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A Short History of Oil Cultures: Or, the Marriage of Catastrophe and Exuberance

FREDERICK BUELL

In opposition to energy historian Vaclav Smil, who argues that “timeless literature . . . show[s] no correlation with advances in energy consumption,” this essay makes the general claim that energy history is significantly entwined with cultural history. Energy history is in fact entwined with changing cultural conceptualizations and representations of psyche, body, society, and environment; it is correlated not just with changing material cultures, but with symbolic cultures as well. To see this, the essay argues, one must conceptualize energy history in terms of a succession of energy systems – systems that are constituted by sociocultural, economic, environmental, and technological relationships. The essay’s specific argument then traces the effects on symbolic culture, especially literature, of the nineteenth – and twentieth-century shift from coal capitalism to oil–electric capitalism. It starts by looking at the features of early oil extraction culture, from Drake’s 1859 oil strike in Titusville, Pennsylvania to Upton Sinclair’s novel *Oil!*, and examines how oil–electric capitalism develops and defines itself culturally against the previous era of coal capitalism. Then the essay considers how the consolidation of the oil–electric capitalist system is significantly related to the emergence of modernist culture, affecting the production of both popular culture and high art. By the end of the twentieth century, a new phase in oil–electric capitalism emerges with the expansion of the postwar petrochemical industry, the dramatic expansion of environmental crisis discourse in the 1960s and 1970s, and the return of peak-oil discourse to the mainstream in the last decade. The essay examines how the material features of oil, as well as its dominant uses as luminant, motor fuel, lubricant, and eventually petrochemical feedstock, take on cultural importance. Exemplifying both the cultural innovations and reinventions of oil capitalism from the extraction era to the consolidation era and the post-World War II period, the essay focusses throughout on the two recurring motifs, exuberance and catastrophe, as they play out in a wide range of literary texts and popular enthusiasms.

I

Vaclav Smil begins *Energy in World History* with a daring proposition. He considers Leslie White’s assertion that the link between energy and culture is the first important law of cultural development. “Other things being equal,” White writes, “the degree of cultural development varies directly as the amount of energy per capita per hour harnessed and put to work.” Smil then cites the further claim by Ronald Cox that a “refinement in cultural

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mechanisms has occurred with every refinement of energy flux coupling.”¹ Smil’s book, he then says, is an attempt to evaluate these assertions.

Only at the end of his survey of energy history does Smil return to the subject. His conclusion is plain. “The amount of energy at a society’s disposal puts clear limits on the overall scope of action” but does little more than that. Still more pointedly, Smil goes on to assert that “timeless literature, painting, sculpture, architecture, and music show no correlation with advances in energy consumption.”² Case closed.

Yet today, oil presents society with a large portfolio of dread problems: rapid global warming that threatens lives, lifestyles, and ecosystems; an expanding number of serious, world-altering globalized environmental crises all related to fossil-fuel-fueled population and economic growth; increasing geopolitical instability, conflict, and terrorism related to control of oil supplies or affecting the production/distribution of oil; and a possibly imminent failure of supply – peak oil – that would wreck the world’s economic and social systems. All of these crises have led to new, widespread awareness of just how completely oil has become essential to all aspects of humans’ way of life, from agriculture to healthcare, transportation to consumer goods. Oil has become an obsessive point of reference in and clear determinant over the daily lives of many, either victimizing them directly and cruelly as with Shell in Nigeria, or Texaco in Ecuador, or making them increasingly feel that their developed-world normalities are a shaky house of cards. Indeed, it has become impossible not to feel that oil at least partially determines cultural production and reproduction on many levels. Nowadays, energy is more than a constraint; it (especially oil) remains an essential (and, to many, *the* essential) prop underneath humanity’s material and symbolic cultures.

Yet no effective response to the huge conceptual gulf between energy and culture that Smil found has been made. Is asking how oil inflects culture like asking how the weather (or, worse, how air, or, worse still, how oxygen) affects it? Clearly, without weather, air, or oxygen no culture would exist. But can one say with any specificity that any of these is a cultural determinant? Jonathan Bate and others have made connections between weather and culture; indeed, links between air and culture would engage pollution studies (which, in turn, would engage a small niche in literary/artistic tradition and theory). But these movements are peripheral at best – or nonexistent, as in the case of oxygen.³

¹ Vaclav Smil, *Energy in World History* (Boulder: Westview Press, 1994), 2.

² *Ibid.*, 252.

³ See the chapter entitled “Major Weather” in Jonathan Bate, *The Song of the Earth* (Cambridge, MA: Harvard University Press, 2000). The closest thing I know to oxygen history is Peter D. Ward’s *Out of Thin Air: Dinosaurs, Birds, and Earth’s Ancient Atmosphere* (Washington, DC: Joseph Henry Press, 2006). It is a history calibrated in million-year intervals that speculatively relates the evolution of larger brains in early hominids to rising

And unlike most of today's theory-inspired advances in cultural study that have focussed on race, colonialism, gender, class, sexuality, and, most recently, environment, oil study does not uncover a large trove of important old literature, even though it does feature a growing body of contemporary art, literature, and popular cultural work. But what oil does have, unlike oxygen, weather, and air, is a reasonably well elaborated and defined human history, one with a complex set of filiations, fissures, ruptures, and breaks. And oil's possible collapse, as imagined today, provides both motivation and a heuristic for asking many interesting questions about oil's relationships with culture, in both the past and the present. We need to ask what we start finding when we cease living in oil as if it were our oxygen and look back on its histories – material, technological, social, and cultural – from the standpoint of today's startled awareness of the fragility of the system “Colonel” E. L. Drake and John D. Rockefeller built. Perhaps the gap between energy and culture can be credibly bridged and made available to the traffic of a new field of study.

II

William Catton's book *Overshoot: The Ecological Basis of Revolutionary Change*, takes the first step in building this necessary bridge. Modern Westerners and their immediate ancestors, Catton declares, “have lived through an age of exuberant growth, overshooting permanent carrying capacity [of the Earth] without knowing what we were doing.” This historically novel exuberance came, Catton argues, from two sources: “(a) discovery of a second hemisphere, and (b) development of ways to exploit the planet's energy savings deposits, the fossil fuels.”⁴ The first method, which Catton calls “takeover,” was simply “behaving as all creatures do. Each living species has won for itself a place in the web of life by adapting more effectively than some alternative form.” European colonization, which took over land and developed its ecosystem resources more completely than the hunter-gatherers it displaced, multiplied Europe's per capita resources by five times. Far less “natural” and more determinative was the second method, which Catton calls “drawdown.” This involved “digging up energy that had been stored underground millions of years ago” and then “drawing down a finite reservoir of the remains of prehistoric organisms.”⁵

oxygen levels on Earth and forecasts further change in 250 million years, when oxygen levels might drop. These speculations make me doubt that oxygen history will become an important theme in cultural history any time soon.

