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American Quarterly, Volume 64, Number 3, September 2012, pp. 437-467
(Article)

Published by The Johns Hopkins University Press
DOI: [10.1353/aq.2012.0039](https://doi.org/10.1353/aq.2012.0039)



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A Tale of Two Gulfs: Life, Death, and Dispossession along Two Oil Frontiers

Michael Watts

When the drill bored down toward the stony fissures
 and plunged its implacable intestine
 into the subterranean estates,
 and dead years, eyes of the ages,
 imprisoned plants' roots
 and scaly systems
 became strata of water,
 fire shot up through the tubes
 transformed into cold liquid,
 in the customs house of the heights,
 issuing from its world of sinister depth,
 it encountered a pale engineer
 and a title deed.
 —Pablo Neruda, "Standard Oil Co.," *Canto General*

Oil's relation to modernity has been construed in three broad sorts of ways with very little intellectual traffic between them. One focuses on oil-producing states and, to quote the title of Michael Ross's new book (2012), on "how petroleum wealth shapes the development of nations." In Ross's dystopian account it is the scale, source, instability, and secrecy of oil and the attendant rise of the so-called new seven sisters—the massive national oil companies of petrostates like Nigeria, Russia, Saudi Arabia, and Iran—which explain the so-called paradox of plenty, namely, the state pathologies and human developmental failures of oil-rich states (the "resource curse"). In his influential book *The Bottom Billion*, the Oxford economist Paul Collier offers a version of this thesis in which oil revenues are captured by rapacious political elites ("the survival of the fittest") thereby contributing to autocratic rule, and those revenues are also predated or looted by rebels for whom oil finances not so much emancipatory politics (social justice, self-determination) but organized crime conducted as insurgency and war (in Collier's account, greater oil dependency produces an increased likelihood of civil war and violence). An "oil curse" appears, in analytic terms, rather like hydrocarbon determinism; or at the very

least the causal powers attributed to oil are given particular sorts of meanings and valencies. Oil here means oil *money* and oil politics means *rents* captured by state agencies and the political class. The agency of oil corporations, or the oil service industries or financial institutions, for example, is almost entirely nonexistent. Put differently, in the universe of the resource curse an Exxon or a Shell is an agent that in conceptual terms is only present as an entity to be predated by rebels who have figured out how to make oil a profitable business (in effect, violent accumulation through a protection racket).

Another line of reasoning—Michael Klare’s new book *The Race for What’s Left* (2011) is a good exemplar—is almost entirely focused on “Big Oil” and global geopolitics (from the vantage point of American empire, what he has called the U.S. global oil acquisition strategy). Here the driving logic resembles another form of commodity determinism, this time emitting a robust Malthusian signal. Resources like oil are finite; industrial capitalism’s enormous appetite for oil and gas is now spurred on by extraordinary capitalist dynamism in South and East Asian economies—more than half of the oil consumed between 1860 and the present was accounted for in the three decades after 1980. Peak Oil is now upon us, which necessarily amplifies the geopolitical pressures and struggles precipitated by tight oil markets, slower rates of discovery, and challenging operating environments (the “end of cheap and easy oil,” as the oil industry puts it). Precisely because of its strategic qualities, oil exploration and development has a praetorian cast, a frontier of violent accumulation working hand in hand with militarism and empire. Haunted by the specter of depletion, states and corporations embark on a desperate scramble for oil (and other natural resources, as the new McKinsey report on the “resource revolution” emphasizes),¹ which is leading inexorably to a tooth and nail struggle for both conventional and unconventional hydrocarbons (e.g., the tar sands, shale gas, deepwater oil and gas). In this account we are about to enter a new “thirty-years” war for resources characterized by market volatility, ruthless resource grabs, and a sort of military neoliberalism.² Here it is less oil as money than oil as post–Cold War power politics (or oil as national security in the contemporary argot). What is on offer is a Big Oil–Big Military–Big Imperial State triumvirate. The invasion of Iraq in 2003 is, in this account, a sort of paradigmatic case.³

Finally, there is oil as an item of mass consumption, or more properly the relations between oil and modern forms of life, most especially the post-1945 American way of life defined, one might say, through petrochemistry. Here the language—theoretical and empirical—is of a rather different register. Oil is capacious, central to virtually every aspect of our lives; as the *New York Times*

put it, oil “oozes through your life,” showing up in everything from asphalt to milk shakes to drugs to plastics to fertilizers.⁴ Oil is capacious, the lifeblood of just about everything including, it turns out, the sorts of civic freedoms and political liberties that most Americans have come to take for granted: unlimited personal mobility, cheap food, the prospect of property ownership in the suburbs.⁵ Oil underwrites modern life, but the social cost is addiction (“Drill, baby, drill”), the terrible costs of which are now clear: carbon emissions and global warming, the assumption of new technological and environmental risks as unconventional sources are exploited, and continued political dependency on parts of the world that, as Dick Cheney famously noted, do not have U.S. interests at heart. Not only is the era of easy oil a thing of the past, but the burdens of oil exploitation will increasingly be felt on the domestic front in Alaska, in the Gulf of Mexico, and across the Marcellus and Barnett shales in the mid-Atlantic and southern states. In this rendering, oil is a form of bio-power,⁶ a resource central to the life of populations and to the management of populations.⁷ To deploy the language of Stephen Collier and Andrew Lakoff, oil actively constitutes a particular “regime of living”—but also, as I show, a regime of death, of bare life.⁸

In much of this writing, oil has been invested with Olympian powers. Oil distorts the organic, natural course of development; oil wealth ushers in a bloated economy of hyperconsumption and spectacular excess: decadent shopping malls in Dubai or flagrantly corrupt Russian “oilygarchs.” The danger in all this sort of oil talk is that there is a slippage between oil as a commodity of indisputable political, economic, and cultural significance and what one might call commodity determinism. Oil, says Imre Szeman, is hardly incidental to capital or to modernity, but “that is not the same as saying it is a prime mover of all decision making.”⁹ Oil rarely escapes the long shadow of Malthusian scarcity—peak oil thinking, after all, saturates much of the thinking on the political right and left. But hugely inflated powers are vested in the thing itself: petroleum undermines or promotes particular forms of democracy, it causes war and rebellion, it retards economic growth, it captures political office. To see oil in this way not only exaggerates the powers of the thing itself (as opposed to thinking about oil capital and oil markets) but also provides too blunt, and curiously too truncated, an accounting of the political economy of what I call the oil assemblage.

Many of those who write about oil typically, and rather curiously, have little to say about the materiality of oil and the political economy of what falls within the circumference of a vast, complex industry.¹⁰ Timothy Mitchell properly notes that most explanations of oil “have little to do with the ways oil

is extracted, processed, shipped and consumed,¹¹ or the apparatuses by which oil is converted into forms of affluence and influence. Often, he says, oil is an affliction of governments that deploy petrodollars, “not of the processes by which a wider world obtains the energy that drives its materials and technical life.”¹² I want to explore these apparatuses of oil—the oil assemblage—to address the questions of this special issue, namely, empire, dispossession, race, and the insecurities of neoliberal life.

To do so, I read two experiences against each other: first, the onshore oil world in the global South (the Niger delta in Nigeria as part of the wider Gulf of Guinea), and the offshore world of deepwater oil and gas exploration and production in the United States (specifically, the Gulf of Mexico and the Deepwater Horizon blowout). Both arenas can be seen as oil frontiers—frontiers of accumulation and dispossession—rooted in the operations of specific oil assemblages. I hope to do justice both to the relations between the deep infrastructures of the oil world—pipelines, rigs, flowstations, tankers, financiers, engineering firms, security forces, and so on—and to the regimes of life and death in the postcolonial South and the advanced capitalist North. Mitchell claims that the structure of the oil industry is ignored at great cost precisely because it becomes a sort of abstraction—it can be copied or deposited from place to place in a modular fashion—in contradistinction to the notion that political, economic, and social relations are in fact “engineered out of the flows of energy.”¹³ This fabrication is place and time specific because oil is always “discovered” in space-time (say, Spindletop, Texas, January 10, 1901), and subsequently inserted into a very specific localized (if more or less globalized) political economy even if the properties of the wider oil assemblage are in some sense generic or normalized. This insertion process is never just a reflection of a political or economic order developed *de novo* by Big Oil but the outcome of complex accommodations, compromises, complicities, oppositions, and violence. As Mitchell puts it in regard to the Middle East, the oil industry was “obliged to collaborate with other political forces, social energies, forms of violence and powers of attachment.”¹⁴ As Pablo Neruda’s great poem says, the trail of oil leads to the engineer, the title deed, and the customhouse.

