Bartow J. Elmore

The American Beverage Industry and the Development of Curbside Recycling Programs, 1950–2000

Many people today consider curbside recycling the quintessential model of eco-stewardship, yet this waste-management system in the United States was in many ways a polluter-sponsored initiative that allowed corporations to expand their productive capacity without fixing fundamental flaws in their packaging technology. For the soft-drink, brewing, and canning industries, the promise of recycling became a powerful weapon for combating mandatory deposit bills and other source-reduction measures in the 1970s and 1980s. In examining the nexus of business, envirotech, and political history, this article explores how American corporations enrolled government agencies to construct resource reclamation systems in the United States that became models for waste management programs in municipalities around the world.

Coca-Cola is one of the most conspicuous corporations in the world. The company has placed vending machines in every corner of the globe, and bright red Coca-Cola signs dot rural roads from Alabama to Zimbabwe.

Coke's exposure, however, has not always been its greatest strength. In the 1960s, Coca-Cola and its soft-drink rivals began to produce prodigious amounts of packaging waste, switching to one-way, nonreturnable containers in an attempt to secure greater profits by consolidating their domestic bottling networks. Nonreturnable distribution systems produced unsightly waste that stirred consumer backlash against corporate profligacy. The beverage industry's most precious commodity—its image of innocent fun—was at stake, and companies like Coca-Cola, PepsiCo, and Anheuser-Busch had to take steps in order to control the debate about producer responsibility.

Unable on their own to clean up the mess they helped create, the nation's big beverage companies turned to federal and local government

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agencies in the 1970s and 1980s to help develop solid-waste management programs that would keep corporate waste out of sight. Opposing initiatives requiring producers to pay for industry pollution, beverage companies lobbied for "comprehensive" recycling programs to solve the problem. Recycling became a corporate weapon in a fierce battle to undermine mandatory deposit legislation and bans on nonreturnable packaging, point-source pollution reduction programs popular among environmentalists in the "Age of Ecology."

In the end, industry lobbyists were victorious, pushing through legislation at the federal, state, and municipal levels that established recycling programs as the cure-all for the nation's solid-waste problems. Recycling became the exclusive solution rather than the complement to mandatory source-reduction programs. While Coke and its corporate partners continued to produce billions of one-way containers, municipalities took on new debts in order to deal with the mounting piles of trash.

Even as governments went about the hard work of constructing and developing the infrastructure to deal with nonreturnable packaging waste, companies like Coca-Cola emerged in the public mind as the champions of environmental stewardship, the industry leaders in recycling technology. By the 1990s, Coca-Cola was distributing brightly colored recycling bins and producing "green" advertisements that declared their commitment to recycling programs. Coke put all its marketing might behind reinventing itself as an environmentally responsible company committed to resource reclamation.

This highly visible corporate greening campaign, however, represented the veneer of a much larger system that had to be built from the ground up, largely by city governments and largely with taxpayer dollars. In part because of the increase in beverage packaging waste, municipal garbage disposal costs had grown exponentially, from an estimated one billion dollars in 1960 to four billion dollars just twenty years later. Shared by all American citizens who paid small sums to finance municipal programs, public commitments to alleviate mounting garbage problems seemed modest, even though the total bill was quite large. Because the costs of cleaning up the mess were distributed, in other words, few citizens recognized the huge capital outlays that were being made by the public on behalf of private industry. Beverage and packaging companies had found a way to enroll local governments in a nationwide corporate cleanup and had done so without drawing the ire of an American citizenry typically averse to government bailouts of private industry. They succeeded because the support they received was largely invisible to the public.[1]

[1]Martin V. Melosi, "Waste Management: The Cleaning of America," *Environment* 23 (Oct. 1981): 9; for a discussion of the massive increase in packaging waste in the twentieth

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Many scholars have sought to amend laissez-faire interpretations of corporate growth to show how a hidden American state facilitated the birth of an economy dominated by large corporations in the twentieth century. Martin J. Sklar, for example, revised the history of Progressive Era trust-busting, showing how antitrust law in the early twentieth century actually legitimated the growth of big business, assigning powers to "extra-electoral experts and administrators insulated from the fluctuations of electoral politics" that did more to "facilitate, legitimize, police, and complement corporate regulation of the market" than to check uncompetitive growth. Gabriel Kolko focused on the Federal Reserve and the Federal Trade Commission as institutions that protected big business from the vagaries of "state regulations that were either haphazard or, what is more important, far more responsible to more radical genuinely progressive local communities." Other scholars, like Richard John and Richard White, focused on federal investments in national communication and transportation infrastructure that helped expand consumer markets and reduce front-end operating costs in the nineteenth and early twentieth centuries.[2]

But while revisionist works in business history have shattered the myth of corporate autogenesis, they have often privileged the period of corporate incipiency as the moment when government aid was most critical to business expansion, and have paid limited attention to the changing liabilities large enterprises faced as they grew out of infancy. Few scholars, whether focusing on Progressive Era enterprises, agribusinesses of the 1930s, or high-tech industries of the Cold War, have treated the construction of public waste-management systems as an essential government intervention that aided big-business growth in the latter half of the twentieth century. Corporate giants that had first emerged in the Progressive Era produced large amounts of packaging refuse by mid-century, causing consumers to question the prudence of supporting an economy dependent on centralized distributors using one-way packaging. Developing public infrastructure that would help

century, see Susan Strasser, *Waste and Want: A Social History of Trash* (New York, 1999). Strasser argues that the country's solid-waste problems developed in the early twentieth century in part because of the emergence of a new consumer culture that considered recycling and reuse practices outdated and antimodern, symbolic of impoverishment, and potentially harmful to one's health. Ibid., 136, 200, 269.

[2] William J. Novak, "The Myth of the 'Weak' American State," *American Historical Review* 113 (June 2008): 752–72; Martin J. Sklar, *The Corporate Reconstruction of American Capitalism, 1890–1916* (Cambridge, U.K., 1988), 434, 438; Gabriel Kolko, *The Triumph of Conservatism: A Reinterpretation of American History, 1900–1916* (New York, 1963), 6; Richard R. John, *Spreading the News: The American Postal System from Franklin to Morse* (Cambridge, Mass., 1995); Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York, 2010); Brian Balogh, *A Government Out of Sight: The Mystery of National Authority in Nineteenth-Century America* (Cambridge, U.K., 2009).

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large firms mollify these fears was critical to the future solvency of some of the most profitable business enterprises the world had ever seen.[3]

Few historical works investigate beverage container recycling systems outside the United States. Notable exceptions include articles by Adrienne Redd, Mike Holderness, Jennifer A. Goff, Lisa Rabasca, and Kathleen M. White (all journalists and recycling specialists) on packaging waste programs in Germany, France, and Canada. Mathias Nast and Finn Arne Jørgensen have written important books on recycling in Germany and Scandinavia. Still, much work needs to be done placing the United States curbside recycling story in an international context.[4]

In this article, I offer a new investigative model for understanding the elements of the American political economy that nurtured big-business growth in the twentieth century. This model restores the connection between large commercial enterprises and the ecologies they inhabit and focuses on corporate involvement in the development of publicly financed environmental programs that facilitated, rather than reduced, industry outputs. Mass-marketing firms like Coca-Cola and Pepsi were ultimately extractive industries requiring prodigious amounts of natural resources. Without cheap raw materials, these industries would never have been able to achieve the retail ubiquity that made them famous. Thus, reducing the cost of ingredients—including packaging—was a primary concern of these enterprises, one that structured corporate strategies in ways business historians have not fully explored. When scholars look at the construction of the corporate commonwealth through the lens of environmental history, they see how the metabolic

[3] Several scholars have produced excellent works on the development of curbside recycling programs, though none have specifically engaged the literature on the "myth of the weak American state." See Frank Ackerman, *Why Do We Recycle: Markets, Values, and Public Policy* (Washington, D.C., 1997); Martin V. Melosi, *Garbage in the Cities: Refuse, Reform, and the Environment* (Pittsburgh, 2005); Martin V. Melosi, *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present* (Baltimore, 2000); Heather Rogers, *Gone Tomorrow: The Hidden Life of Garbage* (New York, 2005); Elizabeth Royte, *Garbage Land: On the Secret Trail of Trash* (New York, 2005); Louis Blumberg and Robert Gottlieb, *War on Waste: Can America Win Its Battle with Garbage?* (Washington, D.C., 1989); Carl Zimring, *Cash for Your Trash: Scrap Recycling in America* (New Brunswick, N.J., 2005).

