

Energy Narratives

David E. Nye

Odense University

"Energy" is a slippery word, referring to something noticeable yet nevertheless intangible. "Energy" may be a noun, but it refers to neither a solid thing like a shoe nor to an abstraction like "liberty" or "democracy." It might be said that this noun aspires to be a verb, since it refers to an active, almost simultaneous, movement from one state to another. Energy is both a commodity and a fundamental aspect of being. Given this peculiar status, energy can function within a narrative as a prize to be won, such as ownership of a utility or Frank Cowperwood's struggle to control a traction company, but it also belongs to a realm of pre-conditions or choices made in fashioning a narrative design. This essay deals first with explicit "energy narratives" and then with the ways that conceptions of energy implicitly shape the pre-formation of narrative, concluding with a discussion of F. Scott Fitzgerald's *The Great Gatsby*. One caveat must be stated at the outset. I will discuss only male energy narratives, which characteristically concern power systems and their problems, growth, limits, success, and failure. A corresponding study of women's energy narratives would perhaps focus more on biological rather than mechanical metaphors. That essay would explore such topics as generativity and barrenness, exclusion and empowerment. Here, I am concerned with defining the narrative designs fashioned by white men, who have long dominated American politics and culture.

Energy has not always been a central category in conceptualizing society or the economy, much less in the constitution of literature. Rather, the importance of energy emerged as part of a larger paradigmatic shift in scientific thought during the nineteenth century. Until the 1840s scientists worked on the assumption that "force" was the central concept in defining and explaining the universe. But increasingly it became evident to them that "force" was a compound of empirical observation and popular metaphor. Beginning in the 1850s Lord Kelvin

and others formulated the laws of thermodynamics, which proposed a new model of the universe in which "energy" was a central term. Only later did their scientific ideas become part of the larger cultural discourse, in a process that it would require a large volume to trace out. Suffice it to say that energy did not remain an abstract concept in physics, but was manifested to most people in the particular forms of energy that were becoming central to industrial society, most obviously steam engines and, later, electrical motors and dynamos. These in turn provided the basis for a metaphorical language of energy. A "dynamic" person "got up a head of steam" or "gave an electrifying performance." Nor was energy merely manifested in such expressions. Scientific thought provided successive models of the universe in which energy remained the key term; and industrialization relied upon a series of new machines that made the United States a "high energy" society.

By the end of the nineteenth century every text contained an implicit conception of energy, which found expression both in terms of the individual and the society as a whole. The ideology of human energy included the perhaps inherently tragic Freudian conception of a reservoir which has a limited supply but that must find an outlet; the liberal conception that energy can be increased if it is released from needless obstructions; and Henry Adams's sense that limitless energy will accelerate society toward a certain doom. In short, the concept of energy was intimately connected to the sense of history, and was often present as a tacit knowledge shared between reader and writer.

As already noted, it is useful to divide the topic into explicit and implicit narratives, or texts which focus overtly on energy and texts which contain an implied conception of it. In the implicit narrative, to which I will return, energy is a central part of an imagined order that offers a fictive resolution to ideological conflict. In the explicit form a particular technology, such as electric high-tension lines or a hydroelectric dam, may become a subject of political debate, or it may become a prominent part of a novel, as was the case with William Wister Haines' 1930s largely forgotten working-class novel, *High Tension*.¹ The following survey will look at a suggestive variety of sour-

¹ Such reform novels were an important part of American culture in the early twentieth century. They were brought out by respected houses, including Bobbs-Merrill, Macmillan, Grosset & Dunlap, and Little, Brown, and they played a role in political life. One must file a modest brief for this silenced literature, which in its own way is as important as unjustly forgotten work by racial and ethnic minorities.

ces, both famous and obscure. Just as importantly, literary works will be placed in a larger context that includes political speeches, advertisements, and public relations, or in short, any discourse which contains opinions about energy.

II. Explicit Energy Narratives

Four conceptions of energy underlie most explicit energy narratives. Any of them may seem to be true or actually be true at a given historical juncture. My purpose is not to determine their veracity, but rather to analyze their interrelations. The typology below may seem familiar to readers of Northrop Frye, Hayden White, or A. J. Greimas, but I will not attempt to harmonize their different critical positions. Rather, I will sketch the historical emergence of four fundamentally different energy narratives: comic, melodramatic, heroic, and existential.² The diagram should be taken as less an analytical device than a convenience for the reader. The split between the horizontal axes is important, however, as it emphasizes a historical development. Comic and melodramatic energy narratives were more common in the nineteenth century, although they still remain popular; those focusing on technology belong almost entirely to the twentieth century, and they have only attracted a sizeable public in recent years.

