wall Street American banks in reflowing the investments of the OPEC oil producing nations to finance the external disequilibria of the non-oil-producing LDCs as a tool of U.S. foreign economic policy during the 1970s. The article suggests that such a policy aimed at the same time at propping up American development assistance programs to the LDCs and at fixing the decline of the dollar in the foreign exchange markets.

Against this backdrop, the article explores the shift of international financial assistance to the non-OPEC LDCs, from dollar-denominated assets mostly allocated by the IBRD before the end of the 1960s, to a set of new international financial arrangements based both on deposits from the OPEC countries with the Eurocurrency markets, and on the intermediary role of the leading American banks specializing in trading these non-resident markets to channel the revenues of the OPEC oil producers to the non-oil LDCs.

Plan of the article

- Introduction
- Oil, dollar and the financing of U.S. development policies from the 1960s to the 1970s: an overview
- Teetering U.S. dollar, oil price hike and short-term Euromarket development: setting the stage for the early rise of U.S. private banks in international lending during the 1960s
- Reducing dollar-denominated assets before the end of cheap oil: the IBRD and the early ascendancy of international private capital markets on development finance
- U.S. private banks and the Eurocurrency markets: international loans to the LDCs amid the two oil price hikes of the 1970s
- Conclusion

INTRODUCTION

1 The leading literature on the first oil crisis of the 1970s, along with that on the history of development assistance implemented by the advanced industrial economies towards the least developed countries (LDCs), as well as the few works on the U.S. foreign financial and monetary policies toward the LDCs since the 1970s thereafter,¹ all point to a set of widely-shared views on the energy crises of that decade and their link to the history of development assistance. First of all, they all point to the 1973 oil shock as the seminal event that lay at the origin of the decade's worldwide inflation. They make the argument that the first oil crisis triggered centrifugal effects on both the strength of the dollar in international markets and on the international trade and payments system that revolved around it.² This research trajectory has pinpointed the financial implications of the first and second oil crises on the international capital markets during that decade. The oil revenues accruing to the oil-producing nations united in the Organization of the Petroleum Exporting Countries (OPEC) as a result of the oil price hikes bolstered the role of OPEC countries as leading international lenders. Based on this premise, this literature has pinpointed varying hypotheses and negotiations conducted at the time between the industrial democracies, first and foremost the United States, and the OPEC countries on the recycling of their financial assets in the international economy. In particular, David Spiro focused attention on the U.S.-Saudi

negotiations to trigger the investment of Saudi oil revenues in U.S. securities.³ Secondly, the literature on development assistance and U.S. foreign economic relations conveys a widely-shared view about the pivotal role of international economic institutions. The International Bank for Reconstruction and Development (IBRD) and the International Monetary Fund (IMF), as well as the regional development banks, shaped and nurtured the architecture of international financial assistance to the LDCs, not only in the first two post-war decades but also amid the gloomy 1970s, particularly at the turn of the decade.⁴ These two research trajectories tackled the history of how the oil-producing countries

³ Spiro, *The Hidden Hand* (cf. note 1).

⁴ On the role of the IMF see Manuel Pastor Jr., "Latin America, the Debt Crisis, and the International Monetary Fund", *Latin American Perspectives*, vol. 16, n° 1, 1989, 79-110; Raúl García Heras, *El Fondo Monetario y el Banco Mundial en la Argentina. Populismo, Liberalismo y Finanzas Internacionales* (Buenos Aires: Ediciones Lumière, 2008); Raúl García Heras, "Multilateral Loans, Banking Finance, and the Martínez de Hoz Plan in Argentina, 1976-1981", *Revista de Historia Económica-Journal of Iberian and Latin American Economic History*, vol. 36, n° 2, 2018, 215-240. Claudia Kedar, "Salvador Allende and the International Monetary Fund 1970-1973: The *Depoliticisation* and *Technocratisation* of Cold War Relations", *Journal of Latin American Studies*, vol. 47, n° 4, 2015, 717-747; Claudia Kedar, *The International Monetary Fund and Latin America: The Argentine Puzzle in Context* (Philadelphia, PA: Temple University Press, 2013); Paul Kershaw, "Averting a Global Financial Crisis: The U.S., the IMF, and the Mexican Debt Crisis of 1976", *The International History Review*, vol. 40, n° 2, 2018, 292-314; on the case of the IBRD see Sarah Babb, *Behind the Development Banks. Washington Politics, World Poverty, and the Wealth of Nations* (Chicago, IL-London: The University of Chicago Press, 2009), 102-108, 128 ff.; Patrick Allan Sharma, *Robert McNamara's Other Way: The World Bank and International Development* (Philadelphia, PA: University of Pennsylvania Press, 2017), 75-95; Claudia Kedar, "The World Bank Lending and non-Lending to Latin America: The Case of Argentina 1971-1976", *Revista de Historia Económica-Journal of Iberian and Latin American Economic History* vol. 37, n° 1, 2019, 111-138; on IDA and multilateral banks, much less investigated than the IBRD and IMF, see Christopher G. Locke, Fredoun Z. Ahmadi-Esfahani, "The origins of the International Debt Crisis", *Comparative Studies in Society and History*, vol. 40, n° 2, 1998, 223-246; see also Guillermo Perry, Eduardo Garcia, "The Influence of Multilateral Development Institutions on Latin American Development Strategies", in Gilles Carbonnier, Humberto Campdónico, and Sergio Tezanos Vázquez (eds.), *Alternative Pathways to Sustainable Development: Lessons from Latin America* (Boston-Leiden: Brill, 2017), 199-234.

¹ See for instance David E. Spiro, *The Hidden Hand of American Hegemony. Petrodollar Recycling and International Markets* (Ithaca, NY-London: Cornell University Press, 1999); Susan Strange, *Casino Capitalism* (Manchester: Manchester University Press, 2015 [1986]); Alan R. Plotnick, "Third World Oil Problems and American Banks", *American Business Review*, 1, 1984, 1-7.

² The literature is too vast to summarize here: see for instance Elisabetta Bini, Giuliano Garavini and Federico Romero (eds.), *Oil Shock. The 1973 Crisis and Its Economic Legacy* (London: IB Tauris & Co, 2016); Charles S. Maier, "Malaise. The Crisis of Capitalism in the 1970s", in Niall Ferguson, Charles S. Maier, Erez Manela and Daniel Sargent (eds.), *The Shock of the Global. The 1970s in Perspective* (Cambridge, MA: Harvard University Press, 2010), 31 ff.; Daniel Yergin, *The Prize. The Epic Quest for Oil, Money and Power* (New York: Simon and Schuster, 1991).

reinvested abroad their financial assets. They analyze either their investments in Western nations' public debt's issues and securities, or their loans to the non-oil developing countries through the intermediary role of Bretton Woods international economic institutions and that of development banks. More recently, along the way of longstanding research interest on the role of western commercial banks in placing the OPEC nations assets with international borrowers,⁵ a strand of studies in banking and financial history has reversed this research pathway. This line of research has started exploring contributions by the European commercial banks to the international investments of the oil-producing nations, from the end of Bretton Woods international monetary regime to the outbreak of the second oil crisis at the turn of the 1970s.⁶ Continuing along this line of research, this article offers a first and partial reconstruction of the involvement of Wall Street commercial and investment banks in reflowing the OPEC financial assets to the non-oil LDCs from the first oil crisis up to the eve of the second oil shock. This exploration of the involvement of American private banking institutions in that recycling process is premised over two developments that featured the decade of the 1960s in international finance. On the one side the involvement of U.S. banks in the growth of short-term highly unregulated non-resident money markets on the European financial centres. The decade-long outflow of capital from American banks led U.S. bankers to soar their investment in non-resident currencies on European markets, the Eurodollar and other Eurocurrency markets, which offered

⁵ William R. Cline, *International Debt Reexamined* (Washington, DC: Institute for International Economics, 1995); Robert Devlin, *Debt and Crisis in Latin America. The Supply Side of the Story* (Princeton, NJ: Princeton University Press, 2016 [1990]).

⁶ Carlo Edoardo Altamura, *European Banks and the Rise of International Finance. The Post Bretton Woods Era*. London-New York (Abingdon-New York: Routledge, 2017). For a rather divergent approach focused on the role of private banks from developing countries in reflowing the OPEC nations assets to the LDCs through access to short-term unregulated money markets see Sebastian Alvarez, *Mexican Banks and Foreign Finance. From Internationalization to Financial Crisis, 1973-1982* (London: Palgrave Macmillan 2019), 1-31.

easier borrowing conditions and more lucrative lending terms. On the other hand, the late 1960s pressure on the value of the dollar in exchange markets stemmed in part from a large-scale inflow of dollars in world money supply. This was the result of dollar-denominated assistance programs allocated by the IBRD and the IMF to the non-oil LDCs. To U.S. policymakers it was a pressing need to provide the LDCs with continued economic assistance without straining the dollar in the foreign exchange markets. A wide variety of late-1960s U.S. initiatives in international monetary relations that included the setting up of Special Drawing Rights (SDRs), the currency of the IMF, and the involvement of largest American commercial banks in placing with international lenders the bonds and certificates issued by the World Bank to finance its development assistance programs, signalled this increased U.S. attention to the weakening of the American currency in foreign markets. They also point to Washington's search for measures to reduce the dollar's share in world money supply. This contribution pinpoints the shift of financial assistance to the non-OPEC LDCs, particularly the Latin American economies, from dollar-denominated assets allocated by the IBRD, the IMF and some federal agencies before the end of the 1960s, to a set of new international financial arrangements. These new arrangements were fuelled by deposits from the OPEC countries with the Eurocurrency markets and by the borrowing of the leading American commercial banks from these non-resident markets. These new financial dynamics are linked to both the increased U.S. attention to face up to the decline of the dollar in the foreign exchange markets and to continued American search to reduce the dollar's share in world supply.

Therefore, the article focuses on the staggeringly crucial role of U.S. banks in promoting such a shift from LDCs borrowing from international economic institutions to international lending by private banks during the decade of the 1970s. In so doing, owing to the stunning increase in the OPEC countries' deposits with the Eurocurrency markets after both the first and the second oil crisis, this contribution makes the argument that

the OPEC oil producers financed the sovereign debt, the current account deficit, and international trade of the non-OPEC LDCs. They did so through a decisive intermediary role by the leading U.S. commercial and investment banks that specialized in trading Eurocurrency assets. Therefore, this article establishes a linkage between the investment of OPEC's oil revenues in high interest-sensitive and largely non-regulated international markets on the one hand and the increased exposure of U.S. commercial and investment banks to financing the foreign debt, balance of payments deficit, international trade and foreign currency reserves of the LDCs over the decade on the other hand. According to this reconstruction, during the 1970s the Eurocurrency markets, first and foremost their Eurodollar component, which accounted for the largest share in total Euro-loans, became the point of intersection between the OPEC countries' international investments and the international intermediary activities of the largest U.S. banks committed to financing the LDCs. Such a new role of non-resident Euromarkets and U.S. banks brought the American financial community to a center stage in shaping the foreign financial relations of the United States way before the meteoric rise of non-OPEC LDCs' liabilities to the 8 largest U.S. commercial banks at the beginning of the 1980s. Therefore this contribution suggests that America's largest commercial and investment banks were deeply involved in injecting money into the LDCs and overexposed to them way before the international debt crisis erupted. In other words, from the late 1960s through to the inauguration of monetary stringency by the newly appointed President of the U.S. Federal Reserve System Paul Volcker at the beginning of the 1980s, U.S. commercial and investment banks offered a critical contribution to the setting up and implementation of international financial arrangements alternative to U.S. currency-centered development assistance programs to the LDCs. This article explores the role of American commercial banks from the late 1960s through to the following decade to pinpoint the early overexposure of U.S. banks to the LDCs. However, it does not tackle the period following the 1979 historical decision of the U.S.

Federal Reserve Bank to uptick interest rates. At the time the U.S. banks overexposure to the LDCs borrowers soared as a result of peaking interest rates.