[4] See John Aquino, ed., *Waste Age/Recycling Times' Recycling Handbook* (Baton Rouge, 1995). On Germany, see Mathias Nast, *Die stummen Verkäufer: Lebensmittelverpackungen im Zeitalter der Konsumgesellschaft: Umwelthistorische Untersuchung über die Entwicklung der Warenpackung und den Wandel der Einkaufsgewohnheiten (1950er bis 1990er Jahre)* (Bern, 1997). For a Scandinavian perspective on beverage-container recycling and an excellent discussion of the sociocultural construction of reverse vending machines (RVMs), see Finn Arne Jørgensen, *Making a Green Machine: The Infrastructure of Beverage Container Recycling* (New Brunswick, N.J., 2011). For a broad look at how America's throwaway culture transformed the European economy in the latter-half of the twentieth century, see Susan Strasser, Charles McGovern, and Matthias Judt, eds., *Getting and Spending: European and American Consumer Societies in the Twentieth Century* (Cambridge, 1998).

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demands of the company helped shape the development of extra-firm institutions designed to reduce the material costs of managing the flow of natural resources critical to specific industries. Understanding corporate influence on the development of these environmental programs suggests avenues for reconstructing the systems we have in order to better serve the needs of the public at large.[5]

Recycling, a system many people today consider the quintessential model of eco-stewardship, was not solely the creation of environmentalists hoping to reduce pollution. In many ways, the system as we know it was a corporate creation critical to the perpetuation of many nineteenth-century extractive industries. This is the story of its construction.

Why Beverage Giants Switched to One-Way Containers

By the turn of the twentieth century, soft-drink companies and major brewing giants shipped thousands of returnable bottles all across the United States. Most companies relied on a network of small bottlers to distribute their products to consumer outlets throughout America.

In order to keep production costs down and to increase profits, local bottlers had to rely on reusable packaging. Between 1899 and 1915, most distributors—small business owners with limited capital resources—used straight-sided returnable glass bottles to sell their products. These containers were fairly generic but remarkably durable. In several areas of the country, beverage containers carried a one- to two-cent deposit redeemed to the consumer upon return of the empty containers. To receive their deposit back, customers had to return used bottles to retail outlets that sold the particular beverage they purchased (not necessarily the same venue where the customer originally bought their beverage). The *Southern Carbonator and Bottler* frequently exhorted distributors to implement deposit systems in order to ensure that their packaging materials were not lost or damaged. In 1905, the journal argued, "The customer's interest in all bottled beverages ceases when the contents are consumed, without the deposit attachment. The only sane, logical and lasting solution of the bottle question is the deposit system."[6]

[5]This study seeks to integrate business and environmental history in ways suggested by scholars Christine Meisner Rosen and Christopher Sellers. For their discussion of the merger of the fields, see Christine Meisner Rosen and Christopher Sellers, "The Nature of the Firm: Towards an Ecocultural History of Business," *Business History Review* 73 (Winter 1999): 577–600; Christine Meisner Rosen, "Industrial Ecology and the Greening of Business History," *Business and Economic History* 26 (Autumn 1997): 123–37.

[6]"Deposit System," *Southern Carbonator and Bottler* (Nov. 1905): 10. According to the *Coca-Cola Bottler*, Coke distributors found deposit systems particularly effective in inducing returns. See *Coca-Cola Bottler* (Apr. 1929): 34–35.

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Though many bottles were broken or discarded by consumers, most containers made their way back to bottlers for redistribution, some making over forty to fifty return trips to bottling plants. According to a United States Resource Conservation Committee study completed by the Research Triangle Institute, soft-drink bottles posted a return rate of about 96 percent as late as 1948, just eight short years before the Coca-Cola Company began experimenting with one-way containers. On average, then, two-way soda containers made roughly twenty-two trips from bottler to consumer back to bottler for redistribution in the 1940s. Beer bottles showed similar results, as average return rates approached thirty-two trips in 1948.[7]

Both the parent companies and local bottlers profited from the two-way distribution system. Local soft-drink bottlers—of which there were over four thousand by 1950—spent less money purchasing containers from glass manufacturers like Owens-Illinois and were thus able to use limited capital resources on other production and advertising costs. Parent companies benefited because the decentralized system allowed them to service remote outlets in rural America, extending their national reach. The packaging reuse system seemed to be good business for all.[8]

The shift to one-way container distribution began in the brewing business, not the soft-drink industry, in large part because the major brewing giants desired a cost-efficient way to break into the new markets made available by the collapse of small breweries in the wake of Prohibition. Passage of the Volstead Act in 1919 precipitated the closure of thousands of saloons and public drinking holes across the country, and the number of breweries operating in the United States declined dramatically from approximately 1,500 in 1919 to 785 by the time of repeal in 1935. The consolidation of the industry altered brewers' distribution philosophy. The three major national conglomerates, Anheuser-Busch, Schlitz, and Pabst, surveyed the American market after Prohibition and recognized that huge expanses of territory were now without local breweries. To tap these markets and ensure capital

[7]The forty-to-fifty figure reflects return rates for some bottles in the 1960s as calculated by the Investment Research Department of Laidlaw and Company in an investment report for the Coca-Cola Company, "Follow-Up Report No. 6 to Basic Report Dated October, 1963," Aug. 1965, box 57, folder 1, Robert W. Woodruff Papers, Manuscript, Archives, and Rare Book Library (MARBL), Emory University (hereafter cited as RWW Papers); United States Resource Conservation Committee, *Committee Findings and Staff Papers on National Beverage Container Deposits* (Washington, D.C., 1979), 75, 76, 84; William K. Shireman et al., *The CalPIRG-ELS Study Group Report on Can and Bottle Bills* (hereafter cited as *Can and Bottle Bills*), (Stanford, 1981), 5.

[8]Constance Hays, *The Real Thing: Truth and Power at the Coca-Cola Company* (New York, 2004), 11.