Figure 1. Explicit American Energy Narratives

	<i>Abundance</i>	<i>Limits</i>
Nature	Comic	Melodramatic
Technology	Heroic	Existential

² On the idea of force in literature, see Ronald E. Martin, *American Literature and the Universe of Force* (Durham: Duke University Press, 1981). Were one to perform this critical work, Frye's formulation might be less useful than the work of A. J. Greimas and his structuralist school. Northrop Frye, *Anatomy of Criticism* (Princeton: Princeton University Press, 1957). Hayden White, *Metahistory: The Historical Imagination in Nineteenth Century Europe* (Baltimore: Johns Hopkins University Press, 1973). A. J. Greimas, *Sémantique structurelle* (Paris: Larousse, 1966; Du Sens. Paris: Seuil, 1970).

In the classic narrative of natural abundance more energy continually becomes available, assuring progress, happiness, and personal success. This energy narrative originated in the industrial revolution, flourished in the nineteenth century, and remained the dominant form until after World War II. During the twentieth century corporate public relations have been the most obvious disseminator of this narrative. Roland Marchand concluded that advertising in the 1920s and 1930s used "scores of parables and visual clichés" to beckon "consumers to join in a cost-free progress toward modernity."³ For instance, General Electric spent millions on a campaign specifically designed to create an "electric consciousness." The company also disseminated this message through personal appearances by Charles M. Ripley, a popular lecturer. The indefatigable Ripley traveled the United States repeating the same talk, "The Romance of Power," often giving it more than once a day. Like a barn-storming revivalist he spread the gospel of progress through electricity, speaking to Rotary clubs, schools, women's groups, and any other organization where local utilities could introduce him. So popular was his lecture that the 100 slides he used were reproduced in sets and other men were trained to give the same talk. In 1928 the whole was packaged as a booklet, *The Romance of Power*, and distributed to schools all over the United States. It had the following subtitles: "Travel, Life and Labor, Here and Abroad;" "An Illustrated Review Filled with Laughs and Information;" "The ABC's of Human Progress;" and "Pictures Showing What the World Can Learn from the United States and What We can Learn from the World." As might be expected, the rest of the world had but little to teach, but could learn a great deal from America. Photographs showed "primitive" people doing things by hand that Americans did with machines. Ripley had statistics and charts to prove that Americans had a higher standard of living than Great Britain, and he argued that the measure of this success was the use of energy. British factories used only one-third as much horsepower per worker as American factories, and, he claimed, productivity was only one-third as great. Moreover, the price of electricity generally was half that in

³ Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940*. Berkeley (University of California Press, 1985), p. 363.

England. Citing such examples, Ripley concluded his book with the admonition, "Young men and women, guard this mechanism [private power plants.] Keep the wheels turning, faster and faster, making more and ever more of the good things of life – for everybody."⁴

Such sentiments were widely held. They could be found not only in corporate advertising and public relations, but just as importantly they were embraced by a whole spectrum of political figures from conservative Americans to Lenin. In the United States abundance based on energy was given a socialist inflection by General Electric's leading researcher, Charles Steinmetz, who believed that electrification would not only increase productivity but also lead automatically to the national consolidation of utilities because of the interconnectedness of generation and transmission facilities. Their integration would create a national grid that only the government could effectively control. Regardless of who was imagined to own the electrical system, however, it was the key to abundance. During the 1930s corporate exhibits at the world's fairs in Chicago (1933-1934) and New York (1939) stressed how private ownership of energy would lead to abundance. The New Deal politicians who created the Tennessee Valley Authority (TVA) shared this idea with the utility executives who opposed public power developments. Even at the political extremes, electricity was seen as a catalyst for abundance. Both the conservative Southern Agrarians and Marxists of the 1930s believed that increasing electrification was virtually identical with prosperity and progress. In short, the comic narrative was dominant for roughly a century, from 1840 to 1940, and has by no means lost its popularity. During the 1950s an updated version of Ripley's talk was purveyed by another General Electric public relations man, Ronald Reagan.

The second form of explicit energy narrative, like the first, assumes that an abundance of energy is an unquestioned good, but it focuses on artificial limitations of the supply. These are usually melodramatic tales of good and evil, in which natural abundance is cut off and hoarded for personal gain. Before 1940 this view was commonly found in novels

4 Charles Ripley, *The Romance of Power* (New York: National Electric Light Association, 1928). The 91 pages of text were illustrated with the 104 of the images used in the slide show. Archives of the National Museum of American History, Warshaw Collection, Box 9, pp. 66-68, 91. The majority of the images used still can be found in the General Electric Photographic Archives, Schenectady, New York. The role of such materials in public relations campaigns is discussed in chapter eight of David E. Nye, *Image Worlds: Corporate Identities at General Electric* (Cambridge: The MIT Press, 1985).

