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Kerosene Is King: Kerosene Consumers and the Antitrust Movement against Standard Oil, 1859–1911

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Abstract

In the late nineteenth-century United States, kerosene became a universal illuminant for artificial lighting, providing its users with a shared material environment. While kerosene users employed the fluid not only for lighting but also for washing, cooking, and cleaning, they had to deal with the material's risks, such as fires and explosions. With the help of chemists and domestic advisors, American consumers adapted to this ambivalent material condition, weaving kerosene into their economic life and social thought. In so doing, some consumers identified as a “professional class” that navigated within this material environment through their own expertise—which paralleled their economic struggle within a rapidly growing but volatile political economy during the Gilded Age. As Standard Oil's monopolization of the kerosene business became a substantial issue in national politics, this social consciousness among kerosene users attracted anti-monopolists like Ida Tarbell. Because Standard Oil had lowered the consumer price, these reformers sought an alternative rationale to persuade kerosene-consuming households to participate in the antitrust movement against the company. Examining how these progressive reformers turned kerosene consumers' social identity to their political ends, this article sheds new light on the relationship between the energy transition, consumer culture, and American capitalism.

Keywords: anti-monopoly; capitalism; consumer culture; energy; kerosene

In April 1905, having just publicized the conflict between Standard Oil and Pennsylvania's independent oil producers, journalist Ida Tarbell visited Kansas. There, the battle against Standard Oil continued. She wrote, “the excitement spread from the oil fields rapidly” so that “all over Kansas, men and women were talking oil.” The oil war in Kansas was the “theme of every gathering—even of women's clubs.” The Kansas case emboldened Tarbell's hopes because it revealed a new orientation in the fight against Standard Oil. She observed that the “citizens of Kansas” were willing to support “independent efforts” of local producers because “they saw clearly that [oil war] as consumers.” These “consumers of oil” demanded that the state legislature should back the independent

producers, an “exceptional ... popular support” that had not been achieved by “any body of oil men” before. “For the first time in the history of the oil business,” Tarbell asserted, “the consumers as a body were taking part in an oil fight.”¹

Tarbell was not alone in recognizing consumers’ support as pivotal to anti-monopoly politics. In the 1900s, anti-monopoly reformers believed that consumers’ participation in the political coalition against big business, the so-called “trusts,” gave new momentum to the antitrust movement on the national level, which had virtually stalled since passage of the Sherman Act in 1890.² At the 1907 National Conference on Trusts and Combinations, held by the National Civic Federation, reformers were eager to find consumers on their side, a class that had been “omitted” in previous anti-monopoly debates.³ Attendee Franklin Pierce from the American Free Trade League noted: “Yesterday I heard a man in this audience say he was from Oklahoma, and he said ... he represented the consumers, and I said in my heart, ‘God bless that fellow ...’ Now, I am here for the consumer, and I am here because I want justice for the consumer.” To Pierce, consumers’ presence at the conference signified support from the American public, “millions of families, mothers, fathers and children, all passing on, ghastly pallid, poor, each paying his tribute to this monstrous evil.”⁴ Along with this enthusiasm, the Theodore Roosevelt administration launched a full-fledged investigation of Standard Oil and justified the intervention by declaring that the company’s “absolute monopolistic control of the field” harmed “consumers of oil.”⁵

Despite historians’ interests in anti-monopoly, consumer politics, and fossil fuels, the story of these oil consumers, an anti-monopoly constituency that thrilled Tarbell and Pierce, has not gotten much attention. Although recent anti-monopoly histories reveal the “diversity of approaches” taken up by varying actors—proprietary capitalists, trade associations, government officials, railroad workers, and Populist politicians, to name a few—that of consumers has not been deeply examined.⁶ Consumer historians do mention a broad anti-monopoly feeling among consumers during the Progressive Era, depicting it as primarily derived from complaints about the rising cost of living.⁷ Applied to Standard Oil, however, this explanation falls short because Standard Oil lowered consumer prices.⁸ Modern oil consumption has been a popular topic, especially for energy historians.⁹ But there has been a tendency to describe oil consumers’ political participation as “price-shock selective,” motivated by anxieties over high energy prices. Such descriptions lead to the conclusion that consumers were a conservative political force allied with corporate interests that promised cheap energy.¹⁰ Yet the record suggests that anti-monopoly reformers like Tarbell viewed consumers as a decisive force at one of the most “progressive” moments in U.S. history, not a conservative force. Then why did these oil consumers participate in anti-monopoly politics, and how did reformers and politicians find consumers’ involvement so captivating?

To explain this paradox, this article begins by examining the consumer culture of kerosene—the primary petroleum product at the time. In the late nineteenth-century United States, kerosene dominated the artificial illuminant market as a cheap and durable energy resource. This new light was welcomed by American households. By the light of kerosene lamps, Americans learned about economic planning, job skills, and cultural tastes, which seemed to help them navigate as individuals a rapidly growing but highly volatile political economy during the Gilded Age.¹¹ The new light, though, brought environmental risks—most notably, explosions and fires caused by adulteration and misuses of kerosene. To manage these risks, consumers educated themselves with professional knowledge about the chemistry and engineering of the oil. In this process,

some consumers began to identify as a “professional class” who sought financial and social advancements in a volatile home environment by relying on their expertise. With the help of domestic advisors, such as those trained in the burgeoning field of home economics, turn-of-the-century Americans took part in a national consumer culture of kerosene and conceptualized kerosene as a material of the growing middle class.¹²

Anti-monopoly reformers recognized the emergence of this consumer culture and social identity among kerosene users and turned them to their political ends. In the late nineteenth century, instead of the classic liberal belief that monopoly inherently raised prices, political economists began to think that not all monopolies harmed consumers, a perspective that became a major interpretation in the 1890s.¹³ This new consensus among political economists troubled anti-monopoly reformers who sought to gain support from the “general public.” Even worse, Standard Oil, the foremost target of the antitrust movement, was one of the best examples of a monopoly benefitting the consumer. Reformers, therefore, had to find other rationales. To do so, they connected the social identity of oil consumers to that of independent oil producers.¹⁴ Reconfiguring a public image of oilmen as the members of the same professional class who struggled to tame crude oil with chemical and engineering solutions, the reformers drew a common line between the two groups. Emphasizing that producers and consumers partook in the same process of professionalism to deal with the nature of oil, these reformers characterized Standard Oil as “*unprofessional*” and derided how the corporation profited without building know-how or expertise through direct contact with the material.¹⁵

Recent environmental historians of energy show that ways of experiencing energy resources often formed the social consciousness of actors, directing their political choices in fashions that sometimes shaped political economies.¹⁶ While most of these studies focus on work and nature at the production site, such as mining labor in coalfields, the site of consumption also deserves attention. As environmental historians of consumer culture have shown, consuming sites are full of human labor and connected to nonhuman beings or things.¹⁷ People’s environmental experiences of consumption could not only shape their social identities but also yield political outcomes. The history of kerosene consumers and their participation in anti-monopoly politics, then, underscores how everyday experiences with modern energy resources could be placed at the intersection of economic life, social thought, and political choice, which affected the course of American capitalism.

In 1859, Edwin Drake, a businessman hired by Seneca Oil Company, drilled underground petroleum in Titusville, Pennsylvania, connecting the enormous reserve of petroleum to the national market of artificial illuminants. Refined from crude petroleum, kerosene provided a cheap and relatively safe illuminant to light homes.¹⁸ For those who could not afford expensive whale oil and candles or were not eager to buy camphene (which had a tendency to explode), kerosene was a highly attractive alternative.¹⁹ Its price was about one-seventeenth of whale oil, yet its quality—in terms of odor, durability, and brightness—was even better.²⁰ Although other options like gas and electricity provided more convenient light, most American households in this period lived outside the “networked” zones linked to gas or electricity grids.²¹ Adding kerosene to her list of reliable light sources in 1873, Catherine Beecher, a renowned writer and educator on housework, noted that if one could find “good kerosene” it left “little to be desired.”²²

Finding good kerosene, however, was not an easy task. American households purchased kerosene from local peddlers and groceries, which demanded a discerning eye.²³ Consumers could make their choices among numerous sellers. In a local newspaper in Portage, Wisconsin—a town with 2,879 residents in 1860—readers could find eleven advertisements for kerosene oil on a single page. The price and quality of each product varied even if it was sold by the same retailer. “Kerosene oil at 40 cts per gallon” did not “last as long or give as clear a light” as the “kerosene oil at 60 cts per gallon.”²⁴ The purchaser also had to worry about adulteration. Pure kerosene was not prone to explode. But profit-driven refiners, facing fierce competition in the early market, frequently adulterated their kerosene with cheaper liquids like benzene and naphtha—mostly leftover petroleum derivatives—that made the kerosene oil explosive.²⁵ Despite some regulatory efforts, it was not easy for the government authorities to inspect them all because many of these refiners ran short-lived business and were geographically scattered, a failure that led to a flood of fires in homes.²⁶ In 1870, Fire Marshal McSpedon in New York City reported sixty-four fires in August, of which fourteen were caused by kerosene and other petroleum fuels.²⁷ According to one analysis, 5,000 to 6,000 people died annually due to fires and explosions caused by kerosene.²⁸ Encountering these challenges, Beecher advised kerosene consumers to learn “all the dangers to be avoided, and the cautions needful in the use of this most dangerous explosive oil.” “Neglect this caution,” Beecher warned, and one would probably be a “sorrowful mourner all your life for the sufferings or death of some dear friend.”²⁹