⁴ William R. Catton Jr., *Overshoot: The Ecological Basis of Revolutionary Change* (Urbana and Chicago: University of Illinois Press, 1982), 5–6.

⁵ *Ibid.*, 28–29.

Catton's inflexible, single-step dialectical narrative (ending in disaster) limits his ability to say much about the specifics of fossil-fuel culture. Nonetheless, it does allow him to make a few important macro-observations about it. Colonialism and then, more importantly, fossil-fuel energy use allowed "quite a marked rise in prosperity *and* . . . a phenomenal acceleration of population increase."⁶ These, in turn, helped create in the West an important cultural attitude: a faith in progress so strong that "the idea that mankind could encounter hardships that simply will not go away" was not just unlikely but in fact "unthinkable."⁷ Fossil-fuel culture can be, in short, described as an "age of exuberance" – an age which is also, given the dwindling finitude of the resources it increasingly makes social life dependent on, haunted by catastrophe.⁸

III

A far more sophisticated theoretical lens is required to see the welter of smaller shapes in this larger history. Again there is an excellent place to start: Jean-Claude Debeir, Jean-Paul Deléage, and Daniel Hémerly's *In the Servitude of Power*. Unlike Smil, Debeir, Deléage, and Hémerly do not just chronicle a history of energy-related technical advances, but find a way to theorize that process to reveal a much more finely grained social history of energy than ever before. All of this will allow me to move to a still finer resolution and to extend the process into culture as well as history.

For Debeir, Deléage, and Hémerly, energy materializes as energy only with the development of technologies they call "converters" – which include everything from sails to atomic reactors. Only thus does a resource or environmental process become, in fact, "energy." Further, these converters do not exist singularly; they emerge and develop as parts of "converter chains," ones that run throughout society. The Neolithic revolution in food energetics, for example, did not occur only with the domestication of animals and plants. A whole chain of converters materialized: "the deployment of new capacities for large-scale harvesting, transporting, and storage (silos for cereals, drying of fish, for example) and the diversification of culinary preparation methods

⁶ *Ibid.*, 30.

⁷ *Ibid.*, 6.

⁸ Catastrophe and exuberance are Catton's terms, but they need far more sensitive and complex descriptions than he gives them – and also need to be far more variable, specific and context-dependent. Consistently, however, the two terms interpenetrate, albeit in different fashions. For example, the term "exuberance" properly suggests a certain precariousness and even a measure of bad faith; it represents a departure from a sturdy sense of likelihood and normality. Even when used robustly, then, it is always shadowed by what fossil-fuel discourse persistently structures as its opposite partner – catastrophe. The two terms also vary for different times, places, issues, discourses, and speakers.

(grinding grain, pottery for cooking)” were equally necessary. But with converter chains, a third theoretical entity also appears: converters and converter chains are always a part of a society, and the three together materialize as an “energy system.” This is a system which “includes, on the one hand, the ecological and technological characteristics of the chains (evolution of sources, converters, and their efficiency) and, on the other hand, the social structures for the appropriation and management of these sources and converters.” In an energy system, simple energy determinism does not exist. For example, the “first converter of thermal energy into mechanical energy,” the steam engine fed by coal, was not what “produced the factory system by replacing human labor, but quite the opposite”: it was “the factory system that made possible the use of steam engines,” something which then had the “effect, if not the goal, of establishing the domination of capital over labor.”⁹ Causation is not simple; a whole environmental, technical, and social system ultimately bootstraps itself into existence. This system is “a determination [that] is itself determined: it is the result of the interplay of economic, demographic, psychological, intellectual, social and political parameters operating in the various human societies.”¹⁰

Debeir, Deléage, and Hémerly then use this framework to historicize energy. History becomes a succession of distinct energy systems. In considering oil history and ultimately culture, then, we need to consider the previous energy system it disrupted and transformed: we need to orient oil in relation to the energy system it emerged within and also disrupted, the system Deleir and colleagues call “coal capitalism.” Coal capitalism deployed the steam engine, humanity’s first converter capable of turning thermal into mechanical power; coal, thus converted, extended itself far beyond its extensive precapitalist uses (for heating and medieval industry once firewood became scarce), transforming the previous medieval energy system into the more modern coal-capitalist one. Importantly, however, the new coal capitalism was not just the latest in a series of energy systems; it “signaled a radical break with all previous energy systems known to humanity. With it, the primacy of biological energies ended and that of fossil energies was established.”¹¹

⁹ Jean-Claude Debeir, Jean-Paul Deléage, and Daniel Hémerly, *In the Servitude of Power: Energy and Civilization through the Ages*, trans. John Barzman (London and New Jersey: Zed Books, 1991), 7.

¹⁰ *Ibid.*, 13. A determination that is itself determined is, of course, very different from the determinisms that are regularly used to inspire or dismiss work on culture and technology, environment, and biology.

¹¹ *Ibid.*, 87. In looking at this break and the era that follows, one must acknowledge that both “exuberance” and “catastrophism” are cultural concomitants not just of fossil-fuel development, but also of the larger acceleration of demographic–technological–economic–social growth that the combination of fossil fuels and capitalism inaugurated. In this complex,

Coal capitalism was thus unique among previous systems in being the first truly exuberant one. Debeir, Deléage, and Hémery (along with many other writers on fossil fuels) regularly describe it as liberatory. For example, Debeir, Deléage, and Hémery repeatedly claim that coal capitalism freed “societies from the restrictive relationship to nature imposed upon land-based production, a liberation which came about thanks to the ever-growing use of energy”; “it enabled the European economies to by-pass the natural limitations of organic energy.”¹² Steam engines placed in coal mines – all of which in England had been pioneered during medieval times – pumped away water that would flood them, allowed them to go deeper and become more productive. Improved steam engines in ships and railroads made the coal’s energy more portable than ever before, freeing English industrialism and empire thereby from geographic limits. Coal refined into coke removed another “critical organic constraint on the growth of the industrial economy”; the limit imposed on the iron-making process by charcoal fell away, thereby liberating the manufacture of machinery (including steam engines).¹³ The factory system itself was liberated from an organic constraint – geography in this case – as steam power replaced water power: factories no longer had to be placed on one of the rapidly dwindling number of sites on the banks of usable rivers but could be put anywhere. All these “liberations” paid off. As Barbara Freese puts it, they were crucial to Britain’s rise as an industrial and colonial power. “By the time London held the first World’s Fair in 1851,” Freese writes, “Britain was hailed as the workshop of the world, and its markets and its empire reached global scale.”¹⁴

Liberation from “nature” released “mechanical power,” decisively changing both the discourse of nature and that of machinery. Eighteenth-century characterizations of nature as lawful and orderly and their persistent imaging of that order as a clockwork mechanism clearly accommodated Enlightenment enthusiasm for “improvement”: a delicate mechanism could be perfected. Now, however, coal-fueled mechanical power – embodied eventually in huge

capitalism temporally preceded fossil-fuel development, but fossil-fuel exploitation soon became arguably as fundamental. ¹² *Ibid.*, 91, 99.