that attacked private monopolies of electrical power, which restricted supplies and/or kept prices high.⁵ There are many possible variants of this narrative. Some writers, both in fiction and in the periodicals, depicted public utilities as an inherent evil, claiming that compared to private enterprises they were generally so badly run and inefficient that they limited the natural abundance of energy. Seen in this perspective, Theodore Dreiser's *The Titan* concerns artificial limitations on energy and the hero's attempts to rationalize its use in his traction companies. In another variant of the narrative of limitation, short-sighted technicians could inadvertently create blockages in the free flow of energy. A 1940s novel dealing with the TVA focused on the difficulties encountered in evacuating backwoods people from their ancestral homes and educating them to accept modern ways, in order to make way for progress. As one character lectures an engineer, whose only concerns are technical, "If you were allowed to build this dam unhampered by the rest of us, it might provide electric power, but for whom? A malaria ridden, poverty-stricken, one-crop population farming burnt-out land can't buy electricity, nor can it buy the products of factories.... The more highly you impractical technicians industrialize a region, the wider becomes the gap between the articles you produce and the consumers on whom the ultimate success or failure of your enterprise depends, because you don't include all the factors in your planning. Frankly, Gordon, you're a starry-eyed, naive engineer."⁶ More commonly, of course, engineers were depicted as the heroes of the abundance story, as technicians with vision. Well before World War I, the engineer emerged as a rugged individualist hero in popular fiction. He was the man of action [the profession was overwhelmingly male] who overcame obstacles, put theories into practice, and ensured material progress.

While early limitation stories focused on individuals, after World War II the narrative of artificial or unnecessary limits on energy supplies assumed global dimensions. Frequently, it is associated with foreign policy, national self-interest, and the deployment of troops in the Middle East. In the 1970s OPEC version, the narrative focused on conflicts between the United States and the oil cartel. In 1990, when Saddam

⁵ Alexander Otis, *The Man and the Dragon* (Boston: Little, Brown and Company, 1910). Henry George, Jr., *The Romance of John Bainbridge* (New York: Macmillan Company, 1906).

⁶ Theodore Dreiser, *The Titan* (New York: World Publishing Company, 1946). Eleanor Buckles, *Valley of Power* (New York: Creative Age Press. Second printing), p. 123.

Hussein seized Kuwait and its extensive oil fields, he was easily type-cast in the role as the villain who threatens the world's energy supply, first by seizing it and later by setting hundreds of oil wells on fire.

The third form of the explicit energy narrative is a tale of transformation, in which clever technicians reveal how to achieve growth, progress, and personal success through using new resources or recycling old ones. In recent times this narrative has been particularly attractive, but it is hardly new. Henry Ford had expressed most of its basic ideas by the early 1930s. He early championed recycling, the use of renewable resources and non-polluting forms of power generation. Ford also helped to enshrine Thomas Edison as one of the central figures of this myth, in which the scientist or engineer is the hero.⁷

After 1940 atomic power began to be presented in similar terms. As a fuel thought to be cheap and inexhaustible, it underlay visions of a future world whose energy supplies would be so limitless that crops could be grown with artificial light underground, leaving the surface of the earth free for recreation. One scientist wrote in *Collier's* in 1940 that atomic energy would ensure "unparalleled richness and opportunities for all. Privilege and class distinctions and the other sources of social uneasiness and bitterness will become relics because things that make up the good life will be so abundant and inexpensive." The same year, *The Saturday Evening Post* called uranium "a miraculous new continent of matter, as rich and wonderful in its way as the Americas proved to be years after their discovery," and spoke of "the Promised Land of Atomic Energy." The apparent discovery of "cold fusion" generated a similar excitement at the end of the 1980s.

While such heady visions have receded, the basic narrative form remains common. More recent versions stress the development of new energy sources such as solar power to replace the fossil fuels which are either running out or potentially unobtainable, the adoption of more energy-efficient housing designs, and the installation of low-energy appliances.⁸ In such narratives there are no immediate limits to growth if

7 On Henry Ford's energy views, see David E. Nye, *Henry Ford: Ignorant Idealist* (New York: Kennikat Press, 1979), Chapter 4.