To overcome this fear, kerosene users sought help from professional knowledge. Beginning in the early 1860s, the chemical nature and potential explosion of kerosene became a hot topic among scientists, especially chemists, who wrote numerous articles about the risk in professional journals like *Scientific American* and *The American Chemist*. In the meantime, it was generally acknowledged that the chemistry of kerosene was “worthy of careful study, not only among physicians, but also consumers.”³⁰ Between 1868 and 1870, a short treatise on the “Chemistry of a Pint of Kerosene,” originally published in the *Boston Journal of Chemistry*, was syndicated in dozens of daily newspapers across the country. The author asserted that consumers should learn how to conduct a “simple experiment” to test at what degree the oil took fire. If a kerosene oil heated in water emitted flammable vapor under 110 degrees Fahrenheit and the fumes took a lighted match, the author argued, the oil was adulterated.³¹ The variants of this “fire test,” originally contrived for professional inspectors, were soon “commonly found” in kerosene-consuming households in the United States.³² Even without a thermometer, kerosene users could heat a spoonful of kerosene oil until it was “moderately warm to the touch” and test it.³³ One chemist declared, “We recommend everyone to try these safe, reliable tests before using any kind of petroleum illuminants, for, independent of the excruciating torture, long suffering and death that might befall the inmates of his own family.”³⁴

Once consumers knew how to purchase good kerosene oil, experts explained, they needed to master how to use it properly as a household illuminant. Kerosene users were warned by domestic advisors that incorrect usage of lamps and fuels might cause fires, air pollution, and optical injuries while extravagant and inefficient usage would waste money and labor. The advice had an ambivalence to it. On the one hand, it deemed kerosene oil an ideal illuminant requiring less money and effort than other illuminants to maintain the right amount of light, trim wicks, and clean lamps.³⁵ On the other hand, it implied that kerosene demanded special caution. While good oil itself was not explosive, its vapor could be. Thus, the best practice was to place the kerosene lamp far away from heat

sources like stoves and clean the lamp regularly. Because kerosene was “not a simple fluid,” the advice warned “never trust it with heedless servants” and urged consumers to be experts in its use.³⁶

Despite these challenges, many kerosene users tinkered with the oil, even pioneering new applications for kerosene that extended far past simple illumination.³⁷ Farmers’ newspapers like *Prairie Farmer* recorded “experiments” and “scientific ways of using kerosene,” including comparing kerosene with other liquids to find the most effective way to protect crops and livestock from vermin.³⁸ Using kerosene as an insecticide gained popularity among anyone who struggled with cankerworms, ants, or mad bees.³⁹ Kerosene users also employed the oil to grease rusted nuts and bolts, preserve leather, and clean metal equipment like the roosts of a henhouse. Creative uses of kerosene were not limited to rural practices as its domestic users also applied the oil in many ways. Mixing kerosene with milk, hot water, or whale oil soap, kerosene users made a special emulsion that removed bugs from their gardens, windows, and kitchen pantries. Moreover, they found that kerosene could be helpful for washing laundry.⁴⁰ A local newspaper in Montpelier, Vermont, recorded a debate between “Mary,” “Ruth,” “Mrs. Wilson,” and “Mrs. H” on the kerosene method for laundry in which the women discussed the best way to make “clothes look better with less labor.” Despite their minor disagreements, they all agreed that kerosene was a “blessing to anyone who tries it” and that they could no longer “wash any other way.”⁴¹ On top of this, kerosene users adopted the oil to clean the floor, cure skin diseases, and refinish furniture.⁴²

These experiences with kerosene in American households show that consumers were both learners and pioneers in kerosene use. Kerosene was commercialized in the absence of public protection and brought environmental risks like fire and explosion. Yet rather than remaining as victims, kerosene consumers attempted to overcome the volatility of this new material by relying upon expertise and professional knowledge.⁴³ In due process, they gave birth to an extraordinary culture of consuming kerosene.

Besides killing bugs, cleaning floors, oiling appliances, and washing clothes, kerosene users turned to the product to light lamps. And as they read by the light of kerosene lamps, the product’s users circulated knowledge about how to use the material. One channel that facilitated this process was nationally circulated women’s magazines. In the 1880s, at least in part due to the increasing readership who could use kerosene light to read at night, the American magazine industry entered a period of what media historians call the “magazine revolution.”⁴⁴ This revolution was led by the *Ladies’ Home Journal*, a national women’s magazine first published in 1883. When the magazine was published, readers with the new light—especially those from Anglo-American and white-collar families—rushed to subscribe.⁴⁵ The readership of the *Journal* rapidly increased to 500,000 in 1886 and one million in 1903, and the magazine became the most-read magazine in the world.⁴⁶

Several common characteristics united these subscribers, one of which was the use of kerosene in their homes. Thus, it was within the pages of the *Journal* that Fannie E. Newberry offered advice on maintaining lamps, writing:

Those who can, by merely touching a button, light a score of electric suns within their homes, or, by turning a screw and applying a match, bring out the mellow, more moon-like radiance of gas ... may give this article the go-by—it is not for them! Yet I venture to say that the *Ladies’ Home Journal* reaches thousands of homes that depend entirely upon kerosene lamps for their nightly cheer, and brightness.⁴⁷

The *Journal* conveyed extant knowledge about kerosene in an organized way. Yet kerosene consumers did not merely receive information but also participated in knowledge production. For example, these consumers utilized the *Journal* to communicate with each other at the national level, swapping tips about the variety of ways they might use kerosene. In due process, they formulated a homogenous social consciousness.

In the early years of the magazine, the editors opened the “Correspondence” section to subscribers who sent thousands of letters in return.⁴⁸ The pages of this section were soon filled with the homemade “recipes” of kerosene for refurbishing furniture, removing bugs, cleaning floors, curing diseases, and washing laundry. The October 1887 issue, for example, printed a letter from “H.L.,” a housewife from Ravenna, Ohio. As a new subscriber who was “very much pleased” with the *Journal*, she eagerly participated in a “chat of the Sisters” who had previously written in the magazine to discuss the use of kerosene. Responding to one of her fellow readers who had inquired about refurbishing furniture, she recommended that “Alice can make her old walnut furniture look quite like new by using black varnish plentifully diluted with kerosene.” In closing, H.L. asked, “Can any of the sisters tell me how to prevent black ants from getting into my pantry?” The answer lay a couple of pages later, where a short reply to “L.M.P.” and “Mrs. J.H.D.”—who had asked questions similar to H.L.’s—noted that “an emulsion of kerosene is good” for removing bugs.⁴⁹ This issue also, unsurprisingly, had letters discussing the use of kerosene for laundry work. Mrs. V. A. Bendall from Warrenton, Virginia, concluded, “The kerosene used for lamps will answer every purpose.”⁵⁰ These professional approaches to the material became one of the class markers that distinguished these correspondents both from the “class of laborers”—in this reading non-Anglo-American, immigrant families—and “[t]hose with wealth in abundance” who knew little of the “struggles in this world for existence.”⁵¹

This class distinction inherent in the use (and discussion) of kerosene was highlighted by a new group of domestic advisors, the home economists. Contributing to women’s magazines like the *Journal*, these writers connected the consumer culture of kerosene to the economic life of middle-income households. In general, home economists, as historian Carolyn Goldstein argues, provided a rational framework for middle-class households to navigate themselves in the rapidly growing but volatile political economy in the Gilded Age and Progressive Era.⁵² In the literature on home budgeting, for example, home economists advised their audience to be the “plotter and planner of the firm.”⁵³ Since planning would enhance their financial future, housewives’ economizing efforts, in addition to the husband’s income, determined households’ economic and social status as the middle class.

Primarily, kerosene was linked to this mission in two ways. First, these practices of economic planning were most likely taken under the light of kerosene lamps. Thus, later in 1926, the lamp light became a symbol and the emblem of the home economics movement.⁵⁴ Second, managing the purchase of fuel—normally coal and kerosene—was considered an exemplar of economization.⁵⁵ Since these fuels had seasonal and/or periodic variations in prices and were relatively easy to store in the home—though, this chance was exclusively given to those who had spacious houses and extra money—home economists could use them as an example of saving money by planning the timing and amount of consumption.⁵⁶ It would be better to purchase kerosene before winter when it was sold at the highest price.⁵⁷ Moreover, the many uses of kerosene could also help streamline the household economy. Home economist Maria Parloa, for example, described using kerosene to refinish kitchen furniture and cooking appliances as “economical recipes,” meaning a way to save money.⁵⁸

Furthermore, home economists reconfigured the social homogeneity among kerosene users into a concrete social identity. For instance, these home economists contributed to the decades-long genre of lamp management and home illumination, placing contemporary middle-class virtues into relief. They described the care of kerosene lamps as a “professional” task requiring a strict work routine that necessitated “practical knowledge” and “training.” They told kerosene consumers that the lamp-managing routine had a similar “natural arrangement of work” to that of “[b]usiness men” and other “professional workers of our time.” By emulating these professionals’ approach to fulfill “each duty with its manifold small accompaniments,” therefore, kerosene consumers could “systematize their work,” joining the middle class, or in the contemporary term, the professional class.⁵⁹

