

**“Throwaway Living”: A Study of American Perceptions of  
Disposability Surrounding Single-Use Products**

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## Introduction

In August 1955, *Life* magazine published a large photo of a happy family. Father, mother, and daughter are all standing around a table, smiling with their hands thrown in the air. Around them, as if suspended in anti-gravity, fly dozens of disposables: plates, trays, utensils, and napkins. The headline, printed on the next page in bold font, reads “Throwaway Living.”

The message of this piece is clear. By 1955, Americans had entered into a new age of technology in product use. In the past, the article explains, these products “would take 40 hours to clean—except no housewife need bother. They are all meant to be thrown away after use.”<sup>1</sup> Disposable products were the wave of the future. Although this ideology was celebrated in 1955, it had earlier precursors and it continues to be important in American society today, where the average citizen generates seven pounds of waste daily. Across a lifetime, this amounts to over 100 tons of trash.<sup>2</sup>

According to the EPA, in 2013, 27% of all municipal solid waste was paper, and 12.8% was plastic.<sup>3</sup> There are no official statistics that indicate what percentage of this is single-use disposable goods, like those discussed in “Throwaway Living.” However, these type of goods make a fascinating study of disposability. Journalist Edward Humes, author of *Garbology*, remarks that waste is the biggest product America makes, yet the country is “living in an official state of garbage denial.” To most people, he claims, their 102 tons are invisible.<sup>4</sup> Single use items are therefore an interesting case study because their disposability

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<sup>1</sup> “Throwaway Living,” *Life*, August 1, 1955, 43.

<sup>2</sup> Edward Humes, *Garbology: Our Dirty Love Affair with Trash* (New York City: Avery, 2013), 5.

<sup>3</sup> “Municipal Solid Waste,” EPA, *United States Environmental Protection Agency*, 2016. <https://archive.epa.gov/epawaste/nonhaz/municipal/web/html/>

<sup>4</sup> Edward Humes, *Garbology: Our Dirty Love Affair with Trash* (New York City: Avery, 2013), 8.

is immediately, obviously visible. In most cases, it is an important part of the product itself, and often is what makes it unique and desirable—or undesirable. The factors that make disposability a ‘good’ or ‘bad’ are not definitive. Instead, they are subjective and changing, and the role of disposability in how a product is perceived is affected by a range of circumstances.

### **The Rise of the Consumer**

In the pre-urbanized United States, people grew or made almost everything they needed. Even by the late 1800s, many Americans relied mostly on goods from within their own communities or homesteads. Susan Strasser, a historian who studies waste and consumption, wrote that Progressive Era Americans were “formerly customers, purchasing the objects of daily life in face-to-face relationships with community based craftspeople and store-keepers,” but they became consumers when they began buying “factory produced goods as participants in a complex network of distribution.”<sup>5</sup> Scholars such as Lizabeth Cohen, author of *A Consumer’s Republic*, have called this change a “market revolution.”<sup>6</sup>

With the growth of cities, people started to buy more food, rather than producing or trading locally. In the late 19<sup>th</sup> century, etiquette books encouraged people to save food by using mosquito netting or storing it in airtight tin containers. There were also frequently chapters on salvaging rotten or slightly bad food.<sup>7</sup> However, urbanization allowed people daily access to markets and shops, and increasing technology, especially in the transportation

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<sup>5</sup> Susan Strasser, “Customer to Consumer: The New Consumption in the Progressive Era,” *OAH Magazine of History* 13, no. 3 (Spring 1999): 10-11.

<sup>6</sup> Lizabeth Cohen, *A Consumer’s Republic: The Politics of Mass Consumption* (New York City: Vintage Books, 2003), 21.

<sup>7</sup> Susan Strasser, *Waste and Want: A Social History of Trash* (New York City: Holt, 2000), 32-33.

sector, meant that these markets were able to stock the produce and other foods that customers desired.

Because shopping in stores was increasing, advertised and branded goods began to triumph over local products. Before the era of mass production, consumers felt a certain loyalty to local production. It was the ‘American Way’: the idea of a rugged pioneer, making it in new territory on his own, just like the country itself had done. However, as buying goods became more convenient, this loyalty shifted, and consumers began to feel connected to certain branded products.<sup>8</sup> This change was pushed along by the growing advertising industry, which encouraged Americans to want new branded products. As Strasser wrote, “People who had never bought cornflakes were taught to need them; those once content with oats scooped from the grocer’s bin were told why they should prefer Quaker Oats in a box.”<sup>9</sup>

This new drive to purchase products was closely connected with a different definition of what it meant to be American. Instead of subsisting on their own, Americans began to idealize ownership and consumption. In 1941, shortly before the United States entered World War II, President Roosevelt declared ‘freedom from want’ to be one of the Four Freedoms that should be enjoyed by all peoples. This was echoed in popular culture and art, such as Norman Rockwell paintings. According to Cohen, “Rockwell depicted ‘freedom from want’ not as a worker with a job. . . but rather as a celebration of the plenitude that American families reaped through their participation in a mass consumer economy.”<sup>10</sup>

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<sup>8</sup> Susan Strasser, “Customer to Consumer: The New Consumption in the Progressive Era,” *OAH Magazine of History* 13, no. 3 (Spring 1999): 12.

<sup>9</sup> *Ibid.*

<sup>10</sup> Lizabeth Cohen, *A Consumer’s Republic: The Politics of Mass Consumption* (New York City: Vintage Books, 2003), 56.

After World War II, the connection between patriotism and consumerism grew even stronger. Many seemed to believe that “the revved-up engine of mass consumption promised to fulfill the long-sought goal of delivering an adequate standard of living to all Americans.”<sup>11</sup> According to a *Life* magazine article from 1960, mass consumption was a civic responsibility that would provide “full employment and improve living standards for the rest of the nation.”<sup>12</sup> This rise in mass consumption, in conjunction with the increasing use of plastics, led to a new wave of disposable products. By the end of the 1960s, the amount of plastic trash had increased sevenfold since the beginning of the decade.<sup>13</sup> The amount of overall waste was increasing, too, and Americans were finding themselves with growing landfills and more trash on their hands.

### **A Brief History of Waste Generation**

The amount of waste that an average American produces has continually increased over the past two centuries. In the late 1800s, so little waste was produced that wastepaper baskets were extremely rare in the home.<sup>14</sup> In a rural, agrarian economy, saving of goods was considered wise, since they could be reused; people never knew when an item might turn out to be of some use, or when they might have the opportunity to buy one again if they threw it out. Furthermore, each person had to be a handyman, since repairs were often necessary to keep goods functioning for long stretches of time.

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<sup>11</sup> Lizabeth Cohen, *A Consumer's Republic: The Politics of Mass Consumption* (New York City: Vintage Books, 2003), 113-114.

<sup>12</sup> Ibid.

<sup>13</sup> Edward Humes, *Garbology: Our Dirty Love Affair with Trash* (New York City: Avery, 2013), 73.

<sup>14</sup> Susan Strasser, *Waste and Want: A Social History of Trash* (New York City: Holt, 2000), 67.

This was especially true of women, who managed the house and therefore considered themselves responsible for saving and recycling. For instance, the common practice of altering worn-out sheets so that they could be used in other ways without getting rid of them entirely was called “turning.”<sup>15</sup> Even as fabric and other goods increasingly became items that people purchased, rather than produced, saving remained the norm. Strasser, in her book *Waste and Want*, explained that most items of clothing were altered yearly to suit fashions of the day, especially more expensive fabrics, such as silk or wool. These nicer goods had a less useful afterlife; they had to stay clothes longer, since they could not be turned into rags or tablecloths, like the more practical cotton and linen.<sup>16</sup> Up until the end of the nineteenth century, almost all women knew how to sew, and they used this knowledge to make goods last as long as possible.<sup>17</sup>

Most of the goods that the average person consumed were those that could be produced on their own or within their community. However, by the end of the 19<sup>th</sup> century, the market revolution made buying products more common. Technological improvements combined with increased advertising contributed to the changing purchasing increase.

With this transformation in production and consumption came an increase in the amount of waste produced. For the first time, more goods were being bought than were being made, and this meant more refuse would eventually enter the waste stream. Thrift and reuse were still considered the ideal, but it became increasingly more effective to simply replace

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<sup>15</sup> Susan Strasser, *Waste and Want: A Social History of Trash* (New York City: Holt, 2000), 44.

<sup>16</sup> Susan Strasser, *Waste and Want: A Social History of Trash* (New York City: Holt, 2000), 46.

<sup>17</sup> Susan Strasser, *Waste and Want: A Social History of Trash* (New York City: Holt, 2000), 38-39.

old goods as production costs decreased.<sup>18</sup> Thanks to increasing waste and a growing public health movement, municipal trash collecting was implemented in major cities.

The forerunner of trash collection was the building and implementation of sewers in urban areas. As early as 1855, Brooklyn had a developed sewer system that handled both storm water and human waste. Public health advocates firmly believed in environmental cleansing and sanitary reform as a method of reducing the spread of disease. This was thanks to popular theories about contagion, and the belief that miasma, or bad air, could spread disease. As Garrick E. Lewis explains in *A historical context of municipal solid waste management in the United States*, sanitation infrastructure first gained popularity because of the health-related desire to reduce filth and waste in populous areas.<sup>19</sup> By the early 1900s, combined sewage systems such as that of Brooklyn were instituted in most major American cities.

Lewis writes that once the removal of sewage was well established, sanitary reformers (public health experts) turned their attention to the collection of refuse and waste. This became an especially pressing issue with the upsurge in the production of garbage after the turn of the century. Despite increasing amounts, though, it was not seen to be as much of a health issue as human waste was.<sup>20</sup> For instance, in 1902, public health researcher and reformer Charles Chapin wrote that health had focused on municipal cleaning in the past; but modern medicine had revealed individual diseases and germs. He explained that science had “learned the true nature of infection. . . Instead of an indiscriminate attack on dirt we must

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<sup>18</sup> Susan Strasser, *Waste and Want: A Social History of Trash* (New York City: Holt, 2000), 112-113.

<sup>19</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004): 309.

<sup>20</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004): 310.



learn the nature and mode of transmission of each infection.”<sup>21</sup> Although Chapin acknowledged that cleanliness could prevent the spread of germs, he also encouraged public health reformers to realize that there could be more effective ways of limiting disease than simply cleaning up trash. Therefore, organization proceeded more slowly, and it was not until 1910 that even 8 out of 10 cities had a municipally run rubbish collection system.<sup>22</sup> While people first saw garbage collection as an infringement of personal space, they soon realized that it was a benefit to the community. Trash collection rapidly became a part of life in urban areas, further normalizing the production and disposal of increasing amounts of waste.<sup>23</sup>

Early refuse management operated on the principle of out of sight, out of mind. Waste was taken from cities and indiscriminately dumped or landfilled in other locations.<sup>24</sup> It was occasionally spread on agricultural land, but the increasing variety of non-compostable garbage minimized this benefit. By the 1920s, the composition of the waste stream included more paper, plastics, and chemicals than ever before.<sup>25</sup> Although this waste was dumped away from urban areas, it was still out in the open. According to William Rathje, author of *Rubbish! The Archaeology of the Trash Heap*, this method of disposal fostered “a widespread social and economic ritual: the Sunday afternoon excursion to drop off the family’s garbage and perhaps pick up some gossip and a discarded item or two.”<sup>26</sup> This practice was especially prevalent in rural areas, where residents might not have a municipal system that collected

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<sup>21</sup> Charles V. Chapin, “Dirt, Disease, and the Health Officer,” *Public Health Papers and Reports* (1902), as excerpted in John Harley Warner and Janet A Tighe, *Major Problems in the History of American Medicine and Public Health* (Boston: Houghton Mifflin, 2001), 240.

<sup>22</sup> William Rathje, *Rubbish! The Archaeology of Garbage* (Tucson: University of Arizona Press, 2001), 42.

<sup>23</sup> Susan Strasser, *Waste and Want: A Social History of Trash* (New York City: Holt, 2000), 123.

<sup>24</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004), 311.

<sup>25</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004), 315.

<sup>26</sup> William Rathje, *Rubbish! The Archaeology of Garbage* (Tucson: University of Arizona Press, 2001), 43.

their garbage for them. Although some people may have enjoyed a trip to the dump, for many others, these sites were unsanitary, smelly nuisances. Biodegradability and decomposition contributed to unpleasant smell, as did incineration, which was very prevalent in the late 1930s and 1940s. Even outside of the dump, many people chose to incinerate their own garbage by burning it in at-home incinerators or 55 gallon drums. Garbage that was not burned was fed to pigs, a practice that continued into the 1950s.<sup>27</sup>

In the 1930s, Jean Vincenz, the Director of Public Works for Fresno, California, instituted the first sanitary landfill in America. Adopted from British practices, Vincenz's landfill used a "trench method, in which waste was deposited into a trench, then covered with a layer of soil" at the end of each day.<sup>28</sup> By 1945, his method had been adopted by close to 100 landfills across America.<sup>29</sup> Five years later, a study undertaken by the U.S. army indicated that such a method would reduce the spread of flies and vermin, and by 1953, a joint committee of the US Public Health Service and the American Public Works Commission published recommended guidelines for refuse collection. These guidelines included the prevention of open burning and swine feeding, and recommended compaction.<sup>30</sup> In 1959, the American Society for Civil Engineers published a standard guide to sanitary

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<sup>27</sup> H. Lanier Hickman Jr. and Richard W. Eldredge, "A Brief History of Solid Waste Management in the US During the Past 50 Years—Part 1," *MSW Management*, originally published 2001, republished by *Forester Daily News*, April 15, 2016.

<sup>28</sup> Garrick E. Louis, "A historical context of municipal solid waste management in the United States," *Waste Management & Research* 22(2004), 315.

<sup>29</sup> *Ibid.*

<sup>30</sup> H. Lanier Hickman Jr. and Richard W. Eldredge, "A Brief History of Solid Waste Management in the US During the Past 50 Years—Part 1," *MSW Management*, originally published 2001, republished by *Forester Daily News*, April 15, 2016.

landfilling which build on these principles. By the 1960s, Lewis writes, “the sanitary landfill had become the dominant means of disposing of municipal refuse.”<sup>31</sup>

Landfill organization was bolstered by the nascent environmental movement in the 1960s. In 1962, Rachel Carson published her famous expose of chemical pollution, *Silent Spring*. It is often credited by scholars, including Lewis, as opening the eyes of the public to environmental issues. Additionally, it ushered in a wave of new legislation.<sup>32</sup> In 1965, President Lyndon B. Johnson called for “better solutions to the disposal of solid waste.”<sup>33</sup> An act called the Solid Waste Disposal Act of 1965 was passed, and its enforcement largely fell to the US Public Health Service. By 1975, all states except Wyoming had comprehensive solid waste management programs, but they were enforced locally. This meant that there was limited potential for improvement and technological innovation.

In 1976, the Resource Conservation and Recovery Act (RCRA) was passed. According to Lewis, this act and its 1984 amendment, “comprise the definitive legislation for solid waste management in America today.”<sup>34</sup> It lays out careful definitions of solid waste and the correct practices for disposal. Furthermore, it was the effective end of open-air dumping. After its main provisions took effect in 1980, the number of landfills in the country declined by almost 50%. For a short time, there was mounting fear of a ‘garbage crisis.’ Some perceived a future wherein there would be no space to dump.<sup>35</sup>

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<sup>31</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004), 315.

<sup>32</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004), 316.

<sup>33</sup> Ibid.

<sup>34</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004), 317.

<sup>35</sup> “After Privatization, Landfill Crisis Disappeared,” National Center for Policy Analysis, September 12, 2000. [http://www.ncpa.org/sub/dpd/index.php?Article\\_ID=9510](http://www.ncpa.org/sub/dpd/index.php?Article_ID=9510)

Ultimately, the crisis was averted by the privatization of landfills. Today, most such organizations are owned by private corporations, which Lewis explains have the funding and “technical expertise to comply with the complex new regulatory environment.”<sup>36</sup> 69% of the trash generated in the modern United States is landfilled (as opposed to being recycled, composted, or incinerated).<sup>37</sup> There are approximately 1,900 landfills across the country. They are required to be constantly monitored for groundwater leaching and the formation of gases. They sit atop a liner of plastic and two feet of clay, and each day, they are covered over in the trench method.<sup>38</sup> Much technological advancement and engineering has been dedicated to the management of the waste created by society. Despite this, however, many Americans are unaware of the impact of their behaviors.

### **The Morality of the Landfill**

William Rathje explains that Americans are especially aware of certain types of garbage—litter, for example, has campaigns dedicated to it. However, it is actually a small percentage of the total amount of waste people generate. It garners focus because other types of waste are “out of sight, out of mind.” Rathje wrote that “Unlike the evidence of many [other social problems] . . . the evidence of specific pieces of household garbage disappears from one day to the next . . . Garbage passes under our eyes virtually unnoticed, the continual turnover inhibiting perception.”<sup>39</sup> He also explains that landfill waste is especially unnoticed because the landfill is perceived as the ‘right’ place for garbage. If it’s in the landfill or

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<sup>36</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004), 321.

<sup>37</sup> Edward Humes, *Garbology: Our Dirty Love Affair with Trash* (New York City: Avery, 2013), 27.

<sup>38</sup> “Municipal Solid Waste Landfills,” EPA.gov, *United States Environmental Protection Agency*, January 27, 2017. <https://www.epa.gov/landfills/municipal-solid-waste-landfills>

<sup>39</sup> William Rathje, *Rubbish! The Archaeology of Garbage* (Tucson: University of Arizona Press, 2001), 45.

heading there, the unspoken reasoning goes, then it is not worth noticing because it is being properly taken care of.

Rathje's claim holds true for the vast percentage of waste generated. However, as he points out with litter, there are some types of waste that are exempt from this invisibility. For a number of reasons, people begin to perceive the disposability of certain objects as a moral quantity—a 'good' or a 'bad,' or even somewhere in between. It is good for certain types of waste to go in the landfill (litter) but it is bad for others (batteries, chemicals). This type of subjective disposability is noticeable and attracts attention.

### **Perceptions of Disposability**

Single-use, disposable products are an interesting case study in disposability. In many cases, they are exceptions to Rathje's idea of unperceived disposability; they can gather attention and become objects of discussion. However, this does not always happen. This thesis will illustrate that the elements which affect perception of a disposable product are not always clear, and the value of disposability is a subjective quality. Each chapter will focus on a case study of a particular product, as well as the reaction to that product and what it says about disposability. The three products discussed are Dixie Cups, polystyrene foam clamshells, and Saran Wrap. Ultimately, I will show that the harm or good of single-use disposables is not a set quantity, but rather one that depends on a number of factors.

### **Historiography**

This thesis aims to unpack ideas about consumerism and disposability. Along the way, it touches on issues of medicine, environmentalism, gender, advertising, and

technology. Some of the sources I have used to shape my approach to the study of waste itself include Edward Humes' *Garbology* and William Rathje's *Rubbish! The Archaeology of Garbage*. Works such as Susan Strasser's *Waste and Want* and Jane Celia Busch's doctoral dissertation, *The Throwaway Ethic in America*, helped me to shape my understanding of how the waste that is created fits into larger ideas about wastefulness and consumption. For a detailed overview of American patterns of consumption, I turned to Lizabeth Cohen's *A Consumers' Republic*. To understand the role of advertising in consumption, I used Juliann Sivulka's *Soap, Sex, and Cigarettes*.