OIL, DOLLAR AND THE FINANCING OF U.S. DEVELOPMENT POLICIES FROM THE 1960S TO THE 1970S: AN OVERVIEW

Before reconstructing the details of the story it is worth providing an overview of the macro-economic developments of the time. From the second half of the 1960s through to the two oil crises of the 1970s it was registered a combined crumbling of stable oil and raw material prices in the world trade market, and an unfettered drop of the dollar in exchange markets with ever-growing U.S. balance of payments deficit and soaring U.S. foreign trade deficit. Moreover, this period featured continued outflow of dollar-denominated capital from the U.S. money markets to the very lucrative Eurocurrency markets.⁷ Though in 1969 the U.S. government instituted a 10 percent reserve requirement on lending by the overseas branches of U.S. banks to U.S. resident banks and companies,⁸ on the eve of the new decade capital outflows from the United States had hit hard the U.S. capital account. On the other hand, the weakening of the dollar in the foreign exchange markets and the appreciation of other leading currencies against the green currency increased the cost of U.S. imports and plunged the U.S. trade balance

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⁷ For further details and data on the interlocking relations among these different developments see Simone Selva, *Before the Neoliberal Turn. The Rise of Energy Finance and the Limits to US Foreign Economic Policy* (London: Palgrave Macmillan, 2017), 91-194.

⁸ Division of International Finance of the Federal Reserve Bank of New York to the Board of Governors, Office Correspondence "Eurocurrency Reserve Requirements on Loans to U.S. residents by foreign branches of US banks", 30.10.1980, 5, in Federal Reserve Bank of New York Historical Archives, New York City, NY (henceforth FRBNYA), b. 553726, fold. Foreign Lending 1982; see also 95th Congress, 1st Session, Joint Committee Print, *Some Questions and Brief Answers about the Eurodollar Market. A Staff Study Prepared for the Use of the Joint Economic Committee Congress of the United States* (Washington, DC: US Government Printing Office, 1977), 13.

into deficit.⁹ Against this framework the system of world trade and payments revolving around the U.S. dollar as a means of payment began floating: a weakened dollar reduced dollar-earnings for the oil and raw material exporting developing nations. These countries were pushed on the periphery of world trade and forced to accumulate rising debts to reward their foreign suppliers of goods and services.

- 4 These different developments and America's pressing need to search for diversifying international financial assistance to the LDCs out of dollar-denominated assets represent the broad framework in which took place the involvement of American banks, used to trading in the Eurocurrency markets and in channeling OPEC resources to the developing world. Prior to focusing on such role of U.S. banks, this article pinpoints the interconnection between the depreciation of the dollar in the foreign exchange markets and the long-lasting worsening of the U.S. balance of payments deficit, the growth of oil and other commodities prices, on the one side and American reaction to these developments. Accordingly, this contribution focuses on the U.S. search for international financial arrangements alternative to dollar-denominated assistance programs designed to help the non-oil LDCs resurrect their current account deficit. From the very late 1960s throughout the following decade, the U.S. government and the largest U.S. banks worked on establishing a set of development assistance policies toward the non-oil-producing LDCs and the highest capital absorbing Middle Eastern OPEC member states. These arrangements were designed to prevent the LDCs and Middle Eastern oil producers from falling apart from the international trade and payments system. Such search for establishing brand-new financial mechanisms was thought to be an alternative to official dollar-denominated development assistance programs carried out over the postwar decades by Bretton Woods development institutions such as the IBRD.¹⁰

⁹ In 1971 the U.S. balance of trade registered an historical and unprecedented deficit.

¹⁰ Patrick Allan Sharma, *Robert McNamara's Other Way. The World Bank and International Development* (Philadelphia,

Along this line of reasoning, section 3 briefly charts the combined development of declining U.S. dollar induced by short-term capital outflows from the United States. Besides, it pinpoints the growth of non-resident Eurocurrency markets and oil price rise in world trade markets in the second half of the 1960s. All these developments contributed to undermining dollar-denominated official assistance programs to developing countries. Through the case study of the IBRD, section 4 sums up the main features of development assistance during the late 1960s: at the time the weakening of the dollar caused by the two-fold crumbling of U.S. currency in exchange markets and rising instability in international oil prices prompted the United States to devise new development assistance programs to the non-oil LDCs. As these new arrangements were thought to be based on a currency diversification out of the dollar from the 1960s to the 1970s, the U.S. private banks were charged with pursuing this objective. Accordingly, at the end of the 1960s, they began placing bonds issued by the IBRD with several different national credit markets. During the 1970s, they bet on the Eurocurrency markets as a new form of currency diversification out of the dollar and as a way to sustain the value of the U.S. currency in the foreign exchange markets.¹¹ Section 5 pinpoints this commitment of the largest American commercial and investment banks: it makes the argument that since the first oil crisis, the bulk of the economic assistance to the non-oil LDCs was made of deposits by the OPEC oil producers with the Eurocurrency markets. The U.S. banks, used to trading in the Eurocurrency markets,

PA: The University of Pennsylvania Press, 2017). Devesh Kapur, John P. Lewis, Richard Webb, *The World Bank: Its First Half Century. Vol. 1: History* (Washington, DC: Brookings Institution Press, 1997); Katherine Marshall, *The World Bank. From Reconstruction to Development to Equity* (London-New York: Routledge, 2008).

¹¹ Though in Washington a wide-ranging debate on whether or not the Eurodollars should be counted to measure U.S. money supply, the vast majority of policy-makers shared the idea that investing in the Eurodollar markets was a means of currency diversification out of the dollar; as a corollary to this interpretation, as much as any other Eurocurrency market the Eurodollar market was an instrument to contrast the decline of the dollar in the foreign exchange markets.

played a crucial role in channeling such deposits to the non-oil LDCs. The epicentre of these lending activities were the Latin American developing countries, first and foremost Brazil and Mexico. This section provides fresh-new archival data about such interlocking between the oil producers' international financial investments, U.S. banking, and the Latin American borrowing nations. In the Conclusion, we round off by stressing continuities and discontinuities from the 1960s to the 1970s. In either decade, the pivot that underpinned the involvement of U.S. commercial banks in financing multiple and different development assistance programs such as the IBRD projects and international lending by transnational financial markets, was devising financial arrangements based on currency units or baskets of currencies alternative to the U.S. currency. This objective was pursued to align the financing of development policies with the support for the U.S. currency in international markets. On the other hand, this article stresses that the Eurodollar and other Eurocurrency markets had a strikingly different impact on the U.S. currency in the context of development assistance. During the late 1960s they contributed to weaken the U.S. currency. In contrast to it, by the mid-1970s, within the framework of the recycling of the OPEC international investments, the Euromarkets fit into the plot of financing the external position of the non-OPEC LDCs, without pressurizing the U.S. dollar and its value in exchange markets.

TEETERING U.S. DOLLAR, OIL PRICE HIKE AND SHORT-TERM EUROMARKET DEVELOPMENT: SETTING THE STAGE FOR THE EARLY RISE OF U.S. PRIVATE BANKS IN INTERNATIONAL LENDING DURING THE 1960S

- 5 All along the 1960s the United States showed intractable incapability to resurrect the U.S. current account component of the U.S. balance of payments deficit. Under way since the very late 1950s, during the following decade the U.S. balance of payments deficit plunged the dollar into a seemingly intractable decline in exchange markets. The staggering expansion in short-term highly-liquid Eurodollar and

Eurocurrency markets highly contributed to the downward spiralling value of the U.S. currency. Under the Kennedy administration and throughout the 1960s, the United States set up a variety of measures to resurrect the U.S. balance of payments deficit. These measures mainly revolved around targeting the current account deficit and included discouraging U.S. overseas military expenditures to reduce the liabilities on the U.S. current account deficit. Likewise, the U.S. governments made arrangements to increase the assets of the current account position through export-promoting policies. On the other hand, federal authorities tackled the U.S. capital account position. They struggled to fix it up through preventing capital outflows for which they used measures such as the Voluntary Foreign Credit Restraint Program (VFCR), an initiative seeking to limit the increase of foreign loans and investments of U.S. private financial institutions. Established in 1965 as a balance of payments deficit-correcting measure, the VFCR was strengthened in 1968, and still under operation in the early 1970s.¹² This string of measures on both the current and the capital account failed to reduce the outflow of U.S. dollar-denominated assets and to stabilize the U.S. balance of payments. This failure can be blamed on the parallel growth of the Eurocurrency markets. The Euromarkets were assets denominated in currencies other than that of the country where they were traded. As non-resident currencies, they were neither bound to reserve requirements or interest ceilings, nor did they have to pay local or federal taxes in the United States. They took advantage from such condition of non-resident assets to increase their competitive edge on financial assets and transactions subject to national regulations and costs.

¹² The literature on this and other measures signed into law in the 1960s in support for the U.S. capital account position such as the Interest Equalization Tax enacted in 1964 is abundant. On the VFCR Program see Rachel Strauber, "Voluntary Foreign Credit Restraint and the Nonbank Financial Institutions", *Financial Analysts Journal*, vol. 26, n° 3, 1970, 10-12, 87-89; Board of Governors of the Federal Reserve System, *Annual Report 1972* (Washington, DC: Federal Reserve System, 1973), 191-194; See also Carnegie Mellon University Archives, Allan H. Meltzer Papers, Federal Reserve Research, Board of Governors Minutes, b. 43, fold. 23.

During the late 1960s and for most the 1970s they could profit from an exceptionally performing competitive advantage over the interbank markets and other resident-currency national markets. Besides, in the case of U.S. investors and the overseas branches of U.S. banks trading in the Euromarkets, they were not subject to the Federal Deposit Insurance Corporation (FDIC) regulations.¹³ As such, the Eurocurrency markets could at the same time offer lucrative interest rates on depositors and concede very competitive loan rates to borrowers. Owing to growing international investments of U.S. corporations, increased U.S. military spending overseas, and large holdings of dollar assets by non U.S. residents in Europe and elsewhere, the dollar component of the Euromarkets, the so called Eurodollars, accounted for the largest share in total Eurocurrency assets. Since the early development and expansion of the Eurocurrency markets in the first half of the 1960s, Eurodollar deposits, excluding interbank Eurodollar placements, reached a total of some \$ 5 billion out of an aggregate Eurocurrency market of roughly \$ 7 billion.¹⁴ In the second half of the decade, U.S. measures to discourage foreign investments of U.S. resident banks and companies, and loans of U.S. banks to foreign borrowers, stimulated short-term capital flows from the United States to the Eurodollar markets. Monetary tightening in the United States in 1967, wide-spread rise in U.S. domestic interest rates, and the parallel credit crunch the following year prompted U.S. banks to increase their borrowings from the Eurodollar markets to finance the U.S. economy, thus leading to temporarily reverting such outflow of dollar assets from the United States.¹⁵

6 The U.S. Federal Reserve was aware of these dynamics: the American central banks'

policymakers noticed that monetary tightening could cause a credit crunch and prompt U.S. domestic banks to borrow even larger amount of money from the Eurodollar markets. According to the Fed this increased borrowing by U.S. banks from the Eurocurrency markets could push up the Eurodollar rates. In turn this upswing in demand for unregulated European money markets could make the Euromarkets an investment outlet attractive to American and other international investors.¹⁶ During the decade of the 1960s and into the first half of the following decade, this combined capital outflow from the United States of short-term dollar-denominated assets and rising borrowing from the Eurodollar market by U.S. resident banks coincided with a period of shrinking U.S. balance of payments deficit. Besides, during that decade, capital flight from the United States hit further the value of the U.S. dollar in exchange markets.¹⁷

Such sequential capital outflow, increased borrowing by U.S. banks in foreign capital markets, plunging dollar in exchange markets, and sinking U.S. balance of payments deficit paired with a steady rise in oil prices way before the quadrupling of oil prices since 1973. A first substantial increase in the posted price of oil occurred as early as 1967;¹⁸ then, free-market crude petroleum prices hiked up in 1971.¹⁹ Certainly, there was a linkage between these trends: the unfettered weakening of confidence in and depreciation of the U.S. dollar, the currency in which most oil transactions and payments were traded, critically contributed to the early increase in petroleum prices. On the other hand, a variety of events crucial to the history of international monetary and financial relations in the

¹⁶ FRBNYA, b. 553726, fold. Foreign Lending 1982.

¹⁷ See unpublished statistical data in Federal Reserve Bank of New York, "Statistical Background Material", 09.08.1976, in FRBNYA, Central Files, b. 616276, fold. Financing Facility OPEC 1974.

¹⁸ Board of Governors of the Federal Reserve System, *Annual Report 1974* (Washington, DC: Federal Reserve System, 1975), table A 66.

¹⁹ UNCTADstat, "Free market commodity price indices, annual, 1960-2010" (price indices 2000=100). Url: <http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=30727> (accessed May 20/5/2015).

¹³ FRBNYA, Paul Meek to Paul Volcker, Office Correspondence "The Euro-banking System: Its Relation to Monetary Policy", 18.08.1978, in FRBNYA, b. 553726, fold. Foreign Lending 1982.

¹⁴ Norris O. Johnson, *Eurodollars in the New International Money Market* (New York: First National City Bank, 1964), 8.