Opening up these frontiers—whether in Angolan or Brazilian deepwater, Russian Siberia or increasingly now the frozen frontiers of the Arctic—necessitates engagements with place-specific social and political forces,¹⁵ none of which necessarily or easily are compatible with some presumed set of desires of corporate oil capital (political stability, surplus management, price control) or indeed of imperialist oil-consuming states. In one case the terminal point is an insurgency and combustible politics threatening the very operations of the oil

industry and the petrostate itself; in the other it is the violence of a blowout, the loss of human and environmental life and livelihoods—and of the deadly consequences of substituting technical and financial over political risks. But my story has to start elsewhere, with the prosaics of the oil apparatuses themselves.

The Oil Assemblage

A key starting point is to see oil and gas as a global production network with particular properties, actors, networks, governance structures, institutions, and organizations (a global value chain in the industry argot) but what is, in effect, a regime of accumulation and a mode of regulation.¹⁶ Seen in this way, oil and gas is gargantuan on all counts. The value of the recoverable oil and gas globally is perhaps \$160 trillion (more than the value of all equity markets and equal to the total value of all tradable financial assets); the value of the oil and gas market alone is over US\$3 trillion. Assets of the entire industry now total over US\$40 trillion. Close to 70 percent of all oil produced is traded (over 50 million barrels per day), accounting for the largest component in world trade. Not unusually, over 1 billion barrels of oil can be traded in a day on the New York Mercantile Exchange and the InterContinental Exchange, much of this being “paper oil” (never delivered physically as oil), which is to say part of the booming commodities futures market. By way of comparison, if Exxon were a country it would be twice as large as the GDP of Nigeria (a major oil producer and home to 150 million people) and comparable to Sweden; the largest five oil companies’ collective revenues exceed the GDP of all of Africa.¹⁷

The production network is held together materially by a global oil infrastructure with its own particular geography. Close to 5 million producing oil wells puncture the surface of the earth (77,000 were drilled last year, 4,000 offshore); 3,300 are subsea, puncturing the earth’s crust on the continental shelf in some cases thousands of meters below the sea’s surface. There are by some estimations over 40,000 oil fields in operation. More than 2 million kilometers of pipelines blanket the globe in a massive trunk-network (another 180,000 kilometers will be built at a capital cost of over \$265 billion over the next four years); another 75,000 kilometers of lines transport oil and gas along the sea floor. There are 6,000 fixed platforms, and 635 offshore drillings rigs (the international rig total for June 2011 is over 1,158, according to Baker Hughes).¹⁸ Over four thousand oil tankers move 2.42 billion tons of oil and oil products every year—one-third of global seaborne trade; over eighty massive, floating production and storage vessels have been installed in the last five years. This petro-infrastructure also accounts for almost 40 percent of global CO₂ emissions. All in all, there is nothing quite like it.

A seemingly unstoppable rush to discover and refine more of a resource that everyone agrees is finite feeds this oil hardware, literally and figuratively. Gavin Bridge calls this the technological imperative that manifests itself in the aggressive pursuit of economies of scale in production and refining, and in transportation.¹⁹ There is a dialectical interaction, as he sees it, between efforts to reduce unit costs (by scaling up production) and the scaling up of transportation (to handle increased product volumes). This imperative drives the oil frontier to the ends of the earth, or more properly a mad gallop to the bottom of the ocean. Deepwater exploration is the new mantra (deepwater offshore production grew by 78 percent between 2007 and 2011). On August 2, 2007, a Russian submarine with two parliamentarians on board planted a titanium flag two miles below the North Pole. At stake were the lucrative new oil and gas fields—by some estimations 10 billion tons of oil equivalent—on the Arctic seafloor. What is on offer is a great deepwater land grab, which requires a vast floating and submersible infrastructure: very large crude carriers; the floating, production, storage, and offloading vehicles; massive submersible technologies linking umbilicals, risers, wellheads to floating production and storage devices; high-capacity production rigs and refineries capable of turning overnight 250,000 barrels of oil into 10 million gallons of gasoline, diesel, and jet fuel.

Overlaid on the oil and gas network is an astonishing patchwork quilt of territorial concessions. Spatial technologies and spatial representations are foundational to the oil industry: seismic devices to map the contours of reservoirs, geographic information systems to monitor and meter the flows of products within pipeline, and of course the map to determine subterranean property rights. Hard rock geology is a science of the vertical, but when harnessed to the marketplace and profitability it is the map that becomes the instrument of surveillance, control, and rule. The oil and gas industry is a cartographer's dream-space: a landscape of lines, axes, hubs, spokes, nodes, points, blocks, and flows. As a space of flows and connectivity, these spatial oil networks are unevenly visible (subsurface, virtual) in their operations.²⁰

Mitchell's exhortation to "closely follow the oil" means tracing the links between pipelines and pumping stations, refineries and shipping routes, road systems and automobile cultures, that is, across the infrastructural networks, across the worlds of engineering and title deeds, into the charnel houses of finance and the military and thereby to discover "how a set of relations was engineered among oil, violence, finance, expertise and democracy."²¹

In seeing oil as an assemblage and as a zone of political and economic calculation, I want to emphasize the variety of actors, agents, and processes that

give shape to our contemporary iteration of hydrocarbon capitalism: this is obviously the supermajors, the national oil companies (NOCs) and the service companies (Halliburton, Schlumberger) and the massive oil critical infrastructures, but also the apparatuses of the petrostates themselves, the massive engineering companies and financial groups, the shadow economies (theft, money laundering, drugs, organized crime), the rafts of nongovernmental organizations (human rights organizations, monitoring agencies, corporate social responsibility groups, voluntary regulatory agencies), the research institutes and lobbying groups, the landscape of oil consumption (from SUVs to pharmaceuticals), and not least the oil communities, the military and paramilitary groups, and the social movements that surround the operations of, and shape the functioning of, the oil industry narrowly construed. But this is only a start. The financial sector is key both in terms of project financing but also as oil itself becomes a financialized asset reflecting a radical change in the oil market itself in the last decade or so. This opens the door to securitization, speculation, and the question of regulatory agencies and the lack thereof. These governance institutions include the commodity exchanges but also the newly emerging global governance mechanisms such as the International Energy Forum. And not least for every barrel of oil produced, moved, refined, and consumed there are carbon emissions (and thereby carbon trading, carbon credits, offsets, and carbon markets), which is itself a complex market with its own politics and dynamics. The connectivities between oil, finance, the military and defense industries, petrochemicals, and the new life science industries only hints at the circumference of this vast assemblage.

The oil assemblage resembles, in some respects, what Andrew Barry has called a “technological zone,” a space within which “differences between technical practices, procedures or forms have been reduced, or common standards have been established.”²² Barry sees such a zone as containing or producing different and multiple spaces (some of which have no boundaries as such) through the operations of metrological (measurement), infrastructural (connection), and qualificatory (assessment) standards. To pursue the analogy, an oil assemblage is what Mitchell calls a coordinated but dispersed set of regulations, calculative arrangements, infrastructural and technical procedures that render certain objects or flows governable.²³ An oil assemblage is a sort of vast governable, and occasionally very ungovernable, space.²⁴ If the oil assemblage is a space of standardization, its operations, however, are always temporally and geographically contingent. One of the assemblage’s structuring forces, always constituted locally, is what I call the permanent frontier.