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growth, large national breweries needed to ship their products in cheap, lightweight, and durable packaging over longer distances.[9]

Nonreturnable containers allowed centralized brewing operations to reach consumer outlets far removed from distribution centers at low cost. As the American Can Company would write years later, "It was the nationally-minded brewers of that time [the 1930s] who foresaw how a one-trip package could provide a profitable way of quickly renewing franchises over a broad geographical range." To be certain, the trend toward at-home consumption of beer influenced brewers' interest in new lightweight, durable packaging, but, as American Can noted, "Consumers were largely satisfied with returnable bottles" in 1935 and did not call on the brewing industry to change their distribution practices; rather, the prime industry problem was to develop a new way to ship large amounts of beer across expanding national markets. The steel can offered an attractive solution to industry, and, in little over a decade, 31 percent of the brewing industry used cans to sell their beverages.[10]

Walter Mack, the savvy soft-drink executive responsible for bringing the Pepsi-Cola Company back from near extinction in the 1940s, was the first entrepreneur to successfully introduce one-way containers to the soft-drink industry. Mack had broken away from the Pepsi-Cola Company in 1951 and taken over ownership of the Cantrell & Cochran Corporation (C & C). He was interested in developing a new line of "Super" soft drinks that would only be available in cans. Teaming up with Continental Can, Mack began distributing his new beverage in steel containers, beginning in 1953. Within weeks, news of Mack's enterprise made headlines, not only in the United States, but also abroad. In Britain, the popular tabloid magazine *The Daily Mirror* reported that Mack's new Super colas introduced "a wholly new way of drinking that makes old-style bottled beverages as obsolete as yesterday's horsecars."[11]

Mack argued that one-way containers would allow his company to outcompete Coca-Cola and other industry rivals. In the early years, Mack contended, the soft-drink industry "was designed on the little ice box, the horse-drawn cart and a grocery store that carried about four

[9] Shireman et al., *Can and Bottle Bills*, 4; American Can Company, *A History of Packaged Beer and Its Market in the United States* (New York, 1969), 7; Maureen Ogle, *Ambitious Brew: The Story of American Beer* (Orlando, 2006), 213; A. M. McGahan, "The Emergence of the National Brewing Oligopoly: Competition in the American Market, 1922–1958," *Business History Review* 65 (Summer 1991): 229.

[10] American Can Company, *A History of Packaged Beer*, 29; "Soft Drinks: Will the Cans Take Over?" *Business Week*, Jan. 1954, 47; Shireman, et al., *Cans and Bottle Bills*, 9; "Canned Soda Pop," *Wall Street Journal*, 24 Sept. 1953, box 292, folder 10, RWW Papers; McGahan, "The Emergence of the National Brewing Oligopoly," 230, 247–48.

[11] "Now! Your Favorite Soft Drinks in Cans!" *Daily Mirror*, 10 June 1953, 19, box 292, folder 10, RWW Papers.

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hundred items. The horse could make a hundred and fifty stops a day, to deliver and pick up the empties. Try that at today's truckers' wages!" Rejecting the returnable distribution system of the soft-drink giants, a system that would require the company to make expensive capital outlays to finance transportation costs, Mack argued that C & C would "have no distributors. We'll be our own."[12]

Coca-Cola watched patiently to see how the canning trend would develop, reluctant to force its bottlers to invest in expensive canning equipment. As Coke president H. B. Nicholson explained, Coca-Cola, like the other soft-drink giants, was committed to "a healthy decentralization," whereby separate ownership oversee bottling and concentrate operations. The company argued that a switch to canning soda pop would not be beneficial for their enterprise, considering that such a transition would require thousands of independent bottlers—roughly 1,050 for Coke (5,905 bottlers industrywide in 1953)—to replace expensive bottling and washing equipment with modern canning machinery.[13]

But despite its public praise for the decentralized bottling network, corporate executives at Coca-Cola headquarters relished the thought of developing a new distribution system that would diminish the power of the local bottler and allow them to accrue profits siphoned off by distributors. In *The Real Thing: Truth and Power at the Coca-Cola Company* (2004), *New York Times* reporter Constance Hays argued that for "nearly as long as there was Coca-Cola in bottles," figuring out how to gain back revenue generated through bottler-to-retailer exchanges "would be a strategic priority for a parade of senior executives."[14]

One-way containers offered an attractive solution to Coca-Cola's dilemma. Walter Mack had shown in 1953 that lightweight, nonreturnable packaging could dramatically decrease shipping and handling costs, allowing centralized distributors to service retailers in distant markets. The lesson could not have been lost on Coca-Cola executives, who realized that lightweight packaging offered the corporate office a powerful weapon in its intracompany war with local bottlers. Profits that once had gone into the pockets of local bottlers could now be channeled into corporate coffers if the company could take over bottling operations.

Intrigued by the success of Mack's distribution system, the Coca-Cola Company began to experiment with steel containers in 1955, teaming up with the American Can Company to produce twelve-ounce

[12] "C&C Super Corp. to Open Third Plant Next Month to Can Soft Drinks in Chicago," *New York Times*, 25 Apr. 1954, F1.

[13] H. B. Nicholson, "The Fabulous Frontier," A Speech for the American Bottlers of Carbonated Beverages, 11 Nov. 1953, box 58, folder 1, RWW Papers.

[14] Hays, *The Real Thing*, xii.

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"MiraCans" for export to post-exchange stores at military bases abroad. By the mid-1960s, Coke was selling thousands of cases of canned Coke to domestic markets, many in aluminum containers after 1967.[15]

Large Coca-Cola distributors enjoyed huge savings from the one-way container system. The Pacific Coca-Cola Bottling Company (one of the largest Coca-Cola distributors in the country) conducted an internal study in 1978 that revealed the bottler used just forty-two gallons of gasoline per thousand cases to distribute one-way containers, compared to ninety-four gallons per thousand cases to distribute and reclaim returnables. The company also reported savings in labor costs with the elimination of certain collection and cleaning services needed for returnables. Other megabottlers commented on the reductions in warehouse and machinery costs associated with the shift to one-way containers, costs that totaled some four million dollars, according to one Coke distributor.[16]

Smaller bottlers who depended on a returnable system to turn a profit lambasted the government for allowing soft-drink giants to pass off the costs of container collection and disposal on the government. Independent distributors servicing small markets, like Peter T. Chokola, president of the family-owned Chokola Beverage company in Wilkes-Barre, Pennsylvania, lobbied Congress to ban nonreturnable containers in the early 1970s, convinced that the containers gave soft-drinks giants a competitive advantage. According to Chokola, the one-way distribution system adopted by corporate titans like Coca-Cola and Pepsi forced city governments to pay for the "recovery burden of 65,000 truckloads" of nonreturnable containers each day. "Centralization and intent to monopolize," Chokola contended, "is the underlying reasons behind rapid conversion of soft drink industry to throwaways."[17]

Small bottlers like Chokola had strong evidence to support their claims that one-way containers were helping large bottlers monopolize markets. The number of Coca-Cola bottlers operating in the United States had dropped dramatically from roughly 1,020 in 1929 to an estimated 500 in 1979, and the total number of bottlers in the soft-drink

[15] "Coca-Cola in Cans for the Far East," *Coca-Cola Bottler* (Apr. 1955): 28; "Sales of Canned Soft Drinks Soar," *Coca-Cola Bottler* (July 1965): 25–27; "Aluminum Aftermath," *Wall Street Journal*, 22 Nov. 1965, 2.

[16] Senate Committee on Commerce, Science, and Transportation, *Reuse and Recycling Act of 1979*, 96th Cong., 2d sess., 3 Mar. 1980, 58; Senate Subcommittee for Consumers, Committee on Commerce, Science, and Transportation, *Beverage Container Reuse and Recycling Act of 1977*, 95th Cong., 1st sess., 25, 26, 27 Jan. 1978, 158.

[17] Senate Subcommittee on Environment, Committee on Commerce, *Solid Waste Management Act of 1972*, 92nd Cong., 2d sess., 6, 10, 13 Mar. 1972, 35; Senate Subcommittee on Environment, *Nonreturnable Beverage Container Prohibition Act*, 93rd Cong., 2d sess., 6, 7 May 1974, 95, 108; Rogers, *Gone Tomorrow*, 136–37.