¹³ Barbara Freese, *Coal: A Human History* (New York: Penguin Books, 2003), 66.

¹⁴ *Ibid.*, 69. The well-known domestic effects of the new coal capitalism were supplemented by coal-facilitated reorganization in the colonies. To note one concrete example: by 1826, the steam-powered gunship *Diana* (called the “fire devil”) entered Burmese waters, easily destroying local opposition. More important, the *Indus*, in 1837, sailed up into Indian rivers, and, in 1841, the *Nemesis* did the same in China. About this process, historian Daniel Hedrick comments: “we cannot claim that technological innovation caused imperialism, nor that imperialist motives led to technological innovation. Rather the means and the motives stimulated each other in a relationship of positive mutual feedback.” Daniel Hedrick, *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (New York and Oxford: Oxford University Press, 1981), 54.

locomotives – rumbled into town, took over the machine metaphor, and promised open-ended progress. Steam engines, engines of motion and change, replaced clocks as the paradigm of machinery. A contributor to a journal edited by Charles Dickens evoked a specter that, though frightful, took the story's protagonist into the depths of a coal mine to teach him that coal was placed on Earth so that man "may hereafter live, not merely a savage life, but one civilized and refined, with the sense of a soul within . . . Thus upward, and thus onward ever."¹⁵ Similarly, Leo Marx, in his classic study *The Machine in the Garden* notes how, in the US, writers in the leading magazines "adduce the power of machines (steam engines, factories, railroads, and, after 1844, the telegraph) as the conclusive sanction for faith in the unceasing progress of mankind." In both high cultural and popular discourse, Marx concludes, "[t]he fable of Prometheus [was] invoked on all sides."¹⁶

But if exuberance ran high, the growth of coal capitalism also produced the opposite: Britain, the workshop of the world, became also (most famously in the views of Karl Marx and Friedrich Engels) the workhouse of the world, even as it sought to globalize that condition by becoming the world's preeminent colonial power. Initially, Romantic Prometheanism opposed this new mechanical power, demonizing the machine; at the same time, however, it offered its own augmentation of power on another level, as it transformed "nature" from clockwork regularity into a dynamic organic/organicist force, one operating both in nature and in the human imagination.¹⁷ Subsequent literary naturalism, however, gave a decisive victory to the demonic power of machinery over its organic/imaginative competitor; think of the sheep destroyed by the steam engine in Frank Norris's *The Octopus*. More significantly, naturalism represented how the liberation of human society from organic constraints ironically ended up creating a variety of machine-made organic nightmares, from Dickensian miasmatic environments to Dickensian oppression of the poor. In the process, coal capitalism developed (appropriately, given its mode of extraction) a sinister cultural geography of depths and instructive descents. The narrator of Rebecca Harding Davis's "Life in the Iron Mills" tells her readers at the start,

This is what I want you to do. I want you to hide your disgust, take no heed to your clean clothes, and come right down with me, – here, into the thickest of the fog and

¹⁵ Freese, 11.

¹⁶ Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (London and New York: Oxford University Press, 1964), 192–93.

¹⁷ Mary Shelley's *Frankenstein* is an excellent (and extreme) attempt to represent and measure the stresses of this double endeavor: a destructively powerful, yet tenderly, poetically sensitive and intelligent monster is assembled mechanically out of scavenged biological parts and then galvanized (doubtless by electricity, thought by many to be the *élan vital*) into life.

mud and foul effluvia. I want you to hear this story. There is a secret down here, in this nightmare fog.¹⁸

The fossil-fueled fires of Hell were brought close to hand, “down” in the factory district.

IV

Thus historicized, exuberance is no longer just surplus energy creating optimism, and its catastrophe is not hapless dependency on what is running out. Exuberance and catastrophe materialized as historically specific forms of capitalist triumph and oppression, of environmental domination and destruction, and of human liberation and psychic and bodily oppression. All of these versions of the two motifs were, moreover, embedded in the materiality of coal itself, be it Promethean coal that gave humanity its new modes of and uses for fire, or Stygian coal, that re-created the ancient fiery nether region as polluted industrial district and city. With these reflections, clearly, we have moved energy history into cultural history.¹⁹

Oil entered this history and began reshaping it in two phases: first as part of what I will call the culture of extraction, and second as a key part of a new culture for a new energy system, which I will call “oil–electric–coal capitalism.” In its first phase, oil (formerly used as a medicine) appeared quickly and exuberantly as a remarkable, new energy source within a bootstrapped system of extraction, refining, transportation, and marketing.²⁰ Oil, in this phase, also had a role in creating what I call “extraction culture,” a specific formation that is still alive today. In its second phase, oil proceeded to thoroughly reshape

¹⁸ Rebecca Harding Davis, *Life in the Iron Mills and Other Stories* (New York: The Feminist Press at CUNY, 1993; first published 1861), 13.

¹⁹ The Promethean myth, of course, was woven into old cultural and techno-cultural traditions; its fusion with coal came only with the invention of the steam engine. Coal’s Stygian features, however, are part of an old tradition of coal as a pollutant, one that begins well before the Industrial Revolution, in medieval and Renaissance accounts of the appalling conditions in the English mines and of massive air-pollution events. Fossil fuels, moreover, lit Milton’s hell, and perhaps were also implicated in its brimstone, as English coal had a very perceptible sulphur content, and fossil fuels were lively features of depictions of Hell all the way back to early Christian sources. For a general discussion, see Freese, 14–42; in Milton’s *Paradise Lost*, see Book I, lines 725–29; for early Christian depictions of Hell, see Book 8, lines 100–6 of the Christian Sybillines in the *New Testament Apocrypha*, Volume II, ed. Wilhelm Schneemelcher, trans. Robert McLeod Wilson (Nashville, TN: James Clarke & Co., 1992).

²⁰ In fact, the (logical) order in which I have listed these converters is misleading. Before the development of extraction techniques came experiments with refining oil and the development of lamps suited for its use as a luminant. Also before extraction, capital accumulation began and marketing was pioneered, two other crucial parts of the oil converter chain. And together with extraction, storage and transportation converters had to be immediately developed – and go through many phases, as teamsters hauling carts with barrels yielded to railroad tankers and then to pipelines.

coal capitalism and do so culturally as well as technologically, expanding dynamically not into just new industries but also into new areas of cultural life. The new system integrated industry with society and culture more completely than ever before, even as it erased or sublimated most of the highly visible evils of the previous era of Stygian coal capitalism.