Frontiers of Dispossession: A Tale of Two Gulfs

At roughly 10 p.m. on April 20, 2010, mud and water shot up and out of the derrick of BP's drilling rig Deepwater Horizon, located in deepwater in the Gulf of Mexico (GOM), and was followed shortly by a massive explosion instantly converting the rig into a raging inferno. Located almost fifty miles off the coast of southern Louisiana, Deepwater Horizon sank two days later to the ocean floor, resting one mile below the sea's surface. As the rig sank, it ruptured the risers (the marine drilling riser connects the floating rig to the subsea wellhead), and a mixture of oil and gas, under extreme pressure, was released into the warm and biologically rich waters of the Gulf. By mid-May 2010, the Macondo well discharge was hemorrhaging at a rate of over 200,000 gallons per day; surface oil covered 3,850 square miles. When it was all over almost 5 million barrels had been released and 35 percent of the Gulf Coast affected. Rarely noted during the crisis was the long and deep history of spills and blowouts in the Gulf, and the systematic destruction of the Gulf coastline, especially in the Mississippi delta, over the previous century.²⁵

In the midst of the Deepwater Horizon catastrophe, Royal Dutch Shell released a report on its activities in Nigeria, the jewel in the crown of the West African Gulf of Guinea, an oil-producing region of global significance and a major supplier of high quality "sweet and light" crude to U.S. markets.²⁶ During 2009 Shell confirmed that it had spilled roughly 14,000 tons of crude oil into the creeks of the Niger delta, the heart of Nigeria's oil economy. In other words, in *one* year, a *single* oil company (Shell, incidentally, currently accounts for roughly one-third of Nigerian national output) was responsible for 4.2 million gallons of spilled oil; in 2008 the figure was close to 3 million gallons. In related figures released in April 2010, the Federal Ministry of the Environment released a tally sheet of 2,045 recorded spill sites between 2006 and 2009. Since the late 1950s when oil became commercially viable, over seven thousand oil spills have occurred across the Niger delta oil fields. Cumulatively over a fifty-year period, 1.5 million tons (4 billion gallons) of crude oil has been discharged in an area roughly one-tenth the size of the federal waters of the GOM. As an Amnesty International report put it, this spillage is "on par with [an] Exxon Valdez [spill] every year."²⁷ Since 1960, to put it more concretely, each acre of the Niger delta has been the recipient of 40 gallons of spilled crude oil.

These two instances of petrocalamity—each centered on exploration and production at different points in the global value chain but with common points of reference in the history of the Black Atlantic—provide an opportu-

nity to explore the instabilities and contradictions in the oil assemblage. Both are oil frontiers, understood not simply as a territory peripheral to, or at the margins of the state in some way, but as a particular space—at once political, economic, cultural, and social—in which the conditions for a new phase of (extractive) accumulation are being put in place (the establishment, in short, of the conditions of possibility for a new phase of capital accumulation).

In the world of big oil, a frontier has a specific set of connotations. A geological province, a large area often of several thousand square kilometers with a common geological history, becomes a petroleum province when a “working petroleum system” has been discovered.²⁸ A commercial petroleum system (or “play”) consists of several core features: a source rock with rich carbon content and a geological depth capable of converting organic carbon to petroleum; a sedimentary reservoir rock with sufficient pore space to hold significant volumes of petroleum and permeability to permit petroleum to flow to a well bore; a nonporous sedimentary rock as effective barrier to petroleum migration; and a structural trapping mechanism to capture and retain petroleum. Once these preconditions are met, the oil frontier comes to life in the play.

The discovery of a petroleum field—a play with commercial potential—triggers a process of appraisal and development, namely, drilling many new wells to confirm the extent and properties of the reservoirs and fluids and to determine whether the configuration warrants further investment. The development of the initial fields in a new province is replete with technical uncertainties that collectively shape the ultimate volume of oil that can be recovered. The properties of reservoir rock, the fluids it contains, and the fluid dynamics in the rock are key, but so too are the fluids that vary in their composition, specific gravity, and viscosity. As Peter Nolan and Mark Thurber point out,²⁹ uncertainties around each of these field variables translate into uncertainty in ultimate recovery volumes, peak production, the life of the field, and so on.

The frontier, in sum, refers to the spatiotemporal dynamics in which fields, in a petroleum province, are discovered, developed, and recovered; the process from so-called primary reserve creation to tertiary recovery from existing “mature” reservoirs. With the development of one or more commercial fields, a frontier becomes “proven” and some uncertainties are reduced, which often induces an influx of new entrant companies that were deterred when entry barriers were high, which includes state companies and smaller independents. Another frontier emerges—a function of new technologies and aging reservoirs—as aging oil fields attract investments through tertiary recovery. But the idea of the frontier captures something else, namely, a process, covering many decades, through which the industry has seen the continual discovery,

exploitation, and extension of the oil frontier from onshore sedimentary basins through shallow offshore basins and into the deep and ultradeepwater basins. Recent and emergent frontiers include the challenges of very deep Arctic water and the commercialization of vast resources of unconventional oil and gas like Canadian tar sands and the U.S. oil and gas shales. The frontier within and between provinces is thus permanent and dynamic, both geographically expansionary and, as it were, involutory. Frontiers are customarily seen as spaces “beyond the sphere of the routine action of centrally located violence-producing enterprises,” in which typically land and property rights are contested, the rule of law is in question, and frontier populations (often racialized and excluded because of the coercive forms of capital accumulation in train) inhabit a zone in which “violence and political negotiation [are] . . . at the center of social and economic life.”³⁰ Frontiers, as I deploy the term for oil, possess all of these qualities rather than be confined to the technical relations of resource exploitation (as the industry understands frontiers). The permanent frontier marks the ongoing recursive construction of new spaces of accumulation (whether the discovery of first oil in the 1950s in Nigeria or the explosion of offshore oil development off coastal Louisiana after 1938) and the creation of the conditions of possibility for the local operation of the oil assemblage.³¹

Oil frontiers have their own temporalities and spatialities—shaped naturally by technological considerations unique to oil—but like frontiers everywhere, questions of access to and control of land, property, the state as a prerequisite for accumulation is key. As a territorial resource, oil is constantly in the business of creating new—and refiguring old—frontiers; complex processes of dispossession, compromise, violence, and engagement mark them. As a technologically dynamic industry, the frontiers so created are “deep, shifting, fragmented and elastic territories.”³² Eyal Weizman’s extraordinary account of the Israeli occupation of Palestine comes close to what I have in mind:

The dynamic morphology of the frontier resembles an incessant sea dotted with multiplying archipelagoes of externally alienated and internally homogenous . . . enclaves. . . . [It is] a unique territorial ecosystem (in which) various other zones—political piracy, barbaric violence, . . . of weak citizenship—exist adjacent to, within or over each other.³³

These oil frontiers are textbook cases of what Henri Lefebvre calls the “hyper-complexity” of global space in which social space fissions and fragments, producing multiple, overlapping, and intertwined subnational spaces with their own complex internal boundaries and frontiers.³⁴



Figure 1. An oil spill from an abandoned Shell Petroleum Development Company well in Oloibiri, Niger Delta. Wellhead 14 was closed in 1977 but has been leaking for years, and in June of 2004 it finally released an oil spill of over 20,000 barrels of crude. Workers subcontracted by Shell Oil Company cleaned it up without adequate protection. Photo by Ed Kashi.