8 *Collier's* and *The Saturday Evening Post* quotations from Stephen Hilgartner, Richard C. Bell, Rory O'Connor, *Nukespeak: The Selling of Nuclear Technology in America* (Harmondsworth: Penguin Books, 1982). Amory Lovins and L. Unter Lovins, *Brittle Power: Energy Strategy for National Security* (Andover, Mass.: Brick House Publishing, 1982), pp. 18–20.

one uses appropriate technologies. Economist Robert L. Heilbroner stressed in the 1970s that, "Given enough power, which nuclear energy now begins to promise us, we could literally 'melt' the rocks and reconstitute any substance by synthetic processes....the long-term future holds out much more promise than the anti-growth school of thought reveals."⁹

In some versions of the transformation narrative, mastering energy through technology leads to human transformation. Edison subscribed to the view that the introduction of lighting into communities not only kept people awake longer but quickened their intellectual and social development. Matthew Luckiesh, one of General Electric's leading lighting researchers during the 1920s and 1930s, tried to document similar theories scientifically.¹⁰ In the 1980s, Murray Melbin, a sociologist, expressed a related view in *Night as Frontier: Colonizing the World After Dark*. Melbin argued that people in post-industrial societies lived in a fundamentally new situation, where life no longer obeyed the diurnal rhythms of night and day. Rather, life continued around the clock without interruption, creating a new social environment characterized by "incessance." He concluded,

Our characters and our bodies are changing and becoming suited to the particulars of incessance. Being reared in a more wakeful household, accelerating the timetable of maturation, hormonal levels in the blood being less conducive to drowsiness, and practices of repeatedly recombining in personal relationships, all contribute to a better fit between persons and nighttime undertakings. Social, biological, and psychological processes have combined to transform us in ways to fit the environment we refashioned, and the community is being stocked with people who are more comfortable with its timetable. Along with altering our milieu, we are altering ourselves.¹¹

In stark contrast to such transformative stories, the existential narrative of absolute limitation offers a bleaker prospect, and does not blame human agents for deficiencies, but presents energy scarcity as a fact of nature, based on scientific principles. The first law of thermodynamics is

9 Robert L. Heilbroner, "Growth and Survival," *Dialogue*, Winter, 1973. [Published by the Council on Foreign Relations in 1972, reprinted in *Dialogue*.]

10 For example, see Matthew Luckiesh, *Artificial Sunlight: Combining Radiation for Health and Light for Vision*. (New York: Van Nostrand Company, 1930.) Edison's views of the social effects of the electric light in "Edison's Prophecy: A Duplex, Sleepless, Dinnerless World," *Literary Digest*, Nov. 14, 1914, pp. 966-968.

11 Murray Melbin, *Night as Frontier: Colonizing the World After Dark* (New York: The Free Press, 1987), p. 127.

that the sum total of all the energy in the universe always remains constant, but the second law (that on entropy) states that due to small losses that occur whenever any conversion of energy takes place, an ever-increasing amount of energy becomes unavailable to man. These laws led Lord Kelvin, who helped formulate them, to predict the gradual heat death of the universe. Such speculations encouraged a romantic pessimism in some popular writing at the end of the nineteenth century, a view also common in recent science fiction. Often the central figure must come to terms with limits, such as the computer whiz kid Fisher in Paul Theroux's *O-Zone*.¹²

Alternately, in some novels the capitalists themselves are forced to recognize the limits of possible expansion. As early as the 1930s, *Bloodbird*, a now forgotten novel by Thomas Burton, pits the Winthrop family which plans to build a hydroelectric dam, against "the valley farmers" whose lands will be sacrificed to the project.¹³ Melodramatic narratives of artificial limits had been concerned primarily with reforming the city; Burton suggests that the still unredeemed city threatened the well-being of the countryside as well. A utility manager explains, "With a series of big dams we can begin to flood and store up enough cheap water power for our turbines to knock out all competition. Then we can make our own rates."¹⁴ The utility buys out some farmers and forces others out through bankruptcy proceedings. At the cost of one man's life, it disrupts a political rally organized by the remaining farmers. Against such ruthlessness the farmers prove helpless. Halfway through the novel their candidate has lost the election and they lose an appeal in the court. One by one they are beaten, until only two men remain. The dam itself is underway, and its construction devastates the valley. *Bloodbird* thus inverts the comic narrative, emphasizing the human and natural costs of power generation. In this world of natural limits the farmers are associated with the idealized Jeffersonian world of subsistence farming and individualism. They look back to the pre-industrial period for values and standards, and ultimately the novel will vindicate their point of view. The stock market crashes, undermining the utility's economic position and paralyzing work on the dam. Then the Winthrop's town burns to the ground, a victim of its own shoddy water

¹² Paul Theroux, *O-Zone* (London: Penguin, 1987). See Martin *op. cit.*, pp. 27-29, and *passim*.

¹³ Thomas Burton, (Stephen Longstreet, psued.), *Bloodbird* (New York: Smith and Durrell, 1941).

¹⁴ *Ibid.*, p. 88.

pipes that freeze because they are substandard. The conflagration is presented as a natural event. Unlike the discursive universe of the Progressive political novel, men are not powerful actors who can shape events to their will; rather, they work within limits dictated by nature.