First, oil extraction culture. The opening of this era in the US began when Drake struck oil in Titusville. This was, Ida Tarbell wrote, the “signal for a rush such as the country had not seen since the gold rush of ’4.”²¹ It was a triumph of wildcatting, speculation, development, pollution, booms, and crashes, a moment of legendary exuberance in American history. Unlike coal mining which was a capital-intensive operation, with a large labor force working underground, often in appalling conditions, oil in Pennsylvania promised immense reward for little investment and less hard labor. So much for the workhouse of the world. Oil, tapped, came up to the surface by itself – albeit sometimes calamitously – to reward the efforts of a few daring and lucky men. Thus oil’s geography of depth differed greatly from coal’s. People did not have to go underground to get it; they stayed on the surface to tap it, already pressurized and ready to go.²²

But the oil boom was no mere gold rush. It was not a one-shot, extract-and-run proposition. It established a new industry and brought wealth and power to the US. As such, Tarbell saw oil extraction as signaling a resurgence of the old, epic–heroic ideology of democratic, self-reliant, community- and nation-building individualism. Oil extraction

used men of imagination who dared to risk all they had on the adventure of seeking oil . . . used capital wherever it could be found . . . used the promoter and the speculator . . . called on the chemist to evaluate the products and had set him up a laboratory to enlarge and improve them . . . [and] called on the engineer to apply all known mechanical devices.

Evoking this epic-scale mobilization of talents in nationalist, Whitman-like prose, Tarbell concluded,

The way that all these varied activities fell in line, promptly and automatically organizing themselves, is one of the most illuminating exhibits the history of our industry affords, of how things came about under a self-directed, democratic, individualistic system: the degree to which men who act on “the instant need of things” naturally supplement each other – pull together.²³

²¹ Ida Tarbell, introduction to Paul H. Giddens, *The Birth of the Oil Industry* (New York: The Macmillan Company, 1938), xix.

²² Oil geography suggests fascinating homologies with psychoanalytic theory and modern cultural practice, from therapy to poetry and art. The subject lies, unfortunately, beyond the reach of this essay. The new cultural geography of the later oil system is a separate but also important and interesting topic; see footnote 29.

²³ Tarbell, xxxvii–xxxviii.

Though Tarbell, writing this as an introduction to Paul Giddens's 1938 *The Birth of the Oil Industry*, also foregrounds the excesses of speculators, the sometimes spectacular environmental and human disasters brought on by rapid growth (Pithole went from seven to 15,000 people in just a few weeks), she dismisses these as peripheral to the epic of oil individualism. "Men did not wait to ask if they might go into the Oil Region," Tarbell wrote, "they went. They did not ask how to put down a well: they quickly took the processes which other men had developed for other purposes and adapted them to their purpose . . . It was a triumph of individualism."²⁴ Thus coal's backbreaking labor in extraction became the thrill of creation; coal's widening of social castes became individualist opportunity; and the gloom of impoverished cities and dismantled, wrecked environments seemed to lift.

But more interesting still, with oil extraction, catastrophe did not simply remain on the periphery of exuberance. It became, for Giddens and even Tarbell, an integral part of the exuberance of oil, not, as with coal, its squalid nemesis. Enthusiastically describing one such catastrophe, Giddens writes how a well at the lower end of Oil Creek sent up a large gusher – three thousand barrels per hour. A hundred and fifty people gathered to watch, when

a sheet of fire, as sudden as lightning, burst forth . . . [and] [i]nstantly, an acre of ground with two wells, oil vats, a barn, and over 100 barrels of oil were ablaze . . . The well continued to spout oil high into the air, which fell to the ground, igniting as soon as it fell and adding dense smoke and sheets of flame to the horrors of the scene.²⁵

Most of the onlookers became "human torches and frantically tried to escape from the fiery furnace." Epic catastrophe came with epic actions. This tone prevails even in writing about slower, seamier aspects of oil damage. Huge volumes of oil poured out into rivers and onto the ground due to the failure or absence of containers; oil river transport featured the exciting release of "freshets" downstream to float the barges – an event that ended often in wreckage that blackened the streams; boomtowns like Pithole famously lacked all sanitation ("The whole place smells like a camp of soldiers when they have the diarrhoea"; fights, drunkenness, and "garroting [were] almost common"); and so much oil spilled from teamsters' wagons onto the already muddy roads they became a "perpetual paste, which destroyed the capillary glands and hair of the horses," many of which died along the way, so that "hundreds of dead horses could be seen along the banks of Oil Creek."²⁶ Add to this wildly fluctuating oil prices and boom and then bust land prices, and it becomes almost impossible to separate out catastrophe from exuberance and vice versa.

²⁴ *Ibid.*, xxxix.

²⁵ Giddens, *The Birth of the Oil Industry*, 76–7.

²⁶ *Ibid.*, 137, 139, 102.

Indeed, the two were mutually reinforcing in Giddens's and even Tarbell's prose.

V

Things changed quickly, Tarbell's *History of Standard Oil* makes clear, as Rockefeller transformed extraction culture into a vertically integrated monopoly that stifled this resurgence of American individualism and frontier spirit. Oil, once systematized, began transforming social life – sending out tentacles into people's private lifeworlds to change them in what seemed, to many (but not all), exuberantly positive ways. Unlike coal capitalism, oil did not remain culturally inscribed as mostly an affair of production machinery for industry and commercial transport. "Give the poor man his cheap light, gentlemen," Rockefeller famously told his colleagues, and the ancient organic constraint of darkness was gone, and the lives of the poor were "lightened."²⁷ Huge machinery now shrank in size and scattered about the factory floor, and then drove in the form of new Fords out the door as parts of a new consumer culture, ones even the working class could enjoy. Old constraints on both physical and social mobility for even the working class were suddenly relieved. Everyman seemed to have now individual access to real power: oil concentrated into one gallon of energy "equal to the amount in almost five kilograms of the best coal" – itself the equivalent of fifty "well-fed human slaves toiling all day."²⁸

Urban environments also began to lose the customary organic miasma caused by coal; pollution abated significantly at industrial sites and in cities. Oil–electric industrial production was materially and culturally refigured as clean, efficient, and modern (think, for example, of Henry Ford's Rouge River Plant and Charles Sheeler's images of it). At the same time, oil–electric capitalism exported coal's miasma as far away as it could. The hellish depths were resited as backward, stagnant, unpleasant spots outside the system.