Frontier Dispossession and Insurgent Oil: The Niger Delta

Nigeria, the eleventh-largest producer and the eighth-largest exporter of crude oil in the world, typically produces over 2.4 million barrels per day (b/d) of oil and natural gas liquids. The oil-

producing Niger delta in the southeast of the country has provided “sweet” (low sulphur) oil to the world market for over half a century, during which time the Nigerian state has captured close to \$1 trillion. Nigeria’s petrofuturity is very much in question. The vertiginous descent of the Niger delta oil fields into a strange and terrifying underworld of armed insurgency, organized crime, state violence, mercenaries and shady politicians, and massive oil theft casts a long shadow over Nigeria’s purportedly rosy oil future. A powerful insurgent group called the Movement for the Emancipation of the Niger Delta (MEND) emerged from the creeks in 2006, an insurgency that reflected a much deeper history of growing militancy since the 1980s. Within two years of taking office in 2007 the new President saw oil revenues fall by 40 percent because of audacious and well-organized attacks on the oil sector; Shell, the largest operator and accounting for almost half of all oil output, had alone lost US\$10.6 billion

since late 2005. In the Port Harcourt and Warri regions—the two hubs of the oil industry—there were over five thousand pipeline breaks and ruptures in 2007 and 2008 perpetrated by insurgents and self-proclaimed militants. An article in the *International Herald Tribune* captures vividly the brave new world ushered in by the violent struggle over oil: “[Oil] companies now confine employees to heavily fortified compounds, allowing them to travel only by armored car or helicopter. . . . One company has outfitted bathrooms with steel bolts to turn them into ‘panic’ rooms . . . another has coated the pylons of a giant oil-production platform 130 kilometers, or 80 miles, offshore with waterproof grease to prevent attackers from climbing the rig. . . . Larry Johnson, a former U.S. Army officer who was recently hired . . . by Eni, said ‘Even Angola during the civil war wasn’t as bad.’”³⁵ According to a report released in late 2008, in the first nine months of 2008 the Nigerian government lost a staggering \$23.7 billion in oil revenues because of militant attacks and sabotage. By the summer of 2009 Shell’s western operations were in effect closed down, and more than 1 million barrels of oil were shut in. Ken Saro-Wiwa’s desolate prediction in 1990 of a “coming war” had seemingly come to pass.³⁶

Nigeria is a petrostate with a vast shadow economy and shadow political apparatuses in which the lines between public and the private, state and market, government and organized crime are blurred and porous. The delta’s coastal waters are, according to the International Maritime Bureau, a pirate haven, comparable to the lawless seas of Somalia and the Moluccas. A new study, *Transnational Trafficking and the Rule of Law in West Africa* by the UN Office for Drugs and Crime, estimates that 55 million barrels of oil are stolen each year from the Niger delta, a shadow economy in which high-ranking military officials and politicians are deeply involved. Amnesty International’s report *Petroleum, Pollution, and Poverty in the Niger Delta*, released in June 2009, grimly inventories the massive environmental despoliation caused by 1.5 million tons of spilled oil, describing the record of the slick alliance of the international oil companies and the Nigerian state as a “human rights tragedy.” A United Nations study of Ogoniland—a small four-hundred-square-mile area within the oil fields—discovered systematic contamination by the oil firms and estimated that it will take thirty years and \$1 billion to clean up.³⁷ Nigeria’s oil complex is a vast and increasingly ungovernable space, a frontier of primitive accumulation, what Mike Rogin, describing Jacksonian America, called the “heroic age of capitalism.”³⁸ Nigeria’s spectacular petrocapi-talism combines the most brutal forms of capitalist dispossession and racialized accumulation with the ecological wreckage of a modern high-tech global oil and gas industry. Corrupt politicians, wealthy contractors, corporate executives, and the feared

security forces stand, cheek by jowl, with poor fisherfolk, uneducated and sick children, angry youths, and the massive detritus of the industry itself. Inevitably, it is a world that is combustible and explosive.

Nigeria is a relative latecomer as an “oil-state” and delivered its first oil exports to the world market in 1958. Now, the enormity of the oil presence in the Niger delta is hard to fully appreciate. Virtually every inch of the region has been touched by the industry directly through its operations or indirectly through neglect. Over six thousand wells have been sunk, roughly one well for every ten-square-kilometer quadrant in the core oil states. There are 606 oil fields (355 on shore) and 1,500 “host communities” with some sort of oil or gas facility or infrastructure. There are seven thousand kilometers of pipelines, 275 flow stations, ten gas plants, fourteen exports terminals, four refineries, and a massive gas supply complex. The national oil company (Nigerian National Petroleum Company) and its joint-venture partners (Shell, Exxon, Mobil, Agip, and TOTAL) directly employ an estimated one hundred thousand people.

A half century of oil wealth has propelled Nigeria into the ranks of the oil rich at the same time as much of the petrowealth has been squandered, stolen, and channeled to largely political, as opposed to productive, ends. Nigeria has long had its 1% versus 99% politics (85 percent of oil revenues accrue to 1 percent of the population). According to former World Bank president Paul Wolfowitz, around \$300 billion of oil revenues accrued since 1960 have simply “gone missing.” Nigerian anticorruption czar Nuhu Ribadu claimed that in 2003, 70 percent of the country’s oil wealth was stolen or wasted; by 2005 it was “only” 40 percent. The state, he said, was organized crime. The Wikileaks U.S. Department of State cables released in November 2010 revealed extraordinary corruption, including a \$20 million payment for basic contract signatures and oil-lifting decisions made by politicians and cronies within the presidency; all in all, a model felonious state. Between 1970 and 2000 the number of income poor grew 19 million to a staggering 90 million. Over the last decade GDP per capita and life expectancy have, according to World Bank estimates, both fallen. According to the United Nations Development Program (UNDP),³⁹ Nigeria ranks in terms of the human development index below Haiti and Congo. It is not a pretty picture.

Nowhere are the failures more profound and visible than across the oil fields of the Niger delta, an impoverished and politically marginalized multi-ethnic region (now encompassing nine states of the thirty-six state federation) composed of what are euphemistically referred to as “minorities.” The current population of the oil-producing states is 28 million (of the total population of 160 million Nigerians), but for the vast majority, oil has brought only misery,

violence, and a dying ecosystem. A United Nations report concluded that the vast resources from an international industry have barely touched pervasive local poverty.⁴⁰ The majority of the oil wealth is captured by the federal state and allocated to the so-called ethnic majorities in the politically dominant northern and western states. By almost any measure of social achievement, the core oil states are a calamity. Between 1996 and 2002 the human development indexes actually *fell* in the delta states.⁴¹ Literacy rates are barely 40 percent, the proportion of primary school children enrolled is, according to a Niger Delta Environmental Survey, 39 percent. There is one secondary health care facility for every 131,000 people serving an area of 583 square kilometers. The number of persons per hospital bed is three times higher than the already appalling national average. Electricity is a running joke. Canalization dredging, gas flaring, large-scale effluent release, mangrove clearance, massive pollution of surface and groundwater, these are the hallmarks of a half century of oil and gas extraction. The region's delicate ecosystems now constitute one of the most polluted places on the face of the earth.

Nigeria's oil frontier began in 1956 when the first helicopters landed in Oloibiri in Bayelsa State near St Michael's Church to the astonishment of local residents. A camp was quickly built for workers; prefabricated houses, electricity, water and a new road followed. Shell-BP (as it then was) sunk seventeen more wells in Oloibiri, and the field came to yield, during its lifetime, over 20 million barrels of crude oil before oil operations came to a close twenty years after the first discovery. Misery, scorched earth, and capped wellheads are all that remain now. In the decade that followed, the Nigerian oil industry grew quickly in scale and complexity. A giant field was quickly discovered at Bomu in Ogoniland, west of Port Harcourt in 1958, and Shell-BP, which had acquired forty-six oil mining leases covering fifteen thousand square miles, rapidly expanded its operations across the oil basin. Ten years of feverish activity saw the opening of the Bonny tanker terminal in April 1961 and the extension of the pipeline system including the completion of the Trans Niger Pipeline in 1965. Oil tankers lined the Cawthorne Channel like participants in a local regatta, plying the same waterways that, in the distant past, housed slave ships in the sixteenth century and the palm oil hulks in the nineteenth. The petroleum frontier followed the slave and palm oil frontiers.