Applying similar frameworks, home economists connected the versatile uses of kerosene with middle-class values. Since kerosene methods were linked to almost every practice of housework, kerosene use in the domestic sphere was a part of home economists’ efforts to professionalize the middle-class home. Writing for the *Journal*, these home economists aligned the kerosene methods of laundry, cleaning, and medical treatment with other home management practices of a “practical housekeeper.”⁶⁰ Moreover, they connected kerosene and its uses to the cultural tastes of the middle class. Using kerosene as an insecticide, for example, was firmly linked to gardening, a leisure activity that increasingly represented middle-class values in the late nineteenth century. As historian Jennifer Price notes, gardening allowed householders to advertise that they “exercised a middle-class American virtue of restraint and the admirable market-economy ethic of self-control.”⁶¹ Discussing proper methods of planting tuberose, gladioluses, coleuses, callas, and fuchsias, these contributors of the *Journal* introduced the exact recipe for a “kerosene emulsion” that would signify a gardener’s expertise and taste.⁶² “M.O.M.,” a reader of the “Floral Helps” section, said that “the kerosene emulsion so often spoken in the *Journal*” was so crucial that without it she would “give up growing plants.”⁶³

Home economists nurtured these various applications of kerosene, many of which were birthed informally by ordinary users, into a national consumer culture of the middle class.⁶⁴ When first commercialized, kerosene was considered a “poor man’s illuminant.”⁶⁵ Yet by the 1890s, kerosene symbolized a material for the middle class, who sought financial and social advancements in volatile home and political economies through their own professionalism.⁶⁶ In due process, kerosene was fastened to the economic life and social thought of middle-income households. Signifying this ascension, in 1894, a nationally syndicated article on the versatile uses of kerosene stated that “Kerosene is King.”⁶⁷

While the consumer culture of kerosene evolved, at the site of production, oilmen in Pennsylvania launched a crusade against Standard Oil, triggering a nationwide antitrust movement that culminated in the Sherman Act in 1890. This movement, however, tended to omit consumers as political actors. As a result, among the numerous interest groups that participated in the legislative process, almost none represented or spoke on behalf of consumers.⁶⁸ Despite some disagreement, historians largely agree that the political language around the Sherman Act “directly dealt with producers and their behavior, not with consumers.”⁶⁹

The absence of consumers in these anti-monopoly politics, which continued in the 1890s, was partly due to the ways in which contemporary antitrust debates conceived of consumers. During this period, consumers as a body were rarely invited to political-economic debates. In January 1897, a young lawyer, Louis Brandeis, participated in a congressional hearing on big business and protective tariffs. When Brandeis was asked by a congressman, “And for whom do you appear?” he replied, “for the consumers ... who were a far larger part of the people of the United States than any who have found representation here.”⁷⁰ Despite his sincerity, as Ida Tarbell later commented, “the committee, chairman, and all laughed aloud but they were good enough to say, ‘Oh, let him run down.’”⁷¹ Similarly, William Jennings Bryan, an enthusiastic and leading anti-monopolist of the time, refused to debate the monopoly problem in terms of consumer benefits. In 1899, to those arguing that industrial combinations could benefit consumers, Bryan retorted, “I protest against the attempt to drag every question down to the low level of dollars and cents.”⁷²

Underlying this reluctance to invite consumers to anti-monopoly politics was an economic assumption that consumers merely responded to the nominal prices. Anti-monopoly arguments related to consumer interests existed—those largely based on the classical belief that competition lowered prices and monopolies did not—but they labeled consumers as economic actors responding to nominal prices, not as political actors. Thus, when it seemed clear to political economists in the 1890s that not all monopolies raised consumer prices—a reinterpretation that came along with the improved use of statistical data and new economic notions like “potential competition”—consumers were further excluded from anti-monopoly debates.⁷³ For example, consumers were not invited to the Chicago Conference on Trusts, an ambitious meeting held by the Chicago Civic Federation in September 1899 that invited numerous representatives to foster a national consensus on the trust problem.⁷⁴ On its fourth and last day, David Kinley, head of the economics department at the University of Illinois, presented the result of a survey that asked 554 respondents about the trust problem. Those surveyed included “wholesale dealers, commercial travelers, railroads, combinations, labor organizations, contractors and manufacturers, and economists, financiers, public men, etc.” but no consumers. Although some respondents still held the old belief that the trusts harmed consumers by raising prices, 90 percent of “lawyers, economists, [and] public men” upheld a new consensus that the trusts reduced costs and might benefit consumers. Despite some disagreements on whether the savings were actually handed down to the consumer, most thought it would.⁷⁵ Reflecting this change in economic thought, President Grover Cleveland said in his 1896 address to Congress that the trusts had “reduced prices, and thus may benefit the public.”⁷⁶

During the conference, Standard Oil was frequently cited as an example of a monopoly that benefited consumers. The participants agreed that the company had “greatly lessened the cost of light” and reduced the “price of oil 75 per cent since that corporation was organized.”⁷⁷ The critiques of Standard Oil condemned the company not for raising prices but for its “price-cutting” strategy to obstruct competition.⁷⁸ Even when the nominal price of refined oil slightly increased in the late 1890s, observers did not blame Standard Oil, instead deeming that increase a result of other structural factors in oil supply. In July 1900, *Trusts and Industrial Combinations*, an industrial report published by the Department of Labor, concluded that the “[recent] changes in the absolute price of oil” had “nothing to do with the combination in oil.”⁷⁹ If, as theorists purported, consumers acted to respond exclusively to nominal prices, it was hard to expect oil consumers to oppose Standard Oil and support the antitrust movement.

To some anti-monopolists, however, consumers responded to more than nominal prices. Right after attending the Chicago Conference, attendee John Finley wrote a letter to his friend Samuel McClure, the chief editor of *McClure's Magazine*, encouraging him to address the trust problem because it would earn "great attention" from his readers.⁸⁰ As one of the most successful figures in the "magazine revolution," along with Edward Bok who edited the *Ladies' Home Journal*, McClure understood his subscribers. Like that of Bok, McClure's business model started with a large middle-class readership with purchasing power—what he called the "marketplace of the world"—who made his magazine attractive to advertisers.⁸¹ To gather this readership, McClure filled the magazine pages with stories that appealed to this target audience—whom he called the "professional class."⁸² To do so, the editors of *McClure's* should not consider consumers mere economic actors but those who had cultural tastes and social identities. This attitude toward the readership was in turn applied to the trust problem. Unlike political economists, McClure and his editors did not assume that consumers would not be interested in anti-monopoly politics because the trusts did not affect consumer prices. Instead, they attempted to find other editorial strategies to appeal to their readers.⁸³

In 1901, Ida Tarbell, the most popular writer in the magazine, took charge of the project. On top of her masterful storytelling skills, Tarbell recognized that the readers of *McClure's* overlapped that of the *Journal*.⁸⁴ As her biographer Kathleen Brady, observes, Tarbell's first idea in framing the trust problem was to focus on how the trusts affected the "housewife."⁸⁵ Years later, Tarbell proudly recalled that her writings on the trust and the tariff problems had "reached women."⁸⁶ Although she had an ambiguous stance on women's right to vote, Tarbell supported their political participation as consumers.⁸⁷ In an article later published in the *Journal*, Tarbell urged "American women" to "recognize opportunities for public service" by understanding "the relation of [the] household economy to [the] National economy."⁸⁸ Specifically, Tarbell asked readers of the *Journal* to exercise their "power ... as consumers" to "deplore the tyranny" of the "monopolistically inclined."⁸⁹ This, however, did not mean that Tarbell considered oil consumers entirely housewives-readers. To her, the consumer was rather the "household" as a whole.⁹⁰ At any rate, thanks to the consumer culture of kerosene shared by her readers, Tarbell could presume without a doubt that these kerosene-consuming households were from the emerging middle-professional class.

Unlike her predecessors, such as the participants in the Chicago Conference, Tarbell considered oil consumers not as abstracted responders to nominal prices but instead as a national public with cultural tastes and social identity. As a pioneering "muckraker," she also sought to instigate political actions of the public at large, which led her to assign readers certain political roles.⁹¹ As scholars have suggested, Tarbell tended to appeal to the spirit of moralism. However, unlike previous public writings on Standard Oil, her piece was based on sophisticated editorial strategies and rationales.⁹² It was highly probable that Tarbell acknowledged the consensus among political economists that Standard Oil had not raised the nominal price of oil and the debates on its actual effects on consumer benefit.⁹³ Moreover, as a daughter and a sister of independent oilmen, she was not only motivated to oppose monopolization but also understood oilmen's culture and lives in detail. With these understandings, Tarbell sought an alternative rationale to align kerosene consumers with independent producers, as outlined in *The History of the Standard Oil Company*, serialized in *McClure's* from November 1902 to October 1904. To borrow the editors' copy, her series would be the "most important, the most illuminating,

and most interesting discussion of the Trust Problem which a magazine has ever laid before the reading public," a public who would read by the light of kerosene lamps.⁹⁴

Historians deem *The History of the Standard Oil Company* as one of the first coherent public writings on the monopoly problem. It seemed coherent because it assumed a coherent readership—the middle-class consumers of kerosene, which “revolutionized the world’s methods of illumination.”⁹⁵ Tarbell built the narrative of *The History* upon a couple of schemes to persuade these consumers to oppose Standard Oil. The first was to reconfigure the public image of independent oilmen, which had been far from attractive in the eyes of her middle-class readers. Since the beginning of the petroleum industry, popular media had depicted oilmen in Pennsylvania as “boomsters” preoccupied with speculations and life in the Oil Regions as “disorder, disarray, indifference to all.”⁹⁶ Thus, Tarbell’s first task in the series should be to replace this vulgar image with a fancier one.