²⁷ Sonia Shah, *Crude: The Story of Oil* (New York: Seven Stories Press, 2004), 6. The new oil-flavored exuberance was distinctive in yet another way. No longer a Promethean intervention from above, or agent of capitalist oppression creating underworlds, energy became fused with widespread social desire. Indeed, it and the invention it stimulated and fetishized became an important attractor of peoples' imaginations and fantasies. Henry Adams's concept of history as a response to attractive, not compulsive, forces, and his use of energy production (the dynamo) as a central symbol for these was one response. More concrete was another change noted by Debeir, Déleage, and Hémery. By the twentieth century, energy production "reversed the demand–supply relation [a scarcity of supply relative to demand] which characterized early industrialization" (as indeed it had all previous energy systems). Now "energy production acquired unprecedented elasticity," and it "anticipated demand" and even "generated new needs." Debeir, Déleage, and Hémery, *In the Servitude of Power*, 108.

²⁸ Shah, 3.

Ironically, in retrospect, even cars were hailed as a great sanitary improvement, replacing the thousands of animals which had daily deposited millions of tons of waste in the streets – and therefore also the atmosphere, as dried dung particles were swept into the air. In consequence, cultural geography changed again: people more and more valorized living within the clean, new apparatus of oil–electric production–consumption, not apart from it.

In doing all this, oil had a partner: electricity.²⁹ What oil did, electricity furthered, taking over the role of light-giver from oil, increasing cleanliness, mobility, and speed with electric motors for factories, trains, and appliances. Together, oil and electricity wrapped people within their many infrastructures – roads, pipelines, telephone lines, power cables – even as it began doing something else of great cultural importance: reaching into and restructuring peoples' private worlds, identities, bodies, thoughts, sense of geography, emotions.³⁰ Perhaps the most important product of oil–electric capitalism was modern consumerism. Half-concealed, half-fetishized oil–electric infrastructures extruded numerous cultural infrastructures (converters), which modern people, including modern artists and writers, chose as preferred dwelling places.

In this transformation, the extraction era's exuberance modulated into the exuberance of a new dynamic system that sought stability in change. The oil

²⁹ Oil was a new energy source, materialized as such by the growth of complex sets of converter chains; electricity was, however, simply a converter, sometimes connected to oil, sometimes to coal. But both allowed the miasmas of the coal era to be situated farther and farther away (culturally and geographically) not just from the well-to-do, but from the growing middle classes. Early observers, like Henry Adams in *The Education of Henry Adams* (1918), were well aware of this. In his famous celebration of the dynamo, Adams writes that, clean and quiet, "it would not wake the baby lying close to its frame." Adams meaningfully explains why this is the case, noting that the dynamo utilized an "ingenious channel for conveying somewhere the heat latent in a few tons of poor coal hidden in a dirty engine house carefully kept out of sight." Henry Adams, *The Education of Henry Adams* (Boston: Houghton Mifflin, 1961), 380. Jill Jonnes also emphasizes how important oil's and electricity's ability to distance or erase coal was to the very idea of modernity. Writing about the dynamo in the 1893 World's Columbian Exposition and Fair in Chicago, Jonnes notes that, installed for the "White City's magnificent lighting displays, [it] was powered by one great 2000-horsepower Allis Chalmers engine, as well as numerous 1000-horsepower engines, all fueled with oil (supplied by Standard Oil) rather than coal." The reason was that the display was meant to symbolize an ideal modern world displacing/replacing the miseries of actual Chicago: "The White City would have no smoky pall." Jill Jonnes, *Empires of Light: Edison, Tesla, Westinghouse, and the Race to Electrify the World* (New York: Random House, 2003), 261. Theodore Dreiser made the same point in writing about "A Certain Oil Refinery," a highly polluting oil facility that was banished to the hinterland of Bayonne. Theodore Dreiser, "A Certain Oil Refinery," *American Earth: Environmental Writing since Thoreau*, ed. Bill McKibben (New York: Literary Classics of the United States, 2008), 188–91.

³⁰ Jacques Ellul has pithily (if androcentrically) characterized this key modern transformation as a move from "man and the machine" to "man in the machine." Jacques Ellul, *The Technological Society* (New York: Vintage, 1964), 6.

industry pioneered that goal; oil historians Harold Williamson, Ralph Andreano, Arnold Daum, and Gilbert Klose discuss how attempts to stabilize the boom-and-bust oil industry appeared first in Oklahoma in 1914, and then nationally, as industry and government, impelled by fear of scarcity, came tensely together to manage oil during World War I. These efforts continued after the war, resulting, by World War II, in a dynamically growing system “far from perfect” but nonetheless “the basic, essential structure” necessary for “attempts to meet old and new difficulties” even today.³¹ If oil, first illuminant and then automobile fuel, was essential to the construction of the new system, it also, in its third major use as a lubricant, may be seen metaphorically as equally essential to the dynamic stability and stable dynamism of oil–electric–coal capitalism.

Upton Sinclair’s novel *Oil!* chronicles one aspect of this immense social and cultural change. We meet its father and son protagonists as “Dad” (J. Arnold Ross, already a multimillionaire “big operator” in the oil business) takes his son, “Bunny,” for a high-speed drive along a California highway. Dad appears to his son, Bunny, as a figure of epic proportions: accessing an “engine full of power” by the mere pressure of “the ball of [his] . . . foot” and rocketing down roads “twisting, turning, tilting inward on the outside curves, tilting outward on the inside curves, [the road having been engineered] so that you were always balanced, always safe.” Dad was a man of money who had commanded the magic necessary to create all this. He “said the word,”

and surveyors and engineers had come, and diggers, by the thousand, swarming Mexicans and Indians, bronze of skin, armed with picks and shovels; and great steam shovels with long hanging lobster-claws of steel . . . All these had come, and for a year or two they had toiled, and yard by yard they had unrolled the magic ribbon . . . Never since the world began had there been men of power equal to this.³²

Though the novel goes on to expose this system as predatory and corrupt, Dad is nonetheless far from the big capitalists Sinclair depicted in his earlier novel *The Jungle*, a novel which dramatized as few American texts have the hellish underworld of coal capitalism. Dad never quite loses completely his new oil-era, Tarbell-like appeal as an epic individualist and adventurer remarkable for “the ingenuity by which [he] . . . overcame Nature’s obstacles.”³³ He is also a loving father who never lets his son’s radical, anti-oil-corporation politics interrupt their close relationship. Dad is, in short, positioned in between: in between Tarbell’s democratic extractor epic and a

³¹ Harold Williamson, Ralph Andreano, Arnold Daum, and Gilbert Klose, *The American Petroleum Industry: The Age of Energy 1899–1959* (Evanston: Northwestern University Press, 1963), 565–66.