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industry declined from 4,519 in 1960 to 2,797 by 1972. Increasing the pace of consolidation in 1986, the parent company created Coca-Cola Enterprises (CCE), a company-owned megadistributor that began gobbling up even more local bottlers in the 1980s and 1990s. By 1997 there were only one hundred Coke bottlers servicing domestic markets. As journalist Constance Hays explained, the number of bottlers had not been that small since the early 1900s.[18]

The one-way container allowed beverage giants like Coke to achieve record profits by shifting key costs of distribution onto municipalities. Coke's success assured the consolidation of the soft-drink industry, as corporate rivals followed the number-one brand's lead. The era of one-way metal soft-drink containers had arrived by the mid-1960s, and though the beverage companies would look to develop new packaging designs in the years ahead—Coke making a major shift toward plastics in 1978—the most dramatic conversion had already taken place by 1960. The beverage industry was primed for a new era of growth in the age of convenience packaging. The only question was, Would the consumer remain committed to this new distribution system?[19]

Consumer Backlash: The Excesses of Industry Become Visible

The soft-drink giants' switch to one-way containers in the 1960s generated prodigious amounts of waste that alerted consumers to the environmental costs associated with corporate growth. Thousands of throwaway cans and bottles lay strewn across the American landscape by the 1960s, and many Americans began to call on the brewing, soft-drink, and packaging industries to clean up the mess. The first petitions for government regulation began in the early 1950s, over a decade and a

[18] Senate Subcommittee on Environment, *Nonreturnable Beverage Container Prohibition Act*, 108; Hays, *The Real Thing*, 11, 182.

[19] The soft drink industry consistently argued that consumers forced the beverage companies to adopt one-way containers. It was a bottom-up process, Coke and its industry allies argued. Consumers living in the automobile age had more mobility than ever before and wanted the convenience of not having to return packaging to retail outlets. While such claims were in part true, left unsaid were the business forces that shaped America's throwaway culture. One-way containers helped soft drink businesses achieve economies of scale in their bottling industries, reducing costs associated with collecting and processing returnables. Convenience packaging, in other words, was as much a product of consumer demand as it was an industry solution to a distribution dillema. For excellent works that explore both business and consumer forces that shaped America's throwaway culture, see Susan Strasser, *Waste and Want*; Susan Strasser, *Satisfaction Guaranteed: The Making of the American Mass Market* (New York, 1989); "Throwaway Society," in Ted Steinberg's *Down to Earth: Nature's Role in American History* (Oxford, 2002): 226–39; "'The Convenience is Out of this World,' The Garbage Disposer and American Consumer Culture," in *Getting and Spending*.

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half after the major brewers inaugurated nonreturnable distribution systems. In Maryland, state legislators proposed a bill in March 1953 that would have required all one-way beer containers to carry a three-cent deposit. That same year, the Vermont General Assembly passed a law that prohibited the use of nonreturnable glass beer bottles within its state borders (a restriction that lasted up to 1957, when "beer industry pressure" led to its expiration). Faced with the success of the Vermont campaign, one-way container producers and their clients knew they needed to take more direct action in combating mandatory deposit legislation.[20]

In the mid-1950s, the American canning, brewing, and beverage industries responded to consumer concern about one-way container waste by creating the first national antilitter organization, Keep America Beautiful (KAB). Though a relative latecomer to the one-way container system (compared to the nation's brewing giants), Coca-Cola and its soft-drink industry rivals were committed KAB associates, channeling considerable capital resources toward KAB's early publicity campaigns.[21]

KAB's central objective was to deflect accusations that producers were to blame for the country's growing litter problem. Describing the impetus for the new organization, American Can Company's Edward K. Walsh admitted that "enlightened self-interest" was a prime motivating factor. Through targeted education programs, national publicity campaigns, and local clean-up drives, KAB worked to dissuade voters from supporting extended producer responsibility programs that would require industries to internalize the costs of waste disposal.[22]

KAB produced hundreds of advertisements designed to encourage consumers to do their part to clean up the environment. This promotional material appealed to an American public firmly rooted in a classical liberal tradition that stressed rational consumers' power to solve market problems. As environmental writer Ginger Strand pointed out, KAB denied that structural changes to industrial technologies would solve the nation's litter crisis. Rather, the organization sought to preclude "any debate over the wisdom of creating disposables in the first

[20] In 1961, John Atlee Kouwenhoven published *The Beer Can by the Highway: Essays on What's American about America* (Baltimore, 1961), a testament to public concern about the aesthetic costs associated with one-way container waste; "Beer Bottle Plan Offered by Delegate," *Washington Post*, 17 Mar. 1953, 26; Andre J. Rouleau, administrator of Vermont Beverage Container Law, "Vermont Deposit Law and Recycling," presented at Vermont Solid Waste Summit, 8 Nov. 1985, P2 InfoHouse Online Comprehensive Pollution Prevention Reference Collection, www.p2pays.org/ref/24/23636.pdf (accessed 2 Aug. 2011).

[21] "Heads New Anti-Litter Group," *New York Times*, 14 Oct. 1954, 31; Royte, *Garbage Land*, 184; Melosi, *Garbage in the Cities*, 225–26; Rogers, *Gone Tomorrow*, 141–46.

[22] "Litter Increased in Crowded Cities," *New York Times*, 7 Dec. 1954, 40.

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place," in this way focusing public attention "on the symptoms rather than the system."[23]

As prime contributors to the growing litter problem, soft-drink companies became increasingly concerned about antilitter backlash in the 1960s. With nonreturnable soft-drink cans representing almost 11 percent of all soft-drink sales in 1963 (over sixty-five million cases that year), soft-drink giants knew that their companies were exposed targets for antilitter agitators in favor of industry-specific pollution taxes. Coca-Cola president Paul Austin admitted this fact in 1968. "We participate in the [creation of] litter to a significant degree," he argued, adding that the company had "earned various criticisms for littering the landscape." Austin lamented the fact that "the packaging for our products is highly visible," frustrated that Coke's "colored decoration on a can or the unique shape of our bottle doesn't deteriorate as readily as paper containers." The solution to this problem of exposure, as Austin saw it, was to encourage "individuals" to "*actively* get involved in the massive job" of cleaning up the unsightly byproducts of Coke's commercial growth.[24]

As they became more and more committed to one-way container technology in the mid- to late 1960s, Coca-Cola and its industry partners began to initiate their own antilitter campaigns to complement KAB efforts, working through their Washington, D.C.–based lobbying arm, the National Soft Drink Association (NSDA). Determined to control the discourse about waste-management solutions, the NSDA spent millions of dollars on advertisements to discourage legislators from supporting mandatory deposit bills, which by 1966 had been introduced in over twenty-three states nationwide.

The NSDA's message was clear: "people, not containers, are responsible" for the growing litter problem facing the nation. The NSDA distributed thousands of posters, bumper stickers, and billboards (an impressive amount of litter by any standard), featuring "Handy," a lone hand with a string attached to the index finger, to remind consumers that "hands alone cause litter." Targeting America's youth, the NSDA also circulated booklets entitled "A Handy Guide to Lessen Litter" in schools throughout the country. The guides not only featured

[23] Ginger Strand, "The Crying Indian: How an Environmental Icon Helped Sell Cans—and Sell Out Environmentalism," *Orion Nature Quarterly* (Nov./Dec. 2008): 24; Finis Dunaway, "Gas Masks, Pogo, and the Ecological Indian: Earth Day and the Visual Politics of American Environmentalism," *American Quarterly* 60 (Mar. 2008): 67–99; Strand, "The Crying Indian," 24; Royte, *Garbage Land*, 184.

[24] Melosi, *Garbage in the Cities*, 170; *Beverage Industry* 87 (June 1996): 26, cited on the Library of Congress's "Coca-Cola Television Advertisements: Homepage," http://memory.loc.gov/ammem/ccmphtml/indsthst.html (accessed 29 Mar. 2011); Paul Austin to Robert W. Woodruff, 28 Nov. 1969, box 16, folder 1, RWW Papers.