The study of how people consume products led me to touch on gender, and for that I relied heavily on Mary Drake McFeely's *Can She Bake a Cherry Pie?* I also referred tangentially to Susan Vincent's "Preserving Domesticity: Reading Tupperware in Women's Changing Domestic, Social and Economic Roles." For an understanding of environmentalism, I turned to David Walls' short online post entitled "Environmental Movement." To explore more in-depth, I relied on *American Environmentalism: The U.S. Environmental Movement, 1970-1990*, edited by Riley F. Dunlap and Angela G. Mertig. Finally, for an understanding of hygiene, medicine, and waste, I worked closely with Nancy Tomes' book, *The Gospel of Germs*. I also used Suellen Hoy's *Chasing Dirt*.

Since each chapter is about a different product, each presented its own unique set of issues and source material. For Chapter 1: Dixie Cups, I worked most closely with the books by Tomes and Hoy. I also utilized Jane Celia Busch's dissertation, as well as work compiled by Ashley Giordano on the use of Dixie Cups. Giordano's website was largely sourced from Lafayette College's Skillman Library, and I used the guides and sources created by their staff to inform my interpretation. In addition, most of the primary sources I used for this chapter,

which include newspaper articles, advertisements, and brochures, came from the collections at Lafayette.

In the writing of Chapter 2: Polystyrene Clamshells, I relied heavily on newspaper articles which documented changes in packaging as they occurred. Additionally, I used company records and patents. To document changes in polystyrene packaging made by the McDonald's corporation, as well as to understand the history of the company, I used John Love's *McDonald's: Behind the Arches*. Additionally, I worked with a number of secondary case studies about polystyrene packaging, especially Susan Svoboda and Stuart Hart's "Case B1: The Clamshell Controversy" and Sharon M. Livesey's "McDonald's and the Environmental Defense Fund: A Case Study of a Green Alliance." Finally, I used records of testimony given by members of an environmental group in a 1992 trial against McDonald's in order to get a better understanding of the opposition to polystyrene foam packaging. *American Environmentalism* was also useful in the writing of this chapter.

In Chapter 3: Saran Wrap, I touch most closely on gender, and thus worked extensively with McFeeley's *Can She Bake an Apple Pie?* To understand the material itself, I relied heavily on primary source materials from the Dow Chemical collection at the Othmer Chemical Library. An unpublished manuscript detailing the invention of saran, titled "Saran—A Saga of Innovation," was especially useful. Additionally, I was also able to access a case study that was completed as part of an advertising campaign for Saran Wrap in 1955, which told me quite a bit about how the product and its disposability was marketed.

It is clear that the existing body of literature covers many of the themes my thesis touches on, including consumerism and disposability. However, even sources that discuss the perception of and reason behind disposability (such as Busch's *The Throwaway Ethic in*

*America*) do not fully unpack the subjectivity of its interpretation and the way it interacts with single-use products. This thesis will add to the current discussion of disposability by illustrating the different ways that it is perceived. By using studies of Dixie Cups, foam clamshell containers, and Saran Wrap, it will show that the factors that influence perceptions of disposability are often separate from the facts about the product. They are related to media trends and social movements, and the way that products are perceived by the public cannot always be predicted.

Existing literature addresses disposability, and to a certain extent, its perception. For instance, Rathje's *Rubbish!* touches on the way waste is seen or not seen to take up space. However, my work will focus specifically on single-use products in a way that has not been done before, and in doing so, will expand the thinking about perceived disposability to consider the moral value that is attached to such ideas, and what factors may influence opinions.



## **Chapter 1: The Paper Cup**

By 1910, a campaign had sprung up against one particular common object. Letters were written. Doctors and science were called into question. Advertisements were placed in magazines, and cartoons were drawn. Many of these illustrations had come to share a unifying thing. They usually portrayed a child or mother, innocently using the object. Looming over the figure was the terrifying specter of death, his skeleton face peering out of his black robes. If readers couldn't see the object, they might presume that it presented a physical danger, such as a knife of some sort, or a razor. However, what the ad showed was seemingly less sinister: a communal tin cup. Although it did not present immediate danger, the makers of such images intended to imply that the communal cup, through continued use, spelled death just as surely as any weapon wielded by one's enemy. How the communal cup came to be marketed as such a sinister object is an interesting story, and understanding the origins of this phenomenon are key to understanding the object which came to replace it—the disposable paper cup.

### **Antecedents**

Before the use of the paper cup, a communal glass was used in order for patrons to have access to water in a variety of public places. Fountains which spurted water, as well as a cup to drink the water out of, were furnished in many spaces, including railroad stations, schools, and city walks. Indeed, many cities took pride in their municipal fountain systems, with which passerby did not hesitate to quench their thirsts. However, the glass was rarely

washed, unless visibly dirty. In some cases, as on railroads, it was left up to individual users to clean it themselves after use—something which no one seemed to have the time for.<sup>1</sup>

A tin cup, referred to as a “dipper,” was especially common in rural areas. It would be hung “just inside the well-curb on a ten-penny nail, above and to one side of the well-spout under which the bucket usually rested, full of water.”<sup>2</sup> Anyone was welcome to dip the cup into the water from the bucket and drink their fill. An 1886 poem in *Good Housekeeping* romanticized this experience, remarking “Your cut glass and silver away I would fling/ For a drink from the dipper that hung in the spring.”<sup>3</sup> For many, the use of the tin dripper was closely related to positive memories of childhood and safety. However, just a few short years after *Good Housekeeping*’s publication of “The Old Tin Dipper,” the dipper and other glassware had come to be seen as disease causing agents, and taking a sip from them was akin to risking one’s own death. This was related to changing perceptions about the role of cleanliness, as well as technological advances that would realize these changes.

## The Germ

Prior to the discovery of germ theory, Americans had strong beliefs about hygiene and disease. People had been aware for many centuries that “people suffering from certain diseases, such as smallpox or bubonic plague, gave off some sort of intangible substance capable of making others sick.”<sup>4</sup> However, there was no scientific understanding of what this substance might be. The most popular theory was that of miasma, or bad air. Such emissions

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<sup>1</sup> Samuel J. Crumbine, *Frontier Doctor: The Autobiography of a Pioneer on the Frontier of Public Health* (Philadelphia: Dorrance, 1948), 166-167.

<sup>2</sup> "Editorial Topics," *The Interior*, December 3, 1896.

<sup>3</sup> Bertha E. Clauson, "THE OLD TIN DIPPER," *Good Housekeeping*, Jul 10, 1886, 131.

<sup>4</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 3.

could come from a sick person, or they could come from environmental factors, such as waste and filth. It was thought to be connected to rot and decay. After the discovery of germ theory, public health researcher Charles Chapin wrote that “The filth theory erroneously assumed that the infectious diseases were caused by emanations, gaseous or otherwise, from decaying matter. . . Everything dirty, everything nauseous, possibly, nay, probably would cause sickness.”<sup>5</sup> Due to this concept, people already believed firmly in the importance of sanitation and hygiene as a mechanism to reduce the spread of disease.

After the discovery of germ theory in the late 1870s and its general acceptance by the turn of the century, these thoughts about hygiene were not replaced by, but reinforced by modern science. Historian Nancy Tomes, author of *The Gospel of Germs*, wrote that “initial understandings of the germ theory were deeply indebted to an older scientific discipline known as ‘sanitary science,’ which stressed the ubiquity of airborne infection and the disease-causing properties of human wastes and organic decay.”<sup>6</sup>

### **The Spread of the Idea**

The turn of the century popularity of germ theory can be attributed to this “marriage of sanitary science and germ theory.”<sup>7</sup> While the science was new, the discovery of germ theory and its implications about the necessity of cleanliness only reinforced already-occurring changes in society and behavior. As Tomes explains,

The germ theory of disease entered the popular discourse about disease prevention at a time when the majority of Americans, physicians and lay people alike, believed

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<sup>5</sup> Charles V. Chapin, “Dirt, Disease, and the Health Officer,” *Public Health Papers and Reports* (1902), as excerpted in John Harley Warner and Janet A Tighe, *Major Problems in the History of American Medicine and Public Health* (Boston: Houghton Mifflin, 2001), 239.

<sup>6</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 8.

<sup>7</sup> *Ibid.*

quite fervently in the reality of what we would today call ‘sick buildings.’ The first gospel of germs, which emerged gradually in the 1880s, simply superimposes the menace of the microbe onto existing mappings of disease dangers in the household.<sup>8</sup>

Thus, germs were not the key to the success of the anti-cup campaign. Rather, it was part of a larger societal movement towards cleanliness, of which germs were only a small part.

In the late nineteenth century, American cities were growing. While dirt could be positive or healthy on the farm—for instance, it helped crops grow—cities were unbearably dirty. They were full of “congestion, noise, filth, and stench.”<sup>9</sup> <sup>10</sup>People who lived in cities seemed to be the special targets of disease. For instance, a series of devastating cholera epidemics struck New York in the mid-19<sup>th</sup> century, and those who lived in the most crowded, dirty parts suffered the worst. Although germ theory proved a solid explanation for cleanliness, it reinforced what city public health reformers had already been emphasizing: quarantines may not have worked, but cleanliness did.<sup>11</sup>

As the movement towards cleanliness for health’s sake expanded, more and more Americans began to value its importance. By the beginning of the 20<sup>th</sup> century, according to Suellen Hoy, author of *Chasing Dirt: The American Pursuit of Cleanliness*, “middle-class Americans idealized cleanliness as their ‘greatest virtue.’”<sup>12</sup> This may have been influenced by the association of poverty with disease and filth, and cleanliness with ‘civilization.’ A clean, modern home helped to separate a middle class family from a poor one, who might live in a crowded, dusty tenement. “Meticulous attention” to domestic matters was an

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<sup>8</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 49.

<sup>9</sup> Suellen Hoy, *Chasing Dirt* (Oxford University Press, 1995), 60.

<sup>10</sup> For more theory about dirt and location, see Mary Douglas, *Purity and Danger* (London: Routledge, 1966). Douglas argues that what is considered to be dirt in any context is simply “matter out of place” and therefore may not actually be coded as dirt in other contexts. In this case, it means that while dirt was acceptable on the farm, it may not have been in cities.

<sup>11</sup> Suellen Hoy, *Chasing Dirt* (Oxford University Press, 1995), 64.

<sup>12</sup> Suellen Hoy, *Chasing Dirt* (Oxford University Press, 1995), 88.

essential marker of a higher-class family, and was an important signifier of societal status.<sup>13</sup> As the ideas of germ theory seeped into the popular consciousness, they only reinforced the belief that ‘cleanliness is next to godliness.’

Since much of the value of cleanliness stemmed from the home, women played a large role in anti-dirt and later anti-germ campaigning. Before germ theory, street cleaning movements in cities were spearheaded by women, who considered it their duty to stop the spread of filth and disease. The concept of “municipal housekeeping” motivated civic-minded upper-class women to improve the status of public health in their communities.<sup>14</sup> For most women, however, they were fixed on the never ending onslaught of dust and dirt that seemed poised to enter their homes. Hygienic experts in the 1870s and 1880s placed extremely high importance on the role of the individual home in preventing disease.<sup>15</sup> Thus, women felt motivated to keep a clean house, even before the concept of germs existed. The impetus on individual change would prove especially useful in the campaign to affect behaviors and end the use of the common cup.

### **Early Days: The Paper Cup**

The anti-common cup campaign was closely linked to the availability of the paper cup as a replacement. However, it was not until the industrial boom of the nineteenth century that disposable paper cups became a reality. Increasing mechanization in the early 1800s enabled an increase in paper production, although it was still limited by the original use of

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<sup>13</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 62.

<sup>14</sup> Suellen Hoy, *Chasing Dirt* (Oxford University Press, 1995), 72.

<sup>15</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 65.

rags as the base material for paper.<sup>16</sup> While rag-saving was a domestic habit, the trade soon outgrew the number of available rags, and they were “imported in ever-increasing quantities from Europe.”<sup>17</sup> In 1852, an English man named Hugh Burgess was the first to patent a method for making paper out of wood pulp. His first American patent was filed in 1854.<sup>18</sup> Burgess’s method called for the production of a costly chemical pulp. The production of paper from ground wood pulp in the United States began in 1866, and by 1877, 60 tons of paper were being produced daily. Thanks to constant innovations, the price of paper also fell drastically between 1867 and 1900, especially newsprint.<sup>19</sup>

In 1907, a man named Lawrence Luellen became interested in the production of paper cups, and he began to design a new product. Luellen was by no means the first person to conceive of such an invention. The earliest patents for paper cups were filed in the 1870s. By the 1890s, paper cups were a commonplace sight at ladies’ lunches.<sup>20</sup> However, they were still a novelty item, and by no means mainstream. The first patents for the paper cup as a device for common spaces began to appear in the 1890s. For example, in 1893, Almy Le Grand Peirce filed a patent for an invention which would

provide for public drinking-places, such as are found in hotels, assembly halls, railway depots and cars, watering places . . . and within convenient reach thereof, drinking cups for each individual frequenter of the liquid dispensary, who after done with it, may throw the same away and thereby avoid the objectionable features of a successive use of one and the same vessel by a great many persons.<sup>21</sup>

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<sup>16</sup> Jane Celia Busch, “The Throwaway Ethic in America” (PhD diss, University of Pennsylvania, 1983), 78.

<sup>17</sup> Ibid.

<sup>18</sup> Charles Watt and Hugh Burgess, Improvement in the Manufacture of Paper from Wood, US Patent 11,343, July 18, 1854.

<sup>19</sup> Jane Celia Busch, “The Throwaway Ethic in America” (PhD diss, University of Pennsylvania, 1983), 80-81.

<sup>20</sup> Jane Celia Busch, “The Throwaway Ethic in America” (PhD diss, University of Pennsylvania, 1983), 89.

<sup>21</sup> A. Le G. Peirce, Ephemeral Drinking-Cup and Advertising Medium, US Patent 496,131, filed May 21, 1892 and issued April 25, 1893.

Peirce went on to note that since such an arrangement required a use of many cups, his patent included a construction for a low-cost “tumbler.” He even proposed that it carry advertisements so as to defray printing costs. However, Peirce’s cups did not take off. They may have been too expensive, or the public may have deemed the paper cup impractical.

On Luellen’s part, he noted that although there were some paper cups on the market, their success was limited by the fact that they had to be unfolded and assembled by the consumer. For instance, the P&O Manufacturing Company of Ohio produced a flat-fold cup sometime between 1907 and 1910.<sup>22</sup> He quickly came to believe that “in order for the machine to be successful, it would have to dispense a cup in open form rather than one which would have to be unfolded each time.” This would therefore save the customer time and work and make the cup easier to market.

In early 1908, Luellen developed a machine that would dispense water in individual cups, for a small fee. He called it the “Luellen Cup & Water Vendor,” and it stored and dispensed conical cups, as well as ice water.<sup>23</sup> In 1908 and 1909, he also hired his brother-in-law, Hugh Moore, to help him run his new company. From 1908-1910, they called themselves the American Water Supply Company and the Public Cup Vendor Company. In 1910, they consolidated into the Individual Drinking Cup Company.

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<sup>22</sup> Kansas Memory, record no. 318740, “Paper Cup” (c. 1907-1910), *Kansas Historical Society*. <http://www.kansasmemory.org/item/318740>

<sup>23</sup> Voss-Hubbard, Anke, “Company History,” Hugh Moore Dixie Cup Company Collection, 1905-2008.” *Skillman Library: Lafayette College*, 2016. <https://sites.lafayette.edu/dixiecollection/>



Figure 1. The Luellen Cup and Water Vendor, c. 1908-1909. Image sourced from “Whistlin’ Dixie: Marketing the Paper Cup, 1910-1960,” David Bishop Skillman Library, Lafayette College (2014), Online version of exhibit curated by Pamela Murray and Diane Windham Shaw, August-December 2008, David Bishop Skillman Library, Lafayette College, Easton, Pennsylvania. <https://sites.lafayette.edu/dixieexhibit/1910s/>

By early 1909, Moore and Luellen had already targeted railroad stations and railroads as important purchasers of their new product. These were places where the common cup was especially visible and used by a majority of those who came through the station. And a large slice of America was passing through railroad stations; in 1900, the 76 million residents of the United States took over 500 million railroad trips.<sup>24</sup> Travelers stopped in to change clothes or grab a meal, while for locals, the station was often a focal point of the town.<sup>25</sup> Thus, the drinking fountains and the tin cups were heavily used. It comes as no surprise, then,

<sup>24</sup> Sarah Herbert Gordon, “A Society of Passengers: Rail Travel 1865 to 1910” (PhD diss., University of Chicago, 1981), 23.

<sup>25</sup> Sarah Herbert Gordon, “A Society of Passengers: Rail Travel 1865 to 1910” (PhD diss., University of Chicago, 1981), 55.



that railroads were one of the public places at the center of a vitriolic campaign to end the use of the communal cup.

### **The Cup Campaign**

The first records of a group objecting to the use of a common cup due to hygienic movements are from the Protestant Church. In 1887, a doctor by the name of M.O. Terry published an article entitled “The Poisoned Chalice” in *The Physicians’ and Surgeon’s Investigator; a Monthly Journal Devoted to the Best Interests of the Profession*. His special target was the common communion cup, which he believed was spreading disease amongst congregants. He wrote, “Now I say to the church, is it just to humanity to administer a rite which is given as a symbol for purification, when by the process of giving it endangers or contaminates the innocent child as well as the aged parent?”<sup>26</sup> Although Terry only mentioned the church, it can be implied that he meant Protestants over the Roman Catholic Church, which at the time only allowed priests to consume the sacred wine. Therefore, Protestants were the largest denomination to share a glass.<sup>27</sup>

Terry’s dissent kicked off a process within the Protestant Church that lasted for the next several years. He was supported by additional doctors, then churches retorted, and so on and so forth. According to Nancy Tomes, this issue “divided individual congregations over the relative importance of religious doctrine and hygiene” until matters came to a head and were usually put to a vote. Most congregations switched to individual cups around the turn of the century.<sup>28</sup> However, disposability wasn’t always the solution. According to a brochure

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<sup>26</sup> M.O. Terry, “The Poisoned Chalice,” *The Physicians’ and Surgeons’ Investigator; a Monthly Journal Devoted to the Best Interests of the Profession*, June 15, 1887, 163.

<sup>27</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 133.

<sup>28</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 133-134.

published for the Sanitary Communion Outfit Company of Rochester in 1900, denominations such as Baptists, Lutherans, Methodists, Presbyterians, and Universalists were listed as having purchased their “patented communion sets, which allowed easy sterilization of individual glass cups and serving trays between uses.”<sup>29</sup> Therefore, although communal cups were targeted in this specific population, they were not yet replaced by the paper cup. Additionally, the general public was not yet changing their habits.