In her first chapter, titled “The Birth of an Industry,” Tarbell characterized independent oilmen as the epitome of the professional class, shedding light on their technological and civilizing contributions to the oil industry and community. Before these oilmen, Tarbell explained, the region was like a “wilderness” that was “too rugged and unfriendly for settlement” and so it had not been “cultivated.”⁹⁷ Struggling with petroleum’s untamed nature, especially its underground location, flammability, explosiveness, and fluidity, the oilmen devised technological solutions to drill, refine, transport, and store the oil. With knowledge of chemistry and engineering, these oilmen had studiously developed professional venues for taming petroleum.⁹⁸ To Tarbell, the Oil Regions were an “orderly society” of the professional class.⁹⁹ Although this “community” had some “perplexing problems of over-production, of railroad discrimination, of speculation,” they would “meet their own needs ... [and] make their towns the most beautiful in the world.”¹⁰⁰ To her readers, this description might have coincided with how they saw themselves—kerosene-consuming households who had mastered the safe and efficient use of the oil with knowledge and expertise. As oilmen had built a civilized community by bringing this resource out of the ground so had readers established a virtual community of the middle class, characterized by ways of using the material. Moreover, readers living in “frontier” regions might have even more sympathy with this rhetoric of settlement and civilization.

In the following chapters, Tarbell depicted Rockefeller as usurping these achievements of oilmen. Largely omitting Standard Oil’s technological contributions to the industry, Tarbell instead crafted a narrative that placed the oilmen and Rockefeller in dire conflict. Focusing on Rockefeller’s personal character—he was a businessman rather than a technician—Tarbell emphasized how Rockefeller had snatched the oilmen’s technological achievements with his brutal business tactics.¹⁰¹ In Tarbell’s portrait, Standard Oil—a company represented by its owner’s personal character—plundered the technologies of producing and distributing oil. Tarbell further described multiple scenes of this plunder, most notable of which was Rockefeller’s extortion of the technology of long-distance pipelines—an original contribution of an independent oil company, the Tidewater Pipe Line.¹⁰² In Tarbell’s narrative, this episode showed how Rockefeller used underhanded and even corrupt tactics to defeat the independent oilmen who had prospered because of their professional abilities and expertise.¹⁰³

Tarbell’s second scheme to persuade kerosene consumers was to focus on the margin between prices of refined and crude oil, instead of the consumer price. In the last chapter

of the series, titled “Price of Oil,” Tarbell printed a chart comparing the price fluctuations of two oil products: crude oil in the Oil Regions and refined oil in the New York market. At first glance, the nominal prices of both products had fallen since the founding of Standard Oil in 1870, just as Rockefeller and many others, including his opponents, had believed. Explaining the chart, however, Tarbell argued that the decline in prices was not a result of Standard Oil and its monopoly but of technological achievements. Therefore, it was not a contribution of Rockefeller but of independent producers who had improved the refinery process, developed iron barrels and storage, and built seaboard pipelines.¹⁰⁴

Then Tarbell suggested readers focus on the margin between crude oil and refined oil, in which Rockefeller “get[s] his profits.”¹⁰⁵ Unlike the nominal prices, the margin showed irregular movements. Tarbell argued that the fall of the margin exactly corresponded year-by-year with the period when independent producers had resisted monopoly and that the rise of the margin corresponded with the period when Rockefeller had gotten control of the oil market. If Standard Oil had not existed, she argued, the margin would have been lower because of the continuing technological developments, and thus consumers would have benefitted from even cheaper oil. Rockefeller had only disrupted this trend by forcing his “own interpretation of a paying price.”¹⁰⁶ Tarbell summarized: “[a]n independent concern” brought down the price to “housewives” who consumed kerosene, while Standard Oil made them “pay more.”¹⁰⁷ To be sure, some anti-monopolists had made similar comments on margins before Tarbell. But they did not get much attention and were reluctant to put forward a conclusive argument. In part, their reluctance was because it was hard to analyze the relationship between the monopolization and the exact year-by-year margin with contemporary statistical skills and resources. As political economist Jeremiah Jenks noted in 1900, “special effects [of the trusts] as shown by the margin cannot be interpreted clearly.”¹⁰⁸ Nevertheless, Tarbell boldly pushed her argument on the trust’s effect on margins, which seemed effective to entice consumers.

In so doing, Tarbell asked her readers to ponder the political economy of oil. Rather than merely responding to the nominal prices of final products, they should learn how “the price of a necessity of life” had been determined behind the scenes by “autocratic powers in commerce.”¹⁰⁹ When encountering competitors, Rockefeller dropped the margin to cut their throat—a practice often called “price-cutting.” And after eliminating competition, he unduly advanced his margin. Thus, his power to control the margin worked for both purposes: throttling competition and enhancing profits. Tarbell insisted that Rockefeller’s “preternatural skill” of controlling the margin was the “most cruel weapon in stifling competition ... and, at the same time, a most persuasive argument in hoodwinking the public,” by which she meant the consumers of kerosene.¹¹⁰

At this point, Tarbell suggested a political coalition between independent oil producers and kerosene consumers. It was true that the integration of the oil industry rationalized production, reduced waste, and thereby stabilized nominal prices. But the savings from these efficient processes should not be privatized by a single company because they were originally someone else’s contributions. Tarbell argued, “[Standard Oil’s] great extension of the volume of business profited the consumer nothing ... it laid hands on the idea of the Tidewater, the long distance pipe-lines for transporting crude oil ... and yet this immense economy profited the public nothing.”¹¹¹ Tarbell assumed, then, Standard Oil’s profit should be redistributed to oil consumers and

independent producers. Moreover, if consumers and producers fought together, Tarbell implied, they could gain a fair share of the rapidly growing petroleum industry. They should do so because they were the ones who contributed to the industry with their professionalism to tame the nature of petroleum, a professionalism on which Standard Oil capitalized without giving payoffs.

Emphasizing the similar social identities of independent oilmen and kerosene users, then, Tarbell persuaded her readers to side with independent producers. Moreover, by focusing on the margin, she described Standard Oil's control of oil prices as a conspiracy that cheated consumers. These frameworks allowed her to challenge (or bypass) the previous economic presumptions about the relationship between Standard Oil and kerosene consumers—which just counted nominal prices. As members of the professional class, consumers and producers sought economic and social advances in a volatile economy relying on their professionalism, which enabled the oil industry by taming the nature of petroleum at both consuming and producing sites. Profits from the oil, therefore, should not be possessed by a single firm that gained control over the margin with business tactics, not with its professionalism. At the conclusion of the series, Tarbell closed her two-year serialization with the following line: “the business man [Rockefeller] who fights to secure special privileges, to crowd his competitor off the track by other than fair competitive methods ... [should] receive the same summary, disdainful ostracism by his fellows, that the doctor or lawyer who is *unprofessional* receives.”¹¹²

Both contemporary and current commentators on *The History of the Standard Oil Company* agree that it galvanized public opinion against Standard Oil and facilitated antitrust reform. But which public, and how?

It seemed that Tarbell's series in *McClure's Magazine* reached middle-class consumers who subscribed to *Ladies' Home Journal*. Despite their disregard for political issues, with the publication of Tarbell's series, the editors of the *Journal* had to deal with the trust problem to meet their readers' expectations. The editors printed articles that discussed relevant topics like the definition of economic trust, Rockefeller's personal character and its effect on Standard Oil's practices, and Theodore Roosevelt's antitrust drive.¹¹³ While not all the articles encouraged readers to participate in the antitrust movement, most of the pieces recognized that the trust issue was a hot topic among readers. Moreover, as Tarbell did earlier, many of these articles emphasized consumers' special relations to the trusts, especially to Standard Oil. One writer noted: “The name ‘Standard Oil’ is almost a synonym for Trust control,” and “[b]y means of this Trust the price of illuminating oil is unduly advanced.”¹¹⁴

The History was also welcomed by Kansans during the Kansas oil war. Living in a “frontier” region closely associated with the petroleum industry and Standard Oil affiliates, Kansans came to have a keen interest in the trust problem and Tarbell's narrative.¹¹⁵ When Tarbell visited Kansas in 1905, Kansans cheered her. Local newspapers reported every step of her visit—including her dinner with the governor, vacationing in the mountains, speaking at a gentlemen's club, and meetings with women's clubs.¹¹⁶ An editor of a local newspaper praised Tarbell as “giving to the world the history of Rockefeller” who had “millions but in almost everything else” was “rated by the masses a bankrupt.”¹¹⁷

Anti-monopoly reformers in Kansas tended to follow Tarbell's thinking on the trust problem. Anti-Standard Oil organizations like the Kansas Oil Producers Association brought in Tarbell to address them and to confer on strategy.¹¹⁸ Presenting themselves as members of the professional class, these reformers tried to gain public support for their efforts to legislate state regulations on Standard Oil. To this end, oilmen in Kansas, as historian Kyle Williams observes, relied heavily on arguments based on science and technology. As Tarbell had argued in the Tidewater case of long-distance pipelines, these oil producers asserted that Standard Oil had privatized technological achievements originally developed by independent oilmen. They problematized not only the pipelines that transported crude oil but also the use of hydrometers that gauged the quality and thus the price of final products. By merely accepting the judgment of its own employees who used the hydrometer, Standard Oil was taking the control of this technology. Reclaiming a right to interpret hydrometers, a technology initially invented by their professional-class predecessors, these reformers argued for "open knowledge" and thus the wider use of this technology.¹¹⁹