As this 1930s novel suggests, the narrative of limits has long been an alternative to the Hamiltonian vision of unlimited expansion, and can be traced back to Thomas Jefferson, who argued that the United States should remain an agricultural nation and should not urbanize or industrialize. Similar narratives are assumed in much of the literature of ecology, and they are implicit in the "small is beautiful" movement that emerged in the 1970s. It, like *Bloodbird*, focuses on the hazards of poor design and stresses finite limits to technological growth.¹⁵ Perhaps because Jimmy Carter became president during these years, and no doubt because he was the only recent president who knew much about the laws of thermodynamics, he often plotted America's energy future in the terms of this narrative. Admittedly, he also at times presented Americans with narratives of technical transformation, emphasizing "the long range development of alternate forms of energy." But with his training as an engineer and as a nuclear submarine commander, Carter saw clearly the problems with nuclear energy, and he also realized that alternative energy sources such as wind and solar power would not be available in large quantity any time soon.

In this dilemma, Carter turned to a more existential view. In 1977, he declared, "The energy crisis has not yet overwhelmed us, but it will if we do not act quickly. It is a problem we will not be able to solve in the next few years, and it is likely to get progressively worse through the rest of this century. Our decision about energy will test the character of the American people...[it] will be the moral equivalent of war."¹⁶ Sitting in the White House with the heat turned down, Carter exhorted Americans to perceive themselves as part of a dogged, heroic struggle that would require a decades-long fight, to overcome their own weakness (over-consumption) and dependence (on foreign oil). The truth of

15 E. F. Schurnacher, *Small is Beautiful: Economics as if People Mattered* (New York: Harper and Row, 1973).

16 Televised speech, April 18, 1977. Quoted in Jimmy Carter, *Keeping Faith* (London: Collins, 1982). For an overview of Carter energy initiatives in the early years and how they became bogged down in Congress and were only partly passed into law, see M. Glenn Abemathy, *et al.* *The Carter Years* (London: Francis Pinter, 1984), pp. 14–19.

this narrative appeared to be confirmed by the long lines at the gas pumps, the rising cost of oil, and the simultaneous stagnation and inflation in the American economy.

This narrative of an overwhelming, long-term crisis, dictated by an absolute limit in the energy supply, which demanded sacrifices, "did not play well in Peoria." Candidate Ronald Reagan campaigned successfully against Carter's scenario of suffering and hardship. In his acceptance speech at the Republican National Convention of 1980, he refused to acknowledge that real energy shortages even existed. Instead, he redefined Carter's program as a narrative of artificial limitation, in which over-zealous regulation had strangled the free market.

Those who preside over the worst energy shortage in our history tell us to use less, so that we will run out of oil, gasoline, and natural gas a little more slowly... But conservation is not the sole answer to our energy needs. America must get to work producing more energy. The Republican program for solving economic problems is based on growth and productivity. Large amounts of oil, coal, and natural gas lie beneath our land and off our shores, untouched because the present Administration seems to believe the American people would rather see more regulation, more taxes, and more controls, than more energy.¹⁷

Two months later, in Cleveland, Reagan compressed this message into the following lines: "The truth is America has an abundance of energy. But the policies of this administration consistently discouraged its discovery and production." He promised to "get America producing again" and concluded, "Every available resource we have must be used to free us from OPEC's domination."¹⁸ Reagan had conflated Carter's policies with those of the oil cartel, without explicitly saying so, by depicting both as parts of a narrative of limitation.¹⁹ After the election he acted to make oil as abundant as possible in the short term. He appointed James Watt as his Secretary of the Interior, who loosened controls on leasing oil and natural gas on federal lands and in off-shore areas. Reagan was also fortunate. Shortly after he came to office, OPEC's efforts to control prices broke down, the price of oil dropped precipitously, and his predictions of abundance almost immediately came true. By 1985 the price of a barrel of oil was less than half what it had been in

17 Ronald Reagan, Acceptance Speech, July 17, 1980. Transcript in *New York Times*, July 18, 1980.

18 Cleveland speech, 10 September, 1980, Facts *on File*, 1980, p. 699.

19 There is another interesting category, which one might call narratives of transcendence, which are closely related to those of limitation. In this connection, see Allen Ginsburg's poem, "Plutonian Ode."

1980. During his first administration he had begun to build up a "Strategic Petroleum Reserve," but these purchases were cut by more than 50% in his second administration, because they no longer seemed necessary.

By 1985 the comic narrative of abundant energy that had flourished since the nineteenth century enjoyed a resurgence. It still seemed justified by the history of American economic growth from a small agricultural society to an industrial power, and it remained congenial to most of the American public. The assumption that energy ought to be naturally abundant is especially suited to a liberal, laissez-faire ideology, in which the self-reliant individual has only to make use of his own energies, which by extension include natural energy as well, in order to rise in the world. Ronald Reagan emphasized the appeal of this narrative by invoking the contrasting possibility of the melodramatic narrative, in which the free market is thwarted by unnatural agencies.