In 1908, the anti-cup campaign began to pick up speed. This was in no small part due to the efforts of doctors and medical professionals, who began to publish articles on the health and safety issues raised by the sharing of school and public drinking cups. Alvin Davison, a biology professor at Lafayette college, published a famous article called “Death in School Drinking Cups” in August of this year. Davison purported that “the chief avenue by which bacteria enter the body is the mouth. The air, food, water, and especially the drinking-cup are the usual means by which the disease-producing parasites are transferred.”<sup>30</sup> He went on to support his claim by explaining the results of several studies which had shown that many of the sore throats schoolchildren suffered could be attributed to diphtheria, a disease which was known to be caused by a germ. Presumably, the children swapped the germ amongst themselves by sharing cups. In addition, he remarked that he had studied “the deposits present on various public drinking vessels . . . it was estimated that the cup contained over 20,000 human cells or bits of dead skin. As many as 150 germs were seen clinging to a single cell.”<sup>31</sup>

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<sup>29</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 134.

<sup>30</sup> Alvin Davison, “Death in School Drinking Cups,” *Technical World Magazine*, August 1908, 624.

<sup>31</sup> Alvin Davison, “Death in School Drinking Cups,” *Technical World Magazine*, August 1908, 626.

Davison's article was first printed in *Technical World Magazine*, which advertised itself as "a popular, illustrated record of progress in science, invention, and industry."<sup>32</sup> Although the magazine aimed to target a narrow subset of the population, subscriptions were growing, and by 1908, the editors claimed that they had a "national circulation."<sup>33</sup> An introductory note remarked that "the aim of this magazine is to describe and illustrate in a simple and popular way whatever is new, important, and interesting in the whole range of discovery, invention, industry, engineering, and science."<sup>34</sup> Therefore, although *Technical World* was a scientific publication, it was not intended solely for an audience of scientists or doctors.

Davison's article was quickly reprinted and referenced in other popular magazines and newspapers, including *Science and Invention* in August 1908<sup>35</sup>, the *Louisville Courier-Journal* in September 1908<sup>36</sup>, *School Hygiene* in October 1908<sup>37</sup>, and *Life and Health* in December 1908.<sup>38</sup> By 1909, his research reached a broader audience in *Good Housekeeping* and *The Ladies' Home Journal*, both of which targeted wives and mothers. This was an important endorsement for the anti-communal cup campaign. As recently as the mid-1890s,

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<sup>32</sup> "Table of Contents," *Technical World Magazine*, August 1908, n.p.

<sup>33</sup> The Editors, "And these letters come . . .", *Technical World Magazine*, August 1908, 611.

<sup>34</sup> "Technical World Magazine," June 1908, n.p. (introduction).

<sup>35</sup> "The Cup of Death," *Science and Invention*, August 29, 1908, 275 (I.I General Business File, Box 1, Folder 2), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>36</sup> Alvin Davison, "DEATH LURKS IN SCHOOL DRINKING CUPS," *The Courier-Journal*, Sep 06, 1908, originally printed in *Technical World Magazine*, August 1908.

<sup>37</sup> Alvin Davison, "Death in School Drinking Cups," *School Hygiene*, 1908, originally printed in *Technical World Magazine*, August 1908.

<sup>38</sup> Alvin Davison, "Death-Dealing Drinking-Cups," *Life and Health*, December 1908, originally printed in *Technical World Magazine*, August 1908.

*Ladies' Home Journal* was the most widely read magazine in America. It first hit one million subscribers in 1903, and was an important taste-making vehicle for wives and mothers.<sup>39</sup>

The *Ladies' Home Journal* editorial was everything that proponents of the paper cup could have hoped for. Not only did it condemn the communal cup as a source of disease, but it explicitly recommended the use of the paper cup as a replacement. It remarked that “this cup now [is] provided for the prevention of contagious disease” in such places as “department store, theatres, public parks, hospitals, railroad stations, schools, and the hundred and one places where the duty of furnishing the water receptacle . . . can be intrusted.”<sup>40</sup> The article in *Good Housekeeping*, a similarly important publication, was published in February 1909 and further linked the communal cup to disease. It explained that Dr. Davison’s research showed that schoolchildren could be exposed to thousands of deadly germs each time they went to quench their thirst. Additionally, it mentioned specific diseases which impacted children who shared cups, including diphtheria and sore throats. The magazine placed special emphasis on the fact that the common drinking cup could be found in schools, endangering the children of the magazine’s readers.<sup>41</sup>

The write up of Davison’s research ran with a photo of three small children in New York City sharing a drink. Two of the children, on the right side of the photo, are dressed in simple, dirty clothes; while the third, a little girl, is dressed in glistening white with a bow atop her head. The caption reads, “The poor little fellow at the right, whose parents probably know no such word as ‘germ,’ uses the same cup as the little girl at the left, whose parents

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<sup>39</sup> Katherine H. Adams, Michael L. Keene, and Jennifer C. Koella, *Seeing the American Woman, 1880-1920: The Social Impact of the Visual Media Explosion* (Jefferson, North Carolina: McFarland, 2011), 11.

<sup>40</sup> “The New Drinking Cup,” *The Ladies' Home Journal*, October 1908, 5.

<sup>41</sup> “An Appalling Situation,” *Good Housekeeping*, February 1909, 143-147.

safeguard her health and life in nearly other way.”<sup>42</sup> By using blame, the anti-cup movement was able to expand to incorporate larger issues in society, including the health divide between the wealthy and the poor.

By the late 1800s, diseases such as tuberculosis increasingly came to affect the poor and what Nancy Tomes calls the “sanitarily disadvantaged.”<sup>43</sup> At the time Davison’s work was published in *Good Housekeeping*, public health reform of the less fortunate was a popular system. Voluntary reform groups grew in a “vast network” and aimed to reach out to those who may not have been exposed to education.<sup>44</sup> According to Tomes, people “did not understand the *why* of sanitary protection so much as the *how* of its practice,” and immigrant women needed to be “aggressively counseled” to behave in a way that was deemed up to sanitary snuff.<sup>45</sup> This culture of education means that the image of three children could be read in a number of different ways. It could signify to upper class women that everyone gets germs, and that they needed to work to make sure everyone was aware of the best options for prevention—such as the paper cup. The other interpretation would be that the poor spread disease. Either way, this would lead to the cup, since the second interpretation would prompt readers to keep their children separate from disease by using the paper cup. Anti-common cup write ups such as this often implicitly touched on class dynamics within society, regardless of whether the original scientific research addressed these issues.

Alvin Davison was not the only prominent doctor to write about the dangers of the common drinking cup. Dr. Samuel Crumbine of Kansas was also working hard on educating the public. He had been on the state board of health since 1899 and had already spearheaded

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<sup>42</sup> "An Appalling Situation," *Good Housekeeping*, February 1909, 144.

<sup>43</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 184.

<sup>44</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 186.

<sup>45</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 186-187.

a successful “swat the fly” campaign that resulted in the use of the first modern flyswatters. In 1907, he gave up his private practice and moved to Topeka to focus on public health full time. His target was tuberculosis, and his main goal was to stop the spread of saliva.<sup>46</sup> His previous campaign had succeeded in no small part due to its catchy slogan, and with tuberculosis, he coined the phrase “Don’t spit on the sidewalk.” However, his actions did not stop there. Crumbine understood that people had a unique emotional connection to and fear of tuberculosis.<sup>47</sup> He worried that a lack of understanding was enabling the disease to spread, especially through the use of the common cup. In his autobiography, he told a story of a 1907 train ride that illustrated his point.

Getting up, I went to the water cooler at the end of the car where I found a man drinking from the common cup which in those days was part of the equipment of every railroad coach. The man’s emaciation, facial characteristics and hollow cough made it obvious that he was an advanced case of tuberculosis . . . [I also saw] a tow-headed five-year old girl who eagerly drank from the common cup after the tubercular adult had used it.<sup>48</sup>

The doctor was worried that the state of Kansas had focused most of its effort on trying to teach people how to avoid tuberculosis in circumstances they could control, like encouraging separate utensils. Yet it seems like such precautions were being “flouted every day on thousands of trains and in public places.”<sup>49</sup> Thus began his quest to change behavior legislatively; by creating a law banning the cup, Crumbine reasoned, he could improve the public health. He took his thoughts to the State Board of Health, who agreed, but thought he needed to convince the railroads, since they would be impacted by the ban.

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<sup>46</sup> Kansas Historical Society, “Samuel J. Crumbine,” Kansapedia, January 2016.

<sup>47</sup> Samuel J. Crumbine, *Frontier Doctor: The Autobiography of a Pioneer on the Frontier of Public Health* (Philadelphia: Dorrance, 1948), 142.

<sup>48</sup> Samuel J. Crumbine, *Frontier Doctor: The Autobiography of a Pioneer on the Frontier of Public Health* (Philadelphia: Dorrance, 1948), 165.

<sup>49</sup> *Ibid.*

Crumbine knew he had to bring solid evidence to the railroads in order to get them to change their ways. In February 1909, he had a friend swab the glass of all of the drinking cups from trains stopped in Kansas City. Although he failed to enumerate what exactly this revealed, he wrote that his results clearly illustrated that “common drinking cups, used promiscuously by the public, were a grave potential danger, for many who used them were capable of transmitting disease and undoubtedly did so.”<sup>50</sup> Railroad managers evidently agreed. After Crumbine showed them his evidence, they were willing to adhere to the proposed ban, which went into effect on September 1<sup>st</sup>, 1909. Railroads and schools in the state of Kansas were no longer allowed to “furnish any drinking cup for public use, and no such person or corporation [could] permit . . .the common use of the drinking cup.”<sup>51</sup> This was almost exactly a year after Dr. Davison first published his research, and it was the first official ban of the common cup.

By this time, the “gospel of germs” had already made a lasting impact on the way contagious diseases impacted American citizens. Tuberculosis, once a common disease of all people, had slowly morphed from a “house disease” to a “tenement house disease.”<sup>52</sup> Germ and cup reformers, who were often white, middle or upper class women, felt compelled to care for not only their children, but the children of the poor. Their responsibilities therefore extended outside of the home and caused many women to take on roles as public health educators.

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<sup>50</sup> Samuel J. Crumbine, *Frontier Doctor: The Autobiography of a Pioneer on the Frontier of Public Health* (Philadelphia: Dorrance, 1948), 167.

<sup>51</sup> Samuel J. Crumbine, *Frontier Doctor: The Autobiography of a Pioneer on the Frontier of Public Health* (Philadelphia: Dorrance, 1948), 168.

<sup>52</sup> Nancy Tomes, *The Gospel of Germs* (Cambridge: Harvard University Press, 1998), 184.

Even though germ theory was common knowledge to most upper-class female readers of *Good Housekeeping* and *Ladies Home Journal* by the time Davison's research ran in 1909, it was not the only impetus for the spread of fear surrounding the communal cup. At the surface, women were told to fear the communal cup because of the germs it contained. However, upon further exploration, it is clear that the anti-cup campaign was part of a longer crusade for cleanliness that marked value, modernity, and refinement in American society. It is thanks to this history that proponents of the germ-based anti-cup crusade were able to target the American public. More specifically, it was for these reasons that they focused on women, and this enabled the campaign to take off.

In 1909, Kansas became the first state to ban the use of the communal drinking cup for sanitary reasons.<sup>53</sup> By 1911, more than a dozen states had followed suit, and they all cited the risk of disease. According to one health commissioner, "I believe about half the sickness in East St. Louis and in other cities is caused by drinking cups which are used by everybody."<sup>54</sup> It is clear that the campaign had found its foothold in medicine and in popular discourse. The common cup was officially on its way out.

### **The Cup Campaigner & Paper Success**

Luellen and Moore saw the success of the campaign to abolish the common drinking cup as a vehicle upon which to improve sales of their paper cup. Moore especially believed in the paper cup's ability to diminish the spread of disease, and he was an ardent collector of newspaper clippings and positive press for paper cups. Today, his papers are archived at Lafayette College's Skillman Library, and careful examination of the items he collected

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<sup>53</sup> "More Reform in Kansas." *The Courier-Journal*, Sep 8, 1909.

<sup>54</sup> "The PUBLIC DRINKING CUP MUST GO!" *St.Louis Post*, Dec 26, 1909.



reveals a number of press clippings from 1908-1911, all about the problems with the communal drinking cup. In addition to the famous piece by Davison, selected titles include “Tuberculosis” and “5,000 Doomed to Die by White Plague,” both of which pointed to the cup’s role in the spread of disease.<sup>55</sup> Moore also saved an undated article entitled “We Can Banish Tuberculosis from this Earth” which makes no mention of the cup. However, the fact that he saved it is clearly indicative of his firm belief in the paper cup’s role in diminishing the spread of disease.

Some of the collected clippings are positive reviews, such as a 1908 piece from *Popular Mechanics* entitled “A New Sanitary Drinking Fountain.” The article explained that the Luellen’s fountain, which was part of the mechanism that dispensed cups, was the only one that “delivers water and containers from separate receptacles,” thus ensuring that each was clean and free of contagion.<sup>56</sup> Another 1908 piece, entitled “A Germless Fountain,” remarked that “now that the people have learned that these evil little microscopical goblins hover in the air . . . they are frequently patient listeners to the merits of some mechanism which will stand between them and the insidious microbe.”<sup>57</sup> A third, called “A Practical

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<sup>55</sup> “Tuberculosis,” *Saturday Evening Post*, October 3, 1908 (I.I General Business File, Box 1, Folder 2), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College, and “5,000 Doomed to Die by White Plague,” *Evening Telegram*, n.d. (I.I General Business File, Box 1, Folder 2), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>56</sup> “A New Sanitary Drinking Fountain,” *Popular Mechanics*, February 1909 (I.I General Business File, Box 1, Folder 3), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>57</sup> “A Germless Fountain,” *The Washington D.C. Pathfinder*, 19 December 1908 (I.I General Business File, Box 1, Folder 3), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

Reform,” specifically mentions paper drinking cups as a solution to stop the spread of tuberculosis.<sup>58</sup>

In order to support the paper cup, Moore decided to create a publication designed to endorse the anti-cup movement. The Cup Campaigner, printed from 1909-1910, ran three issues long and reported on all of the movement’s successes. Especially notable were its lists of successive places where the cup had been banned. Volume 1, published in late 1909, featured short articles on bans in Michigan and Mississippi, as well as a piece on Kansas’s landmark ruling.<sup>59</sup> Volume II, August 1910, simply listed the states which had banned the common cup, which included Wisconsin, Oklahoma, Massachusetts, and Iowa, as well as the three that were mentioned in the first edition.<sup>60</sup> The pamphlet was published as a standalone piece as well as in magazines and newspapers across the country.

Moore was well aware that this fear was a key driving force behind the anti-communal cup movement, and he capitalized on it with the content of his publication. It claimed that people were dying as a direct result of public cups and cited several doctors who supported the claim that “germs can remain in the mouth for months.” The pages were packed with terrifying cartoons of extremely sick people with their mouths on a reusable cup or cups being thrown on the ground and used again.<sup>61</sup>

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<sup>58</sup> “A Practical Reform,” *Good Housekeeping*, 1909 (I.I General Business File, Box 1, Folder 3), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>59</sup> Moore, Hugh (ed), “Do You Use the Cup?” *The Cup Campaigner* I.I, 1910 (I.I General Business File, Box 1, Folder 14), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>60</sup> Moore, Hugh (ed), “The Public Drinking Cup Must Go!” *The Cup Campaigner* I.II, August 1910 (I.I General Business File, Box 1, Folder 14), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>61</sup> Moore, Hugh (ed). “Do You Use This Cup?” *The Cup Campaigner* I.I, 1910 (I.I General Business File, Box 1, Folder 14), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

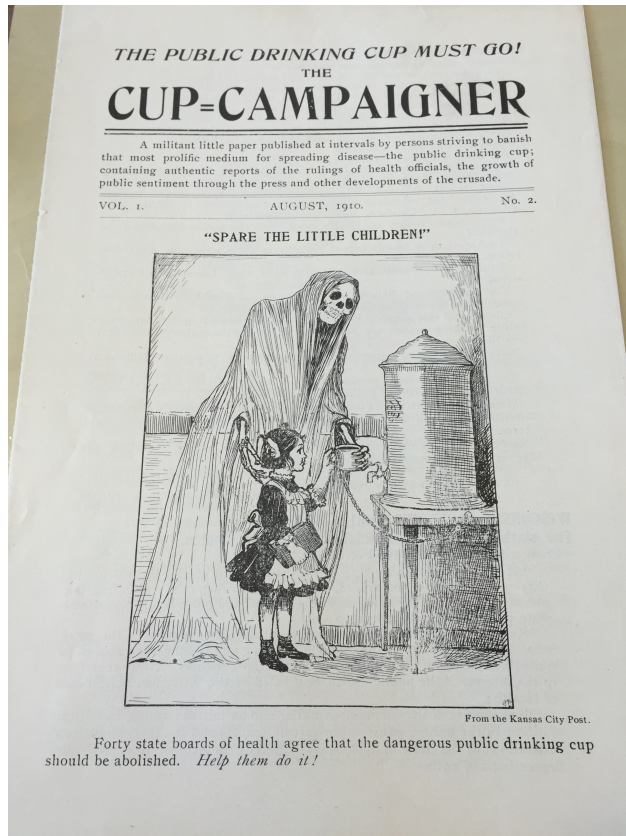


Fig. 2, *The Cup Campaigner* vol. 2 featured an illustration of Death handing a little girl a glass of water, with a caption that read, “Spare the little children!”

Author’s own image, item Moore, Hugh (ed). “Spare the Little Children,” *The Cup Campaigner* I.II, August 1910 (I.I General Business File, Box 1, Folder 14), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

The laws against cups continued to snowball into the new decade. In 1912, the Secretary of the Treasury ordered interstate rail and water carriers to end the use of common drinking cups.<sup>62</sup> In 1915, a letter to the editor in *The New York Times* read “I was always under the impression that we had a law in this State prohibiting the use of drinking glasses in public places.” It then went on to complain that a “certain theater” was forcing its patrons to use glasses rather than the cups from the water cooler.<sup>63</sup> By 1918, 36 states had passed laws prohibiting the common cup.<sup>64</sup> It is clear that the paper cup had cemented itself as the natural follow up to the disease-laden glass tumbler. Its disposability made it a valued object, and its makers needed to highlight this aspect of it in order to ensure its continued success.

<sup>62</sup> "Common Drinking Cups Prohibited," *Railway Age Gazette*, Nov 08, 1912, 896.

<sup>63</sup> B.I., "A Common Drinking Cup," *The New York Times*, Nov 02, 1915.

<sup>64</sup> "THE SANITARY DRINKING FOUNTAIN," *Furniture Manufacturer and Artisan*, May 01, 1918.

## Advertising

In the 1909 issue of *American Health* magazine, the write-up of Dr. Davison's research ran alongside not one but two ads for the "Luellen Automatic Pay Dry Cup Vendor."<sup>65</sup> Interested parties could contact the sanitary department of the Committee on National Health. The second ad noted that multiple railroads had already adopted the individual cup, and that "Individual drinking cups referred to in this Magazine are sold through the Luellen Cup Vendors and the Luellen Cup and Water Vendors."<sup>66</sup> The American Water Supply Company was already trying to make themselves synonymous with hygiene, modernity, and cleanliness: everything the glass cup was not. The company integrated itself with the anti-cup campaign, by marketing their cup as the best solution. This is especially indicated by Moore's personal involvement with the campaign, and his marketing of his anti-common cup leaflet.