Middle-class consumers of kerosene were the primary audience these reformers sought to persuade. Right after they discussed "The Standard and the Public," anti-monopoly-minded editors of a local newspaper dealt with "The Consumer." "In all the discussion of industrial and political conditions the most interesting and least heard of factor is the consumer," they explained. "United," they continued, "the consumers would be invincible" to support oil producers' claim of the "square deal."¹²⁰ Although these reformers' crusade had been triggered by the price-cutting schemes of Standard Oil that had lowered the nominal price of kerosene, reformers in Kansas had confidence that consumers would support their cause. Focusing on the margin as Tarbell did, they declared that the decline in nominal prices was "not only a bribe to the consumer but evidence of the Standard's excessive profit."¹²¹ Regardless of nominal prices, the very presence of profits acquired by Standard Oil meant the sacrifice of consumers. Rockefeller's stock dividend in December 1905, for example, was considered a "Christmas present" from the "consumers of petroleum."¹²² Then, the reformers connected Standard Oil's power to control prices to its control over technologies like the hydrometer, asserting that the company cheated on consumers by selling unqualified kerosene at unduly advanced prices. Standard Oil had bled both "the producers and the consumers."¹²³ The reformers promised to provide "the highest grade of illuminating oil at prices equal to" Standard Oil's. And their fight would bring the "emancipation of All Kansas Oil Producers and Oil Consumers."¹²⁴

As Tarbell observed in her article on the Kansas oil war, which is mentioned at the beginning of this article, it seems that kerosene consumers eventually supported the Kansas oilmen en masse. In a long public rally organized by independent oil producers in March 1905, in which the governor of Kansas, two congressmen, and one senator attended, "big crowds" of Kansans kept their seats. To Senator Fred Dumont Smith, these crowds were "the great army of consumers of Kansas, all the wealth and sinews of a great and prosperous commonwealth."¹²⁵ One observer noted that the antitrust movement in Kansas was the "outcome of the agitation against the Standard Oil company which has been made by the Kansas oil producers association and the oil consumers."¹²⁶ As the "popular wrath" of oil consumers partnered with the political campaign of independent producers, Tarbell later wrote, it became a "national blow to that arrogant spirit of greed which, for selfish gains, aims to put a bounty of nature in chains."¹²⁷

With the Kansas case earning attention from national politicians, a political coalition of independent producers and middle-class consumers seemed like an effective means to

drive the antitrust movement at the national level. Prior to Tarbell's exposé and the oil war in Kansas, Theodore Roosevelt had not viewed consumers as an audience for his "trust-busting" efforts. Because he was following the debates among political economists and advised by theorists like George Gunton and Jeremiah Jenks on the trust problem, Roosevelt believed that industrial combinations might benefit consumers.¹²⁸ In October 1902, a month before Tarbell's first article in *The History*, Roosevelt wrote in a letter to a friend that consumer prices had "no relation whatever to the trusts."¹²⁹ As a result, during his first term, Roosevelt rarely mentioned consumers in his public speeches addressing the trust problem.

But after Tarbell's writings and the Kansas oil war, Roosevelt began to consider consumers as his primary audience. In May 1906, describing a federal investigation on Standard Oil triggered by the Kansas case, Roosevelt announced that "Standard Oil in absolute monopolistic control of the field" harmed the "consumers of oil."¹³⁰ Later that year, Roosevelt went further, arguing that "The Government" should push legislation to ensure that "no excessive price was charged consumers." He asserted, if "a combination has secured practically complete control of a necessary of life," it would be "adverse to the public interest ... under any circumstances."¹³¹ As Roosevelt's interpretation of consumer interests evolved, the nominal price of oil had declined by 34 percent between 1903 and 1905, proof that Roosevelt's change in thinking was not brought on in reaction to rising prices.¹³²

Acknowledging the changing political environment, anti-monopoly reformers in national politics also began courting consumers. In 1907, the National Civic Federation, the successor of the Chicago Civic Federation, arranged another meeting on the trust problem. In this conference, unlike the 1899 meeting, several participants represented consumers. Eugene E. Prussing from the Citizens' Association of Chicago said that "I have been a consumer all my life and represent that class."¹³³ Davis P. Marum, an attorney from Woodward, Oklahoma, declared that "I represent on this floor neither the manufacturers, the wholesalers nor the retailers ... [but] a larger constituency, the consumers."¹³⁴ During the meeting, those claiming to represent consumers received, instead of that greeted a young Louis Brandeis in 1897, a warm welcome like that expressed by Franklin Pierce.¹³⁵

The importance of consumers to the antitrust movement was also recognized in the Supreme Court's 1911 decision to order the dissolution of Standard Oil, in which the petitioner and the respondent debated Standard Oil's influence on kerosene consumers. While the respondent asserted that the "general public" was not hurt but rather benefitted from Standard Oil, assuming that the rationalization of the oil business stabilized nominal prices of oil, the petitioner condemned Standard Oil for its "wrong inflicted upon the public," arguing that the savings from the efficient processes were not handed down to the consumer.¹³⁶ Here, the petitioner's central evidence was a report written by the Bureau of Corporations in 1907, a resulting document of the federal investigation of the oil war in Kansas.¹³⁷ Largely upholding the petitioner's view, the Court retrieved the common law belief that monopolies brought "public evils such as the enhancement of prices," a belief that had been abandoned by many anti-monopolists during the 1890s and that belied actual changes in the nominal price of oil.¹³⁸

The story of kerosene consumers and the antitrust movement against Standard Oil tells us how deeply related histories of capitalism and energy have been and will be. As the first universalized artificial illuminant, kerosene provided its users with a common material

environment, a shared consumer culture, and a focalized social consciousness. When politically utilized, these factors generated sufficient momentum to make a pivotal political-economic decision. Previous historians sometimes pointed out that the Supreme Court's 1911 decision on Standard Oil changed little and that the consumer's interests in oil politics yielded many negative effects in terms of progressive reforms and environmental outcomes. Nevertheless, kerosene consumers' participation in the antitrust movement against Standard Oil shows us how ordinary people's experiences with a new energy resource could generate political power that enabled an unprecedented form of public intervention in the political economy. In the age of climate change and another energy transition, perhaps that is one thing we could learn from history.

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Notes

- 1 Ida Tarbell, "Kansas and the Standard Oil Company: A Narrative of To-Day," *McClure's Magazine*, Oct. 1905, 610, 613, 622. For the broader context of the oil war in Kansas, see Kyle Williams, "Roosevelt's Populism: The Kansas Oil War of 1905 and the Making of Corporate Capitalism," *Journal of the Gilded Age and Progressive Era* 19 (Jan. 2020): 96–121.
- 2 On the Sherman Act and antitrust, see Martin J. Sklar, *The Corporate Reconstruction of American Capitalism, 1890–1916: The Market, the Law, and Politics* (Cambridge: Cambridge University Press, 1988); Laura Phillips Sawyer, *American Fair Trade: Proprietary Capitalism, Corporatism, and the "New Competition," 1890–1940* (Cambridge: Cambridge University Press, 2020). On state and federal antitrust, see James May, "Antitrust in the Formative Era: Political and Economic Theory in Constitutional and Antitrust Analysis, 1880–1918," *Ohio Law Journal* 50, no. 1 (1989): 257–395.
- 3 National Civic Federation, *Proceedings of the National Conference on Trusts and Combinations under the Auspices of the National Civic Federation, Chicago, October 22–25, 1907* (New York: National Civic Federation, 1908), 144, 332, 333, 335, 450.
- 4 National Civic Federation, *Proceedings*, 450.
- 5 Theodore Roosevelt, "Special Message" (May 4, 1906), The American Presidency Project. <https://www.presidency.ucsb.edu/documents/sixth-annual-message-4> (accessed Oct. 12, 2021). This investigation was triggered by the oil war in Kansas and resulted in a report that became central evidence for the 1911 Supreme Court decision to break up the company. For the federal report, see United States Bureau of Corporations, *Report of the Commissioner of Corporations on the Petroleum Industry* (Washington, DC: U.S. Government Printing Office, 1907).
- 6 Sawyer, *American Fair Trade*, 8. For recent works on anti-monopoly, see Philip Scranton, *Proprietary Capitalism: The Textile Manufacture at Philadelphia, 1800–1885* (Cambridge: Cambridge University Press, 2003); Richard R. John, *Network Nation: Inventing American Telecommunications* (Cambridge, MA: Belknap Press of Harvard University Press, 2010); Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: W. W. Norton & Company, 2011); Richard R. John, "Robber Barons Redux: Anti-Monopoly Reconsidered," *Enterprise & Society* 13 (Mar. 2012): 1–38; Sawyer, *American Fair Trade*; Williams, "Roosevelt's Populism." See also Richard R. John and Kim Phillips-Fein, eds., *Capital Gains: Business and Politics in Twentieth-Century America* (Philadelphia: University of Pennsylvania Press, 2017). These histories rarely focus on consumers. Yet, as Richard John suggests, examining the "popular conception of big business" is crucial because it provided a "compelling rationale" for anti-monopoly reformers. John, "Robber Barons Redux," 7, 34. For more traditional works on big business and anti-monopoly, see Gabriel Kolko, *The Triumph of Conservatism: A Reinterpretation of American History, 1900–1916* (Chicago: Quadrangle Books, 1967); James Weinstein, *The Corporate Ideal in the Liberal State, 1900–1918* (Boston: Beacon Press, 1968); Alfred Chandler, *The Visible Hand: The Managerial Revolution in American Business*

(Cambridge, MA: Belknap Press of Harvard University Press, 1977); Sklar, *Corporate Reconstruction of American Capitalism*; Naomi Lamoreaux, *The Great Merger Movement in American Business, 1895–1904* (Cambridge: Cambridge University Press, 1985); Tony A. Freyer, *Regulating Big Business: Antitrust in Great Britain and America, 1880–1990* (Cambridge: Cambridge University Press, 1992).