The onshore oil frontier—the offshore frontier began much later and the first deepwater oil production only commenced in 2005—operated in a distinctive fashion. Oil-bearing lands were in effect nationalized, and leases and licenses awarded (typically with little or no transparency) to oil companies that were compelled to participate in joint ventures with a Nigerian state. A memoran-

dum of understanding determined, among other things, the very substantial government take on every barrel of oil produced. Local communities across the delta lost access to their lands. They were typically compensated (in an ad hoc and disorganized fashion) for loss of land rights and for the cost of spillage. Communities—there are over 1,500—deemed “host communities” by virtue of having oil in their customary territories or being directly affected by oil infrastructure were to receive “community benefits” from the oil companies that, in the absence of an effective local state, came to be seen as local government. Oil companies built alliances with local political powers, which in effect meant dealing directly with powerful chiefs and chieftaincy systems marked by the exercise of lineage-based gerontocratic powers. For the better part of three decades the companies could operate with impunity, cutting deals with chiefs and elders who through direct cash payments and community funds acquired considerable wealth. Meaningful community development was nonexistent, and locals benefited only minimally from employment, since the oil industry is labor intensive only in its construction phase. With the 1980s came the first protests from the oil-field communities—women groups protesting lost of livelihoods, youth protesting lack of employment—and then the electrifying impact of Saro-Wiwa and the Ogoni movement during the 1990s.

The history of oil development in Nigeria is largely the history of the vicious political struggles surrounding the distribution of oil revenues. Since 1960 the shifting geometry of the politics of revenue allocation has a clear trend-line. A process of radical fiscal centralism by the state, which now controls all oil revenues through various statutory monopolies, diverts oil to powerful regional constituencies in the thirty-six-state Nigerian federation (dominated by so-called ethnic majorities). As a consequence, the oil-producing states (populated by so-called ethnic minorities) have lost, and the non-oil producing ethnic majority states and the federal government have gained. Currently, roughly half of all the oil wealth is captured by the federal government through about fifty oil laws that allow the state to establish a statutory monopoly over oil and dispossess local communities; roughly one-third is devoted to the states, but until the late 1990s a disproportionately high share of this revenue allocation ended up in non-oil producing states. In 1960 the oil-producing states, through a principle of “derivation,” took at least half of all the oil revenues produced in their state; by the 1980s this had fallen to 1 percent. Driven by the popular pressures for “resource control,” Niger delta states were able to roll back the secular decline in derivation income. As oil prices rose after 2001, enhanced derivation inserted a vast quantum of monies (driven by high oil prices and the increase in derivation from 1 to 13 percent) into the oil-producing states through the machinery of state and local government.

This fiscal system since the return to civilian rule in 1999 has produced new political alignments on the ground. First, corruption has flowed downward—in effect, it has been decentralized—with the vast local takings to be had as more oil revenues flowed to the major oil-producing states, especially Delta, Bayelsa, and Rivers States. Second, there has been something like a democratization of the means of violence, as militants of various political and criminal stripes, often armed by politicians and a porous military, now control large swaths of territory in the creeks and disrupt the operations of the oil and gas industry at will. And third, expanded increased derivation income has fueled the rise of a hugely powerful political class—“godfathers,” as they are called—that is not only a counterweight to the federal center but also has its own machine politicians. It from this trio of forces that the current wave of violence since the return to civilian rule in 1999 has emerged.⁴² The reservoir of political rage and alienation is deep in Niger delta communities. A large survey of Niger delta oil communities by the World Bank in 2007 discovered that an astonishing 36.23 percent of youth interviewed revealed a “willingness or propensity to take up arms against the state”⁴³

The current crisis extends beyond a guerrilla struggle against the alliance of the state and the oil companies. According to a UNDP report, there are currently 120–150 “high risk and active violent conflicts” in the three core oil-producing states.⁴⁴ The field of violence operates at a number of levels. Insurgent groups like MEND are engaged in armed struggle against the state and the oil companies. There are also intercommunity (both interethnic and intra-ethnic) conflicts often driven by land and jurisdictional disputes over oil-bearing lands (and correspondingly over access to cash payments and rents from the oil companies). There is also urban interethnic warfare—most dramatically seen in the decade-long battles between Ijaw, Urhobo, and Itsekeri ethnic communities in Warri over “who owns Warri.” Central to these struggles in which perhaps 700,000 people have been displaced and thousands killed is the ethnic delineation of electoral wards and local government councils (undertaken by the states but with federal backing), which are the means for urban ethnic communities to access oil wealth, either as rents paid by oil companies for land used for oil infrastructure (such as pipelines, refineries, and flowstations) or as part of the revenue allocation process that now ensures that local government coffers are awash with so-called excess oil profits. Other communities are torn apart by intracommunity youth violence—the famed city-state of Nembe is a case in point—in which armed youth groups battle one another and their chiefs to provide protection services to the oil companies and get access to various sorts of standby (a salary for doing nothing) and cash payments doled out in the name of “community development.”

By the summer of 2009 the oil frontier had become a space of extraordinary violence and political turbulence. According to a report released in late 2008—prepared by a forty-three person government commission and titled *The Report of the Technical Committee of the Niger Delta*—in the first nine months of 2008 the Nigerian government lost a staggering \$23.7 billion in oil revenues because of militant attacks and sabotage. As oil production plummeted still further in 2009, on May 13, 2009, federal troops launched a full-scale counterinsurgency against what the government saw as violent organized criminals who have crippled the oil and gas industry. The militants in return launched ferocious reprisal attacks, gutting Chevron's Okan manifold, which controls 80 percent of the company's shipments of oil. Over two months, from mid-May to mid-July, twelve attacks were launched against Nigeria's \$120 billion oil infrastructure, and 124 of the Nigeria's 300 operating oil fields were shut by mid-July. Then late in the night of July 12, fifteen MEND gunboats launched an audacious and devastating assault on Atlas Cove, a major oil facility in Lagos, the economic heart of the country, three hundred miles from the Niger delta oil fields (a year earlier, to accentuate both their strike capability and the ineptitude of the naval security forces, MEND overran and compromised the large floating production and storage on the massive Shell-owned Bonga field seventy miles offshore). Overall the oil and gas industry, on- and off-shore, has been crippled. By late 2009 Shell has closed its western operations completely, and the eastern region is barely producing 100,000 b/d. Many of the engineering, construction, and oil service companies have withdrawn core personnel and in some cases withdrawn completely. In three years the oil industry in effect came to a standstill.

As the situation deteriorated, the oil companies, which had in effect attempted to keep the oil flowing by cutting local deals with corrupt chiefs, now discovered that a generation of youth—many armed and all without job prospects of any kind—challenged the corrupt oil-fueled chieftaincy system itself, which by the 1990s was in deep crisis. The effects of dispossession in short were turned inward into the heart of customary rule. Armed youth groups in some cases rejected chiefly rule violently and in other cases asserted themselves as middlemen and brokers providing protection services to the companies and interposing themselves between the local oil operations and the chiefs.

Along the oil frontier three processes were at work. The first is what one might call local petronationalisms—the process by which the ethnic minorities of the delta became “oil minorities” with a political project for resource control. Over the last decade this has been most visible in the deepening of Ijaw nationalism and a popular mobilization of youth, especially in the wake

of the state repression of the Ogoni during the 1990s. The Ijaw are the largest ethnic oil minority in the delta and are distributed across the heart of the oil fields, especially in Rivers and Bayelsa states. Their exclusion from the oil wealth (and the federal revenue allocation process), to say nothing of their bearing the costs of oil operations across the oil fields, became central to the emergence of a new sort of youth politics (in effect, a disenfranchised generation). Kathryn Nwajiaku has traced the origins of Ijaw nationalism to the 1920s and 1930s,⁴⁵ but it was overtaken during the 1990s by youth politics and the rise of the Ijaw Youth Council in 1998 and its radical founding document, the Kaiama Declaration,⁴⁶ which marked a watershed in the growth of popular mobilization from below and in the gradual turn to direct actions against both the federal state and the international oil companies. Control of oil in relation to what local peoples saw as a deep history of theft, appropriation, and unjust exploitation provided a powerful idiom to mobilize Ijaw claims and a discourse of rights (including legal, constitutional, and fiscal reforms). Ijaw nationalism proved to be a complicated category because of the internal heterogeneity of so-called Ijaw peoples (differing clan and community structures, differing language and cultural histories). Oil, as Nwajiaku points out, provided a way to draw Ijaw together but also generated other local forms of identity at the clan, village, or local territorial levels. What was true for the Ijaw was as true for every oil minority.