In 1912, the company made the move to rebrand their cup as the Health Kup. This only served to strengthen the product's connection to health and cleanliness. Slogans reinforced this connection- for instance, one ad proclaimed "Boards of Health Order Health Kup."<sup>67</sup> Another, more detailed ad claimed that the Health Kup "made possible the banishment of the deadly common drinking cup. . . . Endorsed by Boards of Health. Suitable for every location."<sup>68</sup> It is clear that the team behind the Health Kup was trying to directly connect it with cleanliness and the abolition of the common cup.

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<sup>65</sup> "Individual Drinking Cups," (ad), *American Health Magazine*, 1909, x-xi.

<sup>66</sup> Ibid.

<sup>67</sup> Vanessa Milan, "1910s," Whistlin' Dixie: Marketing the Paper Cup, 1910-1960, David Bishop Skillman Library, Lafayette College (2014), Online version of exhibit curated by Pamela Murray and Diane Windham Shaw, August-December 2008, David Bishop Skillman Library, Lafayette College, Easton, Pennsylvania. <https://sites.lafayette.edu/dixieexhibit/1910s/>

<sup>68</sup> Vanessa Milan, "1910s," Whistlin' Dixie: Marketing the Paper Cup, 1910-1960, David Bishop Skillman Library, Lafayette College (2014), Online version of exhibit curated by Pamela Murray and Diane Windham

The new name did not last for long. According to historians at Lafayette's Skillman Library, the Health Kup became the Dixie Cup around 1919, so named for a line of dolls that were manufactured in the same building.<sup>69</sup> However, some archival materials indicate that it may have been internally called a Dixie Cup since at least 1917. The name may have been changed to signify an expansion in advertising, including more frequent use of the cup in other locations besides railroads and schools. Regardless of the title, advertisers continued to emphasize the healthful value of the paper cup as at least one of the important points of sale. A 1917 list of "Secondary Points," to be used when selling the cup, included "Clerk does not have to stop, wet-fingered, and separate Dixies . . . They are sterilized by heat in the process and shot off into paper cartons, which are sealed . . . From the sealed cartons the soda man passes Dixie cups into the glass dispenser, where they await your call."<sup>70</sup> The slogan from the same year was "Your hand and lips is the first to touch it."<sup>71</sup>

Even though the campaign to ban the cup in schools was essentially complete by this time, women were still considered a valuable part of the advertising puzzle. In a letter addressed to Moore, the advertising agency wrote that "the woman is the natural advocate of any pure food, or product along the pure food lines."<sup>72</sup> Thus, the connection between the

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Shaw, August-December 2008, David Bishop Skillman Library, Lafayette College, Easton, Pennsylvania. <https://sites.lafayette.edu/dixieexhibit/1910s/>

<sup>69</sup> Vanessa Milan, "1910s," Whistlin' Dixie: Marketing the Paper Cup, 1910-1960, David Bishop Skillman Library, Lafayette College (2014), Online version of exhibit curated by Pamela Murray and Diane Windham Shaw, August-December 2008, David Bishop Skillman Library, Lafayette College, Easton, Pennsylvania. <https://sites.lafayette.edu/dixieexhibit/1910s/>

<sup>70</sup> "Secondary Points," 1917 (I.I General Business File, Box 1, Folder 1 Advertisement), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>71</sup> "Information (Places Where Cups Are Used)," 1917 (I.I General Business File, Box 1, Folder 1), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>72</sup> Clarkson A. Collins, Jr Advertising and Sales Service to Hugh Moore (letter), August 6 1917 (I.I General Business File, Box 1, Folder 1), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

domesticity of women and cleanliness was still seen as a powerful one, and it could be used to market this ‘clean cup.’

Advertisements after the name change focused on cleanliness, and further brought up the theme of cleanliness as a measurement of refinement. An ad from 1924 entitled “Drink in the theatre” showed a man in a tuxedo enjoying a refreshing drink from a “pure, snow white” Dixie.<sup>73</sup> An undated 1920s ad with a similar tagline, “Drink at soda fountains,” pictured a woman in a crisp hat and white gloves, with similar copy about the whiteness and purity of the cups.<sup>74</sup> Both ads attempt to illustrate that being clean and pure was associated with the benefits of wealth and health, such as beauty, youth, and fine clothing. Makers of the Dixie Cup were attempting to insinuate that their product could help consumers achieve a valued level of hygienic refinement.

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<sup>73</sup> “Drink from Individual Dixie Cups” (advertisement), *Elizabeth Daily Journal*, 3 June 1924, (IV.III Department Files- Sales & Promotion 1921-1970, Box 19, Folder 11), Hugh Moore Dixie Cup Company Collection, 1905-2008. Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>74</sup> Vanessa Milan, “1920s,” Whistlin’ Dixie: Marketing the Paper Cup, 1910-1960, David Bishop Skillman Library, Lafayette College (2014), Online version of exhibit curated by Pamela Murray and Diane Windham Shaw, August-December 2008, David Bishop Skillman Library, Lafayette College, Easton, Pennsylvania. <https://sites.lafayette.edu/dixieexhibit/1920s/>



Fig. 3, The use of the communal glass was linked to undesirable and unrefined behaviors, such as a woman willing to kiss any suitor. Furthermore, the ad states that such behaviors further enable the spread of germs. Author's own image, item "Willing to Kiss Anyone," c. 1921-1931 (IV.III Department Files-Sales & Promotion, Box 19, Folder 14 Advertising), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

### The Cup Continues

As the 1910s and 20s continued, the main market for Dixie Cups shifted. Schools and railroads had been glass-free for some time, and the new frontier was the hallmark of modernity and urbanization: the soda fountain. In 1917, advertisers determined that the fountain was the most important place where Dixie Cups were used. According to the author of the PhD dissertation *The Throwaway Ethic in America*, Jane Celia Busch, the soda fountain was the "forerunner of the [modern] fast food establishment," and as such, an



important target for the use of paper cups.<sup>75</sup> Soda fountains were traditionally found in pharmacies and drug stores, and had been since the early 19<sup>th</sup> century, when some pharmacists began to market carbonated “soda water” for health purposes.<sup>76</sup> The list of beverages soon grew to include such healthful tonics as quinine, sarsaparilla, and even Coca-Cola. By the turn of the 20<sup>th</sup> century, pharmaceutical historian Glenn Sonnedecker argued that such fountains were an important social institution.<sup>77</sup> Such restaurants had traditionally used glassware, but a 1924 article in *Drug Topics* claimed it was poorly washed onsite.<sup>78</sup> They were a prime market for the use of the paper cup. Even though health was no longer a specific marketing point for most beverages, the trend had stuck. In 1929, 71% of all pharmacies nationwide had a soda fountain, with some drawing almost 10,000 customers a day.<sup>79</sup>

By 1924, *Drug Topics* claimed, most soda fountains had switched to paper. Although some glassware manufacturers protested, the common sentiment was that customers demanded paper. According to one article, a popular druggist claimed “I use paper cups instead of glassware, because I’m ashamed NOT to!”<sup>80</sup> Many druggists, like the one quoted, felt an obligation to use paper, since they perceived themselves as “traditional guardians of public health.”<sup>81</sup> The cup controversy in schools and railroads was well known, especially by

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<sup>75</sup> Jane Celia Busch, “The Throwaway Ethic in America” (PhD diss, University of Pennsylvania, 1983), 93.

<sup>76</sup> Reid Paul, “150 years of American pharmacy: The rise and fall of the pharmacy soda fountain,” *Drug Topics*, October 22, 2007.

<sup>77</sup> Ibid.

<sup>78</sup> Jerry McQuade, “Sick Rate Lower, Sales and Profits Higher Where Paper Cups are Used,” *Drug Topics*, March 1924, 150-153.

<sup>79</sup> Reid Paul, “150 years of American pharmacy: The rise and fall of the pharmacy soda fountain,” *Drug Topics*, October 22, 2007.

<sup>80</sup> Jerry McQuade, “Sick Rate Lower, Sales and Profits Higher Where Paper Cups are Used,” *Drug Topics*, March 1924, 150.

<sup>81</sup> Jane Celia Busch, “The Throwaway Ethic in America” (PhD diss, University of Pennsylvania, 1983), 93.



those with discretionary income, who were likely to read about it in magazines and also likely to spend money at soda fountains. Although the market was different, the paper cup was still valued for similar reasons. Its disposability had a sterile quality that made it a better option. A 1920 Dixie ad marketed specifically at druggists proclaimed “Influenza sits on the brim of the soda glass. No matter how clean it may *look* . . . Dixie Soda Service. Your patrons will be quick to note the change.”<sup>82</sup>

Proprietors quickly began to realize that paper cups were cost effective as well. According to Busch, a study conducted by Massachusetts State College found that although paper cups were more expensive than washed glasses, they were cheaper than sanitized ones. In the face of an increasingly germ-aware public, organizations found it was easier and cheaper to switch to paper.<sup>83</sup> Ads encouraged customers to reward druggists with notes that read “Patronize fountains where you see this seal!”<sup>84</sup> Another ad in the same 1934 campaign featured a mother with a speech bubble that read “I send MY children to soda fountains that display this seal.” The “individual service, guaranteed clean” of the Dixie Cup could presumably transfer over to the service and cleanliness of the soda fountain itself.<sup>85</sup>

In the soda cup market, the Dixie Cup found itself with its first real competitor: Vortex, which started producing conical cups targeted specifically towards soda fountains in

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<sup>82</sup> Vanessa Milan, “1920s,” Whistlin’ Dixie: Marketing the Paper Cup, 1910-1960, David Bishop Skillman Library, Lafayette College (2014), Online version of exhibit curated by Pamela Murray and Diane Windham Shaw, August-December 2008, David Bishop Skillman Library, Lafayette College, Easton, Pennsylvania. <https://sites.lafayette.edu/dixieexhibit/1920s/>

<sup>83</sup> Jane Celia Busch, “The Throwaway Ethic in America” (PhD diss, University of Pennsylvania, 1983), 94.

<sup>84</sup> “NO LIPS TOUCH AN INDIVIDUAL DIXIE BEFORE YOURS!” (advertisement), *The Evening Sun Baltimore*, October 9, 1934 (IV.3 Department Files- Sales & Promotion 1921-1970, Box 19, Folder 11), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>85</sup> “I SEND MY CHILDREN TO SODA FOUNTAINS THAT DISPLAY THIS SEAL!” (advertisement), *The Evening Sun Baltimore*, October 24, 1934 (IV.3 Department Files- Sales & Promotion 1921-1970, Box 19, Folder 11), Hugh Moore Dixie Cup Company Collection, 1905-2008. Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

1913. Like Dixie, Vortex emphasized the hygienic aspect of their product, which was called the Vortex Sanitary Fountain Service. Dixie and Vortex ultimately merged in 1936, creating the biggest paper company in the United States. However, they still had other competitors, namely the Lily-Tulip Cup Corporation.<sup>86</sup> The days of Dixie's monopoly over the health of Americans had ended.

Still, it was a successful company, and its ads continued to tout the contagion-preventing benefits of paper cups into the 1940s. A 1943 ad claimed that "90 percent of contagious diseases are contracted via the mouth."<sup>87</sup> It was clear that the value of the Dixie continued to be heavily linked to its status as a single-use, individual item. Hints of a shift in focus began with the soda cup marketing, but it was not until the 1960s that the marketing of Dixie Cups shifted almost entirely to that of convenience, with the slogan "What keeps kids out of your hair, colds out of your kids, dirty glasses out of your sink, broken glasses out of the picture, and you out of the picture?"<sup>88</sup> Like other disposables that this thesis will touch on later, Dixie Cups slowly became linked to convenience rather than health. Even then, though, advertising was closely related to the realm of domesticity, motherhood, and the home.

Although some traditionalists fought the switch, the paper cup was wildly successful. It was cleaner and safer, and its use was also easier and more convenient for almost everyone involved. Of course, there were some discontented people. A 1911 satire in *Life* magazine joked that inconsistent legislation meant that you could have a drink from the communal glass as your train traveled through New York State, but in Massachusetts "one looks in vain

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<sup>86</sup> Jane Celia Busch, "The Throwaway Ethic in America" (PhD diss, University of Pennsylvania, 1983), 94.

<sup>87</sup> "Prevent the spread of contagion," (advertisement), c. 1943 (IV.3 Department Files- Sales & Promotion 1921-1970, Box 19, Folder 17), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

<sup>88</sup> "What keeps kids out of your hair. . .?" (advertisement), c. 1960-1964 (IV.3 Department Files- Sales & Promotion 1921-1970, Box 19, Folder 12), Hugh Moore Dixie Cup Company Collection, 1905-2008, Special Collections and College Archives, David Bishop Skillman Library, Lafayette College.

for a glass to drink out of.”<sup>89</sup> Regardless of such write-ups, the success of the paper cup was clear.

Lurking over the horizon, though, was a growing environmental movement. While the cup had environmental drawbacks, this was something that almost no one would conceive as a negative for several decades. Waste was not yet conceptualized as an environmental problem; indeed, it would not reach the public eye until issues with garbage spread and dumpster fires became common. Once it was incorporated into the environmental movement, though, the story of disposability became very different.

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<sup>89</sup> “New Laws About Drinking Cups,” *Life*, December 21, 1911.

## Chapter 2: Polystyrene

### Introduction

At first glance, it seemed like popular icon Ronald McDonald was standing at the podium on the United Nations floor in 1989. But the details weren't quite right, and the overall imagery was threatening rather than comforting. This Ronald was not the character who usually greeted children, but someone much angrier. It was actually Ronald McDonald's alter ego, a twisted clown with makeup skewed into a "disfigured mask." He went by the name Ronald McToxic, and his orange hair was splotted with purple 'chemicals.' McToxic had a frightening message: McDonald's was polluting the planet, it was endangering customers, it was recklessly producing waste. And the company's number one crime was the wasteful polystyrene (more commonly called Styrofoam) clamshells in which it packaged each and every hamburger.<sup>1</sup>

Ronald McToxic was just one illustration of an anti-McDonald's grassroots movement that recently gained prominence. In just a few short years from 1987-1990, McDonald's found itself to be the target of an unprecedented public backlash against its packaging choices. Although the company had long used disposable paper wrapping, in 1975, it switched to a foam option. Fifteen years later, it switched back, after a landmark partnership with the Environmental Defense Fund and ample media coverage.

This is an important case study in disposability because of the strong public reaction. The burgeoning environmental movement managed to convince consumers that something was abnormal. Special attention was paid to landfill space and volume of waste. Despite the fact that environmental groups advocated against other issues, once the packaging was

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<sup>1</sup> James Ridgeway and Dan Bischoff, "Fighting Ronald McToxic," *Village Voice*, June 12, 1990.

changed, the public once again found the company unobjectionable. This chapter will tell the story of the ‘clamshell controversy,’ and examine what, exactly, created this form of contested disposability.

## **The Invention**

Styrofoam was discovered by accident. In 1941, a chemist named Ray McIntire was working on developing a new type of insulation. Prior to World War II, rubber had been a popular choice for insulating homes and businesses. Thanks to the war, however, rubber was in short supply. Dow Chemical Company had hired McIntire fresh out of the University of Kansas in 1940 and set him to work.<sup>2</sup> His goal was to develop “a rubberlike polymer to be used as a flexible insulator.”<sup>3</sup> In the course of his experiments, he combined the chemical styrene with isobutylene, creating polystyrene.

While polystyrene had been created before, McIntire’s mix was different. In this case, the isobutylene had evaporated, leaving a “foam polystyrene with bubbles in it . . . 30 times lighter and more flexible than the polystyrene that had previously been used.”<sup>4</sup> Thus, the material was not new, but the technique of foaming it was. McIntire’s extruded polystyrene soon proved to be extremely valuable for Dow. They tested out some wartime uses, such as in a flotation device for the Coast Guard.<sup>5</sup> The most profitable, however, was building insulation. At the end of World War II, the company patented McIntire’s material under the trade name Styrofoam and began to sell it.

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<sup>2</sup> “Dow Styrofoam Inventor Earns National Honor,” *Midland Daily News*, March 7, 2008.

<sup>3</sup> New York Times News Service, “Ray McIntire, 77, Chemist Who Invented Styrofoam By Accident,” *Chicago Tribune*, February 4, 1996.

<sup>4</sup> *Ibid.*

<sup>5</sup> Lydia DePillis, “You have never actually used a Styrofoam cup, plate, or takeout box,” *The Washington Post*, December 18, 2013.

There is some controversy surrounding the invention of Styrofoam, as Carl Georg Munters, a Swedish inventor, also discovered and patented a way of foaming polystyrene plastic. His 1931 patent explains that the best insulants have very high porosity, low specific gravity, and are solid yet elastic. He then goes on to explain that polystyrol compounds can be treated with a gas which will form bubbles in the compound and then evaporate.<sup>6</sup> This is quite similar to the method which Ray McIntire and Dow Chemical first ‘discovered’ ten years later.

Regardless of the discovery of the material, however, Dow continues to hold the most successful patent, and it is the Dow product Styrofoam which is the most well-known. It is important to note that Styrofoam, as mentioned earlier, is a trade name for Dow’s polystyrene foam. This particular foam is mostly produced for use in building insulation and floatation. Dow also produces some disposable foam, mostly for use in crafting. However, it does not produce “food packaging, cups, plates, coolers, or egg cartons,” and the company makes an effort to make this known. A section on their website points out “Next time you get a cup of java to go, remember, you can't drink coffee from a STYROFOAM cup - because there is no such thing!”<sup>7</sup> Thus, the generic use of Styrofoam to describe any and all foam materials is actually incorrect.

According to one recent *Washington Post* article, Dow Chemical is not happy that their name is being dragged through the mud each time anyone protests Styrofoam. They send out between 25 to 30 cease-and-desist letters per year to companies, groups, and individuals who insist on using the name Styrofoam to describe, degrade, or slander

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<sup>6</sup> Munters Carl Georg et al., Heat insulation, US Patent 2,023,204A, filed August 21 1931, and issued August 20, 1932.

<sup>7</sup> “It’s Not A Cup,” Styrofoam Brand Foam Crafts, *Dow Chemical Company*, 2015. <http://www.styrofoamcrafts.com/en/its-not-a-cup>

disposable foam products. Their business director complains that the company is “doing everything we can to make sure that it’s used properly . . . we don’t really know why everyone wants to land on the name Styrofoam, and why it serves as something people want to misuse.”<sup>8</sup> Dow is not just concerned with image. If they fail to vigorously enforce the trademark they could potentially lose it.<sup>9</sup>

Unfortunately for Dow, this genericide, or overuse of a trade name, is not a new phenomenon. The use of Styrofoam to refer to non-Styrofoam products has been going on for decades, and possibly for as long as there has been non-Styrofoam disposable foam. The success of the brand is partially to blame—people know Styrofoam so well that they associate it with all foam. Such was the case in the late 1980s, when McDonald’s use of polystyrene foam containers for Big Macs came into the public eye.

### **Disposable ‘Styrofoam’**

One of the first applications for truly disposable foam was the coffee cup. As this thesis has already established, disposable cups were a commonplace part of the way people consumed beverages by the early to mid 20<sup>th</sup> century. Although the Dixie Cup was successful, people kept trying to improve upon the design. In the late 1950s, a man named William F. Dart and his son, William A. Dart, were experimenting with the still-new material of expanded polystyrene.<sup>10</sup> They created a machine that could mold beads of the material

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<sup>8</sup> Lydia DePillis, “You have never actually used a Styrofoam cup, plate, or takeout box,” *The Washington Post*, December 18 2013.