7 For an example, see Meg Jacobs, *Pocketbook Politics: Economic Citizenship in Twentieth-Century America* (Princeton, NJ: Princeton University Press, 2005), 39–41. For consumer politics, see Elizabeth Cohen, *A Consumers' Republic: The Politics of Mass Consumption in Postwar America* (New York: Vintage Books, 2003); Jacobs, *Pocketbook Politics*; Lawrence B. Glickman, *Buying Power: A History of Consumer Activism in America* (Chicago: University of Chicago Press, 2009).

8 For Standard Oil's contribution to consumer interests, see Jeremiah W. Jenks, "Trusts and Industrial Combinations," *Bulletin of the United States Bureau of Labor* 29 (July 1900): 661–831. See also Chandler, *The Visible Hand*, 324–25; Ralph and Muriel Hidy, *Pioneering in Big Business 1882–1911: History of the Standard Oil Company* (New York: Harper & Brothers, 1955), 99–100, 140, 299; Mark Aldrich, "The Rise and Decline of the Kerosene Kitchen: A Neglected Energy Transition in Rural America, 1870–1950," *Agricultural History* 94 (Winter 2020): 29–30. For skepticism of Standard Oil's contribution to consumer benefits, especially in terms of consumer safety, see Jonathan Wlasiuk, *Refining Nature: Standard Oil and the Limits of Efficiency* (Pittsburgh: University of Pittsburgh Press, 2018).

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11 On economic volatility in the nineteenth century, see Jonathan Levy, *Freaks of Fortune: The Emerging World of Capitalism and Risk in America* (Cambridge, MA: Harvard University Press, 2014).

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13 Herbert Hovenkamp, *Enterprise and American Law, 1836–1937* (Cambridge, MA: Harvard University Press, 2013), 323–30.

14 For the identity of independent oil producers and their anti-monopoly sentiment, see Darren Dochuk, *Anointed with Oil: How Christianity and Crude Made Modern America* (London: Hachette UK, 2019).

15 Ida Tarbell, "The History of the Standard Oil Company: Conclusion," *McClure's Magazine*, Oct. 1904, 671 (original emphasis).

16 See Thomas G. Andrews, *Killing for Coal: America's Deadliest Labor War* (Cambridge, MA: Harvard University Press, 2010); Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2013); Andrew Needham, *Power Lines: Phoenix and the Making of the Modern Southwest* (Princeton, NJ: Princeton University Press, 2014); Christopher F. Jones, *Routes of Power: Energy and Modern America* (Cambridge, MA: Harvard University Press, 2016); Jeremy Zallen, *American Lucifers: The Dark History of Artificial Light, 1750–1865* (Chapel Hill: University of North Carolina Press, 2019); Trish Kahle, "The

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17 Richard White, “Are You an Environmentalist or Do You Work for a Living?: Work and Nature” in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Company, 1995), 171–85. For works that apply White’s framework to the site of consumption, see Kendra Smith-Howard, “Absorbing Waste, Displacing Labor: Family, Environment, and the Disposable Diaper in the 1970s,” *Environmental History* 26 (Apr. 2021): 207–30. For the broader intersection of environmental history and the history of capitalism, see William Cronon, *Nature’s Metropolis: Chicago and the Great West* (New York: W. W. Norton & Company, 1992); Bartow J. Elmore, *Citizen Coke: The Making of Coca-Cola Capitalism* (New York: W. W. Norton & Company, 2014); Joshua Specht, *Red Meat Republic: A Hoof-to-Table History of How Beef Changed America* (Princeton, NJ: Princeton University Press, 2019).

18 Williamson and Daum, *Age of Illumination*, 63–116; Giddens, *Early Petroleum Industry*, 88–100.

19 Yergin, *The Prize*, 50–1; Jones, *Routes of Power*, 109–16. However, many candles were produced in households; see Zallen, *American Lucifers*; Karen Sayer, “Finding Women in the History of Lighting: Candles in the English Home, 1815–1910,” in *In a New Light: Histories of Women and Energy*, ed. Abigail Harrison Moore and Ruth Sandwell (Montreal: McGill-Queen’s University Press, 2021), 46–66.

20 Sandwell, “Coal-Oil Lamp,” 193.

21 Nye, *Consuming Power*, 124. For its portability and compatibility with previous lighting habits, kerosene also had a big advantage; Sandwell, “Coal-Oil Lamp,” 193–94.

22 Catharine Beecher, *Miss Beecher’s Housekeeper and Healthkeeper* (New York: Harper & Brothers, 1873), 327.

23 For risks regarding kerosene, see the first chapter of James McSwain, *Petroleum and Public Safety: Risk Management in the Gulf South, 1901–2015* (Baton Rouge: Louisiana State University Press, 2018).

24 *Wisconsin State Register* (Portage, Wisconsin), Mar. 15, 1862. The number of kerosene commercials was twelve in a local newspaper in Poughkeepsie, New York. *Poughkeepsie Eagle News*, Apr. 5, 1862.

25 Aldrich calculates the economic incentives of adulteration. Aldrich, “Kerosene Kitchen,” 27.

26 On the public regulation and insuring institutions on petroleum fires, see the first chapter of McSwain, *Petroleum and Public Safety*. See also Giddens, *Early Petroleum Industry*, 93–95.

27 “Dangerous Kerosene,” *American Chemist*, Oct. 1870, 123.

28 Yergin, *The Prize*, 50.

29 Beecher, *Miss Beecher’s Housekeeper*, 107.

30 “Generating of Carbon Acid Gas by Yellow Low Test Kerosene Oil,” *Buffalo Morning Express and Illustrated Buffalo Express* (Buffalo, New York), Apr. 11, 1879, 4.

31 “Chemistry of a Pint of Kerosene,” *Boston Journal of Chemistry*, Dec. 1, 1867, 41. For example, see *Daily Milwaukee News* (Milwaukee, Wisconsin) Dec. 21, 1867; *Daily Evening Express* (Lancaster, Pennsylvania) Jan. 17, 1868; *Western Reserve Chronicle* (Warren, Ohio) Feb. 24, 1869.

32 Mary Converse, “Teaching Chemistry in Connection with Domestic Science,” *Journal of Home Economics*, Apr. 1909, 197.

33 Beecher, *Miss Beecher’s Housekeeper*, 328.

34 “Report of the Committee of the Franklin Institute,” 266.

35 Sandwell, “Coal-Oil Lamp,” 199.

36 Beecher, *Miss Beecher’s Housekeeper*, 328, 107.

37 For the role of users in the history of technology, see Ronald Kline and Trevor Pinch, “Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States,” *Technology and Culture* 37 (Oct. 1996): 763–95; Nelly Oudshoorn and Trevor Pinch, *How Users Matter: The Co-Construction of Users and Technology* (Cambridge, MA: MIT Press, 2005); Joseph J. Corn, *User Unfriendly: Consumer Struggles with Personal Technologies, from Clocks and Sewing Machines to Cars and Computers* (Baltimore: Johns Hopkins University Press, 2011).

38 “Potato Rot,” *Prairie Farmer*, July 3, 1878, 210. “Entomological—the Canker Worm Continued and Compared with the Codling Worm,” *Prairie Farmer*, Mar. 22, 1873, 89. Sometimes, these applications bordered on the superstitious. “J.M.U.,” a local farmer from Wayne, Wisconsin, reported his colleagues who tried to cure a fictitious brain disease of oxen called “horn-ail” by pouring kerosene oil on cows’ heads. Yet, many users found novel and practical ways to utilize kerosene through rational experiments. “Horn-Ail,” *Prairie Farmer*, June 8, 1867, 381.