¹⁵ See Morgan Guaranty Trust Co., *Business Week*, 21.02.1970: monographic issue on "The Money Machine Magic of Eurodollars".

late 1960s as the Suez Crisis, the 1968 gold crisis and the 1967 devaluation of the British Pound added to the inflationary impact of such combined oil price hikes and capital flight from the U.S. money market already underway.²⁰ These events added to the increase in the dollar component in world money supply and overlapped with ongoing shifts in money markets from fixed or adjustable assets to short-term, largely unregulated and inflation-sensitive Eurocurrency instruments. These transformations went all in the same direction of hurting the dollar's rate in exchange markets, ravaging the U.S. balance of payments and setting conditions for inflationary strains across the international economy. Neither policies implemented throughout the 1960s by the Kennedy and Johnson administrations to resurrect the capital and current account positions of the U.S. balance of payments proved to be effective. Neither measures to curb capital outflow nor initiatives to cut overseas military expenditures while increasing foreign military sales halted the sinking of the U.S. balance of payments. The resulting weakening of the dollar in exchange markets and soaring U.S. balance of payments deficit brought the issue of reducing the dollar component in world money supply to center stage both in the late decade debate on the reform of the international monetary system²¹ and in the discussions on the creation and use of the IMF's currency, the Special Drawing Rights (SDRs). The SDRs, established in 1968, were to cope with the monetary and financial consequences on the dollar and international payments of wobbling fixed exchange rates and soaring posted prices of commodities in international markets. Their creation stemmed from widespread U.S. concerns in international monetary affairs to devise a new international reserve unit to supplement dollar-denominated

international liquidity. The creation of a new reserve unit was supposed to reduce the share of the U.S. dollar in world money supply and push up the value of the U.S. currency in exchange markets.²² Increased American concern for the decline of confidence in and value of the dollar in international exchange markets not only underpinned the debate on the reorganization of the international monetary system. Indeed, it also prompted American elites to seek means of payment alternative to the U.S. currency to forestall such rise of the dollar share in world money supply and to prevent its role of reserve currency from fading away. It is worth placing against this new backdrop of international monetary relations both the rapid ascendancy of U.S. commercial and investment banks in shaping the late 1960s official development assistance programs implemented under the aegis of the World Bank and, more importantly, the critical contribution of the largest U.S. private banks since 1974 to the recycling of the OPEC countries dollar-denominated oil revenues. In the first case, the American banking system and some European private commercial banks financed the IBRD development assistance programs. They pursued this objective by placing bonds and securities issued by the IBRD with international investors used to trading financial assets denominated in currencies other than the U.S. dollar. On the other hand, during the 1970s the U.S. and European private banks financed the international trade, foreign debt and current account deficit of the Latin American debtor nations by drawing on the OPEC countries' oil revenues invested in non-resident Eurocurrency markets. In either case, the functioning of these financing mechanisms permitted to finance development assistance without pulling liquidity from dollar-denominated assets, thus helping to reduce the share of dollars in

20 For further details on these events and how they played out in the development of inflationary strains in the international economy see Selva, *Before the Neoliberal Turn*, 91-194 (cf. note 7).

21 On the lengthy discussions on the reform of the international monetary system the literature is abundant. A key reference work is Harold James, *International Monetary Cooperation since Bretton Woods* (Washington, DC-New York-Oxford: IMF-Oxford University Press, 1996), 228-259.

22 Howard M. Wachtel, *The Money Mandarins. The Making of a Supranational Economic Order* (London: Pluto Press, 1990), 78; James, *International Monetary Cooperation since Bretton Woods*, 172 (cf. note 21). Graham Bird, *The IMF and the Future. Issues and Options Facing the Fund* (London-New York: Routledge, 2003), 267 ff.; Christopher Wilkie, *Special Drawing Rights (SDRs). The First International Money* (Oxford: Oxford University Press, 2012), 34 ff.

world money supply. Unmistakably the U.S. commercial and investment banks played a critical and pivotal role in the pursuit of this objective. The growing share of commercial bank lending and the decline in export credit and Official Development Assistance (ODA) from 1960 to 1983 tracks this development in the medium term.²³ The next two sections explore the critical role of U.S. commercial and investment banks in trying to resurrect the value of the U.S. currency in the foreign exchange markets first through the aforementioned new fund-raising policy carried forward by the IBRD, and later on through their full involvement in channeling the OPEC financial assets to the largest debtor nations via the Eurocurrency markets.

REDUCING DOLLAR-DENOMINATED ASSETS BEFORE THE END OF CHEAP OIL: THE IBRD AND THE EARLY ASCENDANCY OF INTERNATIONAL PRIVATE CAPITAL MARKETS ON DEVELOPMENT FINANCE

8 From the postwar decade to the 1960s both U.S. government's official assistance, and the widespread financial involvement of the IBRD in nurturing development assistance programs to the non-oil-producing LDCs had rested on two linchpins: the stability of posted prices of oil in world trade markets and that of the dollar in exchange markets. Based on these two conditions, during those decades neither the non-oil LDCs current account deficit grew staggeringly owed to sudden changes in oil prices, nor were the institutional financial assistance programs established at international level in support for the LDCs reshaped to reflect any changing value of the U.S. currency in exchange markets. As a proxy for this it is worth mentioning that until the 1960s the dollar was by and large the currency of denomination for most financial assistance programs to the LDCs. The IBRD programs were the most remarkable example of this development: until the second

half of the 1960s the IBRD raised dollar-denominated funds in its advanced industrial nations member states. At the time the Washington-based Bretton Woods institution pursued this fund-raising policy by drawing on its members' Central Banks and quotas without resorting to currency diversifications to finance its assistance programs. All this changed in the second half of the 1960s. The combined decline of the dollar in exchange markets and the crumbling oil prices in world trade markets forced the IBRD to reshuffle its development assistance programs to the non-oil LDCs. At the same time these developments led U.S. authorities to bring the American financial community to center stage in the American effort to help abating the non-oil LDCs current account deficits and sovereign debt. After charting the plunging of the U.S. dollar in exchange markets and the teetering of oil prices prior to 1973, it is worth briefly investigating -through the case study of the IBRD's changing borrowing patterns- this historical turn from dollar-denominated assets to the new mechanisms that U.S. authorities devised to provide the non-oil LDCs with continued financial assistance packages against the framework of teetering dollar in exchange markets and wobbling oil prices. The increasing tendency of the OPEC countries to deposit their oil revenues with the Eurocurrency markets during the decade of the 1970s brought about two landmark transformations in the shaping of assistance to the non-oil LDCs. In the first instance the U.S. commercial banks and other private intermediaries got involved in the process at impaired level. Secondly, it was registered a fundamental shift from dollar-denominated assets to Eurocurrency assets, mostly denominated in non-resident Eurodollars, and other non dollar assets. The reshaping of the IBRD official development assistance in the late 1960s came about exactly along these two lines of development: since the appointment of McNamara to the presidency of the IBRD, the bank reorganised its official development assistance to the LDCs by charging the largest U.S. commercial banks with borrowing on its behalf on international markets according to a strict currency diversification principle.

²³ See statistical data in OECD, "Development Cooperation Report 1984", 1984, cited and reproduced in Donald R Lessard, John Williamson, *Financial Intermediation Beyond the Debt Crisis* (Washington, D.C.: Institute for International Economics, 1985), 10.

- 9 All along the two decades from its establishment to the years before the launching of McNamara's ambitious war on poverty, the Washington based institution had resorted to borrowing from private financial institutions and from currency areas other than the U.S. dollar only to a rather limited extent.
- 10 From the early 1950s to the early 1960s, under the Presidency of Eugene Black, former senior Vice President of Chase National Bank, the IBRD established and expanded the market for its securities in the world's investment centers. President Black committed himself to place bonds issued by the IBRD with the European investment centers. For instance, at the start of the 1950s, the IBRD and the Swiss government entered an agreement under which the Washington-based institution was granted tax reductions in connection with the issue of IBRD bonds in the Swiss private capital market.²⁴ By coupling such expansion of the World Bank's borrowing from the international financial centers with the sales of returns on its loans, under the presidency of Black the IBRD could raise funds in the private markets for a total of up to roughly the equivalent of \$ 2 billion, with more than half of its borrowing outside of the United States.²⁵
- 11 Within the framework of this struggle to issue a growing number of bonds and securities in the private markets, at the time the IBRD tried to diversify the currency composition of its borrowing.
- 12 Notwithstanding these attempts, by the early 1960s the IBRD still substantially relied on the U.S. capital markets and largely borrowed from

U.S. investors and dollar-denominated credit lines. For instance, at the beginning of that decade, the IBRD failed in placing some bonds with west European national capital markets.²⁶ Furthermore, tellingly, in 1964 U.S. private investors snapped up the largest portion of \$ 200 million offerings of bonds issued by the IBRD that year.²⁷ Therefore, from the time the U.S. balance of payments plunged in the late 1950s to the attempts conducted under the Kennedy administration to restore equilibrium through the implementation of balance of payments deficit financing policies on the current account position, the IBRD financial relations with the international capital markets did not clearly contribute to a diversification of its investment out of the dollar area. Rather, the Bank attracted American investors and other investors used to trading dollar-denominated assets.

By contrast, from around 1967 to the eve of the new decade, the borrowing policies of the IBRD changed staggeringly: it was registered a markedly turn in its borrowing from the U.S. dollar to other currency areas. The Bank increasingly placed its bonds and securities with private commercial and investment banks that offered investment portfolios based on a basket of different currencies. This diversification of the IBRD investment portfolio eased off pressure on the U.S. currency for bearing the cost of financing development finance. From the appointment of former Secretary of Defense Robert McNamara to the presidency of the IBRD to the end of the decade the Washington-based institution repeatedly resorted to West European capital markets to finance its development assistance programs.²⁸ This new borrowing pattern led the

²⁴ R. McNamara, Memorandum for the Record "Switzerland", 15.05.1968, in World Bank Group Archive, Washington, DC (henceforth WBGA), Records of the Office of the President, Records of President Robert S. McNamara, Contacts-Member Countries Files, Contacts with member countries: Switzerland-Correspondence 01.

²⁵ IBRD Press Release n° 541, 27.06.1958, "Background Statement", in WBGA, Records of the Office of the President, Records of President Eugene R. Black, President Eugene R. Black Papers-Congratulations Correspondence-Volume 6-1953, 1958.

²⁶ WBGA, Records of President Eugene Black, (cf. note 25).

²⁷ The Staff of the Board of Governors of the Federal Reserve System, "Current Economic and Financial Conditions. Prepared for the Federal Open Market Committee", 27.01.1965, III-8, in National Archives and Records Administration, College Park, MD (henceforth NARA), Record Group 82, General Records of the Federal Reserve System, (RG82), Division of International Finance and Predecessors, International Subject Files 1907-1974, b. 327.

²⁸ Memorandum of Conversation Lipfart-Schneider-Schmidt-Anders-Aldewereld, 10.06.1968, in WBGA, Records

Bank to center stage in shaping development assistance policies.²⁹

- 14 A few months after the appointment of McNamara to the head of the IBRD, some of the World Bank's high-ranking officials met representatives from the largest U.S. banks to discuss their participation in financing the new president's ambitious plans to expand the World Bank's lending operation to finance development policies across the globe. Along with fierce criticism on the part of American bankers as for the very low lending rate offered by the IBRD to the American banking system, the very topic at the center of these conversations was the currency denomination of the Bank's bonds and securities offered. Bank of America's representatives and officials of Brown Brothers Harriman, for instance, called attention to the implications of the U.S. balance of payments deficit on the bankability of U.S. dollar-denominated bonds issued by the IBRD.³⁰ One year later, while leading U.S. financial institutions as Morgan Stanley stressed "the need for the Bank to renew and broaden its contacts in the investment community in the United States; and for McNamara to become better known to that community",³¹ the

of the Office of the Presidents, Records of President Robert S. McNamara 1968, Correspondence with Member Countries: Germany. Correspondence 01, fold. Contacts Germany 1968.

29 National Advisory Council Alternates Meeting Minutes, Meeting 75-1, "Review of IBRD/IDA Program and Financial Policies", 16.01.1975, in NARA, Record Group 56, General Records of the Department of the Treasury (henceforth RG56), National Advisory Council on International Monetary and Financial Policies (henceforth NAC), NAC Alternates Minutes and Agenda, NAC Principal Minutes and Agenda, NAC Steering Committee Minutes, NAC Semi Annual Debt Review 1971-1975, b. 1, fold. NAC Alternates-Minutes, Meeting N. 75-1 through Meeting N. 75-8, 16.01.1975-3.12.1975; Sir Denis Rickett (IBRD Vice President), "The Provision of Additional Resources to Developing Countries and the Respective Role of the Fund and the Bank", undated, in WBGA, Records of General Vice Presidents and Managing Directors, Records of Sir Denis Rickett, Oil and Energy, Memos and Reports 1973 through 1974, Volume 3.