<sup>9</sup> Oliver Herzfeld, “Failure To Enforce Trademarks: If You Snooze, Do You Lose?” *Forbes*, February 28, 2013.

<sup>10</sup> Michael Y. Park, “A Brief History of the Disposable Coffee Cup,” *bon appétit*, May 30, 2014.

into cups, and although they never patented their invention, they created an empire.<sup>11</sup> Dart Container Corporation soon became the largest producer of foam cups.

Meanwhile, other uses for disposable foam were expanding as well. In 1968, Jon Huntsman helped to create the first polystyrene egg containers through a Dow-owned company called Dolco (Dolco still exists today, but is no longer owned by Dow, hence the company's assertion that they don't make disposable foam products).<sup>12</sup> In his book, *Barefoot to Billionaire*, Huntsman recounts his ascent up the ladder from egg salesman to head of a promising factory that was already working on the production of foam cartons when he arrived to head it. Huntsman's cartons were a major success in the grocery market. Their proliferation, as well as that of the foam coffee cup, helped set the stage for what seemed a logical procession to foam containers for the Big Mac. It was poised as the revolutionary new food container that kept food hot and uncrushed, and this, combined with other factors, led McDonald's to make the switch.

### **McDonald's: The Company**

By the year 1975, McDonald's was a vast international company. The franchise as it exists today was founded in 1955 by businessman Ray Kroc, and in the succeeding 20 years, its success skyrocketed. Annual reports from 1973-1975 report increasing financial success and focus on expansion and community involvement.<sup>13</sup> They paint rosy pictures of McDonald's-supported initiatives, such as the Ecology Action Packs distributed in schools.

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<sup>11</sup> Elizabeth Lesly, "The Darts: Fear, Loathing, and Foam Cups," *Bloomberg*, July 10, 1995.

<sup>12</sup> Jon Huntsman Sr., *Barefoot to Billionaire: Reflections on a Life's Work and a Promise to Cure Cancer* (New York City: Overlook Press, 2014), ch 3. (n.p.).

<sup>13</sup> McDonald's Corporation, 1973-1975 Annual Reports (microfiche), University of Michigan, Ann Arbor, Michigan.



The 1973 report declared that “the Pack, including study materials, demonstrations and put-together teaching aids, helps youngsters learn about energy conservation, recycling, and other ecology topics.”<sup>14</sup> By paying lip service to environmental education, the company hoped to create a positive image in a changing climate.

In the early 1970s, the environmental movement had “arrived” in American culture.<sup>15</sup> Rachel Carson’s 1962 publication of *Silent Spring* galvanized members of the public. It helped to convince many that the environment was fragile and needed to be saved.<sup>16</sup> Increasing urbanization also contributed to this fear of environmental loss, since many Americans still considered nature to be an important part of the experience of life, despite the fact that fewer were living in close proximity to it.<sup>17</sup> Out of this consciousness environmentalism as an institutional movement grew, and legislation relating to environment increased. The first Earth Day was held in 1970, and increasing institutionalization meant increasing visibility and pull for the movement’s proponents.<sup>18</sup> McDonald’s did not turn a blind eye to this movement. Although executives did not remark that environmental concerns were perceived as threats to sales until the 1980s<sup>19</sup>, the company still scrambled to be perceived as environmentally friendly. According to their records, this was even the reason that they switched from paperboard to polystyrene packaging.<sup>20</sup>

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<sup>14</sup> McDonald’s Corporation, 1973 Annual Reports (microfiche), University of Michigan, Ann Arbor, Michigan.

<sup>15</sup> Riley E. Dunlap and Angela G. Mertig, “The Evolution of the U.S. Environmental Movement from 1970 to 1990; An Overview,” in *American Environmentalism: The U.S. Environmental Movement, 1970-1990*, edited by Riley E. Dunlap and Angela G. Mertig (Washington, D.C.: Taylor & Francis, 1991), 3.

<sup>16</sup> David Walls, “Environmental Movement,” Sonoma State University, 2014.

<sup>17</sup> Ibid.

<sup>18</sup> Riley E. Dunlap and Angela G. Mertig, “The Evolution of the U.S. Environmental Movement from 1970 to 1990; An Overview,” in *American Environmentalism: The U.S. Environmental Movement, 1970-1990*, edited by Riley E. Dunlap and Angela G. Mertig (Washington, D.C.: Taylor & Francis, 1991), 1-9.

<sup>19</sup> John Love, *McDonald’s: Behind the Arches* (New York: Bantam, 1986), 454.

<sup>20</sup> Ibid.

In 1975, Mobil Oil, which produced polystyrene, filed a patent for a clamshell style foam container. The text of the patent claimed that existing packages (such as paperboard, most commonly used by McDonald's, or aluminum foil) could allow the food to be crushed or otherwise mechanically impaired.<sup>21</sup> Thus, the ruggedness of the polystyrene foam made it a valuable choice for Big Mac packaging. A 1979 patent, this one owned by Restaurant Technology, Inc., a company headquartered at McDonald's Plaza, expanded upon the advantages of polystyrene by pointing out that its use "represents a very substantial reduction in raw materials with the attendant conservation of resources."<sup>22</sup>

McDonald's began using the new style of packaging in 1975. There is little written information about this switch, but the packages can be seen photographed in the company's annual reports beginning this year.<sup>23</sup> Furthermore, a number of secondary sources emphasize a report produced by the Stanford Research Institute in this same year.<sup>24</sup> According to "The Clamshell Controversy" and *McDonald's: Behind the Arches*, McDonald's president and founder Ray Kroc was swayed by this report to switch to foam packaging because of its environmental friendliness. Kroc especially valued the fact that polystyrene could be recycled. However, "The Clamshell Controversy" also notes that polystyrene packaging was cheaper to produce, at 2-2.5 cents per packaging vs. 2.5-3 cents for older, paperboard styles.<sup>25</sup> Thus, although the report may have encouraged foam for environmental reasoning, it is difficult to truly ascertain if this was the main factor that encouraged Kroc to switch.

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<sup>21</sup> Nicholas D. Comisso, Covered Food Container, US Patent 3,902,540, filed July 19, 1974, and issued Sept 2<sup>nd</sup>, 1975.

<sup>22</sup> Donald K. Jewell, Foam Sandwich Package, US Patent 4,132,344, filed August 25, 1976, and issued January 2<sup>nd</sup>, 1979.

<sup>23</sup> McDonald's Corporation, 1975 Annual Report (microfiche), University of Michigan, Ann Arbor, Michigan.

<sup>24</sup> I was unable to access this report to view it myself; search locations included the University of Michigan and other college libraries, as well as on WorldCat.

<sup>25</sup> Susan Svoboda and Stuart Hart, "Case B1: The Clamshell Controversy," University of Michigan, 1991.



Fig 4. “McDonald’s Clam Shell Container.” Image from the Smithsonian National Museum of American History, Washington D.C., available at [http://americanhistory.si.edu/collections/search/object/nmah\\_1200817](http://americanhistory.si.edu/collections/search/object/nmah_1200817).

One thing that McDonald’s never considered was reusable containers. Disposability was considered central to the McDonald’s model for a number of reasons. First and foremost, McDonald’s considered itself primarily a take-out restaurant, and global expansion contributed to this promotion. New McDonald’s were being built in smaller and smaller locations with less space for customers to eat in. A location that was growing popular by the 1970s was just off of highways, where commuters could stop in to grab something they could eat in the car.<sup>26</sup> With this business model, total recycling or reuse was not a consideration in cases of environmental friendliness. Although foam was originally chosen because it could be recycled, McDonald’s executives gave no serious thought to switching to reusable containers, even with indoor dining. The disposable burger containers were part of the fast-food, convenience ethos of the restaurants. Thus, for a short time at least, foam containers

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<sup>26</sup> McDonald’s Corporation, Annual Reports 1973-1978 (microfiche), University of Michigan, Ann Arbor, Michigan.

were able to retain the perception of environment friendliness, due to the fact that having no disposability at all was not considered in the discourse.

Furthermore, it is likely that having disposable containers, especially foam clamshells, set McDonald's apart from other restaurants. As the 1979 patent noted, "At the present time, most hot sandwiches at fast food restaurants are wrapped in paper and are then bagged or boxed. Large or jumbo sandwiches are frequently surrounded by a collar and then boxed."<sup>27</sup> Thus, using innovative foam packaging not only enabled the company to serve hamburgers better than its competitors, but it also allowed them to stay technologically advanced and modern. The language of the patent thus reflects the idea that new packaging is better packaging, and that disposable foam containers kept McDonald's ahead of both their competitors and of environmental trends in society.

After the switch, there was little to no press surrounding McDonald's packaging choices. Searches of historical newspaper databases for the year of the change (1975-1976) fail to turn up reports of McDonald's groundbreaking, environmentally friendly choices.<sup>28</sup> Although the McDonald's-buying public was certainly aware of the change, apparently, they did not care much to comment on it. It was not until ten years later that foam would become the topic and subject of a discussion about what, exactly, was problematic disposability, and what the role of the company was in all of this.

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<sup>27</sup> Donald K. Jewell, Foam Sandwich Package, US Patent 4,132,344, filed August 25, 1976, and issued January 2<sup>nd</sup>, 1979.

<sup>28</sup> Searches performed: ProQuest Historical Database, year 1975-1976: "McDonald's polystyrene"; "McDonald's new packaging"; searched Marched 29, 2017.

## Environmental Backlash

In 1989, Ronald McToxic was standing before the United Nations. McToxic's alter ego was Kurtiz Schnied, a high school senior from New Jersey. Schnied was part of a developing 'green' movement of young people worried about corporations' growing use of resources. On this day, Schnied's protest was aimed at one giant in particular: McDonald's. It was a lofty target. In 1988 the company's annual sales per restaurant topped \$1.5 million for the first time.<sup>29</sup> Schnied, alone, dressed as a skewed caricature of the friendly mascot Ronald McDonald, might not pose a big threat. Unfortunately for the company, though, Schnied wasn't alone in his beliefs, and his proclamation that "The planet needs a break today" was supported by schoolchildren and adults nationwide.<sup>30</sup>

Schnied's cause was largely in the news thanks to a grassroots organization called Citizens Clearinghouse for Hazardous Waste (CCHW). The founder of the group, Lois Gibbs, had skyrocketed to fame after the Love Canal tragedy, ten years prior.<sup>31</sup> Under her leadership, an informal group of housewives and homeowners were able to mount a successful media campaign that resulted in a special presidential allocation of funds. According to historian Amy Hay, she was especially successful because, thanks to Gibbs' work, Love Canal residents were able to frame the disaster "as an attack on the nuclear family . . . this approach justified relocation based on the preservation of family life rather than on the injustice of dumping toxic wastes where it disproportionately harmed minorities

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<sup>29</sup> "McDonald's posts 14% profit increase," *Chicago Tribune*, January 29, 1988.

<sup>30</sup> James Ridgeway and Dan Bischoff, "Fighting Ronald McToxic," *Village Voice*, June 12, 1990, 29.

<sup>31</sup> Love Canal was a suburban neighborhood which had formerly been the site of a waste dump for Hooker Chemical. Eventually, barrels of hazardous chemicals began to surface in the backyards of residents, and children living in the suburb suffered adverse medical side effects. The disaster was well publicized. For more information, see Amy Hay, "Everyone's Backyard: The Love Canal Chemical Disaster," *History Now* 40 (Fall 2014).

and poor communities.”<sup>32</sup> Gibbs became a community organizer and pushed for the passing of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund).<sup>33</sup> Now, her group worked to target what they perceived as environmental injustices across the country. In 1987, two years before Kurtis Schneid stood before the UN with his face smeared in white greasepaint, they launched their campaign against McDonald’s use of polystyrene. Under Gibbs’ saavy leadership, the CCHW was able to create a campaign that framed the issue in a way that would ultimately create a public outcry.

CCHW activist Brian Lipsett explained that there were a number of reasons to target McDonald’s in particular. In 1986, the EPA released a report called “Minimization of Hazardous Waste.” Lipsett claimed that this report detailed some of the problems associated with working with polystyrene foam, including the production of dangerous chemicals. Additionally, he cited a survey that was done by the National Bureau of Standards Center for Fire Research, which he remarked determined that polystyrene was not particularly recyclable and “results in the overfilling of landfills with non-degrading plastics.” CCHW also cited a report in *Modern Plastic* that deemed McDonald’s Corp. to be the single largest user of polystyrene packaging.<sup>34</sup> It was these qualities, along with the visibility of McDonald’s as an American icon, that led the group to target their campaign. Other representatives from CCHW especially emphasized McDonald’s ubiquity. The group’s

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<sup>32</sup> Amy Hay, “Everyone’s Backyard: The Love Canal Chemical Disaster,” *History Now* 40 (Fall 2014), n.p.

<sup>33</sup> “Fighting for environmental justice: an interview with Lois Gibbs,” *Multinational Monitor* 17 no. 4 (April 1996): 15.

<sup>34</sup> Brian Lipsett, witness statement, expert testimony on environment, *McDonald’s Corporation v. Steel and Morris*, trial, July 26, 1993, available at [http://www.mcspotlight.org/people/witnesses/recycling/lipsett\\_brian.html](http://www.mcspotlight.org/people/witnesses/recycling/lipsett_brian.html).

Karen Stults noted that “it [McDonald’s] is an American Institution, loved by children and noticed by all.”<sup>35</sup>

One of CCHW’s first problems with the use of foam was their claim that it produced toxic CFCs (chlorofluorocarbons) as a byproduct.<sup>36</sup> Because the organization had its roots in the Love Canal tragedy, which involved dioxin contamination, its members were often especially knowledgeable and eager to do something about the production of additional hazardous chemicals. Thus, the “Minimization of Hazardous Waste Report” was especially worrisome to CCHW.

In 1987, major foam producers announced that they would change production methods to stop using CFCs. CCHW believed that this was due in large part to their activism. After this switch, McDonald’s considered themselves to be working well with environmentalists. *McDonald’s: Behind the Arches* notes that “when scientists determined that fully halogenated chlorofluorocarbons could harm the ozone layer, the company directed its foam packaging suppliers to eliminate those elements from the manufacturing process—and McDonald’s clout prompted the rest of the industry to change.”<sup>37</sup> This story is notably different from that told by CCHW, and shows that McDonald’s firmly believed that they were environmental trailblazers, while their opponents disagreed.

Even after the switch away from CFCs, CCHW still had problems with the use of Styrofoam. Their campaign focused largely on the lack of potential for recycling. 1989

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<sup>35</sup> Ibid.

<sup>36</sup> Brian Lipsett, witness statement, expert testimony on environment, *McDonald’s Corporation v. Steel and Morris*, trial, July 26, 1993, available at [http://www.mcspotlight.org/people/witnesses/recycling/lipsett\\_brian.html](http://www.mcspotlight.org/people/witnesses/recycling/lipsett_brian.html).

<sup>37</sup> John Love, *McDonald’s: Behind the Arches* (New York: Bantam, 1986), 455.

“Action Bulletins” released by the organization focused on the production of solid waste.<sup>38</sup>

Thus, CCHW switched the focus of their campaign from the release of hazardous chemicals to the use of too much non-recyclable material.

For its part, McDonald’s can blame some of its unfortunate visibility on a particular sandwich. The McDLT was an innovation first added to menus in 1985.<sup>39</sup> The euphemistic slogan for the burger was “The Hot Stays Hot, the Cool Stays Cool.”<sup>40</sup> What it meant was that the burger came neatly packaged in a double sided container, with the tomatoes and lettuce in one foam enclosure and the burger in the other. The vegetables stayed cool, and the hamburger stayed hot. As McDonald’s 1987 patent explained,

there remains the need for suitable packaging which will hold the components of a lettuce and tomato hamburger sandwich for an acceptable length of time, while maintaining desirable temperature and moisture levels of the meat, while maintaining the crispness and freshness of the lettuce and tomato, and while providing suitable convenience for the consumer.<sup>41</sup>

The message was further jammed into the heads of consumers with a catchy commercial, featuring a jingle shouted by actor Jason Alexander: “the beef stays hot, the cool stays crisp, put it together, you can’t resist!”<sup>42</sup>

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<sup>38</sup> Citizen’s Clearinghouse for Hazardous Waste, “Action Bulletin,” 22(May 1989), 23(August 1989), Joseph A. Labadie Collection, Special Collections Library, University of Michigan, Ann Arbor, Michigan.

<sup>39</sup> McDonald’s Corporation, Annual Report 1985, microfiche, University of Michigan, Ann Arbor, Michigan.

<sup>40</sup> McDonald’s Corporation, “McDLT Commercial,” Filmed circa 1985, YouTube video posted by Beta M A X, December 9, 2014, available at <https://www.youtube.com/watch?v=Eh1kmVwS4Hw>.

<sup>41</sup> Sharon M. Leary et al., Dual Compartment Sandwich Package, US Patent 4,653,685, filed July 3, 1985, and issued March 31, 1987.

<sup>42</sup> McDonald’s Corporation, “McDLT Commercial,” Filmed circa 1985, YouTube video posted by Beta M A X, December 9, 2014, available at <https://www.youtube.com/watch?v=Eh1kmVwS4Hw>.





Fig. 5, Double-sided McDLT container, c. 1987-1990. Image from McDonald's Wikia, photographer uncited. Available at <http://mcdonalds.wikia.com/wiki/McDLT>.

McDonald's promoted the McDLT for the next several years. It was favorably mentioned as an "innovation" in 1986 and 1987 annual reports.<sup>43</sup> Yet it was removed from the menu in December 1990, and today, most publications that note it consider it to be a failure.<sup>44</sup> Executives studiously do not reference polystyrene in discussing the McDLT, if they discuss it at all-- in one quote, Claire Babrowski, the senior vice president for restaurant systems, remarked that people "didn't think it was their job to put the sandwich together."<sup>45</sup> However, most sources agree that the backlash against polystyrene contributed to the McDLT's very visible downfall.<sup>46</sup>

Environmentalist groups like CCHW were concerned with overuse, and burgers such as the McDLT were especially vivid signs of the overfilling of landfills. A few years prior to the foam crisis, the Resource Conservation and Recovery Act of 1976 (RCRA) was passed. Previous solid waste laws had taken an "evaluate and assess model," but this time, the act

<sup>43</sup> McDonald's Corporation, Annual Reports 1986-1987, microfiche, University of Michigan, Ann Arbor, Michigan.

<sup>44</sup> See John M. Edwards, "Blast from the Past: The McDLT," *Serious Eats*, 2017, <http://www.serious-eats.com/2011/02/blast-from-the-past-the-mcdlt-mcdonalds-1980s-jason-alexander.html>; Jamie Frater, "Top 10 Failed McDonald's Products," *ListVerse*, May 30, 2009, <http://listverse.com/2009/05/30/top-10-failed-mcdonalds-products/>; Chef Christopher, "HAPPY ANNIVERSARY, MCDLT— RECREATE THE LEGEND AT HOME," *Life in Pleasantville*, n.d. <http://www.lifeinpleasantville.com/happy-anniversary-mcdlt/>; and Dan Myers, "15 of McDonald's Most Spectacular Failures," *The Daily Meal*, March 23, 2017, <http://www.thedailymeal.com/eat/15-mcdonald-s-most-spectacular-failures>.