Within both the comic and the melodramatic forms, machines are part of a transcendental vision of technology as a benign extension of the natural world. In contrast, the explicitly technological narratives [the heroic and the existential] recognize at the outset a tension between nature and industrialization, which it presents as a potentially dangerous incursion into the biosphere. They seek to resolve this tension, either by increasing the energy that can be extracted from the same resources, or by recycling. While such narratives began to appear by the end of the nineteenth century, they were not taken seriously by a large public until the 1970s. Both narrative forms were well-represented in the debate spurred by the Club of Rome's publication of *The Limits of Growth*, and both have been prominent in the debates on global warming and the degree of deterioration of the ozone layer.²⁰

20 Donella H. Meadows, et al., *The Limits to Growth* (London: Pan Books, 1972). The book sold widely in the United States and had gone through five printings in England by 1979.

III. Modernism and Implicit Energy Narratives

We have seen how energy has been variously conceived, underwriting contrasting narratives that provide scenarios for social and economic decisions. Yet this four-part typology hardly exhausts the subject of energy narratives. It has a mechanical feel about it and is too static and *a priori*, treating energy as an economic and political factor and understanding it as an object, rather than seeing it as an underlying dynamic force that takes various forms in different historical periods. To understand energy as a factor in literary works, it must be grasped as a changing category of human experience, not merely as an object of political debate. In complex literature energy is not usually a possession to be fought over, nor is it usually an abstraction that an author takes an explicit attitude toward, nor is it merely a matter of categorization, in which pre-conceived narrative structures provide varying accounts of social experience. To discuss energy in relation to literary form, the scheme presented so far is inadequate, because it suggests that narratives neatly correspond with ideological positions and historical time periods.

A work using modernist techniques of narration might be expected to adopt either the heroic or more probably the existential narrative form, but in fact it can just as easily embrace the natural abundance of the comic plot. For example, in 1929 a novel on the public utility question employed the modernist form of multiple narration but nevertheless was a reworking of the earlier comic and melodramatic modes. In *Chains of Lightning* Johnathan Brooks uses five different narrators to tell the story of how Jason M. Wheeler's electrical utility empire comes under political attack. These narrators represent different shades of political opinion and different degrees of technical knowledge, ranging from a wealthy conservative housewife with no scientific knowledge, to a state political boss, to a populist midwestern Senator, to a hypocritical advocate of municipal reform, to the Senator's daughter, who poses as a secretary working for one of Wheeler's private utilities. This multiple narration suggests how public discourse on electrification had fragmented during the late 1920s when utilities came under a massive federal investigation that led to thousands of pages of damning testimony and many calls for nationalizing the industry. The possible tensions between

these narrators are not fully expressed, however, because the novel oversimplifies their differences of opinion. In its discursive universe Wheeler alone has the truth, and the plot revolves around the education of the other characters, so that they each in turn must admit their previous ignorance.

Wheeler, "an early employee of Thomas A. Edison," is a typical liberal hero, a tireless self-made multi-millionaire, whom his family cannot stop from working, "any more than we could stop a dynamo without absolutely disconnecting it."²¹ Wheeler's achievements are threatened, however, by a group of politicians who call for nationalization of the electrical industry. Their spokesman declares: "The elemental force of electricity is not a private plaything. You men who have chained the lightnings to do your will must mold that will to the public needs. If not, we will forge new chains, not for the lightnings, but for you men who have chained the lightnings!"²² The metaphor of chaining lightning, which is also in the book's title, immediately suggests that energy is natural and abundant, and that the plot will turn on the question of who should control the electrical system.

Since the system itself is an unquestioned good, the problem is one of ensuring that it is in virtuous hands. The novel vindicates private ownership, while the politicians who oppose it are revealed to be either hopelessly idealistic or venal. The novel is a treatise on the inevitable corruption and inefficiency of public administration. As Wheeler explains to the Senator who at first opposed him, "my dear Senator...[public ownership of utilities] has been tried over and over again. My company got its start in life taking over municipal electric plants that had failed. These plants owed money for machinery, cable, equipment of all kinds, and were running in debt day after day."²³

Yet if *Chains of Lightning* is an explicit energy narrative that is ultimately an apologia for private utilities, its use of multiple points of view is a symptom of the breakdown of the moral consensus so conspicuous in the progressive politics of 1900. Compared to reform novels written

21 Jonathan Brooks, *Chains of Lightning* (Indianapolis: Bobbs-Merrill Company, 1929), pp. 61, 11. Likewise in *Bloodbird* there is no suitable daughter figure in the Winthrop family whom the progressive hero might marry to resolve the underlying conflict. As if to emphasize this absence, he marries a doctor's daughter, and romance plays no role in reconciling social classes or overcoming political tensions.