30 W.L. Bennett to Mr. Clark, Memorandum "Summary of New York Visits. October-November 1968", in Library of Congress, Washington, DC (henceforth LOC), Manuscript Division, Robert McNamara Papers, Part 1, b. 21, fold. 1 (Bennett, William Memoranda of McNamara Trips 1968-1971).

31 William Bennett to Mr. Clark, Memorandum "Visit to New York City--March 1969", in LOC, Manuscript Division,

IBRD had issued a substantial portfolio of bonds in currency markets other than the dollar. In particular, from late summer 1968 to late summer 1969 the Bank conducted a currency diversification policy by offering both public and private issues in the German markets and in the Swiss capital market.³²

Later on, favored by the United Kingdom and other Western European partners, McNamara turned to draw on the oil-producing countries of OPEC to finance the bonds issued by the IBRD.³³ As of 1968, the IBRD had borrowed in the London market on three occasions,³⁴ while by fiscal year-end 1969 over half of the Bank's gross borrowing had been raised in the German and U.S. private capital markets.³⁵ The case of German private capital markets is particularly noteworthy. Over the decade some world-class

R. McNamara Papers, Part 1, b. 21, fold. 1 (Bennett, William Memoranda of McNamara Trips 1968-1971).

32 Memorandum of Conversation McNamara-Aldewereld-Guth-Klasens, 06.06.1968; Memorandum of Conversation Dr. Henkel-Mr. Aldewereld, 07.06.1968; Memorandum of Conversation Lipfort-Schneider-Schmidt-Anders-Aldewereld, 10.06.1968: all these documents are located in WBGA, Records of the Office of the Presidents, Records of President Robert S. McNamara 1968, Correspondence with Member Countries: Germany. Correspondence 01, fold. Contacts Germany 1968.

33 John Morrian to Robert McNamara, Office Memorandum, "R. McNamara interview with Douglas Ramsey, Economic Development and Raw Material Correspondent of the Economist", 28.07.1975; Office Memorandum "Meeting with Chancellor of the Exchequer, October 1, 1974 (present: McNamara, Denis W. Healey, Derek Mitchell, Richardson, Wass, Rawlinson, France, Cargill)", 02.10.1974, in WBGA, Records of the Office of the President, Records of President Robert S. McNamara, Contacts with Member Countries: United Kingdom, General Correspondence 03.

34 W.M. Van Saagevelt to Mr. D. Love, "Memorandum on the Bank Group's Relationship with the United Kingdom", 11.08.1967, in WBGA, Records of the Office of the President, Records of President Robert S. McNamara, Contacts with Member Countries: United Kingdom, General Correspondence 02.

35 See respectively Summary Memorandum of Conversation D.S. Rickett-R. McNamara-The Governor of the Bank of England, "Annual Meeting 1968--United Kingdom", 09.10.1968; and D.S. Rickett (IBRD Vice President), "Annual Meeting 1969. Meetings with Governors of Part I Countries. United Kingdom", 24.09.1969, both in WBGA, Records of the Office of the President, Records of President Robert S. McNamara, Contacts with Member Countries: United Kingdom, General Correspondence 01 (1968-1969).

German banks purchased an increasing volume of bonds issued by the IBRD. For instance, Giro Centrale (GZ) and Deutsch Bank bought significant portions of World Bank-issued bonds and securities and pledged to make public and private placements in the German markets.³⁶ The involvement of German banks in financing the IBRD programs was a means of easing the burden of the IBRD development assistance programs on the U.S. balance of payments, as well as of supporting the value of the dollar in the foreign exchange markets.

- 16 This growing involvement of private western commercial banks in financing McNamara's war on poverty provided a critical contribution to the promotion of development assistance on a world scale. A rough estimation of the increase in private funding for the developing countries before the 1970s reports a surge in private capital flows from 40 percent of the total in the period 1964-1966 to 44 percent in 1970.³⁷
- 17 This significant change that featured the borrowing patterns of the IBRD helps tracking the two landmark transformations that shaped development assistance programs to the non-OPEC LDCs since the U.S. currency began teetering and the international trade and payments system was ravaged by unstable exchange markets, creeping oil prices and sinking U.S. balance of payments deficit. In the first instance, the search for means of payments and a currency unit to price raw materials and goods exchanged in international trade alternative to the dollar. Secondly, the stunningly central contribution that the western private commercial banks gave to this transformative process. In the case of the World Bank, the involvement of private commercial banks let the IBRD issue

³⁶ Memorandum of Conversation McNamara-Aldewereld-Lipfart (GiroZentrale), 06.06.1968; Memorandum of Conversation McNamara-Aldewereld-Guth-Kalusens (Deutsche Bank), 06.06.1968, in WBGA, Records of the Office of the President, Records of President Robert S. McNamara, Contacts with member countries: Germany--Correspondence 01, fold. Contacts Germany (1968).

³⁷ Irving Sigmund Friedman, *The Emerging Role of Private Banks in the Developing World* (New York: Citicorp, 1977), statistical appendix, table 2.

bonds and securities that could be financed by raising money in money markets other than the U.S. dollar area and could be pegged to a basket of currencies. This process could not only reduce the amount of dollar-denominated assets traded in international money markets. It was also useful in minimizing the exchange risk for investors and to defend the U.S. currency in the foreign exchange markets, thus propping up the U.S. balance of payments.

The next section suggests that amid the two oil 18 crises of the 1970s these same objectives be pursued. At that point, the unregulated Euro-dollar and other Eurocurrency markets became a new instrument to finance development assistance to the non-OPEC LDCs. Resorting to the Eurocurrency markets and to the OPEC countries' deposits in them made it possible to finance the battle of the LDCs against the decade's international inflation. They also partially offset the impact of the mid-1970s economic recession that plagued the advanced industrial economies on their terms of trade without straining further the U.S. currency and balance of payments through dollar-financing official development assistance.

U.S. PRIVATE BANKS AND THE EUROCURRENCY MARKETS: INTERNATIONAL LOANS TO THE LDCS AMID THE TWO OIL PRICE HIKES OF THE 1970S

As pointed out in section 4, at the turn from 19 the 1960s to the 1970s the IBRD development assistance programs took place in connection with this increased involvement of international private intermediaries in fuelling development assistance to the LDCs. This also helped to reduce U.S. federal transfers to the World Bank and the strains they caused on the U.S. government deficit. Most importantly, the involvement of U.S. and other Western commercial banks was aimed to reduce the dollar share in world money supply. This diminished dollar share helped sustaining the purchasing power of the dollar in international trade and financial transactions. Likewise, in Washington the debate on the implementation of Special Drawing Rights

was intended to prop up the U.S. currency in exchange markets by substituting the dollar as the unit of international accounts. The objective was to lessen the effects of a weakening U.S. currency on international trade.³⁸ Therefore, way before the first oil crisis erupted, two key components in the shaping of international financial assistance to the developing countries during the 1970s -U.S. commercial banks and transnational financial markets intended as means of payments and units of accounts alternative to the U.S. dollar- were already under operation. The first oil shock made way for a new player to emerge: the OPEC countries, itself a giant group of international investors. This section outlines how the OPEC countries and their international financial might did play out in this process and tries to assess whether or not they contributed to decreasing the dollar component in world money supply.

20 At the end of 1974, many months after the outbreak of the first oil price hike, the OPEC countries oil surplus had strikingly surged close to \$ 70 billion.³⁹ By that time the LDCs run a combined trade deficit of about \$ 25 billion.⁴⁰ The way the OPEC oil producers distributed their international investments sheds light on the importance of oil producers, transnational financial markets, and western commercial banks, in

reshaping the structure of development assistance to the non-oil LDCs since as early as the first oil shock. By December 1974 the OPEC countries placed as many as 40 percent out of their total foreign investments with non-resident Eurocurrency assets. From 1974 to 1975 the OPEC member countries' placements with the Euromarkets jumped from just over 30 percent to about 45 percent of their total overseas investments.⁴¹ At the same time, during the two years up to mid-1975, their direct loans to the non-oil LDCs rose substantially, whereas their investments in long-term U.S. and U.K. government securities declined.⁴² These data highlight a substantial shift in the direction of the OPEC countries' international investments from long-term securities to short-term highly liquid assets as the Eurodollar markets. In the meantime, not coincidentally, according to IMF estimates, gross commercial bank lending to the non-oil LDCs increased from \$ 9 billion in 1973 to \$ 22 billion at year-end 1975, rising from 38 percent of total borrowings to 50 percent.⁴³ Furthermore, at year-end 1975 the western banking system accounted for the largest amount of claims on the developing countries' private sector debt, which amounted to \$ 66 billion. On the other hand, the public sector debt of the non-oil LDCs were liabilities to western governments or to private foreign banks warranted by their national governments. In order to understand to what extent western banks lending came to center stage in the process of financing the non-OPEC Latin American LDCs it is worth mentioning that by 1975 U.S. private banks were reported to hold two-third of total \$ 66 billion private sector debt. At the same time, Mexico and Brazil owed to western banks nearly one-half or almost \$ 30 billion out of total \$ 66 billion private sector debt.

³⁸ On the SDRs see Wilkie, *Special Drawing Rights* (cf. note 22); Onno de Beaufort Wijnholds, *Gold, Dollar and Watergate. How a Political and Economic Meltdown was Narrowly Avoided* (London: Palgrave Macmillan, 2015), 56-58; Michael Bordo, Harold James, "Reserves and Baskets", *National Bureau of Economic Research (NBER) Working Papers n. w17492*, 2011; Selva, *Before the Neoliberal Turn*, 112 ff (cf. note 7).

³⁹ Interim Committee of the Board of Governors of the International Monetary System, Meeting N. 10, 09.08.1978, Mexico City, "Record of Discussion", in NARA, RG56, Office of the Assistant Secretary for International Affairs (henceforth OASIA), Office of the Deputy to the Assistant Secretary for International Affairs, Records Relating to International Financial Institutions 1962-1981, b. 6, fold. IM-9-2 International Monetary Jan-Aug International Monetary System.

⁴⁰ Eugene Black to Jack Bennett (Undersecretary for the Treasury for Monetary Affairs), 21.03.1975, in Rockefeller Archive Center, Tarrytown, NY (henceforth RAC), Nelson A. Rockefeller Vice Presidential Central Files, Record Group III 26 3, b. 167, fold. F19.

⁴¹ For these data see R.Reisch (Fed New York Foreign Research Division) to Davis, "The U.S. Plan for Recycling Oil Funds", 02.12.1974, in FRBNYA, b. 616276, fold. Financing Facility OPEC 1974.

⁴² D.Beek, "OPEC lending to Official and Semi-Official Entities", 29.07.1975; P.Fousek to P.Volcker, Office Correspondence, 29.07.1975, in FRBNYA, b. 616276, fold. Financing Facility- OPEC 1974.

⁴³ Eugene Black, "The Less Developed Countries Payment Deficits. A Plan to Help", 20.10.1976, in FRBNYA, b. 616276, fold. Financing Facility-OPEC 1974.

The remaining largest Latin American debtors (Argentina, Chile, Perú and Colombia) accounted for one eighth or about \$ 8 billion of total liabilities owed to western banks.⁴⁴ Therefore, from as early as the years 1973 to 1975, U.S. banks held the largest share of the Latin American countries' private sector debt. On the other hand, from 1971 to 1975 the LDCs had increasingly borrowed short-term assets from Western banks.⁴⁵ As at the time most of the western banks' short-term investments were in the Euromarkets, this borrowing pattern helps establishing a linkage between the increased dependence of the LDCs on western commercial banks and the latter ones capability to trade in the Eurodollar and other short-term Eurocurrency markets. The American and other western commercial banks borrowed in the Eurocurrency markets to lend to the LDCs. Furthermore, this occurred even as the OPEC oil producers shifted their investments from long-term assets to short-term Euromarkets. Thus, it is worth establishing a connection between placements by the OPEC with short-term Euromarkets, increased trading by the Western commercial banks in the Euromarkets, and the strikingly rise of LDCs' borrowings from the American and other western banks specialised in trading short-term Eurocurrency assets.