<sup>45</sup> Arthur Lubow, "Steal This Burger," *The New York Times*, April 19, 1998.

<sup>46</sup> See note 43.

focused on specific action to be implemented, especially regarding requirements for sanitation and open air dumping of waste. When its provisions went into effect in 1980, the number of landfills in the country decreased by 50%.<sup>47</sup> The numbers of landfills and their capacity continued to decline for the following 10 years, from 1980 to 1990.<sup>48</sup> This shortage led many to fear a ‘garbage crisis’ as the decade wore on, especially in the heavily populated northeastern region of the United States.<sup>49</sup> New legislation shut down many smaller, government operated facilities, and led to exportation of garbage to less populous areas in the Midwest. Citizens feared that this practice could not continue—thus, the idea of a looming crisis.<sup>50</sup> Eventually, the crisis was averted by the privatization of solid waste management. RCRA guidelines proved difficult for the government to follow and maintain, and profitable for a small handful of companies that created ‘megadump’ conglomerates. However, for most of the 1980s, it seemed that landfilling was a limited practice, and that trash was inevitably going to begin to pile up outside of the landfill.<sup>51</sup> Thus, rigid, voluminous foam clamshell containers were very real and frightening representations of the amount of non-recyclable waste generated each year.

To combat this fear, McDonald’s execs claimed that polystyrene could be easily recycled, and for the first several years of CCHW’s protest the company stood firmly by this ideology. They tested a pilot recycling campaign in New England, and proposed that

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<sup>47</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004): 317.

<sup>48</sup> Garrick E. Louis, “A historical context of municipal solid waste management in the United States,” *Waste Management & Research* 22(2004): 318.

<sup>49</sup> "Government Mess: Private Sector is Cleaning Up After '80s Garbage Crisis," *Investor's Business Daily*, Sep 12, 2000.

<sup>50</sup> Sarah Lyall, “From L.I. to Angry Illinois: A 5-Day Trash Odyssey,” *The New York Times*, December 26, 1991.

<sup>51</sup> "Government Mess: Private Sector is Cleaning Up After '80s Garbage Crisis," *Investor's Business Daily*, September 12, 2000.

polystyrene be repurposed into insulation.<sup>52</sup> Another idea that the company continually advanced was that of “Archie McPuffs,” which was a plan for each restaurant to be fitted with a small incinerator.<sup>53</sup> A prototype was even developed before the idea was dropped for lack of feasibility. They also claimed to have created the “largest polystyrene foam recycling program in the nation.”<sup>54</sup>

Despite these claims, environmental advocates took issue with what they perceived as a lack of action from the company. Furthermore, the movement was well-publicized in newspapers and magazines, most of which portrayed McDonald’s as the villain. *The Omaha Journal* was one of the first to extensively cover the “Send It Back” movement initiated by the CCHW<sup>55</sup>, which encouraged consumers to send their used foam clamshells to McDonald’s headquarters in Oak Brook, Il. The group remarked that if McDonald’s was truly able to efficiently recycle polystyrene, then they should be perfectly able to dispose of the waste they created. According to Brian Lipsett, Send It Back was a smashing success. In a testimony produced under oath for a 1997 trial against McDonald’s, he remarked that one company, Superwood, had to send waste back to McDonald’s after the company failed to pay for recycling. After collecting all of this waste, in addition to that of the campaign, McDonald’s headquarters in Oak Brook, Illinois developed a “serious odor and vermin problem.”<sup>56</sup>

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<sup>52</sup> John Holusha, “McDonald’s Contribution to Recycling,” *New York Times*, April 18, 1990.

<sup>53</sup> Citizen’s Clearinghouse for Hazardous Waste, “Action Bulletin,” 22(May 1989), 23(August 1989), Joseph A. Labadie Collection, Special Collections Library, University of Michigan, Ann Arbor, Michigan.

<sup>54</sup> John Love, *McDonald’s: Behind the Arches* (New York: Bantam, 1986), 454

<sup>55</sup> Nancy Ryan and Stevenson Swanson, “Boxing Knockout: McDonald’s Turns to Paper Wrappers,” *Chicago Tribune*, November 2, 1990.

<sup>56</sup> Brian Lipsett, witness statement, expert testimony on environment, *McDonald’s Corporation v. Steel and Morris*, trial, July 26, 1993, available at [http://www.mcspotlight.org/people/witnesses/recycling/lipsett\\_brian.html](http://www.mcspotlight.org/people/witnesses/recycling/lipsett_brian.html).

Operation Send It Back was only one of many campaigns organized against McDonald's. In their newsletter, CCHW noted that other organizations were speaking out against Styrofoam—for instance, in May 1989, 61 episcopal churches had banned the use of the product, and the city council of Portland, Oregon voted to outlaw it in the entire city.<sup>57</sup> Still, McDonald's insisted that foam could be recycled and was perfectly safe for the environment.

Most coverage was on the side of the environmentalists, and made it a point to highlight their points of view. For instance, the *Chicago Tribune* quoted Brian Lipsett as saying that “McDonald's efforts around the foam issue have been clearly deceptive and self serving,”<sup>58</sup> and the *Providence Journal* quoted a Save the Bay activist who claimed that “it just doesn't make any sense to use that type of material for a product that we are only going to use once and then throw away.”<sup>59</sup> The issue was also covered in nationally circulated publications, such as the *New York Times*, the *Wall Street Journal*, and *Time* magazine. As the protests wore on, McDonald's understandably grew more and more concerned about how they were perceived. The *New York Times* pointed out that

McDonald's has gone far beyond being a mere seller of hamburgers, it is a national institution. So the last thing it needs is to have schoolchildren be told it is a force of evil, damaging to society. If it appeared to be putting profit over the environment by stubbornly staying with a material widely regarded as detrimental to the environment, the company risked alienating many of the same younger customers who avoided buying tuna caught by methods that kill dolphins.<sup>60</sup>

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<sup>57</sup> Citizen's Clearinghouse for Hazardous Waste, “Action Bulletin,” 22(May 1989), Joseph A. Labadie Collection, Special Collections Library, University of Michigan, Ann Arbor, Michigan.

<sup>58</sup> Nancy Ryan and Stevenson Swanson, “Boxing Knockout: McDonald's Turns to Paper Wrappers,” *Chicago Tribune*, November 2, 1990.

<sup>59</sup> Bob Wyss, “The fight over foam: A heavy weight battle over lightweight plastic foam,” *Providence Journal*, February 21, 1988.

<sup>60</sup> John Holusha, “Packaging and Public Image: McDonald's Fills a Big Order,” *The New York Times*, November 2, 1990.

Meanwhile, foam producing companies grew worried that one of their largest clients was going to stop using their product. While some admitted that they were concerned with foam's indestructability, others stubbornly touted the environmental benefits of their material. The former general manager of one company remarked, "What is the goal of uncontrolled rotting of an organic material? If I had a landfill in my backyard I would want it full of plastic. I would not want biodegradability occurring near my ground water."<sup>61</sup> McDonald's did not make any public moves to assuage the foam producers, but they refused to be open to switching materials, either.

Execs remained committed to using foam and continuing to discover new ways of recycling for much of the McToxics campaign. On November 2<sup>nd</sup>, 1990, however, they made a surprising announcement: they were phasing out Styrofoam packaging entirely in their U.S. locations. The switch was abrupt; the *New York Times* noted that most followers of the situation expected the company to continue with its recycling programs. Scientist Allan Hershkowitz remarked "This is a case study for the business schools . . . The decision was made in the last 72 hours. You get the impression they do something and then try to figure out what it means."<sup>62</sup> Hershkowitz' conviction was backed by others, including scholar John Love, who in his book *Behind the Arches* noted that the announcement came on a Thursday, and McDonald's was scheduled to hold a press conference about its commitment to foam recycling on Monday.<sup>63</sup> Although outsiders claimed the decision was last minute,

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<sup>61</sup> Bob Wyss, "The fight over foam: A heavy weight battle over lightweight plastic foam," *Providence Journal*, February 21, 1988.

<sup>62</sup> John Holusha, "Packaging and Public Image: McDonald's Fills a Big Order," *The New York Times*, November 2, 1990.

<sup>63</sup> John Love, *McDonald's: Behind the Arches* (New York: Bantam, 1986), 454.

McDonald's' public stance was that it had been working on the new environmentally-friendly packaging since August.

### **McDonald's Takes Action**

In August 1990, McDonald's launched a partnership with a nonprofit organization called the Environmental Defense Fund (EDF). The EDF was a particularly salient choice; the organization prided itself on finding market-minded solutions to environmental problems. Unlike Lois Gibbs and other grassroots activists, it was more than willing to work with McDonald's.

The EDF represented a new kind of environmental activism that arose at the end of the 1980s. "Green alliances," as scholar Shannon Livesey calls the partnerships, represent the acceptable expansion of expertise. The corporation "borrows not only the environmental expertise, but the credibility of the ecology group."<sup>64</sup> In exchange, the environmental group provides approval of the corporation's actions, and makes them trusted partners in the environmental movement. According to Livesey, this kind of partnership between organizations provides high-profile positive publicity for both groups.<sup>65</sup> Publicity may be correlated to the actual good of changes made, but it doesn't always mean that a corporation itself has actually become environmentally friendly.

Proponents of the EDF claimed that the company "disarmed the [environmental] opposition" by creating the task force—presumably to show what an environmentally

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<sup>64</sup> Sharon M. Livesey, "McDonald's and the Environmental Defense Fund: A Case Study of a Green Alliance," *International Journal of Business Communication* 36, no. 1 (2016): 9.

<sup>65</sup> Sharon M. Livesey, "McDonald's and the Environmental Defense Fund: A Case Study of a Green Alliance," *International Journal of Business Communication* 36, no. 1 (2016): 14.

friendly company McDonald's was.<sup>66</sup> However, according to the Executive Report produced by that very committee, the partnership was formed at the request of the EDF president at the time, Fred Krupp.<sup>67</sup> Regardless of how the committee was formed, the pairing was unprecedented, and produced concrete recommendations as to how the company could become more environmentally friendly.

The committee consisted of three representatives from the EDF and four representatives from McDonald's. Of the McDonald's representatives, two were from environmental affairs, one was from Perseco (McDonald's packaging company), and one, tellingly, was the company's communications director. Clearly, McDonald's perceived that much of the problem with using foam was based in the public backlash against it. Vice President Shelby Yastrow even told *Rolling Stone* magazine "That clamshell package was the symbol that everyone glommed onto. We knew if we got rid of that thing, it would be like pulling forty thorns out of our paw."<sup>68</sup>

The goals that the partnership eventually produced were primarily focused on source reduction, reuse, recycling, and composting.<sup>69</sup> The most salient goal with regards to polystyrene foam was, for most environmental activists, source reduction. According to the EDF committee's Executive Report, "Source reduction occupies the highest tier in the waste management hierarchy because of its benefits throughout the lifecycle of a product or package." By altering packaging and other disposable material, the theory went, McDonald's could reduce waste and secondarily save on costs. The EDF was likely to put the

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<sup>66</sup> John Love, *McDonald's: Behind the Arches* (New York: Bantam, 1986), 455.

<sup>67</sup> EDF-McDonald's Waste Reduction Task Force, "Executive Report," Environmental Defense Fund and McDonald's Corporation., April 1991.

<sup>68</sup> William Gifford, "McDonald's: The Greening of the Golden Arches," *Rolling Stone*, August 22, 1991.

<sup>69</sup> EDF-McDonald's Waste Reduction Task Force, "Executive Report," Environmental Defense Fund and McDonald's Corporation., April 1991.

environmental impact first, but the company was doubtless swayed by the cost-reduction benefits.

The main result of the partnership was McDonald's switch from polystyrene foam containers to paperboard wraps. According to the Executive Report of the partnership, this would represent a 70-90% decrease in the volume of waste produced by McDonald's.<sup>70</sup> Reactions to this change were mostly positive. As soon as January 1991, a Gallup poll showed that customers considered McDonald's to be the most environmentally friendly fast food chain, beating out Wendy's, KFC, and Burger King. Additionally, a 1991 Cambridge Reports/Research International study showed that consumers ranked McDonald's the most environmentally friendly out of 23 companies.<sup>71</sup> That same year, McDonald's was awarded the inaugural Presidential Environment and Conservation Challenge award.<sup>72</sup>

However, many articles covering the switch noted that environmental groups were not entirely satisfied with the results of the partnership. For instance, an article in *Pantagraph* interviewed activists who believed that some of the new paperboard wraps were even harder to recycle than polystyrene foam. The target of source reduction was fulfilled, since wraps were less voluminous, but the company would still be putting waste directly into landfills without recycling. One Vermont activist complained that "It's a little bit of a scam if they're switching to items that are non-recyclable and non-compostable."<sup>73</sup> This sentiment was

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<sup>70</sup> Ibid.

<sup>71</sup> John Love, *McDonald's: Behind the Arches* (New York: Bantam, 1986), 456.

<sup>72</sup> Robert L. Langert, witness statement, expert testimony on environmental affairs and McDonald's, *McDonald's Corporation v. Steel and Morris*, trial, June 4, 1993, available at <http://www.mcspotlight.org/people/witnesses/recycling/langert.html>.

<sup>73</sup> "McDonald's cooking up a leaner image," *Pantagraph*, June 3, 1991.



echoed by articles in national publications such as *Rolling Stone* and *The New York Times*.<sup>74</sup>

However, according to EDF scientists, the wraps were fully compostable.<sup>75</sup>

The CCHW also spoke out about the switch. According to founder Lois Gibbs, who was interviewed in 1996,

So they [McDonald's] cut a deal with EDF which gave credit to EDF for persuading them on the basis of their argument alone. But the truth is, it was not EDF that won that fight, it was the local people in communities across the United States. The grassroots groups and CCHW in particular were especially angry with EDF because we wrote letters to all of the mainstream groups, saying that McDonald's is likely to come and try to negotiate with you. We had been trying to get McDonald's to sit down with the grassroots leaders. We were willing to sit talk about it, but they were not. EDF was the only environmental group which violated that strategy, and went ahead and met with McDonald's, violating people's trust and their working relationship with people on the grassroots level.<sup>76</sup>

Thus, according to Gibbs, CCHW was concerned that both the company and EDF were lauded by the general public, despite the fact that they were not actually the ones who instituted the change.

Regardless of the concerns of a select group of environmentalists, the polls conducted in 1991 showed that McDonald's had succeeded in its marketing goals. The EDF partnership, although critiqued in the media, was generally accepted by the consuming public. In the eyes of many, McDonald's was now the face of an environmentally friendly company. Thus, the lack of actual success in minimizing environmental impact was not thoroughly evaluated.

Foam executive John Grioux accurately summed up the campaign when he remarked "This is an environmental attack on the throwaway, fastfood [sic] life style and the company with the highest profile . . . This is not about polystyrene." He went on to point out that the material

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<sup>74</sup> William Gifford, "McDonald's: The Greening of the Golden Arches," *Rolling Stone*, August 22, 1991. John Holusha, "Packaging and Public Image: McDonald's Fills a Big Order," *The New York Times*, November 2 1990.

<sup>75</sup> "McDonald's cooking up a leaner image," *Pantagraph*, June 3 1991.

<sup>76</sup> "Fighting for Environmental Justice: an interview with Lois Gibbs," *Multinational Monitor* 17, no. 4 (1996): 15.

was used widely in other food industries, such as the production of egg cartons, yet they were not under attack.<sup>77</sup>

Grioux was correct, and so was CCHW founder Gibbs. For the consuming public, McDonald's was a target because activist groups publicly made it one. Once the company announced they were changing their ways, the issue was resolved. Critical awareness of issues was never at the center of the debate for most people; and disposability itself was not the problem. Rather, it was acceptable disposability.

### **Why The Clamshell Controversy?**

The case of McDonald's packaging is unique because of the public reaction to it. It is clear that the general public expected McDonald's to be environmentally friendly, yet the approach to environmental friendliness lacks analysis. This is evidenced by the acceptance of the new paperboard packaging, despite the unhappiness of many environmental groups after the change. It is clear that there was a limited understanding of what, exactly, the problem with Styrofoam was.

This is in large part due to the type of media coverage the controversy received. Even though CCHW and other groups had problems with the CFCs and chemicals produced by Styrofoam, when they made volume their main issue, it was all that was covered. Thus, the volume reduction paperboard provided was perceived as a solution to McDonald's problems, both by the company itself and by the general public.

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<sup>77</sup> John Holusha, "Packaging and Public Image: McDonald's Fills a Big Order," *The New York Times*, November 2 1990.

### Chapter 3: Saran Wrap

This thesis has already discussed one type of disposable plastic. Although the general public often disassociates polystyrene from this category, it is, in fact, a plastic. However, it is not closely associated with what Edward Humes has called “the plasticization of America.”<sup>1</sup> In the late 1940s and 1950s, disposable plastic products appeared in “rapid succession,” with plastic-lined paper cups in 1950, TV dinners in 1953, and high-density polyethylene for milk jugs in 1957, just to name a few.<sup>2</sup> This chapter will discuss yet another of these products: clear plastic wrap, and more specifically, Saran Wrap, first marketed by Dow Chemical in the early 1950s. This section will first outline the invention, use, and marketing of Saran Wrap. Then it will delve into an explanation of why, exactly, it lacked the controversy of polystyrene or the laudability of Dixie Cups. Despite being a disposable product, Saran Wrap’s disposability is often ignored. It reduces food and household waste, yet in the process of doing so, it creates waste itself.

#### The Invention

Like polystyrene, Saran Wrap was an accidental invention, discovered by researchers at Dow Chemical. In 1933, a student helper by the name of Ralph Wiley was tasked with cleaning test tubes in a Dow laboratory. He discovered that a number of the tubes were coated in a plastic that seemed to be impervious to previously known solvents. This plastic, vinylidene chloride, was the first crystalline organic polymer<sup>3</sup> to be discovered. By 1935,

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<sup>1</sup> Edward Humes, *Garbology: Our Dirty Love Affair with Trash* (New York City: Avery, 2013), 72.

<sup>2</sup> Edward Humes, *Garbology: Our Dirty Love Affair with Trash* (New York City: Avery, 2013), 73.

<sup>3</sup> A carbon based molecule with an ordered structure comprised of identical repeating units.

Wiley was able to demonstrate that the material was thermoplastic<sup>4</sup>, and could be molded but would crystallize upon cooling. He renamed it polydichloroethylene.<sup>5 6</sup>

Even though Wiley had discovered a groundbreaking plastic, he wasn't quite sure what to do with it. He decided to mix it with vinyl acetate to create a more tractable material, resulting in a molecule he called Venalloy. It was discovered that, although Venalloy cooled and became crystalline, "by rapid super-cooling, the softened material would remain soft and amorphous indefinitely."<sup>7</sup> It was this pliable texture that would eventually encourage Wiley to promote the material as a wrap.

Some of the early uses of Wiley's new, flexible plastic included as a replacement for rattan in automobile and train seating. The filaments were woven on a loom to give the natural look that manufacturers desired at the time. Filaments were also woven into men's suspenders, garters, and belts, and they were used in window screens.<sup>8</sup> It was around this time that the material became known as Saran. Although the market was growing, Dow was not particularly encouraged in selling individual consumer goods. According to Key, "Dow's

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<sup>4</sup> A plastic that becomes pliable or flexible above a specific temperature and solidifies upon cooling.