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lessons on how not to litter but also included a great deal of soft-drink advertising that spotlighted "the history, growth and outlook for carbonated beverages."[25]

Coca-Cola developed independent programs to fight the backlash against one-way container technology. Coke's vigorous pursuit of these campaigns was in large part a response to the growing strength of an environmental movement that increasingly took aggressive actions toward visible corporate polluters. Commenting on the political and cultural climate in the final months of 1969, Coke president Paul Austin wrote to former company chairman Robert Woodruff, "I was getting concerned about the exposure of the Coca-Cola Company to attacks because it is an outstanding member of the Establishment." He admitted that the "Coca-Cola Company is a serious offender in a certain part of the pollution problem" and stated his belief that the initiation of a corporate greening campaign "would reap immeasurable good will from government sources, the conservationists of the country, and the public at large."[26]

With Austin at the helm, the Coca-Cola Company launched a national "Bend a Little" campaign in 1970, placing ads throughout the country featuring an attractive woman bending over to pick up empty containers. The company also distributed "Bend a Little" litterbags to its customers. The message was obvious. As Coca-Cola archivist Phil Mooney explained, "The goal of the 'Bend a Little' campaign was to remind people that cleaning up America called for a little extra effort from all of us."[27]

Coke, NSDA, and KAB public ad campaigns in the 1960s and early 1970s certainly helped draw the public's attention away from the fact that American companies were producing prodigious amounts of packaging waste, but corporate polluters knew that litter bags would not, in the long run, solve their problem of exposure. In the Pacific Northwest and New England in particular, legislators were frustrated that little was being done to combat the nation's growing litter problem, and they pushed for mandatory deposit legislation in the late 1960s. The beverage industry had to respond with a more aggressive campaign directed to American lawmakers if it hoped to avoid costly pollution taxes.

[25] *American Soft Drink Journal* (July 1967): 34; *National Soft Drink Association (NSDA) Bulletin*, 26 Apr. 1968; *NSDA Bulletin* (Jan.–Feb. 1968).

[26] Paul Austin to Robert W. Woodruff, 28 Nov. 1969, box 16, folder 1, RWW Papers.

[27] "'Bend a Little' and 'Keep America Beautiful,'" featured on Coca-Cola's company blog, "Coca-Cola Conversations," edited by archivists Ted Ryan and Phil Mooney, http://www.coca-colaconversations.com/my_weblog/2009/04/bend-a-little-and-keep-america-beautiful.html (accessed 28 Jan. 2010); Pendergrast, *For God, Country, and Coca-Cola*, 301; *New York Times*, 22 Apr. 1970, 33.

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Recycling Becomes the Solution

On October 1, 1972, the Oregon state government passed An Act Relating to Beverage Containers and Providing Penalties. State representative Paul Hanneman had originally introduced the bill in 1968 at the urging of concerned citizen Richard Chambers. The measure failed to receive enough votes, but the timely support of Governor Tom McCall got the legislation passed four years later. The law mandated a five-cent deposit for all one-way containers and banned detachable pull-tabs for all beverage containers sold in the state. Vermont followed Oregon's lead in 1972, passing a mandatory deposit bill for all one-way containers sold in the state.[28]

The enactment of these statewide mandatory deposit bills occurred at the same time that the United States Congress began to consider a national ban on nonreturnable containers. By the mid-1960s, President Lyndon Johnson began to push for federal funding for municipal solid-waste programs, in part because of pressure coming from his wife. As historian Lewis Gould has shown, Lady Bird Johnson was a strong proponent of conservation initiatives, and by the 1960s she was helping to lobby for a series of environmental programs, including the Highway Beautification Act of 1965. Spurred on by Lady Bird, Lyndon Johnson signed into law the Solid Waste Disposal Act of 1965 and later lobbied for the first National Survey of Community Solid Waste in 1968. These measures did not assign effective regulatory powers to the federal government, but they did set a precedent for increased federal involvement in solid-waste management, a concern traditionally considered the responsibility of state and municipal governments.[29]

In 1970, continuing a new tradition of federal involvement in solid-waste management issues, the House of Representatives considered an amendment to the Solid Waste Disposal Act that would have prohibited the distribution of nonreturnable beverage containers within the United States. Testifying before Congress, the mayor of Bowie, Maryland, argued that his city council had passed the ban because "rising cost to the taxpayer in gathering and disposing of these containers was becoming unconscionable." The twenty-two House legislators who sponsored the federal ban were equally concerned about escalating waste-disposal

[28] For a detailed history of the Oregon battle, see Brent Walth, "No Deposit, No Return: Richard Chambers, Tom McCall, and the Oregon Bottle Bill," *Oregon Historical Quarterly* 95 (Fall 1994): 278–99; Stanford Environmental Law Society, *Disposing of Non-Returnables: A Guide to Minimum Deposit Legislation* (Stanford, 1975), 17.

[29] Lewis Gould, *Lady Bird Johnson and the Environment* (Lawrence, Kans., 1988). See also Lewis Gould, ed., *Lady Bird Johnson: Our Environmental First Lady* (Lawrence, Kans., 1988); Melosi, *Garbage in the Cities*, 198, 200–01.

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costs, arguing that corporate polluters should be expected to pay the expenses associated with one-way container technology.[30]

Representatives from the beverage-container industry attacked the proposed federal ban, arguing that the measure would hurt sales and "create severe economic dislocations in industries employing hundreds of thousands of people." Richard L. Cheney, president of the Glass Container Manufacturers Institute, explained in his testimony against the proposed legislation that "thousands of glass container plant employees would be put out of work" if the industry were limited to returnable bottle production. In 1972, when a national nonreturnable container ban once again came up for consideration in the Senate, Norman L. Dobyns of the Carbonated Beverage Container Manufacturers Association explained that doing away with one-way containers would completely eliminate the soft-drink canning industry: "We won't be there any more. That is a very large, very important, very consequential industry, that is gone by that one legislative stroke."[31]

Industry lobbyists were victorious at the national level in 1970 and 1972, and continued to be throughout the 1970s, in large part because they convinced federal legislators that a ban would result in severe job losses within the soft-drink and packaging industries. In 1976, when another proposed ban failed to make it off the Senate floor, Senator Adlai E. Stevenson of Illinois maintained, "I think it failed because of the jobs question," adding, "I certainly hear the concern over jobs in my state, which is a large manufacturer of containers."[32]

The "smokescreen of job losses and economic doom" proved effective at the local level as well. In Yonkers, New York, for example, lobbyists working for the NSDA, Coca-Cola, Pepsi-Cola, and the United States Brewer's Industry testified before the city council in 1971 in order to promote a recycling program over a proposed ban on nonreturnables. According to the *New York Times*, the ban had originally received bipartisan support and "appeared to have at least a reasonable chance of passing" when it first came up for consideration in committee. Following the testimony of ten "industry spokesmen," including the head of the NSDA, however, several councilmen removed their support for the bill. As they had done at the national level, corporate lobbyists in Yonkers used the threat of catastrophic job losses to scare lawmakers into

[30] House Subcommittee on Public Health and Welfare, Committee on Interstate and Foreign Commerce, *Prohibit Certain No-Deposit, No-Return Containers*, 91st Cong., 2d sess., 18 Sept. 1970, 53.

[31] Ibid., 46; Senate Subcommittee on Environment, *Solid Waste Management Act of 1972*, 79.

[32] Senate Subcommittee on Science, Technology, and Space, Committee on Commerce, Science, and Transportation, *Materials Policy*, 95th Cong., 1st sess., 14, 19 July 1977, 62.