21 One more point is noteworthy to complete this overview of the increasing involvement of American commercial and investment banks in international financial markets and in financing international development policies. Way before 1973 the largest U.S. banks had established overseas branches across the Mediterranean and Middle Eastern oil producers featuring the largest consumer markets: countries as Iran and Libya had become market outlets for U.S. manufacturing and service industry. Within

this framework, the U.S. commercial banks had served as export-promoting or import-financing intermediaries long before the outbreak of the first oil crisis.⁴⁶ Therefore, by the time the 1975 worldwide recession broke out, the largest U.S. commercial and investment banks had long served as a point of connection between the OPEC oil-producing countries and the industrial world.

22 However, it was only shortly after the first oil price hike that American banks became a critical point of intersection between the OPEC oil revenues, the new highly unregulated transnational Euromarkets, and the financing of the non-OPEC LDCs' external disequilibria. The U.S. monetary authorities played a decisive role in bringing U.S. commercial banks to center stage in channeling the OPEC oil revenues to finance the LDCs current account deficit. As of 1974, notwithstanding repeated reluctance by U.S. bankers to reinvest the OPEC financial assets in the LDCs due to the poor creditworthiness germane to the developing countries,⁴⁷ the overseas branches of U.S. banks used to trading non-resident Eurocurrency assets, financed a growing share of the LDCs current account deficit. On the whole, the international banking system financed approximately half of the current account deficits of the oil imported from OPEC by the developing countries.⁴⁸ This contribution of U.S. commercial banks to finance

⁴⁴ These figures are based on a Federal Reserve Bank of New York study by David Beek, "The External Debt Position of the non-oil Developing Countries", 28.10.1976, in FERBNYA, b. 616276, fold. Financing Facility- OPEC 1974.

⁴⁵ Talk by Abdullatif Al-Hamad, Director General of the Kuwait Fund for Arab Economic Development "Problems of Aid and Lending", Harvard University, 25.04.1977, in FRBNYA, b. 616276, fold. Financing Facility OPEC-1974.

⁴⁶ See for instance the involvement of Chase Manhattan Bank and First National City Bank in Iran: Memorandum of Conversation C.Widney (Representative of Chase Manhattan Bank)-the U.S. Ambassador in Iran "Chase Manhattan activities in the Middle East", 31.10.1968; R.Harlan (U.S. Embassy in Teheran) to W.McClelland (U.S. Department of State), 30.07.1968, both documents in NARA, General Records of the Department of State (RG59), Bureau of Near Eastern and South Asian Affairs, Office of the Iran Affairs, Records Relating to Iran 1965-1975, b. 3.

⁴⁷ D.Keyser to T.Willet, Memorandum "Recycling Petrodollars: Aspects of Financial Market Behavior", 23.09.1974, in NARA, RG56, OASIA, Office of the General Counsel. Assistant General Counsel, Records Related to OPEC Financial Affairs 1974-1979, b. 8; see also *The Financial Times*, 24.09.1974.

⁴⁸ E. Black to J. Bennett (Undersecretary of the Treasury for Monetary Affairs), 21.03.1975, in RAC, RG III, 26, 3, Nelson A. Rockefeller Vice Presidential Central Files, b. 167.

the balance of payment on the current account of the non-OPEC LDCs begun way before the first oil shock, developed further at mid-decade, and grew even larger in the second half of the decade. This widespread American involvement in financing the LDCs external deficit continued up to the outbreak of the turn-of-the-decade debt crisis since 1980.⁴⁹ Before briefly assessing the increasing involvement of American banks in the second half of the 1970s it is worth pinpointing the string of causes that pushed them forward. To account for this decade-long involvement of the largest U.S. banks in financing the current account position and foreign debt of the Latin American non-OPEC LDCs it is worth pointing out three factors. In the first instance, the developing countries accounted for 40 percent of total U.S. export. This factor continuously prompted the United States to promote financial assistance to the LDCs, and particularly to the Latin American economies, all along the decade of the 1960s and 1970s. This U.S. export-promoting policy continued until the second oil crisis brutally squeezed commercial relations between the United States and Latin America. It is worth recalling that by 1982 –amid the Latin American debt crisis– U.S. total export fell by 5 percent, whereas American export to Latin America was down by 8 percent, to Mexico by 20 percent and to Brazil by 13 percent.⁵⁰ Consider the impact of the first oil price hike and the international inflationary spiral triggered by the expansionary policies of the Nixon administration and the UK government on the current account position of the non-OPEC LDCs.⁵¹ From 1974 to 1975 the

non-OPEC Latin American developing nations suffered from both a worsening current account deficit and a decline in their current account assets. The shrinking of the current account deficit was caused by the increased cost of consumer goods that Latin American countries imported from oil price hike-hit advanced industrial nations. Furthermore, a decline in export of raw material to Western Europe as a result of the 1975 recession lays at the origins of the non-oil LDCs diminished assets, on the current account position that those economies suffered from at the time.⁵² Therefore, within the framework of the recession that followed the first oil price shock, not only did the LDCs reduce imports from the United States and other advanced industrial nations. They also suffered from shrinking export in raw material and other strategic products to the industrial economies. At the time U.S. monetary authorities, and particularly the Fed, exerted pressure on the American bankers to commit fully on financing the LDCs, and particularly the non-oil LDCs, in order to prevent them from falling into a plaguing recession and to avoid a decline in U.S. export.⁵³ The second development that explains the increased centrality of U.S. commercial and investment banks in shaping and financing development assistance to the LDCs traces back to 1972. At the time the expansionary monetary and fiscal policies inaugurated by the Nixon administration stimulated a rise in international demand for consumer and investment goods as well as for raw and strategic material. As a result of such dynamics, the price of raw materials produced in the LDCs surged substantially. This development made the non-OPEC LDCs more appealing to western commercial banks: American and other western banks improved their rating of the LDCs creditworthiness and opened new credit lines to the LDCs. This process triggered an increase in the liabilities of the LDCs to western banks and laid at the origins of an inflationary spiral caused by both an upsurge of raw material prices and expanding

⁴⁹ The most cutting edge fresh new literature on this subject has so far largely overlooked the role of American finance in Latin America and other non-oil producing developing countries before and after the outbreak of the second oil crisis. See for reference Altamura, *European Banks and the Rise of International Finance* (cf. note 6); Alvarez, *Mexican Banks and Foreign Finance* (cf. note 6); García Heras, “Multilateral Loans, Banking Finance, and the Martínez de Hoz Plan in Argentina 1976-1981”, 215-240 (cf. note 4).

⁵⁰ Continental Bank, Position Paper “International Monetary Fund Quotas, Bank Regulation and the Economic Welfare of the United States”, 1983, in FRBNYA, b. 553726.

⁵¹ On this see for instance Robert Gilpin, *The Political Economy of International Relations* (Princeton, NJ: Princeton University Press, 1987), 118-170.

⁵² Federal Reserve Bank of New York, “The External Debt Position of the non-oil Developing Countries”, 30.10.1976, in FRBNYA, b. 616276, fold. Financing Facility OPEC 1974.

⁵³ Selva, *Before the Neoliberal Turn*, 199-204 (cf. note 7).

world money supply.⁵⁴ In the third instance, by the mid-1970s the Latin American LDCs resorted to western private banks for three institutional reasons. The first reason was the easiness of pleading for funds from private banks compared to the lengthy and uncertain process of filing requests for borrowing from international economic institutions like the IMF, the multilateral development banks or the IBRD. Not coincidentally, in the second half of the decade, some of the largest U.S. private banks ventured on offering extensive lending to Latin American borrowers.⁵⁵ The second institutional reason that since the mid-1970s drove the non-OPEC LDCs to borrow large amounts of funds from the western banking system, and particularly from the 8 largest U.S. commercial banks, was the ill-functioning and unequal distribution of the OPEC oil revenues after the first oil price hike. At year-end 1975 the largest amount of the OPEC oil revenues that the oil producers had placed with the international money markets were put to finance the balance of payments deficit of the advanced industrial nations. This was the case for both the project to establish an OECD financial arrangement to finance its member countries, and the IMF oil facility, a financial arrangement designed to help countries whose balance of payments had been hit the most by the first oil price hike. According to statistical data, the oil facility devoted the bulk of its assistance to advanced industrial nations suffering from shrinking current account deficits.⁵⁶ The third institutional reason that prompted the LDCs to borrow from western banks extensively, was unmistakably the fact that by the time the 1975 recession hit the advanced industrial nations, most of them had stretched to the limits of holding the debt of the LDCs. Much the same was the case of the IMF: the Bretton Woods institution increased its

member quotas precisely in order to finance the external debt of developing countries. Unlike the importance given in the economics and historical literature to the role of the IMF and the World Bank in nurturing the external equilibrium of the LDCs in the second half of the decade, the IMF lagged behind its official lending commitment all along the decade. At the beginning of the 1980s, within the framework of a turn-of-the-decade Washington debate about the feasibility of making the Fund directly borrow from the private capital markets and commercial banks,⁵⁷ the Fund made arrangements with the U.S. government to borrow from it a financial assistance package that the Washington government had borrowed from private capital markets. In exchange for such credit lines, the U.S. government could draw on the IMF SDRs, and the IMF was supposed to repay the loan at the current Eurodollar loan rates.⁵⁸

23 These multiple factors led U.S. commercial and investment banks to get increasingly involved in financing the current account deficit and the sovereign debt of the non-OPEC LDCs, first and foremost the Latin American nations. This involvement began before 1973 when private commercial banks began trading bonds and securities issued by the IBRD. Then, this new role of American banks mounted out of the striking international economic imbalances in world trade and payments after the first oil crisis and continued unfettered in the second half of the decade. A close look at unpublished archival data helps making a quantitative assessment of this development in the second half of the 1970s. From 1977 to 1979 the ratio of international lending to capital assets of the 8 largest U.S. banks increased constantly. However, the turning point

⁵⁴ Paul Meek to Paul Volcker, "The Euro-banking System: Its Relation to Monetary Policy", in FRBNYA, b. 553726, fold. Foreign Lending 1982.

⁵⁵ See archival material and unpublished data in FRBNYA, Anthony Solomon Papers.

⁵⁶ On the unequal redistribution of the OPEC oil revenues between developed countries and LDCs after the first oil price hike see Eugene Black, "The Less Developed Countries Payment Deficit. A Plan to Help", 20.10.1976, in FRBNYA, b. 616276.

⁵⁷ See for instance Charles Dallara (Department of the Treasury) to Deputy Assistant Secretary Ledding, Office Memorandum "Issues Related to IMF Borrowing in the Private Markets", 29.08.1980, in NARA, RG 56, OASIA, Office of the Deputy to the Assistant Secretary for International Affairs, Records Relating to International Financial Institutions 1962-1981, b. 6, fold. 9-1 Reform International Monetary 1978-1980.

⁵⁸ Continental Bank, Position Paper "International Monetary Fund Quotas, Bank Regulation, and the Economic Welfare of the United States", 1983, 3, in FRBNYA, b. 553726.

	December 1977		June 1979		June 1982	
	Percent	Amount	Percent	Amount	Percent	Amount
Non-OPEC LDCs	110	45	112	53.2	154	101.9
OPEC members	35	14.2	40	18.8	35	23.1
All Countries	425	174	415	197	518	343

Table 1: US Bank Exposures for Selected Groups of Countries 1977-1981
 Source: Federal Reserve Bank of New York, "Concentrations of Country Risks", 17.02.1983, in FRBNYA, b. 553726

on the way down to the overexposure of U.S. banks to poor-creditworthy developing nations occurred in June 1979. At that time, spurred in part by the second oil price hike, the rate of growth in lending outstripped the growth in capital assets. Noticeably, such increase in lending relative to capital funds was particularly intense in respect to the non-OPEC LDCs, where the bulk of U.S. banks exposure was concentrated (see table 1).

24 Within the framework of this increased exposure in international lending, the geographic distribution and destination-specific of these lending activities of U.S. banks changed substantially. Until 1974, Eurocurrency lending was concentrated in the 9 Bank for International Settlements (BIS) reporting countries and mostly distributed with banking institutions: in 1974 the Eurocurrency market shared the largest percentage out of total credit supply to European borrowers. However, since 1975 onwards, Eurocurrency lending came through a historical shift: at the time it was reported a landmark increase in Eurocurrency claims against domestic and foreign non-banks,⁵⁹ and the bulk

of claims were against non-BIS member countries, including the developing countries. This trend sheds light on the changing trajectories of Eurocurrency lending by western banks even as, since the first oil shock, the OPEC countries increased their financial assets and began massive investments with the Eurocurrency markets.