<sup>5</sup> Max Key and Gene Perrin, "Saran- A Saga of Innovation" (unpublished manuscript, October 1980), print, ch. 1 p. 2 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>6</sup> In the late 1970s, an executive at Dow by the name of Max Key became interested in writing the history of Saran Wrap. He had been employed by the company since 1928, and was "deeply involved in the early days of Saran research and production." Although his manuscript was unpublished, a copy of it, edited posthumously by another employee, is available at the Othmer Chemical Heritage Foundation archives. The information in this section about Saran comes from his detailed research in "Saran- A Saga of Innovation."

<sup>7</sup> Max Key and Gene Perrin, "Saran- A Saga of Innovation" (unpublished manuscript, October 1980), print, ch. 3 p. 10 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>8</sup> Max Key and Gene Perrin, "Saran- A Saga of Innovation" (unpublished manuscript, October 1980), print, ch. 4, p. 11 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

management at that time was interested only in selling bulk products in carload or at least truckload lots. Marketing fabricated products or consumer items had little appeal.”<sup>9</sup>

Dow encouraged one of the head engineers on the product, Jim Pierce, to become one of Dow’s customers. What this meant was that Pierce would rent machines and materials needed to produce the new plastic, and sell it himself as a separate company. In the mid-1940s, Pierce quit Dow and started Pierce Plastics with his brother. They did quite a successful business, especially during WWII, when they sold Saran window screening for tents and barracks in the South Pacific. It was also during the war that Saran was first produced as a wrap.

At the time, the army was shipping machine guns “packed in grease and wrapped in burlap reinforced with heavy Kraft paper. The gun’s parts then had to be washed carefully with solvents to remove the grease before they could be reassembled.”<sup>10</sup> Dow was already furnishing small amounts of Saran film to General Motors. GM asked Dow if the film could be molded in seamless bags in which to wrap machine guns, and so began another successful use of Wiley’s polymer.

After the war, Dow continued to look for new opportunities to market its Saran filaments and wrap. However, they were hoping to continue to sell at an industrial level. In 1949, a Dow employee’s wife asked him to keep a piece of Saran Wrap, saying it would be useful in the kitchen. According to Key, this is where the idea for the wrap began. He

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<sup>9</sup> Max Key and Gene Perrin, “Saran- A Saga of Innovation” (unpublished manuscript, October 1980), print, ch. 4 p. 12 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>10</sup> Max Key and Gene Perrin, “Saran- A Saga of Innovation” (unpublished manuscript, October 1980), print, ch. 7 p. 3 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

claimed that Dow was already trying to penetrate the film market, but “cellophane was the only clear material, and its manufacturers [DuPont] showed little interest in a new product.”<sup>11</sup> The Dow employee whose wife had asked about Saran, Ross Ludwig, proposed the idea of selling it as a kitchen product, but executives still didn’t want the company to be involved. Key wrote that “They were convinced that Dow belonged in the commodity chemical market and that consumer goods were big trouble. As a matter of fact, there was really no marketing organization at the time to handle consumer products, to matter how marketable they might be.”<sup>12</sup> However, Ludwig and his coworker, Curley Irons, received permission to sell Saran as private contractors.

They produced small rolls with the name Clingwrap and began selling it door-to-door in Midland, MI. Word of mouth spread, and Ludwig and Irons’s product eventually developed a small following in the Western U.S. It was picked up and sold by Safeway grocery stores. The pair was not making much money, though, since it cost them about 90 cents to produce a roll and they sold it for 98. In 1953, they realized that they would have to have Dow take over the marketing, since they “would have to borrow heavily to make further market penetration.”<sup>13</sup> For \$10,000, the duo sold the product back to Dow Chemical.

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<sup>11</sup> Max Key and Gene Perrin, “Saran- A Saga of Innovation” (unpublished manuscript, October 1980), print, ch. 9 p. 1 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>12</sup> Max Key and Gene Perrin, “Saran- A Saga of Innovation” (unpublished manuscript, October 1980), print, ch. 9 p. 2 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>13</sup> Max Key and Gene Perrin, “Saran- A Saga of Innovation” (unpublished manuscript, October 1980), print, ch. 9 p.6 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

Key writes that the fact that Saran Wrap wasn't making any money was not important to Dow. Rather, what had really been accomplished was a "good test market exercise."<sup>14</sup> Ludwig and Irons' marketing showed that customers preferred a 12-inch wide, 50-foot roll, that it sold best in grocery stores and not gift shops, and that a cutting edge on the bottom made the product easier to handle. Furthermore, it showed that there was enough market appeal for a profit to be made. Dow had the resources to produce great quantities of Saran Wrap, cheapening the cost per unit. They could produce rolls for less than 90 cents but still sell them for 98. Armed with this information, Dow was ready to return to the consumer products market once more.

### **Sales & Marketing**

After Dow company bought Saran Wrap in 1953, sales grew, thanks to greater production capabilities and a larger marketing budget. As an article from an advertising publication called *Tide Magazine* explained, "Saran Wrap's story sounds like the sales success story of all time." Just two years after the product "went national," it seemed to be in every American house. It was sold in most major national grocery stores, and the magazine even claimed that three out of every four American families knew about Saran.<sup>15</sup> Much of the product's early success can be attributed to television.

Dow's main ad campaign for the first two years was largely focused on TV, which

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<sup>14</sup> Max Key and Gene Perrin, "Saran- A Saga of Innovation" (unpublished manuscript, October 1980), print, ch 9 p. 6, (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)) The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>15</sup> "The problems behind SARAN WRAP's new marketing moves," *Tide*, February 11, 1956, 17, (Hooker, Millard Box #1, File No. Hooker 0013. Misc. History of Dow Advertising Dept. Medic) The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

was still a fairly new medium for advertisers. The company spent over \$1,000,000 (over \$9 million in 2017) on 1953's TV budget alone. According to Key, Dow was entirely new to television advertising and thought that "for cash on the line, an advertiser could buy most any program desired." Unfortunately for Saran Wrap's representatives, this was not true, and Dow had a hard time acquiring advertising space on shows they felt were appropriate for their market. Executives wanted to sell their product as a miracle of science, and they felt that it should be advertised on a conservative, scientific show.<sup>16</sup> They eventually settled on a new show, a hospital drama called *Medic* that was set to air on NBC in September 1954.<sup>17</sup> Dow president Leland Doan remarked that, "As a chemical company, we are constantly occupied with developing new things or making old things better. This program coincides with our philosophy of progress. It is as worthwhile educationally as it is entertaining dramatically, and we believe it will set a new standard of programing."<sup>18</sup>

It seemed that the barrage of television advertising had a positive effect. Ten months after the introduction of the advertising, Saran Wrap was selling over 3 million boxes a month—compared with just 120,000 in October 1953. In addition to exclusively sponsoring *Medic*, Saran Wrap was also appearing in commercials and on other NBC programs, such as *The Today Show* and *The Kate Smith Show*. According to studies Dow conducted in Ohio, visual demonstration was especially key for the product's success, since it was so new to customers. Furthermore, transparency was a major selling point in the early days, and

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<sup>16</sup> Max Key and Gene Perrin, "Saran- A Saga of Innovation" (unpublished manuscript, October 1980), print, ch. 10 p. 1 (Products Box #9, File No. Products 00319A Saran- A Saga of Innovation (Bolenbaugh files)), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>17</sup> "The problems behind SARAN WRAP's new marketing moves," *Tide*, February 11, 1956, 20 (Hooker, Millard Box #1, File No. Hooker 0013. Misc. History of Dow Advertising Dept. Medic), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>18</sup> "The incredible tv success story of SARAN WRAP," *Sponsor*, September 20, 1954, 34-35.



television allowed viewers to see it for themselves. Actress Carol Brooks appeared in commercials as the “Saran Wrap girl” to attractively demonstrate the use of the material to cover bowls, wrap items, and more. She talked to customers as she wrapped, and in a straight, no-nonsense manner, explained “Just watch how this magic food wrap clings to form a tight and moisture-proof cover that keeps meats fresh and flavorful. And Saran Wrap is crystal clear, you won’t have to search for the sandwich you want. Why, you can even slice tomatoes ahead of time!”<sup>19</sup> Dow was so pleased with the success of their advertising that they renewed their Medic contract for 1954-1955 to the tune of \$2 million dollars.<sup>20</sup>

However, Saran Wrap only seemed a success to those who didn’t know the backstory. TV was reaching more consumers than ever, and Saran had \$12,000,000 worth of sales in 1955. However, the ad budget was \$3,500,000, so Saran Wrap marketing took 25 to 30 cents out of every dollar. According to *Tide* magazine, this would be a “headache” for any marketer, and certainly so for Dow, which was new to the consumer products game.<sup>21</sup> It was clear that something had to change. Since it was a research company, Dow executives decided that the best thing to do would be to conduct research, so they hired a consulting group called Nowland & Co. to conduct a \$34,500 four-month study. They especially wanted the company to “uncover what held back sales [and] to suggest ways to break the bottlenecks.”<sup>22</sup>

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<sup>19</sup> “The incredible tv success story of SARAN WRAP,” *Sponsor*, September 20, 1954, 34-35.

<sup>20</sup> *Ibid.*

<sup>21</sup> “The problems behind SARAN WRAP’s new marketing moves,” *Tide*, February 11, 1956, 17 (Hooker, Millard Box #1, File No. Hooker 0013. Misc. History of Dow Advertising Dept. Medic), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>22</sup> “The problems behind SARAN WRAP’s new marketing moves,” *Tide*, February 11, 1956, 18 (Hooker, Millard Box #1, File No. Hooker 0013. Misc. History of Dow Advertising Dept. Medic), The Dow Chemical Historical Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

## Marketing Studies & Domesticity

The Nowland study was released in October 1955 with the goal of “isolat[ing] and examin[ing] factors which operated to inhibit or facilitate the sale of Saran Wrap, particularly with reference to the consumer as such in her day-to-day use of the product.”<sup>23</sup> It is important to note that, in conducting the study, Nowland & Co. decided that all users of Saran Wrap were female. All of the information presented by them referred to women and their ability or inability to use the product. This is reflective of the ideals of domesticity that were growing ever more important in American society in the post-war period.

As historian Mary Drake McFeely explains in *Can She Bake a Cherry Pie? American Women and the Kitchen in the Twentieth Century*, “the America that moved into the 1950s had emerged from two decades of exceptional circumstances.”<sup>24</sup> Young families idealized suburban plenty and the ‘classic lifestyle’ because it was seen as something that was newly available. The ideal of mother in the kitchen, constantly cooking, was sold to women by “the marketers of domesticity [who] told stories about the good old days of plenty long ago and, like the wicked gnome in a fairy tale, surrounded housewives with temptation in the form of advertisements for brand new appliances and marvelous modern kitchens, instant mashed potatoes and Reddi-Whip.”<sup>25</sup> Saran Wrap was just another stepping stone in the pyramid of ready-made American products.

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<sup>23</sup> Martin V. Marshall, “Case 8: Dow Chemical Company (C),” in *Advertising Management, Text, and Cases*, by Neil Hopper Borden and Martin V. Marshall (Homewood, Illinois: R.D. Irwin, 1959), 565.

<sup>24</sup> Mary Drake McFeely, *Can She Bake a Cherry Pie?: American Women and the Kitchen in the Twentieth Century* (Amherst, Massachusetts: University of Massachusetts, 2001), 89

<sup>25</sup> Ibid.

Such consumerism was often closely tied up with the oft-sought “American dream.” According to some historians, these “messages of consumption” were necessary for “the realization of American capitalist success.”<sup>26</sup> Domesticity and homemaking as an ideal in the late 1940s and early 1950s was therefore closely linked to ideals of American patriotism. Capitalism was the American way of life, which had to be right because of wartime triumph. Saran Wrap, as well as other newly produced kitchenware items, was playing right into these ideals. It came onto the market at an excellent time to market the domestic lifestyle. Yet executives at Dow seemed to be more focused on selling it as a scientific product. While the modernity aspect probably worked well, the marketing study revealed that product placement needed to be targeted more directly to women—and especially certain types of women and users of Saran Wrap.

According to Nowland, there were four main categories of Saran Wrap users: heavy users, light users, former users, and nonusers. Heavy users were found to be “Saran Wrap enthusiasts,” constantly innovating new ways to use the product instead of old materials. On the other hand, light users were likely to only use Saran Wrap in the ways it had been advertised—for instance, they might use it to cover a bowl, but they wouldn’t use it to wrap vegetables or sandwiches to keep them fresh. Therefore, the product needed to focus on expanding its base to these less innovative light users.

Nowland had quite a bit to say about what Saran Wrap use meant about the personality of a woman. If she was a heavy user of Saran Wrap, then she was probably an excellent cook who took pride in the kitchen. The report claimed that “This is the type of person for whom cooking is a rewarding experience and not a necessary chore in running her

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<sup>26</sup> Victor J. Viser, “Winning the Peace: American Planning for a Profitable Post-War World,” *Journal of American Studies* 35, no. 1 (April 2001): 116.

house . . . The kitchen is one place in the home where this kind of woman has an opportunity to express her creativity and to be rewarded for it by husband and family.” In this kind of explanation, the valuation of domesticity as the best way for a woman to be “ideal” is clear. As McFeely explains, a woman would be seen as the most successful if she pleased “husband, children, and friends. It demanded skill . . . but the results were supposed to look effortless.”<sup>27</sup> Premade foods neatly covered in Saran Wrap and quickly popped in the oven or refrigerator before serving certainly fulfilled this stereotype. Saran Wrap was seen as saving foods and keeping them ready. However, the wastefulness or disposability of the product was not seen as part of this idealized image, just as effort was not seen to be part of the life of the perfect housewife.

On the other hand, women who did not enjoy using Saran Wrap were thought to be inferior cooks. Their dislike of Saran Wrap was not because of deficiencies with the product, but because of deficiencies in their own cooking skills. Nowland theorized that since such women did not like the kitchen, they would “displace [their] negativism onto anything which is associated with it.”<sup>28</sup> Light users were especially likely to have issues with the handling and dispensing of Saran Wrap. However, there was no evidence that they were less dexterous than heavy users. More likely, they were just more bothered by these minor inconsistencies. Nowland observed that “The housewife’s appreciation of the versatility of Saran Wrap determines the difficulty she thinks she has with the handling-dispensing problem.”<sup>29</sup> A

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<sup>27</sup> Martin V. Marshall, “Case 8: Dow Chemical Company (C),” in *Advertising Management, Text, and Cases*, by Neil Hopper Borden and Martin V. Marshall (Homewood, Illinois: R.D. Irwin, 1959), 567.

<sup>28</sup> Martin V. Marshall, “Case 8: Dow Chemical Company (C),” in *Advertising Management, Text, and Cases*, by Neil Hopper Borden and Martin V. Marshall (Homewood, Illinois: R.D. Irwin, 1959), 570.

<sup>29</sup> Martin V. Marshall, “Case 8: Dow Chemical Company (C),” in *Advertising Management, Text, and Cases*, by Neil Hopper Borden and Martin V. Marshall (Homewood, Illinois: R.D. Irwin, 1959), 574.

woman who struggled to handle Saran Wrap was committing a major crime in the kitchen: her effort was visible.

The study noted two major issues with the product: the “cookery-motive,” or its use in the kitchen, and the “efficiency-motive,” or the troubles with handling as mentioned above.<sup>30</sup> Since Nowland had conceptualized the idea that Saran Wrap’s marketing problems were with the people using it, and not the product itself, the next step for Dow was to change its advertising and marketing.

Much of the advertising to date had focused on “kitchen wrapping language” as well as the abstract properties of the wrap (cling and transparency). According to Nowland, this meant nothing for the average housewife. It didn’t allow her to “grasp the logical implications of these characteristics, and therefore she does not relate them to herself and her own needs and problems.”<sup>31</sup> Instead, Dow should focus on promoting specific uses for the wrap, giving reasons for the use. This would enable the “transparency, cling, simplification etc. . . . [to] speak for themselves.”<sup>32</sup>

The most noteworthy factor listed here is simplification. Simplicity was an important part of domesticity in this time period. The “packaged” domestic life, as described by Mary Drake McFeely, meant that special value was placed on commodities that simplified a mother’s role<sup>33</sup>. Saran Wrap enabled the illusion of neatness, modernity, organization and antiseptic hygiene—simply by covering her leftovers, a mother’s social ‘value’ and kitchen

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<sup>30</sup> Martin V. Marshall, “Case 8: Dow Chemical Company (C),” in *Advertising Management, Text, and Cases*, by Neil Hopper Borden and Martin V. Marshall (Homewood, Illinois: R.D. Irwin, 1959), 577.

<sup>31</sup> Martin V. Marshall, “Case 8: Dow Chemical Company (C),” in *Advertising Management, Text, and Cases*, by Neil Hopper Borden and Martin V. Marshall (Homewood, Illinois: R.D. Irwin, 1959), 577.

<sup>32</sup> Martin V. Marshall, “Case 8: Dow Chemical Company (C),” in *Advertising Management, Text, and Cases*, by Neil Hopper Borden and Martin V. Marshall (Homewood, Illinois: R.D. Irwin, 1959), 578.

<sup>33</sup> Mary Drake McFeely, *Can She Bake a Cherry Pie?: American Women and the Kitchen in the Twentieth Century* (Amherst, Massachusetts: University of Massachusetts, 2001), 106.

efficiency could increase. Much like that of its reusable competitor, Tupperware, Saran Wrap marketing and advertising attempted to create an ideal of the “everywoman” as a household manager. Such ideas centers around the goal of creating “exceptionally designed, great-looking products that make everyday living easier.” For this everywoman, everyday living involved “managing a budget, planning and cooking nutritious and delicious meals, keeping the house in order, attending to the needs of her husband and children, and maintaining social networks.”<sup>34</sup>

### **Changes in Advertising**

It comes as no surprise, then, that Nowland encouraged Dow’s new marketing campaign to center on Saran Wrap’s specific value as a household necessity. The conclusion offered 16 recommendations. Although it is not necessary to elaborate on all of them within this context, it is worth noting that they included the importance of promoting Saran Wrap as a “household staple,” explicitly demonstrating “the ability of Saran Wrap to preserve that which it is protecting,” connecting the product to non-kitchen uses, and minimizing the effect of the housewife’s natural cost-consciousness.<sup>35</sup> These techniques can be seen in Dow’s ads from 1955 and after.

For instance, a 1955 ad with the headline “Saran Wrap: For all kinds of uses all through the house!” had two columns, one for the kitchen and one for the rest of the house. On the kitchen side, a pair of attractively manicured hands wrapped a ham and an all-American apple pie for efficient freezing. In the rest of the house, Saran Wrap covered silver

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<sup>34</sup> Susan Vincent, “Preserving Domesticity: Reading Tupperware in Women’s Changing Domestic, Social, and Economic Roles,” *Canadian Review of Sociology and Anthropology* 40, no. 2 (May 2003): 180-181.

<sup>35</sup> Martin V. Marshall, “Case 8: Dow Chemical Company (C),” in *Advertising Management, Text, and Cases*, by Neil Hopper Borden and Martin V. Marshall (Homewood, Illinois: R.D. Irwin, 1959), 581.