22 *Ibid.*, p. 89.

23 *Ibid.*, p. 75. Also see pp. 290–295, where Wheeler calls for federal utility regulation.

twenty years earlier, romance plays a negligible role in its universe; attention has shifted instead to the utilities themselves, seen from multiple perspectives. Despite its appearance of modernism, *Chains of Lightning* belongs to the ideological world of naturalism, the literary mode appropriate to the steam-engine. In both modes of production, literary and industrial, all the moving parts are clearly visible. A naturalist plot structure, with its characters securely linked together in a sequence of actions, resembles the steam-driven factory, with its clearly articulated system of belts and gears. The world of the steam-driven factory may have been large, but it was technologically limited in size. The shafts, belts, and gears could only extend so far, and the energy system of the whole was transparent to all observers. It was a system of unambiguous cause and effect, where the relations between owners and employees were clear.

In contrast, the electrified factory expressed a modernist aesthetic, not only in its elongated, functionalist architecture, but in its interior articulations of power. Instead of a central power source from which emanated all the drive shafts, the new energy source was flexible and invisible, and it could be transmitted anywhere. The form of the factory was no longer limited by the capacity of shafts and belts to carry power over distances. Rather, the form became infinitely flexible, as all spaces became equal, and it could be expanded over a much greater area. The changes in scale were likewise facilitated by the interposition of telephones, loudspeakers, and other electrical communication devices between managers and workers. Most important of all, workers ceased to experience work as a series of coherent steps leading to a finished product that they could make from start to finish. Instead, they repeated a single task endlessly, as the assembly line required simultaneous work on everything at once. Homogenization of space and simultaneity in time were likewise the conceptual underpinning of much modernist writing. In short, the shift from one energy system to another, from steam to electricity, provided a whole new conceptual and experiential framework.²⁴

The implicit energy narratives of the 1920s register this shift from one energy system to another, just as the final form of a building is implied

²⁴ In part this framework has already been examined in Stephen Kern's *The Culture of Space and Time* (London: Weidenfeld and Nicolson), 1983.

in the foundation and scaffolding that enclosed it when under construction. Pierre Macherey wrote about such unacknowledged frameworks in *A Theory of Literary Production*:

the [literary] work is articulated in relation to the reality from the ground of which it emerges: not a 'natural' empirical reality, but that intricate reality in which men – both writers and readers—live, that reality which is their ideology. The work is made on the ground of this ideology, that tacit and original language: not to speak, reveal, translate or make explicit this language, but to make possible that absence of words without which there would be nothing to say. We should question the work as to what it does not and cannot say, in those silences for which it has been made... The order which it professes is merely an imagined order, projected on to disorder, the fictiveresolution of ideological conflicts... The work derives its form from this incompleteness which enables us to identify the active presence of a conflict at its borders.²⁵

What then are the ideological conflicts created by the shift from one energy system to another? And how do these conflicts create the uneven ground of literary experimentation?

Consider the the deployment of millions of lights in Times Square, and the transformation of the city into an electric landscape. The Great White Way was a universe of signs that proclaimed not only particular made-made products but the creation of a new landscape. For the millions of tourists who came to stare at them in Times Square, the signs only incidentally advertised an array of products. They came to see the sheer size and magnificence of the flashing signs; they were engulfed in a restless crowd and the roar of the city. This electric landscape, even more than the new electrified factories, was the cultural ground from which modernism sprang. From one point of view its presence signified the standardization of products, the use of advertising as a means of mass persuasion, the power of large corporations, and technology as an unquestioned good. But for the artist and the writer, the landscape's chaotic brilliance expressed an implicit ideology that valued simultaneity, fragmentation, and montage. This new electric landscape stamped itself upon the imagination, and became a central part of the intricate topography of modernist experience. It remains, then, to examine one well-known text to see how this analysis might prove useful.

²⁵ Pierre Macherey, *A Theory of Literary Production* (London: Routledge, & Kegan Paul, 1978), p. 155.

IV

The Great Gatsby is an exemplary implicit energy narrative, for Gatsby uses electricity as a tool of self-creation.²⁶ One of Carraway's first attempts to describe him is as an electrical machine capable of sensing seismic disturbances. Gatsby controls his bootlegging and illegal bond sales using electrical technologies, the telegraph and telephone, which permit him to keep track of far-flung operations while appearing to be a rich man of leisure. These technologies allow him, in effect, to be simultaneously in several places at once, which is to say that he can be several persons at once. The butler need only call him away to the phone for a moment, and he enters one of the silences of the text, the unheard conversations with his underworld connections. It is hardly a flaw in the novel that we only hear a fragment or two from these phone calls. What we do hear establishes what sort of activities Gatsby is monitoring and directing. These silences only hide the specific content of his illegal activities; more importantly, they are the surface beneath which he can devise multiple identities.