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opposing top-down regulation. Explaining the effect of the industry testimony, councilman Peter Mancusi confessed, "The streets are dirty, and everyone agrees. But talk about 500 families out of a job and the Councilmen sit up and listen." Aloysius Moczydlowski, another councilman who was admittedly swayed by industry testimony, explained his rationale for opposing the ban: "I learned that the companies are understanding and facing the waste problem themselves. No voters have spoken to me, only companies. And who can solve problems better than private industry?"[33]

The soft-drink, packaging, and brewing industries held out recycling as the panacea that would solve the nation's litter problems. Companies in these industries knew that they had to take preemptive steps to combat growing consumer concerns, and they believed recycling could be touted as an effective industry alternative to mandatory deposit schemes.[34]

To be sure, brewing, soft drinks, and canning giants were not the only businesses lobbying for recycling programs in the 1970s. In *Cash For Your Trash: Scrap Recycling in America*, Carl Zimring explained that salvage companies like the Hugo Neu Corporation fought for the expansion of recycling programs, believing that publicly supported resource reclamation initiatives would offer new sources of revenue for their industry. Despite their enthusiasm, many scrap companies never received lucrative recycling contracts from municipalities; most went to burgeoning garbage conglomerates like Waste Management Inc. (WMI) and Browning-Ferris Industries (BFI). As Finn Arne Jørgensen has shown in *The Green Machine: The Infrastructure of Beverage Container Recycling*, supermarket owners and local grocery store proprietors welcomed recycling programs as alternatives to deposit programs that would force them to take on the messy work of receiving and processing used beverage containers. Paper manufacturing companies, as well as representatives from the plastics industry, also supported recycling. Executives at the American Paper Institute and the Society of the Plastics Industry spoke in favor of resource reclamation programs that would help generate recyclables valuable for their industries.[35]

Support for public recycling initiatives came from nonprofit organizations as well. Environmental groups lobbied for resource recovery programs, believing municipal reclamation schemes would help alleviate the nation's growing solid-waste problem. The Sierra Club, the

[33] Rogers, *Gone Tomorrow*, 150; "Yonkers Studies a No-Return Ban," *New York Times*, 9 Sept. 1971, 59.

[34] Rogers, *Gone Tomorrow*, 172.

[35] Zimring, *Cash for Your Trash*, 160; Jørgensen, *Making a Green Machine*, 29–31.

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National Wildlife Federation, and other major environmental organizations attended hearings on beverage-container recycling programs and argued in support of funding programs that would channel federal revenue toward recycling grants. Notably, though, these groups treated recycling as just one component of their conservation agenda. As Heather Rogers pointed out, organizations like Environmental Action "viewed the 'three Rs' in a hierarchical fashion: first, reduce consumption, then reuse goods in their already manufactured form as long as possible, and then, only as a last resort, recycle."[36]

Still, companies like Coca-Cola and Pepsi remained leading proponents of recycling initiatives, precisely because of consumer awareness of the beverage industry's contributions to the solid-waste problem. In 1970, the president of the National Soft Drink Association explained how company advertising on one-way packaging created this industry-specific dilemma:

> It is your and my container that may lay along the side of the road inviting public wrath, not the glass or the can companies . . . . It is our trademark on it and it carries our product . . . . They are going to be concerned with the final social consequence of your and my enterprise, and they are going to expect us to account for that consequence.[37]

Recognizing their unique exposure to environmentalists' attacks, the beverage industry bombarded the public with advertisements highlighting their efforts to recycle in the early 1970s. These ads suggested that American business was using its innovative strengths to solve the nation's litter problems. In New York City, for example, Reynolds Metals Company worked with Coca-Cola, Pepsi-Cola, and Mobile Oil on a citywide ad campaign to highlight industry efforts to reclaim container waste. The ads, which included "bus posters, transit cars, and Sunday comics advertisements," featured descriptions of twenty-nine recycling collection centers throughout the metropolitan area run by various corporate partners. Coke claimed in its advertisements that "our city government has enough to do without setting up reclamation centers," suggesting that the company, in partnership with its consumers, had both the will and the resources to solve one "of the most important ecological problems of our day." Other businessmen echoed these claims. The American Can Company, which produced the first aluminum-can recycling program in 1967, also spoke of corporate self-reliance: "We

[36] Rogers, *Gone Tomorrow*, 140.

[37] Meeting minutes from the State Association Conference, National Soft Drink Association, 10 Nov. 1970, 12, American Beverage Association (ABA) Information Center, Washington, D.C.

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can solve the problem in industry and we are already working on it. . . . Industry is doing such a good job in the area of coming up with systems."[38]

Despite big business praise for privately run resource-reclamation programs, support for these clean-up drives quickly began to wane. In February 1972, less than twelve months after Coca-Cola, Mobil Oil, and Reynolds began their recycling program in New York, the press reported that "enthusiasm for the recycling of waste on Long Island seems to be faltering." Mobil gas stations had already closed their reclamation centers by the winter of 1972, and several of the centers run by the Coca-Cola Bottling Company of New York dramatically reduced their hours of operation.[39]

The press reported similar problems with private recycling programs throughout the country. In California many reclamation programs were shut down in 1972, largely because they could not cover operation costs. The San Diego Ecology Center, a major recycling plant in southern California, barely broke even in 1972, relying on subsidies from outside sources to cover its operating expenses. The *New York Times* reported in May of 1972, "Recycling so far is not paying its own way. And there is a growing belief that it will be years—if ever, before it makes any major dent in the nation's mounting piles of solid wastes." According to the *Washington Post*, by 1978 virtually all the "3,000 drop-off recycling centers that sprang up in the United States from 1970 to 1973" had "disappeared," unable to recoup capital expenses associated with collection and facilities maintenance.[40]

In addition to being unprofitable, recycling programs in the 1970s simply were unsuccessful at reclaiming the vast majority of refuse produced by the beverage industry. Of the 36 billion containers produced by the glass industry in 1972, only 912 million (about 3 percent) actually made it to recycling centers. Aluminum reclamation showed similar results, as only close to 4 percent of all aluminum material made it back to producers through recycling programs. These results should not have been surprising considering the small fiscal enticements that private collectors tendered to consumers. Coke's collection centers in New York, for example, offered recyclers just one-half cent for every returned can. Small bottlers who were being pushed out of the soft-drink market

[38] "Advertising: Reynolds in an Ecology Drive," *New York Times*, 13 Apr. 1971, 63; "Display Ad," *New York Times*, 9 Feb. 1971, 25; Senate Subcommittee on Environment, *Solid Waste Management Act of 1972*, 81.

[39] Melosi, *Garbage in the Cities*, 221; "Recycling Efforts Faltering on L. I.," *New York Times*, 13 Feb. 1972, A1.

[40] "Waste Recycling Effort Found to Lag," *New York Times*, 7 May 1972, 1; "A Guide to Recycling," *Washington Post*, 13 Apr. 1978, VA1.

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because of the switch to one-way containers highlighted the inconsistencies in soft-drink giants' conservation rhetoric. As independent Dr. Pepper bottler Eugene Norton explained in 1972, "The public is . . . being told that people will not return returnable bottles for a deposit, yet on the other hand, these same pundits say the public will deliver throwaways to a recycling center for as little as a penny apiece providing they can find a recycling center."[41]

In order for recycling programs to work in the United States, public resources had to be channeled toward innovating and building the resource-reclamation infrastructure. There was no profit incentive that would encourage the development of recycling systems in the 1970s; these programs had to be subsidized, and as early as 1970, companies like Reynolds, American Can, Coca-Cola, and Anheuser-Busch testified before Congress to promote the adoption of legislation that would channel federal funds toward municipal recycling programs.