At the same time, against this broad framework, 25 each of the eight largest U.S. banks (Bankers Trust, Chase Manhattan Bank, Chemical Bank, Citicorp, Irving, Morgan, Manufacturers Hanover, Marine Midland) increased their lending to the three largest Latin American debtor nations: Brazil, Mexico and Argentina.⁶⁰

CONCLUSION

The first part of this contribution has pinpointed 26 the late 1960s and early 1970s outflow of short-term financial assets from the United States to the highly unregulated Eurocurrency markets. As pointed out in section 3 this process substantially contributed to the shrinking U.S. balance of payments deficit on the capital account

(Washington, DC: U.S. Government Printing Office, 1977), 9-10.

⁶⁰ Federal Reserve Bank of New York, "Supervisory Policy Response to Country Exposure Excesses", Table II (Selected Country Exposures of 8 largest Banks), in FRBNYA, b. 553726.

⁵⁹ 95th Congress, 1st Session, Joint Committee Print, *Some Questions and Brief Answers about the Eurodollar Market. A Staff Study Prepared for the Use of the Joint Economic Committee Congress of the United States*

that the United States experienced at the time. Neither U.S. laws devised to revert such capital outflows, nor measures implemented to prop up the current account position, were successful in stabilising either the U.S. balance of payments in the aggregate or the U.S. trade deficit. In the light of this late-1960s striking external imbalance, the U.S. commercial and investment banks got involved in propping up the U.S. balance of payments and in supporting the value of the U.S. currency in the foreign exchange markets in different ways. In so far as the foreign economic and financial assistance programs to the developing nations had an impact on total U.S. balance of payments deficit, this contribution has focused on the U.S. specific strategy devised to lessen such impact of U.S. economic assistance to the non-oil LDCs through full involvement of the American banking system both from the second half of the 1960s to the first oil price hike and later on during the 1970s. In either case, the involvement of American commercial banks was based on the idea that U.S. financial capitalism could contribute to a policy of currency diversification of American development assistance programs out of the dollar intended to ease the ongoing strains of foreign economic assistance on the value of U.S. dollar in the foreign exchange markets. A policy of currency diversification out of the U.S. currency would prop up the dollar by reducing its share in world money supply.⁶¹

27 Section 4 has investigated how American banks got increasingly involved in diversifying the basket of currencies in which the bonds and securities issued by the IBRD to finance its development assistance programs were denominated. The involvement of American commercial banks in the pursuit of this objective was clearly intended to reduce the share of dollar assets in world money supply and to ease the pressure of IBRD official development assistance on the U.S. balance of payments. Measures undertaken by U.S. authorities to forestall the outflow of capital

from the United States and the overlapping of multiple developments in the international monetary and energy markets, that occurred from the second half of the 1960s to the beginning of the new decade, were ill-functioning, as highlighted in the first part of this contribution. It led U.S. authorities to get involved further U.S. private capital in trying to ease the pressure of capital outflows on the balance of payments and the standing of the American currency against other major currencies. Along this line of researching, section 5 has explored the continuance of this policy to abate unfettered plunging of U.S. balance of payments and U.S. currency. It did so by resorting to the American banking system in the new international economic environment that followed the first oil price hike. As detailed in section 5, since the first oil crisis a new chain of international investments and borrowings materialized. The first oil price hike triggered a surge in the oil revenues and financial assets of the OPEC oil producers. This surge led Middle Eastern countries to become global investors by massively placing funds with unregulated and highly profitable short-term Eurocurrency markets, most of which were at the time Eurodollars. By the mid-1970s 40 percent of the OPEC countries' international placements were with the Eurocurrency markets, and by year-end 1977 as much as 70 percent of new yearly placements with the Euromarkets came from the OPEC countries.⁶² More specifically, this process took place through increased OPEC placements with the most important Wall Street banks, which in turn reflowed these assets to their overseas branches specialised in trading in the Eurocurrency markets, and to other international banking institutions that traded Eurocurrency assets.⁶³ During the 1970s at the highest U.S. foreign monetary policy level there was an intensive debate on

⁶¹ J. Karlik and P. Kenen, Memorandum "The International Monetary Role of the Dollar and Related Issues", 02.08.1978, in NARA, RG56, OASIA, Office of the Deputy to the Assistant Secretary for International Affairs, Records Relating to International Financial Institutions 1962-1981, b. 2.

⁶² Paul Meek to Paul Volcker, "The Euro-banking System: Its Relation to Monetary Policy", 07.08.1978, in FRBNYA, b. 553726, fold. Foreign Lending 1982; see also IMF Research Department Working Group, *The Eurocurrency Market and World Economic Stability* (Washington, DC: IMF, 1978).

⁶³ G. Short and B. White (Fed NY Balance of Payment Division) to Mr. Kubaryck, Research Memorandum "Highlights of United States Involvement with the Euromarket", 07.04.1978, in FRBNYA, b. 553726, fold. Eurodollar Market.

whether or not the Eurodollars were resident dollars and contributed to money supply and inflation. This debate revolved around a dispute on the Eurodollar as a time deposit or demand deposit.⁶⁴ Notwithstanding these lengthy debates within the United States on whether or not the Eurodollars could be counted to measure U.S. money supply, since 1974 U.S. authorities relied on Eurodollar and other Eurocurrency markets traded by U.S. commercial banks as a way to finance the non-oil LDCs' pressing balance of payments deficit and import problems. The United States considered this way a strategy to continue development assistance without further straining the U.S. currency in the foreign exchange markets. All along the decade of the 1970s it was a widely-shared view among U.S. policymakers that U.S. commercial banks could play a critical role in putting Eurodollar and other Eurocurrency assets to finance the LDCs.⁶⁵ Therefore, dollar-denominated assets accrued to the OPEC countries after the first oil shock were deposited with the Eurocurrency markets. Then, these Eurocurrency assets were traded by the U.S. and other western commercial

and investment banks specialised in dealing Eurocurrencies to finance international lending to the non-oil LDCs struck the most by the 1975 recession in Europe on both their current account position and their foreign debt. Along this line of research, section 5 has reconstructed this new pattern of international investments and lending by also providing a quantitative assessment of lending patterns by the largest U.S. banks and other leading commercial banks from before the 1973 oil crisis to the following few years. The outcome is that after the first oil crisis American and European commercial and investment banks shifted their investment and lending activities from Europe and other developed markets to the developing world, and particularly to the Latin American non-oil LDCs. Over the following years and decade these non-oil LDCs suffered the most from the implication of the two oil crises in terms of balance of payments deficit and foreign debt. More specifically, this was the case for the hard currency requirements for import and export-financing that trapped Mexico, Brazil, and Argentina in the lost decade of the 1980s.

64 A variety of archival sources track this debate: see for instance L.Goodman to Mr. Kubarych, Federal Reserve Bank of New York Research Memorandum "Eurodollar and the Money Supply", 10.01.1980, in NARA, RG56, OASIA, Office of the Deputy to the Assistant Secretary for International Affairs, Records Relating to International Financial Institutions 1961-1982, b. 8.

65 A.Solomon (Undersecretary of the Treasury for Monetary Affairs), "Statement before the Subcommittees of the House Banking, Finance and Urban Affairs Committee", 12.07.1979, *US Department of the Treasury News*.

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ENERGY SOURCES

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Life in the oilfields: Unveiling new sources for social history of French hydrocarbon industry

Abstract

Enjeu majeur pour la recherche en histoire des hydrocarbures, la difficulté d'accès aux sources archivistiques, notamment issues des entreprises, limite le champ d'exploration des chercheurs. L'ouverture de nouveaux fonds permet de développer des problématiques qui interrogent la dimension sociale et culturelle de l'histoire de l'industrie des hydrocarbures. Cet article présente les archives papiers et audiovisuelles de la Compagnie Française des Pétroles Algérie (CFP-A) et explique comment l'interdépendance entre sources écrites et mémoire orale peut contribuer à l'humanisation de ce champ d'études.

Plan of the article

- The Compagnie Française des Pétroles Algérie archive: new sources for social history of hydrocarbon industry
- Memories from the oilfield: the interdependence of oral and written sources in the Social History of hydrocarbon industry.
- Conclusion

1 At the beginning of the 1980s French companies created their first Archive department in charge of the corporate historical heritage. The unrestricted access to corporate records unveiled original sources and has fostered the emergence of new research questions among French scholars. Challenging the primacy of Public Archives, this evolution has supported the emergence of Energy History as an independent field of study. Oil and gas have always been tackled from the angles of Economic and Diplomatic History with a main focus on the geostrategic role of energy resources in the international system. The multiplication of corporate history monographs and biographies of the oil industry's founding fathers confirmed these main tendencies. Nevertheless, the emergence of the contemporary debate on energy transition and post-carbon society has raised several questions on the role of individuals in shaping oil culture during the 20th century. In this context, Energy industry archives are fundamental sources to relocate the human element at the core of the historical analysis¹. Defining the life in the oilfield as a new object of study, this paper presents the sources of Social history of French hydrocarbon industry in Algeria that are accessible in Total Historical Archives. We will introduce the *Compagnie Française des Pétroles Algérie* (CFP-A) historical archives as the main source to study the everyday life of French engineers and technicians in the Saharan oilfields. Furthermore, we will discuss the importance of memory and the interdependence of written and oral Social history sources of hydrocarbon industry, assessing the renewed role of historians and archivists in the creation of new archival collections.

THE COMPAGNIE FRANÇAISE DES PÉTROLES ALGÉRIE ARCHIVE: NEW SOURCES FOR SOCIAL HISTORY OF HYDROCARBON INDUSTRY

2 Social history has always been considered a multifaceted discipline characterized by a broad object of study. This can be summarized by the idea of the French Social historian Ernest

¹ Pascal Griset, "Histoire sociale et entreprise", in Christophe Charle (eds.), *Histoire sociale, histoire globale ? actes du colloque des 27-28 janvier 1989* (Paris: Editions de la Maison des sciences de l'homme, 1993), 195-196.

Labrousse who explained that "all History is social and Social History is all the History."² In French academic debate, a limited amount of research has been carried out on the interactions between individuals, groups and organizations in the field of Energy History. However, focusing on the "social" dimension can be considered as an effective way to "[understand] the inner workings of the organizations through the analysis of the human factor."³ Most of the French scholars have so far privileged macro-historical perspectives considering energy as a strategic resource rather than as a consumer good and as the result of an industrial production process. After pioneering research on the cultural implications of energy,⁴ the renewed dialogue between Energy historians and Social scientists is contributing to the humanization of the discipline. In this sense, the oilfield, the refining plant and the pipeline construction site can be considered as a privileged field of observation to study labor relations, the social impact of technological innovation and the emergence of shared professional identities.

In order to understand the role of fossil fuels in the ongoing debate on energy transition it is necessary to question the emergence of oil culture⁵ and the myth of black gold in French society after World War II. This compels us to question the role of the men and women who participated in the evolution of hydrocarbon industry, to understand how they acquired technical expertise in oil and gas exploration and production and to define the role of French oilmen in shaping French collective imaginary. *Compagnie*

² Maurice Agulhon, "Ernest Labrousse, historien social (XIX^e siècle)", *Annales historiques de la Révolution française*, vol. 276, n° 1, 1989, 129.

³ Pascal Griset, "Histoire sociale et entreprise" (cf. note 1).

⁴ Alain Beltran, *La fée et la servante. La société française face à l'électricité, XIX^e-XX^e siècle* (Paris: Belin, 1991); Gabrielle Hecht, *The Radiance of France: Nuclear Power and National Identity after World War II* (Cambridge: MIT Press, 2009 [1998]).

⁵ Ross Barrett and Daniel Worden (eds.), *Oil Culture* (Minneapolis: University of Minnesota Press, 2014); Sheena Wilson, Adam Carlson and Imre Szeman (eds.), *Petrocultures: Oil, Politics, Culture* (Montreal: McGill-Queen's University Press, 2017).

Française des Pétroles Algérie (CFP-A) archives can help to develop these research questions studying the emergence of the “Saharan Oil Saga” during the *Trente Glorieuses*. Presenting the role of individuals in shaping mentalities and organizations, the archives of the first *Compagnie Française des Pétroles*’s Exploration-Production affiliate will help historians and social scientists to write an alternative history of French hydrocarbon industry in the second half of the 20th century.