Nick encounters these many identities at the lavish parties held on Gatsby's spacious lawn, where his servants erect "enough colored lights to make a Christmas tree of Gatsby's enormous garden." The lights transform the home's appearance, inviting guests to attend the parties as though they were at Coney Island or on Broadway. The guests include actors, producers, and singers from the entertainment world. The elaborate party lights are not only Gatsby's advertisement of himself to the world at large but they create a world where illusion and reality blend. At the same time, these lights, like those on the Great White Way, are an advertisement sent across the bay to Daisy. The lights proclaim him to her, and in his imagination the green light at the end of her dock is a winking response.

On one occasion Gatsby puts on all the lights in his house to "glance into a few rooms," as if by making them more intensely visible his success will become more real. The closer Gatsby comes to regaining Daisy, the more intensely they shine, culminating on the night when he

26 F. Scott Fitzgerald, *The Great Gatsby* (Hammondsworth: Penguin, 1964). On electrification see pp. 42, 45, 79, 108, 171. Electrical lighting also is prominent in some of Fitzgerald's short fiction, and it is central in the pre-formation of John Dos Passos' *Manhattan Transfer*.

has finally arranged a meeting, when they are at their brightest. Carraway recalls, "Two o'clock and the whole corner of the peninsula was ablaze with light, which fell unreal on the shrubbery and made thin elongating glints upon the roadside wires. Turning a corner, I saw that it was Gatsby's house, lit from tower to cellar." This was to be his last great display. After he has recovered Daisy, Gatsby ceases to exaggerate himself through electricity, and attempts to retire into a private life. With Daisy by his side he no longer needs to hold the parties, and "the lights in his house failed to go on one Saturday night – and, as obscurely as it had begun, his career as Trimalchio was over." In effect, Gatsby wishes to give up his split existence, divided between social pretense, half-confidences to Carraway, deals with the underworld, and a secret romantic love for Daisy. At the book's outset he had achieved what might be called a cubist personality, which Carraway can only begin to see from many perspectives. Once he regains Daisy, however, he appears to want a single whole identity, like a character in a realist novel. He hires new, unfriendly servants that ward off the public, and he tries to retire from a public role. Of course Gatsby cannot, as Carraway tries to tell him, turn the clock back to an earlier time. He cannot become an unambiguous character in the world of realism, with its gears and belts of cause and effect that ensure a logical plot. Instead, his identities become entangled with Tom's deceptions, which also rely considerably on the electrical technology of the telephone. Wilson kills Gatsby in what might be called a case of mistaken identity, but which more accurately is an outcome of multiplying identities and self-deceptions. Wilson is doggedly naturalistic, a man with only one identity. Gatsby deploys himself as a multiple character, based on the simultaneity, pretense, and social display that electrical technologies make possible, generating endless rumors about himself. Because he is fragmented, he can make intermittent and startling appearances in the novel, like a great advertisement blinking on the Great White Way. He is entertaining for a season, but soon is emptied of content, burns out, and must be replaced.²⁷

As *The Great Gatsby* demonstrates, implicit energy narratives which do not appear to have anything to do with energy, may register the shift from one system to another. They can contain the tension between two

27 For background see David E. Nye, *Electrifying America: Social Meanings of a New Technology* (Cambridge: MIT Press, 1990), particularly Chapter 2, "The Great White Way," and Chapter 5, "Flexible Factory."

systems of values, experiences, and metaphors, the one based on steam-power, cause-and-effect, the gears of the clock, and self-control, the other based on electrification, simultaneity, and a self in fragments. In early life Gatsby attempts to shape himself into a Franklinesque character who can make his way by force of character, but this attempt is doomed to failure in a discontinuous, electrified world. Likewise, the famous "wasteland" landscape between Long Island and New York takes on additional resonance when understood as part of an energy narrative. Literally, it is a pointed reminder of the wastefulness of the high-energy society, the entropic result of making power. Looking at this landscape, Wilson sells energy at his gas station; he is always tired, as lacking in energy as the grey world of ashes. Figuratively, this borderland isolates him and his nineteenth-century notions of personal advancement, and it mocks his demand for a literal cause-and-effect explanation, or a motive, to explain the death of his wife. Nick Carraway presents quite a different case. He has given up on the old universe of force and self-creation, which for him is located only in the past that he evokes on the last page of the novel. Only when the lights have been turned off along the shore does he imagine the inexpressible wonder of Dutch sailors who looked out at the fresh green breast of America. Nostalgically, he begins to rewrite the comic energy narrative, imagining the promise of abundance in an orgiastic future, symbolized by a green light. But realizing the impossibility of this narrative, his text breaks off in an ellipsis, falling back into the silence from which which it has been made.