Second, the militant groups themselves were often the *products*, if not the creation, of state-supported electoral thuggery. A welter of so-called militias, cults, organized criminals were bankrolled and in many cases armed by ambitious corrupt politicians and local political godfathers, especially during the electoral cycles of 1999 and 2003. Two important militias, which arose before MEND, namely, the Niger Delta Vigilante and the Niger Delta People's Vigilante Force, were both funded by machine politicians and the local state. After a decade of deepening militancy, the boundaries between states and militants was blurred, and the reality on the ground is one of a dizzying and bewildering array of militant groups, militias, and so-called cults—the Niger Delta Militant Force Squad, Niger Delta Coastal Guerillas, South-South Liberation Movement, Movement for the Sovereign State of the Niger Delta, the Meinbutus, the November 1895 Movement, the Arogbu Freedom Fighters, Iduwini Volunteer Force, the Niger Delta People's Salvation Front, COMA (Coalition for Military Action), the Greenlanders, Deebam, Bush Boys, KKK, Black Braziers, Icelanders, and a raft of others. Nonstate armed groups often got their start as a way of doing violent oil politics for the Nigerian oil elites and then took on a life of their own, redeployed into other pursuits as the oil frontier advanced.

And finally, the proliferation of a massive oil theft business (“bunkering,” as it is dubbed locally) in which insurgent groups were able to insert themselves (typically as underlings beneath high-ranking military officials and politicians). Local illegal refineries in the creeks produced refined fuel from oil tapped from pipelines, but the serious money lay elsewhere, in the larger quantities of oil moved offshore in barges and sold internationally. It is, and remains, a massive business (Wikileaks revelations again pointed to high-ranking military, politicians, and business people as central to the operations of what in 2011 was estimated to be a bunkering trade of \$20 billion, perhaps running at 250,000 barrels per day) that nevertheless enabled youth groups and local criminal operatives to acquire arms and embolden their military offensive (and their popular appeal to a generation of enraged youth). Of course, the line between crime and politics here is murky and difficult to determine. Some bunkerers may have articulated the rhetoric of “popular appropriation” but were clearly part of criminal syndicates, which included the military, businessmen, and politicians. In others, the bunkering business was indeed a way in which insurgency could be financed. In both cases it produced a class of violent entrepreneurs—the militias resembled the mafias of mid-nineteenth-century Sicily who stood between a weak state and deep class struggles surrounding the latifundia—and a ferocious battle over bunkering territories.⁴⁷

Oil wealth in Nigeria has helped produced a multiplicity of overlapping spaces of oil, from the new states and local government areas bankrolled by the oil revenue process to reconfigured spaces of chieftainship and ethnicity in which a panoply of political movements (youth groups, ethnic militias, oil thieves) struggles for control of different sorts of territory, to the violent spaces of the creeks controlled by insurgents and federal military forces. These spaces, often unruly, and deeply conflicted, represent a ferocious struggle over how nation building—in this case fueled by the centralized control over oil wealth—is to proceed and in whose name and interests. These political struggles over who has access to oil and by what means reflect the complex politics—what Mitchell called engineering political relations for energy flows—that attends the movement of the onshore oil frontier across the Niger delta. On its face, the oil assemblage in Nigeria appears to be in question: supermajors like Shell are selling assets and acreage, others move offshore in the vain hope of avoiding the militants, while the prospects of a military conflagration unsettles the oil markets. At the same time, with prices at \$100 a barrel, the entire rickety structure can stagger on: the Nigerian government, the rebels, the supermajors, the oil bunkerers, and the political godfathers can all get their cut despite, and because of, the ungovernability of the entire system. Violent racialized

accumulation in the oil assemblage can, paradoxically, be self-producing as an economy of violence.

Deepwater Horizon: Finance Capital, Neoliberalized Risk, and the Louisiana–Gulf of Mexico Frontier

The outer continental shelf (OCS) in the GOM is the largest U.S. oil-producing region. Not unexpectedly, the Gulf's oil complex—the assemblage of firms, the state, and communities that shape the character of oil and gas extraction—is massive by any accounting. With over four thousand currently operating wells, the Gulf accounts for one-third of U.S. crude oil production and over 40 percent of U.S. refining capacity. Over the past century, companies have drilled over fifty thousand wells in the Gulf (twenty-seven thousand have been plugged), almost four thousand of them in deepwater (more than one thousand feet). In the last fifteen years more than sixty wells have been drilled in the ultradeepwater zones—in more than five thousand feet of water—deploying dynamic positioning systems that use computers and satellites to keep rigs and supply vessels steady in rough seas and high winds. By 2001 deepwater oil production surpassed the shallow-water shelf extraction. There are 3,020 platforms currently operating, but they represent only a small part of the Gulf's oil and gas infrastructure: thirty-three thousand miles of pipeline on- and offshore connected with a network of terminals, as well as a huge capital investment of refineries, storage facilities, shipyards, and construction facilities stringing the coast from Mississippi to Texas. It is a massive industrial cluster directly employing more than four hundred thousand people in Louisiana, Texas, Alabama, and Mississippi, generating \$70 billion annually in economic value and \$20 billion annually in tax revenue and royalty payments to local, state, and federal government. The total fixed capital in the Gulf oil complex is now valued at an estimated \$2 trillion.⁴⁸

Louisiana's section of the Gulf, which contains many of the nation's largest oil fields, holds more than nine-tenths of the crude-oil reserves in that region. As of 2011, Louisiana was the fifth-largest producer of crude oil and the fourth-largest producer of natural gas in the United States. More than 228,000 wells have been drilled searching for oil and gas in the state since the first commercial oil well was drilled in 1901 in Jennings. The Louisiana OCS oil and gas production is greater than any other federally regulated offshore area in the United States. Including federal reserves, Louisiana has nearly one-fifth of total U.S. oil reserves, one-tenth of natural gas reserves, and historically has produced about 88 percent of the 17.9 billion barrels of oil and 80 percent of the 170

trillion cubic feet of natural gas extracted from all federal OCS territories. The industry's history in the state is synonymous with the history of U.S. offshore frontier development. While the first onshore well was drilled in the state in 1901, much of the subsequent developments were in shallow water along the coast. Since 1938 the state inner and outer continental shelf has become the driving force for the development of deepwater and ultradeepwater oil and gas production.

Louisiana's deep connection to oil means it is also America's very own petrostate, a living testimony to the petropopulism and oil-based human and ecological development failures that have typically afflicted oil-producing states in the global South.⁴⁹ Petrocorruption and the shady politics of oil development were there from the beginning, as the oil industry emerged on the backs of an extractive economy (timber, sulfur, rice, salt, furs). Local businessmen snapped up land and threw themselves into a chaotic land grab backed by Texas drillers and operators with little regard for the law. Wildcatting sprung up with no regulation; leases, especially along the coast wetlands, were allocated behind closed doors. Huey P. Long famously launched his career with an attack on Standard Oil and then proceeded to build his own subterranean oil empire.⁵⁰ While senator, Long and his political cronies established the Win or Lose Corporation, which acquired cut-rate mineral leases through the government and resold them at a healthy profit. At the same time he used oil severance taxes to begin a populist program of public service provision, which integrated a white working class (and subsequently African American petrochemical workers) into a program of economic modernization.⁵¹

In the 1920s and 1930s the wetlands leases opened up a new frontier as companies built a sprawling network of roads, canals, platforms, and wells, all of which left an indelible mark on the wetlands. By the 1970s, when oil was providing 40 percent of state revenues, Louisiana ranked at the very bottom of the heap in terms of basic development indicators. According to the *Measure of America Report* on Louisiana,⁵² currently the state ranks forty-eighth (only Mississippi and West Virginia are lower) in terms of human development indexes. Massive inequalities between white and black populations mark all measures of human well-being; infant mortality and homicide rates are comparable to parts of Central America and sub-Saharan Africa. In some parishes well-being is roughly at the average level of the United States in 1950. The report points out that 80 percent of wetland losses in the United States over the last century have been in Louisiana. As the Tulane law professor Oliver Houck put it: "What oil and gas did is replace the agricultural plantation culture with an oil and gas plantation culture."⁵³

The history of the oil industry is a textbook case of frontier dispossession and reckless accumulation running far in advance of state oversight and effective regulation.⁵⁴ Off-shore drilling technology was in effect born and nurtured in Louisiana with an assist from Venezuela—the former along the shallow coastal waters, the latter on Lake Maracaibo. Technology quickly developed from oil derricks on piers to stationary, mobile, and, by the 1930s, submersible drilling barges. All of this was propelled by new seismic technologies, which uncovered numerous salt domes across the coast and offshore region. Between 1937 and 1977 almost twenty-seven thousand wells were drilled in the coastal parishes including shallow offshore. It was the first wave of leases and backroom petropopulism that unleashed a torrent of canal construction, dredging, and pipeline corridor construction (to say nothing of the emerging petrochemical complex in what became “Cancer Alley”) and permitted large-scale salt intrusion and rapid coastal degradation.