Large soft-drink, brewing, and packaging enterprises supported the Resource and Recovery Act (RRA) of 1970, which called for the federal government to provide assistance to municipalities struggling to deal with the nation's growing solid-waste problem. City governments interested in constructing resource-reclamation plants could expect the federal government to provide grants for the development and construction costs associated with resource-recovery programs.[42]

Not everyone in the beverage industry was happy with the federal government's new interventions under the RRA. Small, independent bottlers like Peter T. Chokola argued that federally supported recycling programs shifted "the burden of recovery of containers from the private sector onto Government." They argued against programs that did not require companies using one-way containers to pay for the waste they helped create. One small bottler opposed federal grants for recycling research, arguing that "this is added consumer and taxpayer costs, millions, perhaps billions of dollars and it isn't going to solve the problem any better than the returnable system which is already here."[43]

Despite resistance from small businesses, Congress continued to generate legislation that would encourage government investment in municipal recycling programs. In 1976, Congress passed the Resource Conservation and Recovery Act (RCRA), which increased federal support for local resource reclamation initiatives. The big soft-drink companies

[41] "Waste Recycling Effort Found to Lag," *New York Times*, 7 May 1972, 1, 57; Senate Subcommittee on Environment, *Solid Waste Management Act of 1972*, 26.

[42] House Subcommittee on Public Health and Welfare, Committee on Interstate and Foreign Commerce, *Prohibit Certain No-Deposit, No-Return Containers*, 91st Cong., 2d sess., 18 Sept. 1970, 39; Royte, *Garbage Land*, 127.

[43] Senate Subcommittee on Environment, *Solid Waste Management Act of 1972*, 35.

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supported this measure, hoping to direct general tax funds toward clean-up projects that would help them keep their waste out of sight. The former president of the NSDA, Sidney P. Mudd of the Seven-Up company, praised the RCRA for setting a "clear national objective and a suitable funding mechanism to stimulate similar planning and action for appropriate solid waste management throughout the 50 States."[44]

By the end of the 1970s and into the 1980s, the increased visibility of the country's landfill problems intensified concerns about throwaway containers. As neighborhoods began to expand to the peripheries of solid-waste-dump sites, citizens increasingly came in close contact with piles of trash that had once been out of sight and out of mind. The birth of the environmental justice movement in the early 1980s was in large part sparked by increased awareness of the connections between low-income residential neighborhoods and municipal dump sites. Private and volunteer recycling programs did not seem to be fixing the nation's litter problem, and legislators throughout the country now had empirical evidence from Oregon's and Vermont's mandatory deposit programs that suggested industry-targeted taxes would in fact reduce litter.[45]

Concerned about the perceived landfill crisis and following the lead of Oregon and Vermont, several states renewed campaigns to push through restrictive legislation designed to reduce one-way container waste in the late 1970s and early 1980s. Maine (1976), Michigan (1976), Connecticut (1978), Iowa (1978), New York (1982), Delaware (1982), Massachusetts (1983), and California (1986) all passed mandatory deposit laws that required nonreturnable cans and bottles to carry five- to ten-cent deposits. Some states were finally making private corporations price their product to reflect the environmental costs of cleaning up packaging waste. Soft drink companies were not happy because even though they could pass on deposit costs to consumers, increased prices portended reduced sales.

[44] Senate Subcommittee for Consumer, Committee on Commerce, Science, and Transportation, *Beverage Container Recycling and Reuse*, 95th Cong., 2d sess., 25, 26, and 27 Jan. 1978, 203.

[45] On the birth of the environmental justice movement, see Eileen Maura McGurty, "From NIMBY to Civil Rights: The Origins of the Environmental Justice Movement," in *Environmental History of the American South: A Reader*, ed. Paul Sutter and Christopher J. Manganiello (Athens, Ga., 2009); and Robert Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality* (Boulder, Co., 1990). For works on the emergence of the modern environmental movement, see Samuel P. Hays and Barbara Hayes, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955–1985* (Cambridge, U.K., 1987); Ted Steinberg, "Shades of Green," in *Down to Earth: Nature's Role in American History*, ch. 15 (Oxford, 2002), 239–61; Adam Rome, *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (Cambridge, U.K., 2001). According to Heather Rogers, one study showed that roadside litter in Oregon decreased by 35 percent in the wake of the new deposit law. Rogers, *Gone Tomorrow*, 147.

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Federal tax bills requiring offending companies to pay for the collection and disposal of their container waste resurfaced in the early 1980s as well. Just two years after Iowa became the fifth state to pass a mandatory deposit law, the U.S. House of Representatives considered adopting a national bottle bill that would require all one-way containers in the United States to carry a cash deposit. The measure was ultimately defeated, in part due to the concentrated lobbying efforts of soft-drink representatives like Edward Glaston, vice president and division manager of Pacific Coca-Cola Bottling Company (one of the largest Coke bottlers in the country), who testified to Congress that mandatory deposit legislation in Oregon had dramatically increased his company's operating costs and hurt business. Glaston argued that his fuel costs "more than doubled" because of deposit legislation that required the company to pick up its containers. Left unsaid was the fact that municipal agencies had been paying the fuel costs of picking up the company's waste. Ultimately, Glaston argued, consumers were hurt most, as they were forced to pay higher prices to pay for the new deposits.[46]

Major beverage companies did little to develop infrastructure that would make deposit systems work in bottle-bill states. Finn Arne Jørgensen argues that big bottlers "did their best to sabotage" New York's Returnable Container Law in 1982 requiring reverse-vending machine (RVM) producers to develop complicated container scanning systems that ultimately made them too expensive for retail grocers. Jørgensen showed how Tomra, a Norwegian engineering firm, had tried to bring laser-scanning RVMs to New York in the 1980s but was ultimately stymied by companies like Coca-Cola, which argued that the machines would not be able to distinguish between containers of different brands, and would therefore make them unable to ensure accurate assignment of deposit refund responsibilities. Ultimately, RVM machines never enjoyed the popularity they gained in other parts of the world, especially Scandinavia, where Tomra's systems became commonplace by the end of the 1980s. Absent the backing of the major beverage giants, high-tech, private-sector reclamation vending systems lagged in New York and the rest of the country.[47]

Publicly funded curbside recycling programs, or rather the promise of such programs, became the U.S. industry's primary mechanism for combating legislation that would demand extended producer responsibility for packaging waste in the 1980s. Curbside reclamation programs became the alternative to mandatory deposits and returnable bans, a system pitched as a fix-all rather than as a complement to additional

[46] Senate Committee on Commerce, Science, and Transportation, *Reuse and Recycling Act of 1979*, 68.

[47] Jørgensen, *Making a Green Machine*, 89.

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waste-reduction initiatives. What might have made these programs so attractive to legislators was that their costs would not be visible to the voting public. Recycling programs would be paid for with general tax funds received at the state, local, and federal level and with small user fees. As soft-drink, brewing, and packaging lobbyists explained to lawmakers, recycling, unlike mandatory deposits, would not take jobs away from their district or increase taxes in ways that would draw the ire of the American consumer.[48]

The beverage industry positioned itself as the keystone of the recycling system. Through the end of the 1980s, soft-drink, brewing, and beverage-packaging companies sought to convince citizens and lawmakers alike that container waste was the essential fuel driving nascent recycling programs. An industry spokesman argued that because aluminum cans and glass containers represent "an excess of 70 percent of the scrap value in the curbside bin," cutting out this source of revenue would destroy resource-reclamation programs across the country. In 1987, when a mandatory deposit initiative came up for citywide vote in Washington, D.C., Coca-Cola, PepsiCo, Anheuser-Busch, and Miller Brewing Company, among others, committed more than one million dollars to an ad campaign promoting the idea that beverage cans were essential to recycling programs. The *Washington Post* reported the corporations' claim "that if consumers take their bottles and cans back to grocery stores to collect their deposits, those items will not go to independent recycling centers that need revenue from glass and aluminum to survive." NSDA vice president Gifford Stack summarized the industry's position on mandatory deposit legislation and the importance of keeping one-way containers in the municipal waste stream in 1989 by arguing, "If these packages were not included in curbside recycling programs the operational cost to the municipalities would, indeed, skyrocket."[49]

The soft drink industry had a particularly strong case to make when it came to its aluminum cans. In the 1980s, scrap aluminum was significantly more valuable than recycled glass or plastic. Beverage companies could reduce energy requirements by up to 95 percent using recycled aluminum rather than virgin materials from bauxite ore. Energy saving for glass were considerably more modest, approximately 25 percent, and the dismal recovery rate for plastics made recycling that synthetic

[48] Rogers, *Gone Tomorrow*, 154.