- 4 The *Compagnie Française des Pétroles Algérie* is a 75 linear meters⁶ archival collection today accessible in Total Historical Archives.⁷ It is one of the rare examples of a corporate records collection rescued from the nationalization of foreign oil companies that took place in Algeria in 1971. Part of the documentation dating from 1951 to 1962 has been saved after Algerian independence when the archives were repatriated from Algiers to Paris.⁸ After this, thanks to an effective record management strategy, CFP-A archives have been enriched with new sources produced from 1962 to the beginning of the 1980s. The uniqueness of this collection is due to the inaccessibility of records from other French companies that worked in the Sahara such as the state-owned *Société Nationale de Recherche et d'Exploitation des Pétroles en Algérie* (SN Repal) as well as the *Régie Autonome des Pétroles* (RAP) and Royal Dutch-Shell joint-ventures, the *Compagnie de Recherche et d'Exploitation de Pétrole au Sahara* (CREPS) and the *Compagnie des Pétroles d'Algérie* (CPA).
- 5 Preserving a rich collection of activity reports, corporate bodies’ meeting minutes and correspondence, CFP-A archives is the main accessible source of French hydrocarbon industry

history in Algeria. The collections keep important documentation presenting innovation in oil and gas exploration techniques, administrative methods automation, human resource management and organization. Readers will also find an important collection of financial documentation presenting the activities of different joint-ventures founded by CFP-A and SN Repal. For example, the *Société Pétrolière de Gérance* (SOPEG) records attest the role of French engineers in the Hassi Messaoud – Béjaïa pipeline. Presenting workers’ everyday life, these files complete the important photographic collection preserved in Total Historical Archives. In the same way, the *Société d'Exploitation de Hydrocarbures d'Hassi R'Mel* (SEHR) records contribute to study the development of Hassi R'Mel gas field between the 1960s and the 1970s. The *Compagnie Algérienne de Méthane Liquide* (CAMEL) record helps to explain the evolution of gas consumption in Europe thanks to the development of liquefaction technology and the construction of the world first liquefaction plant in Arzew.

In addition to these thematic orientations, CFP-A 6 archive sheds new light on three distinct periods of French hydrocarbon industry history. The first period starts with the beginning of Saharan geological exploration in the aftermath of World War II. For CFP-A this phase officially started with the signing of a cooperation agreement with SN Repal in 1951, formalizing the joint exploration of a 260 000 km² area in northern Sahara. The massive mobilization of private and public investments rapidly led to the first oil discovery in 1956 while the Algerian war of Independence was in full swing. After the mediatization of the Saharan Oil Saga among French public opinion, the second period is dominated by the 1962 Algerian independence and the consequent decision to start oil exploration in other productive regions of Asia, Africa and in the North Sea. Nevertheless, the archives highlight the role of CFP-A in French-Algerian cooperation agreement and in training Algerian engineers and technicians. The third period is characterized by the nationalization of French oil companies in 1971 and the adoption of a new industrial strategy based on cooperation and technical assistance.

⁶ Total Historical Archives, 18V01807/1-714, *Archives de la Compagnie Française des Pétroles Algérie* (the archival processing of this collection has been carried out by the author of this article between 2016 and 2018).

⁷ Total Historical Archives are located in the company’s headquarters in La Défense. The reading room is open by appointment from Monday to Friday from 9am to 5 pm (gs.tfms-paris-archives@total.com)

⁸ Total Historical Archives, AO011902 *Récit de carrière de Jean Picard*, Paris, 9th May 2018

7 A large number of research questions could be answered using these unpublished sources. Life in the oilfields could be approached from a multidimensional perspective focusing on three main features. The first one is the division of labor between expatriated and local workers, a subject that has recently been approached by scholars.⁹ The analysis of CFP-A Human Resources strategy can contribute to this rising academic debate, envisaging a comparative analysis of training and social promotion models developed by French companies in Algeria and Anglo-American companies especially in the Middle-East. The second feature focuses on the technological development enhanced by the adaptation of oil and gas techniques to the Saharan working environment. CFP-A Technical Department archives present the technological innovations in seismic prospection, drilling techniques and gas liquefaction process. Presenting the company's achievement, archives do not conceal the industrial misadventure and the projects that never got off the ground like the Trans-Mediterranean pipeline that was first envisaged during the 1960s. The third feature is the analysis of the oilfield as a spatial framework that fostered the emergence of a new professional category. CFP-A collection shows the everyday life in Hassi Messaoud "Maison Verte", the company living base that was designed to provide French personnel with the highest standard of living. Drawing a portrait of the first French oilmen, these sources give a general overview of habits, rituals and mentalities, retracing the life of this community in the middle of the desert.

MEMORIES FROM THE OILFIELD: THE INTERDEPENDENCE OF ORAL AND WRITTEN SOURCES IN THE SOCIAL HISTORY OF HYDROCARBON INDUSTRY.

8 Even if CFP-A archival collection impresses the reader with its richness and entirety, a minor part of the documentation has been lost over the

⁹ Touraj Atabaki, Elisabetta Bini and Kaveh Ehsani (eds.), *Working for Oil: Comparative Social Histories of Labor in the Global Oil Industry* (New York: Palgrave Macmillan, 2018); Elisabetta Bini and Francesco Petrini, "Labor politics in the oil industry: new historical perspectives", *Labor History*, vol. 60, n° 1, 2019, 1-7.

years. This is due, on the one hand, to complications occurred while the documents were transferred from Algeria to France during the Algerian war of independence.¹⁰ On the other hand, the conservation of the archival collection has been deeply influenced by the archivists' historiographical sensitivity. According to archival theories, the archivist decides the destruction or the conservation of records at the end of their lifecycle. The conservation of records because of their historical value is deeply influenced by major historiographical tendencies in a defined context.¹¹ This is the reason why only a limited number of internal documents reporting the living condition in the oilfields and the social life in the industrial sites are still accessible nowadays.

This lack of written sources attesting the everyday life in the company imposes to resort to memories and stories of the people that lived through this important chapter of French industrial history. Whereas the legitimacy of oral sources has been debated for a long time among French archivists and historians,¹² nowadays it seems that the existing distinction between "regular archives" and "alternative archives" is losing its appeal.¹³ Oral Archives are no longer perceived as alternatives sources but their complementarity with paper archives is confirmed. Nevertheless, recent debates¹⁴ have highlighted

¹⁰ Total Historical Archives, AO11916, *Récit de carrière de Sylvianne Loste*, Paris, 24th January 2019.

¹¹ Cf. Association des Archivistes Français, *Les archives dans l'entreprise : guide des durées de conservation* (Paris: Association des Archivistes Français, 1997). Roger Nougaret and Association des archivistes français (eds.), *Guide des services d'archives des entreprises et organismes du monde du travail* (Paris: Editions du CNRS, 1998).

¹² Florence Descamps, *Archiver la mémoire: de l'histoire orale au patrimoine immatériel* (Paris: Éditions EHESS, 2019). Florence Descamps, *L'historien, l'archiviste et le magnétophone : de la constitution de la source orale à son exploitation* (Paris: Comité pour l'histoire économique et financière de la France, 2001).

¹³ Didier Devriese, "Archives 'régulières' versus archives 'alternatives': un examen en légitimité", *17e Journées des Archives: Archiver le temps présent - les fabriques alternatives d'archives* (Louvain-la-Neuve: Université catholique de Louvain, 2018).

¹⁴ "Pratiques contemporaines de l'histoire orale. De l'entretien aux archives orales" Paris, Ecole des Hautes Etudes en Sciences Sociales, April, 11th to 13th, 2019.

how nowadays the interview methodology has integrated the historian's toolkit.¹⁵ In the field of Energy history, research on History of Electricity has encouraged the development of the first Oral Archives programs since the 1980s. The first project aimed to collect the career stories of Electricité de France managers and French hydroelectric engineers.¹⁶ But, despite the fact that the number of Oral Archives projects on hydrocarbon history has increased in the Anglo-Saxon world,¹⁷ a lack of memories from the oilfields persists nowadays.

10 For these reasons, after processing the *Compagnie Française des Pétroles Algérie* archival collection, all the conditions have been met to launch the first Oral Archives program in Total Historical Archives in 2018. The first one was to acknowledge that the existing gap in written archives needed to be bridged with the career stories of the former CFP-A personnel. The heritage aspect has been the most important reference during the conception of the project. Nevertheless, the issue of the intergenerational transmission of technical knowledge was taken into consideration. The second condition was the fruitful interaction between Total Historical Archives and the CFP-A former staff association. The retired company agents were willing to take part in the Oral Archives program, sharing their stories and preserving the company's collective memory. The third

¹⁵ Daniel Berteaux, "L'histoire orale en France: fin de la préhistoire", *International Journal of Oral History*, vol. 2, n° 2, 1981, 121-127.

¹⁶ Martine Bungener, Alain Beltran and Jean-François Picard, *Histoire(s) de l'EDF: comment se sont prises les décisions de 1946 à nos jours* (Paris: Dunod, 1985); Part of the oral archives are accessible online "Mémoire de l'industrie et ses réseaux" project website: <http://www.memoire-orale.org>, consulted on august 19th, 2019.

¹⁷ Since the year 2003 the University of Aberdeen and British National Library Oral archives project "Lives in the Oil Industry", has collect more than 200 life and careers stories on the history of the UK North Sea oil and gas industry: <https://www.abdn.ac.uk/oillives/about/programme.shtml> (consulted on September 2nd, 2019). In Canada a project cofounded by oil companies and the Petroleum History Society "Petroleum Industry Oral History Projects" has collected more than 400 interviews in between 1981 and 2013: <http://petroleumhistory.ca/oralhistory/>, (consulted on September 2nd, 2019).

condition was the decision to go back to the roots while preparing Total centenary anniversary in 2024, replacing the historical dimension at the core of the corporate identity.

Integrating the archival methodology and Social history approach, the project « Archives orales de la Compagnie Française des Pétroles Algérie: une entreprise de mémoire (s) » has made it possible to collect the memory of 23 members of CFP-A former staff between 2018 and 2019. The main target group of the oral archive collection is divided into three categories: CFP-A and Total Algérie agents, CFP and partner companies' personnel seconded in the Sahara, consultants and contracted workers. The Oral Archives program has been chronologically limited to the period between the foundation of the company in 1953 and the retirement of the first generation of engineers and technicians trained in the Sahara during the 1990s. Participants have been selected in order to ensure an equal representation of different oil industry's families of profession: geologist, geophysicists, drillers, producers, jurists and executives. Considering the overrepresentation of Pieds-Noirs¹⁸ among the company staff, it has been necessary to widen the target population in order to collect a greater variety of stories. Furthermore, although hydrocarbon industry has been for a long time a male dominated environment, this project has made it possible to collect career stories from the women who worked in the CFP group. CFP-A Oral Archives present today, among others, a long interview with the first French female exploration engineer recruited by Total group in 1957.

The result of this Oral Archives campaign is a collection of 24 interviews lasting from 1 to 3 hours for a total of more than 50 hours of audio and video recording. Every interview has been structured following a chronological approach and focusing on the main stages of the interviewee's professional career. Starting from young age

¹⁸ The term Pieds-Noirs, literally Black-Foot, indicates the population of French and European origin that was born in Algeria during the colonial period and moved to France after Algerian Independence in 1962.

education, the career stories retrace the path followed by the first oil engineers and technicians at the beginning of oil and gas exploration in the aftermath of World War II. Interviews have focused on the recruitment process in the company to deepen the understanding of the company's human resources strategy. The information collected has given important details about the Algerian labor market, the physical and psychometric criteria adopted to recruit the company personnel and the role of the company in adapting its organization to work in an extreme and isolated environment such as the Sahara. Furthermore, collecting information about the workday activities has helped to understand the workers' perceptions of the company structure, the management style adopted and the relations between different departments. Otherwise, the most important topic discussed during interviews was the everyday life in the company living bases in Hassi Messaoud. Memories about this life experience enables us to question the identification process that characterizes this social group and their professional identity. Collecting details about the yearly celebration of oilmen's patron saint on Saint Barbara day, the interaction between French and Algerian communities in the living space and the ceremonial relation between the District Chief and his subordinates suggest that oil history is, first and foremost, a humanized history.