³² Upton Sinclair, *Oil!* (New York: Penguin, 2006; first published 1926), 6.

³³ *Ibid.*, 76–77.

system in the process of forming its top-down, vertically integrated combinations. He drives at high speed, yet he does this on a road engineered for both speed and safety.

If Dad is favorably depicted, so are the physical operations of his industry, which have none of the coal-capitalist miasma that infused every aspect of *The Jungle*. At the site of one of Dad's new wells, Bunny thinks,

it was all nice and clean and new, and Dad would let you climb, and you could see the view, clear over the houses and trees, to the blue waters of the Pacific – gee, it was great! And then came the fleet of motor trucks, thundering in just at sunset, dusty and travel-stained, but full of “pep” . . . [The men] went to it with a will; for they were working under the eye of the “old man,” the master of the pay-roll and their destinies. They respected this “old man,” because he knew his business, and nobody could fool him. Also, they liked him, because he combined a proper amount of kindness with his sternness; he was simple and unpretentious . . .³⁴

Though clearly portraying Bunny as naive, Sinclair shares Bunny's excitement about the ingenuity involved in oil extraction, as Sinclair's subsequent fascinated description of the intricacies of drilling shows. Depicting the industry, Sinclair once again channels some of Tarbell's exuberance, which in turn channeled a previous era of US national ideology.

VI

This exuberant portrayal of oil drilling is not, however, solely retrospective. It also faces forward. Sinclair shows how, incorporated into the oil–electric system, exuberance takes on key new forms. In the new energy system, men have “pep” and Dad is a “real guy” who has “the stuff,” barrels of it.³⁵ Dad is, in short, an enlivened, positive, capable, always energetic machine himself – one that is fueled by oil. Dad thus is part of a long line of figures styled and self-styled as “modern.” That identification, along with the new energetics that is one of its chief signs, exuberantly marks off these individuals, together with the larger US oil–electric capitalist energy system, as part of a new and, for some, exuberantly better world.

In this new era, American exceptionalism leaves the frontier and invests itself in the modernity of the US, and the gap between it and the world outside modernity becomes reinscribed as a gulf between advanced and developing or backward places. This new societal exceptionalism promotes a new notion of individualism, which in turn becomes a new place for oil–electric cultural invention. In popular and also high cultural discourse, people's bodies and psyches are refigured as oil–electric-energized systems, and avant-garde artists

³⁴ *Ibid.*, 59.

³⁵ *Ibid.*, 61.

become the experts who most aggressively convert these energetics into new styles, new aesthetics, new poetics.³⁶

I will let Dad stand as a sufficient early example of a new kind of bio-energetics, pep, produced by oil. His foot connected him to engine power that augmented him, even as his charisma as a “big operator” yet a “real guy” gave him attractive force over his men. As it was with Dad, so it was with many. Slang was a fertile seedbed for their invention. People started (bodily and psychically) to “rev up” and “step on the gas.” Sometimes they operated on all their cylinders and stopped, when necessary, to refuel. Electricity, oil’s partner in the new energy system, provided a seedbed for even more fertile invention: as David Nye, in *Electrifying America*, puts it, electricity became “a metaphor for mental power, psychological energy, and sexual attraction,” and it “merged with new therapeutic conceptions of the psyche and the self.” Examples include “‘She really got a charge out of seeing you,’ or ‘He’s gone on a vacation to recharge his batteries . . . An ‘energetic’ person was ‘a human dynamo,’ a powerful performance was ‘electrifying.’”³⁷ The kinetics in all of these examples are so pronounced, catastrophe is not simply banished or geographically relocated to a hell; as in extraction culture, it is fused with exuberance. Thus people also crash, undergo crackups; they blow a fuse; they burn out. But unlike extraction culture, this fusion – as modernist art and aesthetic invention reveal – is complex and polyvalent, anything but simple.

Sinclair Lewis’s title character Babbitt, for example, “whose god was Modern Appliances,” embodied his ego in his Dutch colonial home in Floral Heights and his automobile, which he drives and parks in “a virile adventure masterfully executed.”³⁸ He commutes to work in Zenith, a city transformed, so that new “clean towers . . . thrust” “old . . . factories with stingy and sooted windows, wooden tenements colored like mud” from the business center. Further, he smugly sees himself as filled with new energy, as “capable, an

³⁶ True, this development is not wholly novel: Whitman, in his remarkable poem “To a Locomotive in Winter,” enthusiastically converted a steam engine into a new energetics for American bodies, psyches, and art. He also did the same with electricity in “I Sing the Body Electric,” absorbing a widespread romantic discourse of electricity and bodies, as Paul Gilmore discusses at length. Paul Gilmore, *Aesthetic Materialism: Electricity and American Romanticism* (Stanford: Stanford University Press, 2009), 143–76. Oil–electricity’s revision and great expansion of both these discourses subsequently did much to constitute “the modern.”

³⁷ David E. Nye, *Electrifying America: Social Meanings of a New Technology, 1880–1940* (Cambridge, MA: MIT Press, 1992), 155. Nye’s conclusion was that “electricity was not merely one more commodity; rather it played a central role in the creation of a twentieth-century sensibility. Electricity seemed linked to the structure of social reality; it seemed both to underlie physical and psychic health and to guarantee economic progress.” *Ibid.*, 156.

³⁸ Sinclair Lewis, *Babbitt* (New York: Oxford University Press, 2010; first published 1922), 15.

official, a man to contrive, to direct, to get things done.”³⁹ Exuberant in his views of himself and his world, Babbitt is, however, Lewis makes abundantly clear, psychologically, socially, and aesthetically a catastrophe – an emblem of the stupidity and vulgarity that the new modern energies are in fact bringing about. These are qualities Babbitt has mostly not because he partakes too fully of modern energetics, but because he partakes too little: he is, in short, a dim bulb.

At the other extreme end of the spectrum of modern energetics is Hart Crane, who styled himself as “quite fit to become a suitable *Pindar* for the dawn of the machine age, so called.” Crane’s stylistic innovations sought to “absorb” the machine into poetry, and he pursued it by cultivating “an extraordinary capacity for surrender, at least temporarily, to the sensations of urban life” to the end of internalizing the “power of machinery” so completely it might become “like the unconscious nervous responses of our bodies, its connotations emanat[ing] from within.”⁴⁰ From this stunningly romantic surrender, Crane writes poetry that creates – more than anything else in existence – the kinetic tactile and kinesthetic effects felt by bodies and psyches impelled by oil–electric-powered machinery into motion – by elevators, airplanes, trains, and subways. Packing sensations like the sudden, stomach-churning initial drop of an elevator or subway in descent into his always dynamically forward-rushing verse, Crane also incorporates into his style the new perceptual kinetics explored in oil–electric-powered film, its capacity for representing dynamic sudden motion in shifts of scene and perspective and in cut and zoomed shots. This ecstasy of motion is, however, nearly as catastrophic as it is exuberant. Kinetic catastrophe is the subject of “Kitty Hawk,” and even his poems’ authentic ecstasies – like “Atlantis” – are wedded to the surmounting of almost equal extremes of despair – as in “The Tunnel.”