[49] "Bottle Bill Foes' Recycling Claim Disputed," *Washington Post*, 25 Oct. 1987, B7; Senate Committee on Energy and Natural Resources, *Recycling*, 102nd Cong., 2d sess., 17 Sept. 1992, 160; House Subcommittee on Transportation and Hazardous Materials, Committee on Energy and Commerce, *Recycling of Municipal Solid Waste*, 101st Cong., 2d sess., 12, 13 July 1989, 256. For a thorough analysis of the D.C. bottle bill debate, see Joy A. Clay, "The D.C. Bottle Bill Initiative: A Casualty of the Reagan Era," *Environmental Review* 13, no. 2 (Summer 1989): 17–31.

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material economically unattractive. Major corporations were eager to buy up stocks of recycled aluminum to reduce front-end costs, making that metal the clear cash cow of the recycling system. Coke and its industry allies argued that the diversion of aluminum cans from the waste reclamation stream via deposit laws would eliminate the majority of the revenue generated from sales of recyclables.[50]

The soft drink industry's appeal proved effective. After 1986, only one other state (Hawaii) passed a mandatory deposit law. Most municipalities committed substantial resources and political support to the development of what the industry called "comprehensive" recycling programs. In 1986, only Rhode Island had a mandatory statewide recycling law on the books, but, just three years later, twenty-six states had passed laws requiring recycling as a component of solid-waste reduction, and seven states mandated the creation of statewide curbside programs. The number of curbside programs in the United States increased from just six hundred in 1989 to over four thousand in 1992. With the rise of curbside recycling, industries abandoned many of their own buyback programs and began to rely largely on municipal services that required them to pay no extra fees.[51]

By the end of the 1990s, publicly funded recycling programs had become accepted as the method for cleaning up industry container waste. Touted by industry as self-sustaining systems, however, curbside programs depended for years on subsidies. According to a study conducted in 1999, revenue generated from the sale of recyclable materials covered less than 35 percent of municipal expenses for recycling programs in the United States. The *New York Times* reported in 1993, "Five years after recycling took hold in this country, it has become clear that the market value of the materials left at the curbside is not likely to cover the collection and processing costs for a long time." Taxpayers were taking on the majority of the cost of collecting, processing, and

[50] L. L. Gaines and A. M. Wolsky, "Resource Conservation Through Beverage Container Recycling," *Conservation and Recycling* 6 (1983): 11–14. In 1969, the Coca-Cola company commissioned the first Life Cycle Assessment (LCA) study to determine the environmental footprint of various packaging materials. Under the direction of Robert Hunt and Bill Franklin, the Midwest Research Institute (MRI) carried out the study on behalf of the soft drink company. Their findings were never reported to the public, but in 1974, the EPA asked Hunt and Franklin to complete a similar study on nine different beverage containers. The study, *Resource and Environmental Profile Analysis of Nine Beverage Alternatives* (Washington, D.C., 1974), offered an excellent comparison of energy requirements and environmental costs associated with recycling different packaging materials. For more on Coke's involvment in the develoment of LCA, see Robert G. Hunt and William E. Franklin, "LCA—How It Came About: Personal Reflections on the Origin and the Development of LCA in the USA," *International Journal of Life Cycle Assessment* 1 (Mar. 1996): 4–7.

[51] Bruce van Voorst, and Rhea Schoenthal, "The Recycling Bottleneck," *Time*, 14 Sept. 1992; Zimring, *Cash for Your Trash*, 134; Debi Kimball, *Recycling in America: A Reference Handbook* (Santa Barbara, Calif., 1992), 23–24.

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returning corporate byproducts to producers, and industry remained exempt from disposal fees that might have been used to pay for expensive recycling systems. More critically, government-mandated source-reduction and polluter-pays programs had been discredited as viable methods for reducing the nation's pollution problem.[52]

Conclusion

Curbside recycling has not been the panacea the beverage industry has claimed for it. In 2001, the recycling rate for aluminum cans was just 46 percent. That year, waste-disposal agencies trucked 700,000 tons of aluminum cans to landfills all across the country. Conditions have not improved much over the last decade. According to a study conducted by the U.S. Government Accountability Office in 2006, the national recycling rate in America leveled off at around 32 percent in the mid-2000s. Today, consumers recycle only about 28 percent of polethylene terephthalate (PET) plastic bottles used in the United States.[53]

Though statistics reveal the shortcomings of our current waste-management practices, beverage giants continue to receive praise for their recycling efforts. Coca-Cola has garnered special commendations for its commitment to packaging-reclamation programs. In 2009, the press praised Coca-Cola for helping to finance the construction of the largest plastic-to-plastic recycling plant in the world in Spartanburg, South Carolina, and others applauded Coke's 2007 partnership with RecycleBank, a national recycling program that offers consumers coupons in exchange for recyclable containers. The company has distributed thousands of recycling bins featuring Coca-Cola's trademark throughout the country and has continued to produce promotional material about its "green" packaging. To the public, Coke has appeared to be the champion of sustainable business development.

Despite the fanfare about corporate greening campaigns, today's curbside reclamation programs would not have been possible without public funding. Corporate recycling programs have been built on infrastructure that it took municipalities decades to construct. For years,

[52] Royte, *Garbage Land*, 14; "Who Foots the Bill for Recycling," *New York Times*, 25 Apr. 1993, F5; David H. Folz, "Recycling Performance: A Public Sector Environmental Success Story," *Public Administration Review* 59 (July–Aug. 1999): 343; Daniel H. Loughlin and Morton A. Barlaz, "Policies for Strengthening Markets for Recyclables: A Worldwide Perspective," *Critical Reviews in Environmental Science and Technology* 36 (2006): 290.

[53] Rogers, *Gone Tomorrow*, 176; "Can or Bottle, Bill Wants Makers to Pay for Recycling," *New York Times*, 11 July 2002; Government Accountability Office (GAO), *Recycling: Additional Efforts Could Increase Municipal Recycling* (Dec. 2003), 11; Environmental Protection Agency (EPA), *Municipal Solid Waste in the United States: 2009 Facts and Figures* (Washington, D.C., 2010), 52.

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recycling programs proved unprofitable, and private institutions failed time and time again to create comprehensive programs that would dramatically reduce container litter. Expensive resource reclamation programs survived as the preferred and exclusive solution for solid-waste disposal in this country only because private corporations used their lobbying might to shift responsibility for the collection and recycling of corporate waste onto the public sector. In the end, consumers did most of the work, subsidizing (both through their labor and through taxes) the beverage industry's packaging-reclamation system, allowing companies to expand their operations without incurring increased costs.

The history of corporate involvement in the construction of public waste-management systems challenges interpretations of the rise of big business in America that portray modern mass-marketing firms as self-reliant, the product of systems devised, owned, and managed by private enterprise. In this article, I show how commercial success often depended on technological systems and infrastructure that private firms did not manufacture, that their perpetual growth, though seemingly indomitable, was contingent upon supportive scaffolding that came from without, not from within, these companies. It is a history that belies the prudence of nominating private corporations to be the primary architects of waste-management projects designed to protect the health of our ecology. History has shown that Coke and its beverage allies are far more often the beneficiaries of infrastructural supports built by public institutions, rather than the bulwark of elaborate systems engineered with private-sector capital that they claim to be. Coke's recycling bins scattered across the landscape may be evidence of a new era of corporate interest in contributing to greening strategies, but past experience suggests that the company's commitments will remain a small component of a much larger effort financed by the public.

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