CONCLUSION

The contemporary social demand for energy transition is requiring us to deepen our knowledge of the social dimension of Energy history. Understanding the 21st century conception of energy phenomena obliges us to analyze from a historical perspective our relationship to fossil fuel, our consumption patterns as well as the representation of hydrocarbon industry in everyday life. Since the beginning of Energy history, scholars have privileged the adoption of a macro-historical approach that contributed to the development of a top-down historiography. The processing of corporate archives, such as the *Compagnie Française des Pétroles Algérie* archival collection, has provided historians with unpublished sources supporting the adoption of micro-social perspectives¹⁹ in oil and gas history. Instead of focusing on organization, industrial structure and decision-making process, these new collections enable us to analyze specific aspects of people's daily life in the hydrocarbon industry. Considering the lack of sources that characterizes corporate archives, the systematic development of Oral Archives programs can help to preserve the collective memory of companies and organizations. A fruitful interaction between historians and archivists can support the collection of life stories contributing to affirm the idea of complementarity of oral and written sources. 13

¹⁹ Christophe Charle, "Contemporary French Social History: Crisis or Hidden Renewal?", *Journal of Social History*, vol. 37, n° 1, 2003, 57-68.

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REVIEWS

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Abstract

Anand Toprani's *Oil and the Great Powers: Britain and
Germany, 1914 to 1945* (Oxford University Press, 2019)
describes how the failure of Britain and Germany to secure
oil supplies undermined each country's hegemonic ambi-
tions over three decades. Leveraging archival records and the
model of comparative history, Toprani pens a work replete
with insights for historians of energy and geopolitics.

Plan of the article

- Comparative human narratives
- Geography and the pivotal year of 1935
- Germany's search for self-sufficiency
- Energy transitions and world power

1 For the past two hundred years, dominance of fossil fuel resources has bestowed global power. Britain became the world's first global hegemon in the nineteenth century, thanks to its first-mover advantage in industrialization and its peerless navy, neither of which would have been possible without the world's largest supply of high-quality domestic coal resources. The United States similarly leveraged its own prodigious oil resources in the twentieth century into dollar primacy, industrial strength, and military power, and then embraced global hegemony. Sandwiched between these epochs, Britain and Germany fought two world wars for global hegemony in which neither side had enough oil resources to win and after which both sides emerged weaker.

2 This is the subject of Anand Toprani's excellent new history, *Oil and the Great Powers: Britain and Germany, 1914 to 1945* (Oxford University Press, 2019), winner of the 2020 Richard W. Leopold Prize from the Organization of American Historians, which is awarded every two years. The work narrates how the British and German failure to secure oil supplies undermined each country's hegemonic ambitions over three decades. "Britain and Germany drew the same lessons from [World War I] with regard to oil. Not only did they need it, and in much greater quantities than heretofore, but they had to look for it beyond their borders" (6). Britain sought oil independence through investments in the Middle East in the interwar period. Germany's options were limited to its synthetic fuel industry and land-based sources linked by rail and barge, namely Romania and the Soviet Union.

3 Toprani, currently an Associate Professor of Strategy and Policy at the US Naval War College in Rhode Island, argues that the powers erred by seeking independence in oil in the first place: "energy independence is not synonymous with energy security" (16). They might have attained energy security, however, if they had chosen to be interdependent, something neither was politically willing to consider. "Opting for energy security as part of a strategy of interdependence could have provided Britain and Germany with

ample supplies of energy and perhaps guaranteed their economic prosperity, but only at the cost of their political freedom. This was unacceptable to elites in either country" (17-8).

We now know how elusive energy independence is, but this was less clear in the 1920s and 1930s, when oil was flooding onto the market, creating demand with low prices, and supplanting coal in the transportation sector.¹ Britain's quest for oil independence is somewhat forgivable, given its past independence in coal and growing demand for oil. Germany, on the other hand, started from behind, tried to rewrite the rules of the game, and nearly succeeded. For both powers, however, the reality of logistics, planning, prices in currencies they didn't control, sources located in lands across oceans, and geopolitics made independence a pipe dream.

COMPARATIVE HUMAN NARRATIVES

Oil and the Great Powers is a vital contribution to the historiography of oil and world power and will provide readers with new sources and insights to spur their own work, especially concerning these three decades, but also for broader questions pertaining to energy geopolitics. Scholars have made vital contributions to explaining how oil revolutionized warfare in World War I,² how powers sought concessions in the Middle East in the interwar period,³ and how oil shaped World War II in Europe and helped trigger it in the Pacific.⁴ But no one has examined the British-German stories concurrently and in such holistic fashion, thus providing a complete narrative of how oil helped produce the cataclysm of World

¹ Nuno Luís Madureira, "Oil in the Age of Steam", *Journal of Global History*, vol. 5, n° 1, 2010.

² Walter Jensen, "The Importance of Energy in the First and Second World Wars", *The Historical Journal*, vol. 11, n° 3, 1968.

³ Gareth Jones, "The British Government and the Oil Companies, 1912-1924: the Search for an Oil Policy", *The Historical Journal*, vol. 20, n° 3, 1977; and William Stivers, "International Politics and Iraqi Oil, 1918-1928: a Study in Anglo-American Diplomacy", *Business History Review*, vol. 55, n° 4, 1981.

⁴ Daniel Yergin, *The Prize: the Epic Quest for Oil, Money, and Power* (New York: Simon & Schuster, 1991).

War II. This book, quite frankly, should have been written decades sooner, but required the right scholar, one capable of using both English and German-language archival and secondary sources and well-versed in oil, geopolitics, history, and strategy, to take it on.

- 6 Toprani's account is especially powerful in two methodological respects. First and foremost, he uses archival records to reveal how powerful individuals, including Adolf Hitler himself, shaped oil policy. Interdepartmental debates can often dull readers, but Toprani locks in on the relevant debates and demonstrates how leaders pushed and pulled on policy. Whitehall's interdepartmental squabbles were particularly fascinating, and the tradeoffs argued between the Treasury, the Admiralty, the Petroleum Department, Foreign Office, and Colonial Office reveal how intertwined and complicated British policy was, which proved, at times, detrimental to British strategy.
- 7 It is these human-driven decision-making narratives that lend the book's comparative approach – covering Britain over four chapters in Part I and then Germany over four chapters in Part II – such resonance. This comparative approach works so well because it distills the two different strategies on their own merits. "Although there is some overlap in chronology and policy aims, the strategies adopted by Britain and Germany were as different as the reasons for their failure" (19). Planning, logistics, and timing all undid the plans of the powers for oil independence, but in different ways. The book's comparative approach should be considered a model for future histories of energy that involve two or, at most, three nations.

GEOGRAPHY AND THE PIVOTAL YEAR OF 1935

- 8 Part I traces Britain's attempts to stockpile oil and acquire new foreign concessions. Indebted to the Americans and forced to pay for much of its oil in dollars, Britain started the interwar era in a precarious position. Its large bet on the Middle East – Iran and Iraq – was not unwarranted: prodigious supplies came online in both countries. Yet Britain could not count on Middle

East supplies to Europe in wartime given both the shortage of tankers and long journey required. Resource nationalism, meanwhile, imperiled its most readily available, non-U.S. source of oil in the Western Hemisphere: Mexico. "Britain's failure had less to do with geology than geography," writes Toprani, because the British "based their oil strategy on the premise that there would not be any threat to their supply lines" (119).

The story's definitive turning point—and one I didn't see coming—arrives in 1935. "Germany's abrogation of the Versailles Treaty and the fracturing of Britain's relationship with Italy over its invasion of Abyssinia in 1935 changed the strategic calculus. Germany and Italy, although inferior to Britain at sea, could sever access to the Middle East through the Mediterranean—through which 34 percent of Britain's oil imports traveled in 1934—and possibly even invade the region" (97). Britain's lines of communication to oil supplies in the Middle East, on which it placed its bet for oil security, were now threatened, and it did not have enough tankers to avoid the Suez Canal and bring the oil around Africa. A Mediterranean disruption, in other words, could sever Britain from its Middle East supplies, according to planners. "Seldom," Toprani concludes, "has a strategy promised so much yet yielded so little as Britain's efforts in the Middle East following World War I" (129). Britain suffered a further blow in 1938, when Mexico nationalized its oil industry, where British firms were dominant (108–113). Thus, on the eve of war in 1939, Britain found itself in a similar position as in 1914: largely dependent on the United States for oil supplies.

On the Mediterranean threat, I wondered if Toprani missed an opportunity to examine the 1936 Montreux Convention, which gave Turkey control over regulating the Turkish Straits and created uncertainty regarding the Soviets' most critical oil-export chokepoint. The Soviets protested the convention in 1939 and 1940, and later in 1945, seeking air and naval bases to assure their position in the straits. We learn that Axis oil supplies, both German and Italian, from Romania and the Soviet Union had to travel overland

from 1939–1941, which was more expensive and logistically demanding. Did the convention and Turkey’s pro-Allied attitude also play a role in this story by hampering the Axis powers in the Mediterranean?

GERMANY’S SEARCH FOR SELF-SUFFICIENCY

11 The story of Britain is thorough and original, but the story of Germany is even more so, partly because the stakes and gambles were more dramatic. The Germans had learned in World War I that they had to secure oil supplies if they were to unseat the British, but they faced similar constraints as before. Without a dominant navy and already a continental power, Germany looked to new imports from nearby countries – Romania in 1938 and the Soviet Union in 1939 – and to grow its own synthetic fuel industry, which had the added benefit of aiding foreign currency balances by reducing German dependence on foreign imports of fuel (177). Germany’s attempts to thread a tight needle on oil foundered on two mistakes. The first was Hitler’s impatience. With Italy’s resurgence and the victory of fascist forces in Spain, Hitler believed the geopolitical chessboard was titling in his favor and pushed for his plans of conquest earlier than Germany was logistically ready, at least in oil. Germany’s second mistake was not planning for how to supply Europe after it conquered it (199). Despite these shortcomings, Germany, partly through luck but also through adaptation, supplied its own armed forces ably during the war, at least until the spring of 1941.

12 By the summer of 1941, however, Germany’s oil situation was dire. Desperate to correct its coming oil imbalance, it had established Continental Oil in March 1941 to try to free Germany from the control of the Anglo-American companies in Romania, but this half-measure would not be enough, nor were increased investments in synthetic fuels viable given wartime exigencies. Thus, Hitler crossed the Rubicon and invaded the Soviet Union with Operation Barbarossa, something he had begun planning in July 1940. After securing the oil fields in Baku, Germany’s strategy was to move into the

Mediterranean, severing Allied access to Soviet and Middle East oil altogether and opening it up for the Germans (231–37). Its failure, of course, was a major turning point in the war and dashed Germany’s search for self-sufficiency in oil, the subject of the final chapter of Part II.

ENERGY TRANSITIONS AND WORLD POWER

The undercurrent of Toprani’s twin narratives is the global transition from coal to oil as the most-used energy source. Britain was the first power to recognize and invest in oil as a transportation fuel for naval advantage, starting its conversion of destroyers and submarines in 1901 and of battleships in 1912. The United States only partially converted its fleet during this period, while Germany started during World War I, but the British made a willful head start in a bid to retain global hegemony.⁵ Though the outcome was determined on land, British control of seas kept the German navy at bay and restricted imports into the country. A similar scenario occurred during World War II, as British control of the Atlantic enabled it to import ample supplies of oil from the United States – and then military hardware through Lend Lease from 1941 and troops from 1942. In the end, planning, logistics, and strategic enclosure by the Allies turned the tide in both conflicts.

Oil and the Great Powers made me think that a comparative study of the United States and the Soviet Union could be similarly fascinating. Both countries owe their global power to oil to an extent, and it seems that they discovered how best to coerce their enemies with oil in the same year: 1941. The Soviets made the obvious decision to sever oil exports to Germany after Hitler launched Operation Barbarossa in June 1941. Did this decision, and Operation Barbarossa more broadly, inform the United States’ decision to embargo oil exports to Japan in July/August 1941? The United States and the Soviet Union could also be an interesting pairing along

⁵ Volkan Ediger, John Bowlus, “A Farewell to King Coal: Geopolitics, Energy Security, and the Transition to Oil, 1898–1917”, *The Historical Journal*, vol. 62, n° 2, 2019.

the lines of Toprani's model, for instance from 1941-1970 as they competed globally while each having ample oil supplies, although access to Soviet archives would make this challenging. Alternatively, the two powers have dabbled in interdependence and cooperation in oil from 1991-2020, with United States companies seeking oil deals in Russia and both aiming to extend oil's primary position in the global energy system.

- 15 Control over energy resources continues to shape geopolitics today. All powers still depend on oil for the military transportation sector, but

the energy transition demands cleaner fuels, and some fear that China's dominance over the minerals required to construct renewable energy technologies, batteries most notably, could be a future geopolitical flashpoint. *Oil and the Great Powers* reminds us both that transitions in energy sources change geopolitics and that these shifts take decades to occur. There are no quick solutions, and energy independence remains as elusive today as it did for Britain and Germany. Interdependence remains the only path towards energy security.

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