This same argument could be developed in regard to Pound, early Eliot, and Hemingway. They too self-consciously invented modern, expert-created, and widely advertised styles, styles that could perhaps be thought of as aesthetic converters, that formed a key part of their project to rescue literature and thereby civilization in a time of acute crisis. Representing a new kind of alienation and social fragmentation – a nightmare side of the modernity brought in when oil–electric capitalism banished coal to the peripheries – they also explored what seemed like qualitatively new modes of mind and perception that aestheticized those experiences, again as a new kind of

³⁹ *Ibid.*, 3, 6.

⁴⁰ Hart Crane, *The Complete Poems and Selected Letters and Prose of Hart Crane*, ed. Brom Weber (Garden City: Doubleday, 1966), 262.

energetics.⁴¹ With Hemingway and Eliot, for example, that meant a new energetics of hyperconsciousness – for example, the light in Hemingway’s well-known short story “A Clean Well-Lighted Place” – that aesthetically haunted and mesmerized even as it paralyzed, rather than powered, bodies and psyches. In the midst of their portrayal of cultural and existential catastrophe, a clean catastrophe, not a coal-miasmatic one, exuberance subtly accompanies even the most desolate depictions, thanks to the entrancing and self-consciously transformative novelty of the writers’ styles.

Perhaps the most clear-cut example of modern catastrophic-exuberant energetics comes, however, from the new oil–electric technology of film. Arguing that film represents not just a new medium, but a change in the very “way in which human perception is organized,” Walter Benjamin relates the jerky motion of (early) film to the new Fordist system of manufacture, arguing that it is embodied visibly in the assembly line.⁴² In *Modern Times*, Charlie Chaplin (a favorite of Benjamin) simultaneously embodies and disrupts this new energetics, creating, with astonishing comic grace, a body that both channels and subverts the assembly line’s motion – which is, of course, also the motion of his medium, the mechanism of film itself. What were the cultures of coal have become now the aesthetics, even the poetics, of oil.

VII

If modern oil–electric–coal capitalism sought both dynamism and stability, it was never more than precariously achieved. In World War I oil exuberance was wedded all too clearly to oil catastrophe in a high-profile marriage of absolute opposites. Oil powered destructive new machinery (tanks, airplanes, trucks, diesel submarines), was used in making destructive weapons (TNT and even mustard gas), and it fueled a refitted British Navy, superior to Germany’s, which remained tied to coal. On the other hand, it was what saved the Allies and won the war, according to some influential voices: as Daniel Yergin writes, in his history of oil, *The Prize*, at a celebratory dinner ten days after the armistice Lord Curzon uttered the famous words, “The Allied cause had

⁴¹ Alienation may be seen, I believe, as the oil-era replacement for/descendant of the exploitation and environmental immiseration of the coal-capitalist working class. Modernist alienation is clean, not miasmatic; individualized, not collective, higher up on the class ladder than coal-misery; and an affliction of the refined consciousness, not of the degraded laboring body.

⁴² Walter Benjamin, “The Work of Art in the Age of Its Technological Reproducibility,” in *idem, The Work of Art in the Age of its Technological Reproducibility and Other Writings on Media*, ed. Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin (Cambridge, MA: Harvard University Press, 2008), 23. See also Thomas Levin’s introduction to the section on film, *ibid.*, 315–22.

floated to victory upon a wave of oil.⁴³ Oil helped kill millions. Oil led to victory. Immediately after World War I, as noted above, modernist exuberance was accompanied by the attempt to structure oil and society into a dynamic yet stable system.

In the context of World War II, the same description still fits: again the allies floated to victory on a sea of oil, and again war was followed by an attempt to stabilize. Once again, one finds a period of postwar exuberance, as the 1950s–1960s saw a new expansion of consumer society. But this exuberance marked not just simple continuance; it accompanied a reinvention of and a new phase in the oil–electric energy system, as oil extruded a crucial new set of converter chains. The petrochemical industry, development of which started after World War I, but which only blossomed after World War II, created a huge new array of products to add to its consumer repertoire. As wartime petrochemistry was reworked into the chemical equivalent of ploughshares, oil, chemically metamorphosed, became central to many new productions, from plastics to pharmaceuticals, print inks to pesticides. It changed into what people dressed in, evacuated into, viewed, and even ate, not just what they put into their power machinery. Oil thus now reappeared as an agent of chemical *and* social metamorphosis. Bodies became literally oily, in what they ate, and in the cosmetics and clothes they put on; pharmaceuticals began doing the same thing for minds.

On the heels of this exuberance came a much more insistent form of catastrophe. In 1964, Rachel Carson's *Silent Spring* made chemical metamorphosis seem the start of an apocalypse. With the transformation of fear of nuclear destruction into fear of environmental self-destruction that came with the 1970s environmental crisis, an apocalypse that involved oil, in many ways beyond Carson's carcinogenic and ecocidal toxics, seemed likely. People died in New York and London from the pall of fossil-fuel air pollution. Global warming made an early appearance on the popular stage with the film *Soylent Green* (1973), even as the oil crises of the 1970s added the threat of economic chaos to environmental meltdown. But then came exuberance again, with what seemed like no transition: Ronald Reagan, arguably, was swept to power on unhappiness with oil scarcity, an unhappiness which was quickly salvaged by the release of a new sea of oil, one that floated his new conservatism

⁴³ Daniel Yergin, *The Prize: The Epic Quest for Oil, Money, and Power* (New York, The Free Press, 1991), 183. Curzon's rhetoric (and the tone of Yergin's title and book) are a perhaps a bit exaggerated, the former being a tribute to the wartime contribution of the American oil industry, and the latter clearly indebted to the (extraction-era) discourse of the epic of oil. Still, oil's contribution to World War I was great, and by World War II Curzon's comment would apply without qualification.

to new victories – the most significant of which was the collapse of the USSR, a collapse that can be linked to a resulting plunge in oil prices.

These rapid oscillations between oil exuberance and catastrophe, I would argue, signal the arrival of a new cultural regime – one that we dwell in today. This new regime involves a fusion of the two motifs and links them in a mutually reinforcing symbiosis that recalls early extraction culture. But now the fusion takes place against a background not of celebratory nationalism, or modernist neo-exceptionalism, but of a combination of multiplied scenarios for global apocalypse and theoretical advances toward antifoundationalism, the breaching of apparently secure cultural boundaries, and the embrace of disequilibrium and emergence. Stability seems to be completely gone – gone simultaneously in a runaway dynamism of exuberance and catastrophe.