Off-shore development is customarily dated to 1905 in Louisiana but began in earnest in 1938 with a Brown and Root–constructed freestanding structure 1.5 miles from shore in fourteen feet of water, the so-called Creole Field. In 1945 Louisiana offered the first lease sale, and one year later a platform was built five miles out in shallow water and, in a move repeated many times over, drew on the local fishing industry to assist in construction and ferrying workers to the “floating hotels.”⁵⁵ By 1947 Kerr-McGhee had drilled the first well “out of sight of land” using war-surplus barges and other equipment to house drilling and workers, thereby reducing the size and cost of the self-contained drilling and production platform. These first, tentative developments precipitated, however, a titanic seven-year struggle over jurisdiction of the outer continental shelf in which the oil companies supported states rights (to continue the lax, or rather nonexistent, regulation) over federal claims. Finally resolved in 1953 through two key pieces of legislation—the Submerged Lands Act and the Outer Continental Shelf Lands Act—which authorized the secretary of the interior to offer leases for competitive bidding beyond the three-mile limit. By 1957 there were 446 platforms in federal and state waters, and the rush was on.⁵⁶

In practice, the moving offshore frontier was transformed through four giant waves of frontier development, a quartet of land grabs and dispossession. The first was almost wholly unregulated during the late 1940s and 1950s prior to and immediately after the resolution of the state jurisdiction question. A second occurred in the wake of the oil import quotas of 1959, which unleashed another round of major leasing; 2 million acres were leased in 1962, in water depths up to 125 feet, more than all previous sales combined. Oil production almost tripled between 1962 and 1968, and deepwater operations had

by this time reached 300 feet. The first subsea well was drilled in 1966. As the National Commission on the BP Deepwater Horizon Oil Spill noted,⁵⁷ this period was associated with massive hurricane damage and serial accidents including blowouts, injuries, and helicopter crashes. A 1973 National Science Foundation report noted what was clear to everyone, namely, widespread collusion between industry and government and very light government oversight. The U.S. Geological Service freely granted waivers from complying with the limited regulations and inspection demands while the regulatory agencies were hopelessly underfunded and understaffed (twelve people in the lease management office oversaw 1,500 platforms).

In the wake of the Santa Barbara spill in 1969, OCS development nationally was stymied, but the Gulf of Mexico proved to be a striking exception to the larger national trend. Exploration proceeded apace with the first deepwater (one thousand feet and more) play made by Shell in 1975 in the Mississippi Canyon. The landmark 1978 National Energy Act and the OCS Lands Act Amendments in the same year fundamentally transformed offshore leasing by vesting expanded power in the secretary of the interior, developing an exploration and production planning process expressly requiring the secretary to demand environmental and safety studies, a requirement, however, that the secretary could override if “incremental costs” were deemed high.⁵⁸ In short, the good news was that finally—three decades after the beginning of the offshore boom—there was something like an effort to provide serious government regulatory oversight (though the Oil Pollution Act was not passed until 1990); the bad news was that the Gulf of Mexico was granted an exemption from all of the review and oversight legislation. The 1978 Lands Act Amendments expressly identifies the GOM “for less rigorous environmental oversight under NEPA”;⁵⁹ three years later in 1981 the Interior Department categorically excluded from NEPA review applications to drill wells in the central and western Gulf. The 1980s provided in a sense an ideological resolution to the issue: the environmental enforcement capacities were eviscerated, and what emerged was a “culture of revenue maximization,” as the National Commission on the BP Deepwater Horizon Oil Spill put it.⁶⁰

The election of Ronald Reagan in 1981 marked not just the third round of leasing but an assault on the Carter reforms, and a full-fledged neoliberalization of the Gulf deploying the now-expanded powers of Interior Department. Under the leadership of Secretary of the Interior James Watt came a promise to open up the OCS to areawide leasing; he placed 1 *billion* acres on the block. He began by establishing a new agency in 1982—the Minerals Management Service (MMS)—which created eighteen large planning areas rather than the

traditional three-mile-square blocks. While Watts subsequently resigned amid controversy and congressional opposition to OCS development on the east and west coasts, the Gulf was exempt, and the result was a land rush and massive exploration and production that constituted the third deepwater frontier wave (the record lease sale prior to 1982 was 2.8 million acres; the first areawide lease in the Gulf produced a sale of 37 million acres!). Seven sales between 1983 and 1985 leased more acreages than all previous leases combined since 1962; 25 percent were located in deepwater, and the lion's share was captured by Shell, the leading innovator and player in offshore technology and production. At the same time, the reforms provided for radically reduced royalties and federal bonus bids, with the consequence that companies paid 30 percent less despite a sixfold acreage expansion (average lease prices per acre fell from \$2,224 to \$263). In 1987 the MMS reduced the minimum bid for deepwater tracts (from \$900,000 to \$150,000), enabling a few companies to lock up entire basins for ten years for almost nothing. The fruits of this frontier expansion were visible a decade later: in that period deepwater (one thousand feet and more) wells grew from 4 to over 45 percent of all Gulf production.⁶¹

The 1990s proved to be nothing short of a "stampede."⁶² Seismic innovations, a new generation of drilling vessels capable of drilling in ten thousand feet of water and through thirty thousand feet of sediments (tension-leg, SPAR, and semisubmersible platforms), and new drilling techniques ("down-hole steerable motors") pushed the deepwater frontier to the so-called subsalt plays. Ten years later the Gingrich revolution ushered in another reform to lay the basis for another round of accumulation by dispossession: the OCS Deep Water Royalty Relief Act of 1995 suspended all royalties to be paid by the companies for five years. In turn, this produced another land grab in which 2,840 leases were sold in three years. By 2000 deepwater production topped shallow-water output for the first time. At the same time, the ascendant BP was increasingly displacing Shell's hegemony in the Gulf. By using new 3-D seismic technologies, BP had made a series of remarkable discoveries and by 2002 was the largest acreage holder in deepwater (accounting for over one-third of all deepwater reserves). The MMS budget reached its budgetary nadir precisely during this boom (a record number of wells were drilled in 1997). The *Houston Chronicle* reported that over the 1990s there was an 81 percent increase in offshore fires, explosions, and blowouts. In the following decade it increased fourfold.