- 39 "Mad Bees," *Prairie Farmer*, May 3, 1879, 139; "Some Practical Suggestions for the Husbands and the Housewife," *Lake Geneva Herald* (Lake Geneva, Wisconsin), Apr. 2, 1886, 7; *Vermont Watchman and State Journal* (Montpelier, Vermont) Oct. 28, 1885; "Domestic Economy," *Osage City Free Press* (Osage City, Kansas) Aug. 22, 1889, 3.
- 40 "Kerosene in Laundry Work," *Napa Register* (Napa, California) Jan. 25, 1884, 4.
- 41 "Washing Clothes with the Aid of Kerosene," *Vermont Watchman and State Journal* (Montpelier, Vermont) Aug. 24, 1887, 3.
- 42 "Four Household Familiars: What May Be Done with Salt, Vinegar, Kerosene and Ammonia," *World* (New York) Mar. 16, 1895, 5.
- 43 For "energy anxiety" experienced by energy users, see Ruth W. Sandwell, "Women, Fear, and Fossil Fuels" in *In a New Light*, 67. For the agency of energy users, see Abigail Harrison Moore, "Agency, Ambivalence, and the Women's Guide to Powering Up the Home in England" in *In a New Light*, 90–113. Some of these consuming practices were driven and manufactured by entrepreneurs. See, Aldrich, "Kerosene Kitchen."
- 44 Frank Luther Mott, *A History of American Magazines*, vol. 4, 1885–1905 (Cambridge, MA: Harvard University Press, 1957), 1–5. One observer noted that "kerosene has ... increased the length of life ... [and its users] now occupy a portion of the night in reading and other amusements." Williamson and Daum, *Age of Illumination*, 320.
- 45 On *Ladies' Home Journal*, see Helen Damon-Moore, *Magazines for the Millions: Gender and Commerce in the Ladies' Home Journal and the Saturday Evening Post, 1880–1910* (Albany: State University of New York Press, 1994); Jennifer Scanlon, *Inarticulate Longings: The Ladies' Home Journal, Gender and the Promise of Consumer Culture* (London: Routledge, 1995).
- 46 Damon-Moore, *Magazines for the Millions*, 74–77.
- 47 Fannie E. Newberry, "The Care of Lamps," *Ladies' Home Journal*, Oct. 1886, 7.
- 48 In 1889, they had to hire ten people a day to open letters. Damon-Moore, *Magazines for the Millions*, 27.
- 49 "Correspondence," *Ladies' Home Journal*, Oct. 1887, 8, 12.
- 50 "Correspondence," *Ladies' Home Journal*, July 1887, 8.
- 51 *Ladies' Home Journal*, Nov. 1885, 5. *Ladies' Home Journal*, Oct. 1887, 8.
- 52 Carolyn M. Goldstein, *Creating Consumers: Home Economists in Twentieth-Century America* (Chapel Hill: University of North Carolina Press, 2012) 11. See also Sarah Stage and Virginia B. Vincenti, eds., *Rethinking Home Economics: Women and the History of a Profession* (Ithaca, NY: Cornell University Press, 1997); Sarah A. Leavitt, *From Catharine Beecher to Martha Stewart: A Cultural History of Domestic Advice* (Chapel Hill: University of North Carolina Press, 2002); Susan Levine, *School Lunch Politics: The Surprising History of America's Favorite Welfare Program* (Princeton, NJ: Princeton University Press, 2011); Kristin L. Hoganson, *Consumers' Imperium: The Global Production of American Domesticity, 1865–1920* (Chapel Hill: University of North Carolina Press, 2014).
- 53 *Ladies' Home Journal*, Oct. 1887, 14.
- 54 To be sure, the Betty Lamp was not a kerosene lamp but a lamp for organic oils popularly used during colonial times. This was because home economists tried to retroact the image of reading housewives by the lamp light to the nation's very beginning. Sharon Y. Nickols, "Keeping the Betty Lamp Burning," *Journal of Family and Consumer Sciences* 93, no. 3 (2001): 35.
- 55 *Ladies' Home Journal*, Sept. 1904, 24; *Ladies' Home Journal*, July 1905, 36.
- 56 Robert Kendall Shaw, *Bibliography*, 123–24. For the class distinction regarding the purchase and storage of coal, see the fourth chapter of Sean P. Adams, *Home Fires: How Americans Kept Warm in the Nineteenth Century* (Baltimore: Johns Hopkins University Press, 2014).
- 57 Hidy, *Pioneering in Big Business*, 109.
- 58 Maria Parloa, *Miss Parloa's Young Housekeepers: Designed Especially to Aid Beginners* (Boston: Estes and Lauriat, 1884).
- 59 Juliet Corson, "The Routine of Housework," *Ladies' Home Journal*, Oct. 1893, 22.
- 60 "Practical Housekeeper," *Ladies' Home Journal*, Oct. 1885, 5.
- 61 Jennifer Price, *Flight Maps: Adventures with Nature in Modern America* (New York: Basic Books, 2000), 122.
- 62 *Ladies' Home Journal*, Sept. 1889, 12; *Ladies' Home Journal*, Oct. 1887, 12; *Ladies' Home Journal*, Jan. 1890, 21; *Ladies' Home Journal*, Apr. 1890, 18; *Ladies' Home Journal*, Nov. 1891, 31; *Ladies' Home Journal*, Dec. 1891, 33; *Ladies' Home Journal*, Nov. 1892, 31.
- 63 *Ladies' Home Journal*, Nov. 1892, 31. Along with this, home economists described how to use kerosene to wash brushes for oil painting, another middle-class hobby. *Ladies' Home Journal*, June 1887, 6.

- 64 This kind of material culture (and related experiences) played a crucial role in the development of middle-class identity among consumers of nationalized commodities like kerosene. See Moskowitz, *Standard of Living*.
- 65 Williamson and Daum, *Age of Illumination*, 526.
- 66 This social meaning of kerosene lasted until the 1920s when middle-class families began to substitute kerosene with electricity as a primary illuminant. See Nye, *Consuming Power*, 97–98.
- 67 “Kerosene is King” *Boston Globe*, Jan. 1894, 30.
- 68 Hovenkamp, *Enterprise and American Law*, 246–47.
- 69 Legal scholar Robert Bork, for example, famously argued that the Sherman Act intended to protect consumers. Yet, his “consumer welfare” thesis on antitrust statutes has been refuted by other economists and historians. See Robert H. Bork, “Legislative Intent and the Policy of the Sherman Act,” *Journal of Law and Economics*, 9 (Oct. 1966): 7–48. For refutations, see, Christopher Grandy, “Original Intent and the Sherman Antitrust Act: A Re-Examination of the Consumer-Welfare Hypothesis,” *The Journal of Economic History* 53 (June 1993): 359–76; Werner Troesken, “The Letters of John Sherman and the Origins of Antitrust,” *The Review of Austrian Economics* 15 (Dec. 2002): 275–95; Barak Y. Orbach, “The Antitrust Consumer Welfare Paradox,” *Journal of Competition Law and Economics* 7 (Mar. 2011): 133–64. The quote is from Grandy, “Original Intent and the Sherman Antitrust Act,” 367.
- 70 Melvin I. Urofsky, *Louis Brandeis: A Life* (New York: Schocken Books, 2012), 90–91.
- 71 Tarbell, *Autobiography*, 273.
- 72 Chicago Civic Federation, *Chicago Conference on Trusts* (Chicago: Civic Federation of Chicago, 1900), 497.
- 73 Hovenkamp, *Enterprise and American Law*, 323–30. The notion of potential competition was polished by John Bates Clark, “How to Deal with Trusts,” *Independent*, May 2, 1901, 1002. For Clark’s complex stance on the trust problem, see John F. Henry, *John Bates Clark: The Making of a Neoclassical Economist* (New York: St. Martin’s Press, 1995), 117–26.
- 74 On the Chicago Conference, see Herbert Hovenkamp, “The Invention of Antitrust,” *Southern California Law Review* 96 (Apr. 2023): 129–206.
- 75 Chicago Civic Federation, *Chicago Conference*, 530–33. See also Hovenkamp, “Invention of Antitrust,” 135–36.
- 76 Grover Cleveland, “Fourth Annual Message,” The American Presidency Project. <https://www.presidency.ucsb.edu/documents/fourth-annual-message-second-term> (accessed Aug. 3, 2019).
- 77 Chicago Civic Federation, *Chicago Conference*, 270, 280; George Gunton, *Trusts and the Public* (New York: D. Appleton and Company, 1899), 12–16.
- 78 Chicago Civic Federation, *Chicago Conference*, 73.
- 79 Jenks, “Trusts and Industrial Combinations,” 724.
- 80 McClure to Finley, Sept. 14, 1899, Finley Papers; recited from Harold S. Wilson, *McClure’s Magazine and the Muckrakers* (Princeton, NJ: Princeton University Press, 2015), 131–2.
- 81 “McClure’s—The Marketplace of the World: A Brief for Advertisers,” (New York: S. S. McClure Company, 1906). For national magazines in this period, see Mott, *History of American Magazines*, 1–5.
- 82 Richard M. Ohmann, *Selling Culture: Magazines, Markets, and Class at the Turn of the Century* (London: Verso, 1996), 84.
- 83 McClure, *Autobiography*, 243–44; Tarbell, *Autobiography*, 202; Wilson, *McClure’s Magazine*, 101.
- 84 Both magazines were bought by middle-class consumers, and they often launched promotions to sell the magazines altogether in a bundle subscription. “\$8.30 for Magazines for Only 3.98,” *Ladies’ Home Journal*, Dec. 1900, 25.
- 85 Kathleen Brady, *Ida Tarbell: Portrait of a Muckraker* (New York: Seaview/Putnam, 1984) 121.
- 86 Tarbell, *Autobiography*, 273.
- 87 For Tarbell’s stance, see Robert Stinson, “Ida M. Tarbell and the Ambiguities of Feminism,” *Pennsylvania Magazine of History and Biography* 101 (Apr. 1977): 217–39.
- 88 *Ladies’ Home Journal*, Mar. 1913, 26.
- 89 *Ladies’ Home Journal*, Feb. 1913, 22.
- 90 In a business pamphlet for advertisers, the editors said that the magazine “has its place in the home, is read by every member of the family circle.” “McClure’s—The Marketplace of the World: A Brief for Advertisers,” (New York: S. S. McClure Company, 1906).