On the exuberant side, the dynamic growth of new industries (computers, genetics, robotics, and nanotechnology) has been accompanied by a new, exuberant rhetoric that rejects the very notion of stability and equilibrium and that celebrates risk and even imminent catastrophe as part of this new dynamism.⁴⁴ Important also are exuberant versions of postmodern theory, celebrating human supersession of nature and evolution, and the breaching of boundaries between the human and the technological.⁴⁵ Simultaneously, psychic and bodily energetics have been taken to a catastrophically exuberant extreme in fictions like William Gibson's *Neuromancer* (1984), in which psyches wired into cyberspace experience qualitatively new and addictive kinds of out-of-body acceleration. Equally, new catastrophic–exuberant fantasies of post-evolutionary metamorphosis and hybridization have been fetishized by writers from Bruce Sterling in *Schismatrix* (1986) to China Miéville in *Perdido Street Station* (2003).

On the catastrophic side, a myriad of environmental, technological, economic, and geopolitical crisis scenarios have now become key reference points for US culture's construction of normality. Oil is central or significant in many of these crisis scenarios, even as worries about it have become a key part of today's norms.⁴⁶ More and more people today feel they dwell in what

⁴⁴ On the new exuberance see Kevin Kelly, *Our of Control: The New Biology of Machines, Social Systems, and the Economic World* (New York: Basic Books, 1995); Alvin Toffler, *The Third Wave* (New York: Bantam, 1984); and Ilya Prigogine and Isabelle Stengers, *Order out of Chaos: Man's New Dialogue with Nature* (New York: Bantam Books, 1984). On its involvement with risk see Julian Simon, *The Ultimate Resource 2* (Princeton: Princeton University Press, 1966); and Naomi Klein, *The Shock Doctrine: The Rise of Disaster Capitalism* (New York: Picador, 2008). See also the discussion of risk and the new exuberance in Frederick Buell, *From Apocalypse to Way of Life* (New York: Routledge, 2005), 177–246.

⁴⁵ See, for example, Fredric Jameson, *Postmodernism: Or, the Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991); and Donna Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1990).

⁴⁶ This is the central argument of my *From Apocalypse to Way of Life*.

Ulrich Beck calls “risk society.” US popular culture (in blockbuster films and video games especially) now exuberantly sets its high-tech exciting narratives in postapocalyptic milieus. Many of these films, like the James Cameron *Terminator* films (1984, 1991), *Children of Men* (2006), or *I Am Legend* (2007) are at best only very indirectly related to oil, but they do the oily cultural work of injecting exuberance into catastrophe in postapocalyptic settings. More directly engaging oil are films like *The Day after Tomorrow* (2004), a film that works to make global warming thrilling, and Cameron’s *Avatar* (2009), which wrests a visually stunning utopian vision from energy woes.

A few more serious texts, however, attempt to unravel this fusion of catastrophe and exuberance. Octavia Butler’s *The Parable of the Sower* (1984) and Xenogenesis Trilogy (1987–1989), Cormac McCarthy’s *The Road* (2006), and Kazuo Ishiguro’s *Never Let Me Go* (2005) all present meltdowns and narratives of painful, slow, on-foot struggle that resist the exuberance that is today so persistently inscribed in postapocalyptic space. A small, more recent wing of such writing is now devoted to specifically post-oil fictions, including Sarah Hale’s *The Carhullan Army* (2007), James Howard Kunstler’s *World Made by Hand* (2008), and Andreas Eschbach’s *Ausgebrannt* (2009),⁴⁷ fictions which, in that order, focus attention on the question, possibility, and even possible character of post-exuberant societies.⁴⁸ In these texts, most notably, fantasies of post-physical acceleration and quicktime metamorphosis are stifled.⁴⁹ What the significance of these cultural attempts to resist the

⁴⁷ I include Eschbach’s fiction in the list because, while it is by a German writer and has not yet been translated, it is substantially set in and influenced by reflection on US culture. Its deviation from the anglophone postapocalyptic mode is very refreshing, as it explores different post-catastrophic, post-oil futures for different societies.

⁴⁸ A slightly different, but very interesting example of resistance to fused catastrophe and exuberance is Kim Stanley Robinson’s global warming trilogy (*Forty Signs of Rain* (2004), *Fifty Degrees Below* (2005), and *Sixty Days and Counting* (2007)). A speculative-fiction and alternative history of the present, the trilogy shoehorns attempts to deal with the first, catastrophically large disruptions of global climate into a realistic fiction of mixed subgenres. Partly Washington novels of political and scientific-political intrigue, partly suspense novels dealing with internal spying, partly romances, and partly novels of the education and growth of a large cast of interesting and likable good people dealing with domestic and personal issues, the trilogy not only confines exuberance and catastrophe within these different frames, but also manages to end in a strikingly complex fashion. On the one hand, it concludes nonexuberantly, as catastrophic climate disruptions (dramatized quite vividly) will certainly continue. On the other hand, it also concludes noncatastrophically, as the crisis is now in the hands of a good President and staff, elected in a narrow defeat of the scientifically illiterate far right candidate [Bush], even as characters’ romantic and familial problems happily resolve.

⁴⁹ That such fantasies are directly and/or indirectly related not just to today’s culture, one dependant on oil, but to oil in its contemporary material and technologically reworked forms is, I think, clearly arguable. Today’s post-biological acceleration is clearly a descendant of futurist versions of modern automotive speed, and apocalypses that have characters trudging

contemporary postapocalyptic fusion of catastrophe and exuberance might be is, of course, not yet clear. But what is clear is that the old faith in stability is gone. Oil's power, complexity, and serious woes are not only transparent to people today as never before, but also themselves a hot cultural commodity in oil capitalism. In the process, the old traditions of exuberance and catastrophe, embedded in the earliest oil literature, have taken on extreme new forms.

along disused highways pushing shopping carts play both on automobile and oil-midwived twentieth-century consumer culture. And quicktime metamorphoses, while inspired by the baby steps genetic engineering has actually taken, play on the postwar reshaping of motive energy into metamorphic energy. Motive energy literally became metamorphic with the rise of post-World War II petrochemistry and its transformation of oil into so many different forms. In a different sense, motive energy also became metamorphic with more recent cultural fascination with robotics. In fact, and far more in fantasy, today's robotics has transformed the instrumental mobile machinery of modernity (for example, automobile culture) into a wide variety of lively post-biological cyborg life forms (from malign terminators operating in militarized postapocalypse to Spielbergian AI's, active in Disneyfied postapocalypse).