The final wave of frontier accumulation was triggered by the election of George Bush in 2001 and the events of September 11. On May 18, two days after Cheney's Energy Task Force report was delivered, Bush issued Executive

Order 13212 (titled Actions to Expedite Energy Related Projects) the purpose of which was to “expedite [the] review of permits or other actions necessary to complete the completion of such projects.”⁶³ The language was, as a number of commentators pointed out, almost identical to that of a memorandum on the “streamlining” of development in the OCS submitted by the American Gas Association to the Cheney Task Force. The MMS was already laboring under a congressionally mandated rule to limit permit review to an impossibly confining thirty days, but the new order pushed things much farther: in its wake four hundred waivers were granted every year for offshore development. As offshore exploration and production stepped into historically unprecedented ultradeepwater, the permitting process and enforcement were laughable. MMS was not simply toothless and staffed by the sorts of oilmen it was designed to regulate but, according to a 2008 inspector general report, was a hothouse of among other things a culture of substance abuse and promiscuity. To round out the abandonment of anything like supervision, in June 2008 Bush removed the ban on offshore drilling. Oversight deteriorated to the point where NOAA was publicly accusing MMS of purposefully understating the likelihood and consequences of major offshore spills and blowouts. Watt’s new system was nothing more than “tossing a few darts at a huge map of the Gulf.”⁶⁴

Shell announced the birth the new “neoliberal frontier” in 2009. The Perdido platform, located two hundred miles offshore in water two miles deep, is nearly as tall as the Empire State Building, drawing in oil from thirty-five wells in three fields over twenty-seven square miles of ocean.⁶⁵ Sitting atop an “elephant” field rumored to contain as much as 600 billion gallons of oil, the scramble was on. In similar fashion BP pushed forward on a hugely ambitious program to develop multiple fields in the most demanding and unforgiving of environments, pushing deeper into old Paleogene and Lower Tertiary strata. The likes of Thunder Horse—BP’s massive semisubmersible production facility almost destroyed by Hurricane Dennis in 2005—located in the Mississippi Canyon 252 Lease and the Macondo well (forty miles distant) represented, as the National Commission on the BP Deepwater Horizon Oil Spill put it, “formidable tests.”⁶⁶

Viewed on the larger canvas of the *longue durée* of offshore development, Perdido and Macondo were the expressions of what one might call the accumulation of insecurity, and the neoliberal production of systemic risks in the Gulf of Mexico—each rooted in the politics of substituting technological and financial for political risk. BP and Shell were drilling in five to ten thousand feet of water fifty miles offshore to produce deepwater oil close to the U.S. market offering a regulatory framework that can best be characterized as producer

friendly, which, especially in the wake of September 11, produced a much better risk audit than dealing with the Russians in Siberia or the Angolans in the Gulf of Guinea.

The Deepwater Horizon catastrophe was overdetermined by the vast accumulation of risks fabricated along the shifting frontier of offshore accumulation. The Macondo well—named after Gabriel García Márquez’s famous fictional town in *One Hundred Years of Solitude*—was drilled from a semisubmersible mobile rig owned by Transocean, while BP as the field operator (as is often the case in the Gulf) shared the field with Anadarko Petroleum and Mitsui Oil Exploration. Halliburton completed the cementing of the well, but on the day of the explosion there were indications of flow into the well. A large blowout of methane gas traveled up the drilling pipe and ignited the platform, leading to an explosion and a fire, which sank the rig. The disaster happened on the same day that BP executives visited the rig to congratulate management on a job well done. It was coincidentally the fortieth anniversary of Earth Day.⁶⁷

Nowhere are the links between deregulation and neoliberal capitalism clearer than in the 2011 report by the Deepwater Horizon Study Group.⁶⁸ In its devastating assessment, the catastrophic failure resulted from multiple violations of the laws of public resource development, and its proper regulatory oversight, by a BP safety culture compromised by management’s desire to “close the competitive gap” and to save time and money—and make money—by making trade-offs for the certainty of production. Because there were perceived to be no downsides, BP’s corporate culture embedded in risk taking and cost cutting, and not least the histories and cultures of the offshore oil and gas industry and the governance provided by the associated public regulatory agencies.

The Deepwater Horizon disaster has more than a family resemblance to the 2008 financial crisis. And it is financialization, in fact, that adds yet another dimension to the oil frontier. At the time of the disaster, BP was one of the largest traders in the emerging oil futures and securitization markets. Standing at the heart of this financialization is the shift to oil as an asset class.⁶⁹ Oil prices have not always depended on the futures markets. In the 1970s and 1980s, before the advent of active crude-oil futures trading in the New York and London markets, most of the oil produced was traded via long-term contracts.⁷⁰ In the last twenty years oil has broken its relation to “market fundamentals” and is dominated by the flow of money and by the investment banks, as seen in unprecedented price volatility. Behind this newfound volatility and the speculative role of paper oil was the fact that “innovations in the financial industry made it possible for paper oil to be a financial asset in a very complete way. Once that was accomplished, a speculative bubble became possible. Oil is no

different from equities or housing in this regard.”⁷¹ The volume of unregulated over-the-counter commodity transactions had grown enormously since 2000, a development made possible largely by the Commodity Futures Modernization Act of December 2000. These changes and what Dan Dicker calls assetization (the rise of commodity index funds and exchange traded funds), financialization (new and mostly over-the-counter customized energy products similar to the derivative markets), and electronic access to oil markets collectively not only made oil into an asset class similar to equities and bonds but also gave the commodities market a massive boost.⁷² As a result, it was not so much minor speculators as large institutional investors who sought exposure to the commodities market. They regarded commodities as an alternative investment category in their portfolio allocations and invested a significant proportion of their assets accordingly. The new actors in the oil trade have produced a situation in which, according to Kent Moors,⁷³ 60 percent of the oil futures market is coming from speculators. Oil has become a source or store of liquidity sometimes preferable to the dollar because the oil market allows a better hedge against the loss in dollar value in foreign exchange. The movement into crude oil and oil product futures contracts as a flight to liquidity, which is a barely a decade old, has decisive implications for oil volatility. This is the heart of the so-called oil vega problem: the increasing inability to determine the genuine value of crude oil based on its market price. The inability to plan, predict, and compensate indicates that “we have a developing market (dis) order—a pervasive and endemic disequilibrium masquerading as the ‘new order’ in the oil market.”⁷⁴

An assemblage generating massive new systemic risks of financial and market volatility is one new expression that throws the “formidable tests” of deepwater oil into sharp relief. Others risks are biophysical and would include of course the potentially catastrophic costs of hurricane damage, which are endemic to the region but seemingly now are rendered even more devastating by the products of the oil industry itself (carbon emissions, global warming, and extreme climatic events). The 2005 hurricane season crippled the Gulf energy sector and left \$120 billion in losses. Of course this is what the insurance and reinsurance industries are, in theory, in the business of protecting. But the 2005 season consumed the entirety of global premiums insurers had collected from energy underwriting.⁷⁵ The Gulf “wind market”—major underwriters already have high rates and have capped coverage—is a big question mark. Gulf oil seems to combine the worst of Wall Street, the worst of corporate rapaciousness, and the worst of technological hubris all running headlong into the global climate crisis. A perfect storm of catastrophic risk: the unrelenting accumulation of insecurity.

The dynamics along these two oil frontiers—one onshore, one offshore—have family resemblances, but each also highlights quite different, and often contradictory, dynamics in the local operations of the oil assemblage. Both produce a sort of ecological slow death,⁷⁶ but each also manufactures radical turbulence (one political and military, the other financial and economic) that threaten the very operations of the industry itself. Accumulation by dispossession along the oil frontier is key to both. If the Niger delta frontier reveals one explosive dynamic in the oil assemblage that resembles a combination of violent accumulation with fragmented sovereignties, the Deepwater Horizon suggests another. The Macondo well disaster reveals the deadly intersection of the aggressive enclosure of a new technologically risky resource frontier (the deepwater continental shelf in the Gulf), with the operations of what one can call neoliberalized risk, a lethal product of cutthroat corporate cost cutting, the collapse of government oversight and regulatory authority, and the deepening financialization and securitization of the oil market. These two local pockets of disorder and catastrophe in the oil assemblage point to, and are expressions of, the deep pathologies and vulnerabilities in the operations of imperial oil. If the onshore frontier in Nigeria ends in insurgency, in Louisiana and the Gulf the political story ends with class action suits, a reorganization of the regulatory but ultimately the abandonment of President Obama's moratorium and the gradual resumption of deepwater drilling. In both Gulfs, the oil assemblage lurches forward, simultaneously advancing the frontier and multiplying—and amplifying—the production of profit and risk.

Notes

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