91 For muckrakers, see Hofstadter, *Age of Reform*, 164–67; Louis Filler, *The Muckrakers* (Stanford, CA: Stanford University Press, 1993); Brian Thornton, “Muckraking Journalists and Their Readers: Perceptions of Professionalism,” *Journalism History* 21 (Spring 1995): 29–41.

92 Previous anti-monopoly treatises targeting general readers, such as Henry Demarest Lloyd’s *Wealth against Commonwealth*, lacked coherent narrative frameworks compared to Tarbell’s. Contemporary reviewers deemed Tarbell’s work as a more “readable story,” contrasting its good style with the “depressing effect” of Lloyd’s book. Hidy, *Pioneering in Big Business*, 649–52.

93 Tarbell was advised by prominent scholars like John Bates Clark and John R. Commons. Moreover, she surveyed many government reports and political economists’ works, which unanimously granted the fact that Standard Oil lowered the consumer price. “Introduction” written by Joseph Dorfman in John B. Clark and John M. Clark, *The Control of the Trusts* (New York: Augustus M. Kelley, 1971), 9; Brady, *Ida Tarbell*, 133.

94 “Announcement,” *McClure’s Magazine*, Nov. 1902, 4.

95 Ida Tarbell, “The History of the Standard Oil Company: The Birth of an Industry,” *McClure’s Magazine*, Nov. 1902, 3–4.

96 William Wright, *The Oil Regions of Pennsylvania: Showing Where Petroleum Is Found: How It Is Obtained and at What Cost with Hints for Whom It May Concern* (New York: Harper & Brothers, 1865), 38. Perhaps this picture was closer to what they really were; as historian Brian Black observed, the Oil Region was “not a community at all.” Black, *Petrolia*, 14. One visitor observed that the Oil Region was the “rendezvous of strangers eager for speculation.” Yergin, *The Prize*, 29. See also Roger M. Olien, Diana Davids Hinton, and Diana Davids Olien, *Oil and Ideology: The Cultural Creation of the American Petroleum Industry* (Chapel Hill: University of North Carolina Press, 2000), 21–23. The most recent work on independent oil producers is Dochuk, *Anointed with Oil*.

97 Tarbell, “Birth of an Industry,” 3, 15.

98 Tarbell introduced readers to the oilmen’s technological achievements by presenting the portraits of seven individual “inventors” and illustrations of their inventions. Tarbell, “Birth of an Industry,” 7.

99 Tarbell, “Birth of an Industry,” 15.

100 Tarbell, “Birth of an Industry,” 16.

101 Ida Tarbell, “The History of the Standard Oil Company: The Rise of the Standard Oil Company,” *McClure’s Magazine*, Dec. 1902, 116.

102 Ida Tarbell, “The History of the Standard Oil Company: The Fight for the Seaboard Pipe-Line,” *McClure’s Magazine*, Jan. 1904, 295.

103 Tarbell’s argument here was not correct. Standard Oil built two seaboard pipelines before Tidewater did and then managers of Tidewater began to ask Standard Oil to merge their firm. Williamson and Daum, *Age of Illumination*, 440–62.

104 Ida Tarbell, “The History of the Standard Oil Company: Price of Oil,” *McClure’s Magazine*, Sept. 1904, 533.

105 Tarbell, “Price of Oil,” 533.

106 Tarbell, “Price of Oil,” 534.

107 Tarbell, “Price of Oil,” 545.

108 Jenks, *Industrial Report*, 724. For the contemporary debates on margins and monopolies, see George Gunton, “The Economic and Social Aspect of Trusts,” *Political Science Quarterly* (Sept. 1888): 398; Edwin R. A. Seligman, *Principles of Economics: With Special Reference to American Conditions* (New York: Longmans, 1905), 347. See also, Olien, *Oil and Ideology*, 97–100; Hovenkamp, “Invention of Antitrust,” 137, 152–54.

109 Tarbell, “Price of Oil,” 548.

110 Tarbell, “Price of Oil,” 548.

111 Tarbell, “Price of Oil,” 539–40.

112 Ida Tarbell, “The History of the Standard Oil Company: Conclusion,” *McClure’s Magazine*, Oct. 1904, 671 (original emphasis).

113 Although some previous studies consider the anti-monopoly sentiment as a “male” issue, it was not completely so. See “The World and His Wife: A Popular Explanation of the Affairs of To-Day,” *Ladies’ Home Journal*, Feb. 1903, 14; “The World and His Wife: A Popular Explanation of the Affairs of To-Day,” *Ladies’ Home Journal*, Apr. 1903, 17; “The Man President Roosevelt Works for,” *Ladies’ Home Journal*, June 1906, 19; “Who Is to Blame for the High Prices?: Why the Trusts Are to Blame,” *Ladies’ Home Journal*, Nov. 1910, 42; “Who Is to Blame for the High Prices?: Why Women Are to Blame,” *Ladies’ Home Journal*, Dec. 1910, 23; “His Letters to His Mother in Which Great Questions Are Made Clear,” *Ladies’ Home Journal*, Mar. 1912, 23.

For the previous studies, see Robyn Muncy, "Trustbusting and White Manhood in America, 1898–1914," *American Studies* 38 (Fall 1997): 21–42.

114 "Why the Trusts Are to Blame," 42.

115 *Abilene (KS) Daily Reflector*, Dec. 14, 1903.

116 "Miss Tarbell There," *Topeka (KS) Daily Capital*, Apr. 7, 1905, 1; *Abilene (KS) Daily Reflector*, Aug. 4, 1905, 2; "Rockefeller on the Stage," *Hutchinson (KS) News*, Nov. 18, 1905, 7; "Press Favors Kansas Idea," *Topeka (KS) Daily Capital*, Mar. 5, 1905, 19.

117 "Some Magazine Notes," *Abilene (KS) Daily Reflector*, June 28, 1905, 3.

118 Olien, *Oil and Ideology*, 106–07.

119 Williams, "Roosevelt's Populism," 102–11.

120 *Kansas Weekly Capital* (Topeka, Kansas), Apr. 3, 1905.

121 "Oil Fields and Pipe Lines of Kansas," *Topeka (KS) Daily Capital*, June 3, 1905, 6.

122 "Income \$40,000,000," *Topeka (KS) State Journal*, Nov. 18, 1905, 1.

123 "Will Have Refinery," *Abilene (KS) Daily Reflector*, Feb. 2, 1905, 1.

124 "Proclamation," *Topeka (KS) State Journal*, Apr. 3, 1905, 7.

125 "Oil Men Meet," *Topeka (KS) State Journal*, Mar. 18, 1905, 10. Unfortunately, it is not easy to find how middle-class consumers themselves thought of the Kansas Oil War. While local newspapers in Kansas often mentioned consumers' voices, they rarely printed ordinary readers' letters or contributions. Perhaps consumers' responses to Tarbell's article were something like that of "a lady from Cocheton Centre, N.Y." who wrote to *McClure's Magazine* after reading it: "While visiting I found *McClure's* in nearly every home in which I stopped, and no wonder, for it is the general opinion of the intelligent reading public that no better magazine is published." "From our readers," *McClure's Magazine*, Aug. 1903, 21. While we need more research to know consumers' own accounts of the Kansas oil war, it is possible to observe the increasing importance of consumers in anti-monopoly politics from the accounts of politicians, producers, and activists.

126 "Will Have Refinery," *Abilene (KS) Daily Reflector*, Feb. 2, 1905, 1.

127 Tarbell, "Kansas and the Standard Oil Company," 622.

128 George Gunton to Theodore Roosevelt, Dec. 17, 1902, Theodore Roosevelt Papers, Library of Congress Manuscript Division. Theodore Roosevelt Digital Library. Dickinson State University. <https://www.theodorerooseveltcenter.org/Research/Digital-Library/Record?libID=o39866> (accessed Feb. 11, 2023).

129 Henry Cabot Lodge to Theodore Roosevelt, Sept. 22, 1902, Theodore Roosevelt Papers; Theodore Roosevelt to Henry Cabot Lodge, Sept. 27, 1902, Theodore Roosevelt Papers.

130 Roosevelt, "Special Message" (May 4, 1906).

131 Theodore Roosevelt, "Sixth Annual Message," The American Presidency Project. <https://www.presidency.ucsb.edu/documents/sixth-annual-message-4> (accessed July 4, 2018).

132 Data calculated from U.S. Energy Information Administration, "U.S. Crude Oil First Purchase Price, Annual," Dec. 1, 2018. (statistics from Williams, "Roosevelt's Populism," 117).

133 National Civic Federation, *Proceedings*, 144.

134 National Civic Federation, *Proceedings*, 332–33, 335.

135 National Civic Federation, *Proceedings*, 450.

136 *Standard Oil Co. of New Jersey v. United States*, 221 U.S. 47–8 (1911).

137 United States Bureau of Corporations, *Report of the Commissioner of Corporations on the Petroleum Industry* (Washington, DC: U.S. Government Printing Office, 1907).

138 *Standard Oil Co. of New Jersey v. United States*, 221 U.S. 2 (1911).

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