(to prevent it from tarnishing), shoes (to keep clothes clean when packing), and paintbrushes (to prevent the spread of mess).<sup>36</sup> In all cases, Saran Wrap was seen as a hygienic covering that kept things neat and clean, the way they were supposed to. In another ad, this one from 1959, Saran Wrap was touted as the ‘saver’ of a number of different potentially troubling situations. The tagline was “Nothing saves like Saran Wrap,” and there were brief descriptions of how the product saves trouble, time, worry, flavor, freshness, and moisture. Ultimately, it was disclosed, Saran wrap “saves everything.”<sup>37</sup> It’s important to note that because it is disposable, Saran Wrap doesn’t save everything. It saves everything but itself. The irony in this tagline has gone largely unrecognized.

Nowland’s influence on advertising can clearly be seen in a set of two Saran Wrap ads themed around a picnic, one from 1955 and one from 1956. Both are about how using the product will make it easier to have a picnic. The earlier ad describes some of the uses of Saran Wrap, including “Lets you pack so many different foods” and “keeps foods fresh so long.” However, most of the page is dominated by a picture, and the foods shown aren’t actually wrapped. Rather, the clear Saran film is held in front of the products.<sup>38</sup>

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<sup>36</sup> “Get two! One for the kitchen, one for the rest of the house” (advertisement), 1956(Box 10, Folder 1956 vol 2 Saran Wrap ads), The Dow Chemical Advertising Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>37</sup> “Nothing saves like Saran Wrap,” (advertisement) 1959, (Box 9), The Dow Chemical Advertising Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

<sup>38</sup> “Wrap it in SARAN WRAP” (advertisement), 1955 (Box 9), The Dow Chemical Advertising Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.



Fig. 6, 1955 advertisement. Author's own image, item "Wrap it in SARAN WRAP" (advertisement), 1955 (Box 9), The Dow Chemical Advertising Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

In contrast, the 1956 ad shows watermelon, onions, and pie wrapped or being wrapped. Following Nowland's advice, technique is demonstrated, and there are separate blurbs describing uses of the wrap. Featured bullets include "No last minute rush," "No odor trouble," and "No lost freshness."<sup>39</sup> As advised, the company was playing up the specific importance of using Saran Wrap, as well as the product's simplicity and modernity. The advertisement told housewives that Saran Wrap would help them to achieve the domestic ideal of perfection without mess. It is a neatening product that minimizes food waste, yet by virtue of being a disposable, it creates waste when it is thrown out.

<sup>39</sup> "Make your picnics easier with Saran Wrap," (advertisement), 1956, (Box 9), The Dow Chemical Advertising Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.





Fig. 7, 1956 advertisement. Author's own image, item "Make your picnics easier with Saran Wrap," (advertisement), 1956, (Box 9), The Dow Chemical Advertising Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

## Impacts

Saran was the first product to officially launch Dow into the consumer market. By 1994, though, Dow's retail side had grown to a \$930 billion dollar industry. The company sold 11 products, including Ziploc bags, Yes detergent, and Saran Wrap.<sup>40</sup> In 1997, a number of these products were sold to SC Johnson.<sup>41</sup> Today, most of Dow's products are produced for industry, rather than directly for consumer use. However, Dow commodities are used to make many common items, including shampoo and conditioner, laundry detergent, and

<sup>40</sup> Doug Henze, "Dow's plastic wrap celebrates 40<sup>th</sup> birthday," *Midland Daily News*, reprinted in *Ludington Daily News*, March 5, 1994.

<sup>41</sup> "Dow sells consumer unit," *CNNMoney*, October 28, 1997. <http://money.cnn.com/1997/10/28/deals/dowbrands/>

capsule coating on pills.<sup>42</sup> And Saran Wrap was the product that launched this thriving market.

Despite Saran Wrap's successful ubiquity, it was never much critiqued in the public eye. Unlike Dixie Cups or polystyrene clamshells, Saran Wrap's disposability has never been addressed in popular media. For a number of reasons, it has not been lauded or condemned for its disposability.

Parallels can be drawn between Saran Wrap and Dixie Cups. Like the Dixie Cup, Saran Wrap has certain properties that can be perceived as antiseptic. It saves food from mold and spoiling, thus minimizing the spread of disease. Advertisements pointed out that it was moisture-sealed and limited "odor trading."<sup>43</sup> As with Dixie, Saran Wrap was closely tied to the oral spread of germs and the consumption of food. By the time it became popular, though, the use of germs to advertise a product had fallen out of vogue. The closest that Saran's advertisers got to touting its hygienic qualities was emphasizing that it kept leftovers fresh for longer. Odor also figured prominently in 1960s advertising campaigns, although it's not clear if bad odors were being connected to the health and safety of certain food consumption. It seems that Saran Wrap was not particularly valued for its disposability—although it had many assets, being a single-use product was not especially important.

Saran Wrap was not despised for disposability, either. Throughout its history of use, Saran Wrap appears to have garnered very little, if any, environmental backlash. There was the occasional note—for example, a 1995 article from the *New York Times* profiled Jean Wentworth, a self-professed extreme environmentalist, in a piece called "One Who Tries to

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<sup>42</sup> "Dow Businesses in Consumer," Dow, 2017. <http://www.dow.com/en-us/markets-and-solutions/consumer>

<sup>43</sup> "Nothing saves like Saran Wrap" (advertisement), 1959 (Box 9), The Dow Chemical Advertising Collection, The Donald F. and Mildred Topp Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.

Recycle Everything.” But Ms. Wentworth was treated like an outlier or anomaly. Her habit of reusing Saran Wrap was presented as a curiosity, not something that other people ought to be doing.<sup>44</sup> Other newspaper sources that expressed environmental concern with Saran Wrap are more recent. For instance, in the late 2000s, a syndicated column reported that Saran Wrap was related to the production of dioxin, and in 2005, another piece explained that it has been connected to other potentially harmful chemicals like DEHA.<sup>45</sup> However, there was no mass media campaign against Saran Wrap, and it was not maligned like polystyrene.<sup>46</sup>

It may be noted that polystyrene was heavily attacked because of volume. Despite its actual environmental impacts, landfill space was perceived as the most troubling aspect of its disposability. Polystyrene is not easily recyclable, and although Saran Wrap is not either, only the clamshells seem to take up massive amounts of space and air in limited landfills. Therefore, it seems reasonable that Saran Wrap escaped notice because of its compactness. Perception is key here. Saran Wrap is perceived as being a minor contributor to landfill space usage, and polystyrene is thought to be a large contributor. However, as a *New York Times* article from 1992 pointed out, “expanded polystyrene foam accounted for less than one percent of the volume of garbage dumped in landfills between 1980 and 1989.”<sup>47</sup> It is clear that perceptions of space matter more than actual space used. While this is almost certainly a major factor, it cannot be used as the sole explanation. One must consider the environmental impact of other compact plastics, such as the oft-maligned plastic grocery bag.

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<sup>44</sup> D. G., “One who tries to recycle everything,” *The New York Times*, Jun 11, 1995.

<sup>45</sup> Glenn Ellis, “Dioxin and health,” *Chicago Defender*, June 2006. Elizabeth Jardina and Douglas Fischer, “Products can be exposure source, but there are things you can do,” *Oakland Tribune*, March 11, 2005.

<sup>46</sup> Searches performed: Proquest Historical Database, March 29, 2017; “saran wrap environment,” “saran wrap wasteful,” “saran wrap bad”; some results turn up but not to the same extent as polystyrene. Furthermore, results are spread over time periods. See “Experts vary on using plastic wrap,” *Telegrams and Gazette*, May 2, 1991, “Chemical Trespass: The Verdict on Dow,” *Multinational Monitor* 25, no. 4 (November 2004), “Dear Earthtalk,” *Earth Talk*, July 11, 2010.

<sup>47</sup> Witold Rybczynski, “We Are What We Throw Away,” *The New York Times*, July 5, 1992.

The t-shirt bag, so known because of its shape, was invented in 1962 and introduced to the United States in 1976. Like Saran Wrap, it was replacing a pre-existing disposable object; in this case, paper bags. By the late 1980s, plastic bag use had caught up to paper in American grocery stores.<sup>48</sup> However, consumers had already taken issue. In the mid-1980s, tales of sea animals eating plastic bags and dying were already circulating, and by 1986, the 500,000-member General Federation of Women's Clubs was motivated by the plight of such animals to take up a campaign against plastic grocery bags. The same year, an article in the *Los Angeles Times* remarked that “many consumers [sic] groups, who have had little luck marshaling support against such items as plastic garbage bags, Styrofoam egg cartons and plastic milk containers, have found that grocery bags is an issue that can galvanize us all.”<sup>49</sup> It is clear that there was some sort of public consensus that plastic bags were an acceptable environmental ‘bad’ to rally against, even if the other items listed were not.

Like polystyrene, plastic bags drew widespread attention for their visibility. Although they don't take up much landfill space, they are an extremely obvious reminder of consumer society. Plastic bags can be seen everywhere—caught in trees, drifting along the ground, and floating in the ocean. Journalist Edward Humes, author of *Garbology: Our Dirty Love Affair with Trash*, notes that the “relatively small weight masks plastic bags’ enormous impact.” Many bags go astray, he explains, landing on beaches and littering otherwise pristine areas of nature. Plastic bags were the “second most common item of trash found on beaches during 2009’s International Coastal Cleanup Day.”<sup>50</sup> Furthermore, plastic bags have had a negative association with beaches and marine wildlife since at least the 1980s. It is not landfill space

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<sup>48</sup> Janet Larsen and Savina Venkova, “Plastic Bag Bans Spreading in the United States,” Plan B Updates, *Earth Policy Institute*, April 22, 2014. [http://www.earth-policy.org/plan\\_b\\_updates/2013/update122#Timeline](http://www.earth-policy.org/plan_b_updates/2013/update122#Timeline)

<sup>49</sup> Jube J. Shiver, “Supermarket Dilemma,” *Los Angeles Times*, Jun 13, 1986.

<sup>50</sup> Edward Humes, *Garbology: Our Dirty Love Affair with Trash* (New York City: Avery, 2013), 174.

that is just the issue with environmentally contested items. Visibility plays an extremely important role.

Unlike polystyrene, Saran Wrap is not bulky; it's not perceived as adding space to landfills. And unlike plastic bags, it's not visible everywhere. It's thin plastic, but it compacts into itself and doesn't catch the wind, meaning it's less likely to escape from landfills and garbage cans. Therefore, it's unlikely that Saran Wrap will ever be considered a bad product due to visibility or unjust use of space.

Saran Wrap is not entirely exempt from environmental critique. In the early 1980s, Dow Chemical was subject to a 'dioxin scare' after the material was found to be leaching into the Tittabawasee and Saginaw rivers. Dioxin was especially well known and feared by the environmentally-minded public thanks to its role as an ingredient in Agent Orange, the controversial defoliant used in Vietnam during the war. Due to a well-publicized lawsuit, it was fairly common knowledge that Dow was the largest producer of Agent Orange.<sup>51</sup> This meant that Dow already had a negative environmental image. The company dealt with some especially bad press after the news broke that they were leaking chemicals in Michigan, with one EPA spokesman remarking, "How do you spell dioxin? Some people spell it D-O-W."<sup>52</sup> However, connections to Saran Wrap were scarce. Despite the fact that Saran wrap, like polystyrene, contains dioxin and uses it in production, searches of historical newspapers and magazines turned up nothing explicitly connecting the two until the mid-2000s.<sup>53</sup>

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<sup>51</sup> Paul Blustein, "Poisoned Image," *The Wall Street Journal* Jun 28, 1983.

<sup>52</sup> Ibid.

<sup>53</sup> Searches performed: Proquest Historical Database, March 29, 2017; "saran wrap dioxin," "plastic wrap dioxins." See Glenn Ellis, "Dioxin and health," *Chicago Defender*, June 2006; Gregory D. Kesich, "Buyers urged to avoid 'poison plastics'; Widely used polyvinyl chloride emits toxins when burned, and in Maine, most of towns' trash is burned," *Portland Press Herald*, Dec 8, 2004; Phil Mulkins, "More microwave myths busted; one can pose leaching problem," *Tribune Business News*, September 4, 2006; and Webb, Iris, "Be careful using plastic in the microwave; Wrap, containers must be oven-safe," *Times—Picayune*, January 2005.

Furthermore, this critique exists today, but is limited, and has not impacted sales of Saran Wrap to the extent that environmental backlash affected polystyrene. Concerns about space may be more accessible to the layman than concerns about dioxins and toxicity, which require some degree of scientific literacy.

Finally, it is important to note that the limited adverse reaction to Saran Wrap's disposability may be related to the time at which it was invented. When the product was new, it was not en vogue to market something because it would prevent the spread of disease. Even though this is feasible for Saran Wrap, since it prevents food from spoiling, it has never been an explicit part of the brand's advertising. Furthermore, there was not a vivid anti-waste movement until the 1980s. The general public was simply not aware that landfill space was a concern. Therefore, Saran Wrap may have been spared by its newness in a period where waste-based environmental concerns were not tantamount. By the time that the issue arose, Saran Wrap was an old product to which no one was paying special interest, and it was able to fly under the radar.

As explained thus far, there were a number of reasons which impacted the perception—or lack thereof—of Saran Wrap's disposability. Despite evidence that the disposability of single-use products is often considered, there seems to be little to no public awareness of the role of disposability and waste in connection to this product.

## Conclusion

In March 2017, I conducted an informal survey. I asked about 30 of my Facebook friends: which of these three products do you think is the worst for the environment? And why?<sup>1</sup> This is obviously not a representative sample. All of them were undergraduates at the University of Michigan, and the sample size of the group is very small. However, most of the respondents—roughly 73%-- indicated that polystyrene was the worst.<sup>2</sup> The purpose of this survey was not to conclude which product is actually the worst; that is a subjective determination. What I am most interested in is the reasons why polystyrene was chosen. Of the 27 people who chose polystyrene, the most common remarks were centered around volume and biodegradability. People who chose volume were most concerned that it would take up too much space in landfills, which was a common anxiety when the clamshell containers were around. However, three times as many people indicated that they felt that polystyrene was not biodegradable. A common worry was that it would ‘last forever’ in the earth, or that people had “heard” that polystyrene does not decompose.

No one explicitly addressed why they felt biodegradability is an issue, but on its own it was enough reason to distrust a product. Like the volume of clamshells, people feel that something has a negative impact—even if it may not be true. William Rathje’s research in landfills in the 1990s actually indicated that most plastics and even foods do not biodegrade well under these conditions. Edward Humes synthesized Rathje’s research in his book *Garbology*, writing “Garbage does not decompose inside landfills as most people, including sanitation experts, believed. A well-maintained, airtight, dry sanitary landfill was more like a

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<sup>1</sup> A three question, online survey conducted from March 13<sup>th</sup>, 2017 to March 19<sup>th</sup>, 2017. There are 35 responses. Questions are noted in the appendix.

<sup>2</sup> Since most of my classmates are not familiar with clamshell containers, I allowed them to select polystyrene in general.

mummifier of trash than a decomposer of trash . . . Steaks and hot dogs came up intact after decades.”<sup>3</sup> The fact that biodegradability in landfills does not always occur as expected is referenced in more recent publications as well.<sup>4</sup> From the limited sample I surveyed, it appears that this information has not made it into the public consciousness. Like the issues with the volume of clamshell containers, as discussed in Chapter 2, some of the common concerns today are not entirely based in fact.

Attitudes about disposability are influenced by a number of factors, and not all of them are predictable. This thesis has highlighted some key issues. Chapter 1, Dixie Cups, showed that there has historically been a strong connection between disposability and health. If an item can be linked to improved health, its disposability may become a valuable selling point. In the case of Dixie Cups, a successful public health campaign meant that they came to be seen as culturally superior to the old-fashioned communal cup. This is also true of other products, such as sanitary napkins, which were sold to women as a modernizing product that meant they no longer had to deal with the waste and filth of washing out blood-filled fabrics.<sup>5</sup>

Another key factor in attitudes about disposability is environmentalism. In many cases, environmentalism shapes most or all of the discourse about a product’s disposability, such as polystyrene clamshells, as illustrated in Chapter 2. Although McDonald’s claimed that polystyrene was a superior product, the scale of the backlash against it meant they ultimately forced a change. It is especially notable that McDonald’s insisted that they

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<sup>3</sup> Edward Humes, *Garbology: Our Dirty Love Affair with Trash* (New York City: Avery, 2013), 174.

<sup>4</sup> See Sampurna Datta and Lauren Eastes, “Biodegradation in Municipal Solid Waste Landfills,” *Geoengineer*, 2015. <http://www.geoengineer.org/education/web-based-class-projects/geoenvironmental-engineering/biodegradation-in-municipal-solid-waste-landfills?showall=1&limitstart=> and Ross Headifen, “Landfill Space Costs a Premium,” *Plastic Waste Solutions*, n.d. <http://plasticwastesolutions.com/biodegradability-landfills/>

<sup>5</sup> Sharra Vostral, *Under Wraps: A History of Menstrual Hygiene Technology* (Lanham, MD: Lexington Books, 2008), 65.



remained committed to the product until the very end of its use. The abrupt switch is all the more indicative of that fact that consumer complaints were the only real reason the company pulled polystyrene. Environmental issues have influenced the discourse surrounding a number of other products, such as plastic bags, disposable diapers, and water bottles. Diapers especially were subject to their own public outcry in the 1990s; they suffered an environmental backlash much like that of polystyrene. People were afraid that they were taking up too much space in landfills. Rathje noted that this was especially likely because they were often isolated from other trash; they were confined in a “large, lumpy, *heavy* bag of their own, whose exterior bulges reflect the distinct identity of the diapers therein.”<sup>6</sup> His research proved, however, that diapers take up less than two percent of landfill space, both by weight and by volume.<sup>7</sup> As with plastic bags, diapers were simply too visible for their own good.

Although it may seem this way, environmentalism does not always cast a negative light on a product’s disposability. For instance, compostable products, such as some paper napkins, are generally lauded for their disposability. Newspaper articles from *Marketing Weekly News* and Wisconsin’s *The Post-Crescent* in 2013 celebrated a particular brand, Xpressnap, whose napkin dispenser and “100-percent recycled and certified compostable napkins have saved billions of napkins worldwide by dispensing only one napkin at a time.”<sup>8</sup> Furthermore, in many cases, other frameworks take precedent over environmentalism. Dixie Cups are a great example of this. Additionally, as mentioned earlier, disposable products for

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<sup>6</sup> William Rathje, *Rubbish! The Archaeology of Garbage* (Tucson: University of Arizona Press, 2001), 152.

<sup>7</sup> William Rathje, *Rubbish! The Archaeology of Garbage* (Tucson: University of Arizona Press, 2001), 162.

<sup>8</sup> "SCA Celebrates 10-Year Anniversary of Tork Xpressnap, Revolutionizing Foodservice One Napkin at a Time," *Marketing Weekly News*, Dec 7, 2013, 198. "SCA's Tork Commemorates Xpressnap," *The Post-Crescent*, July 3, 2013.

feminine hygiene have historically been lauded for technological advancement in reducing the amount of contamination and blood their users must deal with, as opposed to being indicted for wastefulness.<sup>9</sup> Therefore, it cannot definitively be stated that environmentalist concerns—or any other factor—will determine how positively or negatively a product is perceived.

Other elements that influence how disposability is perceived include gender, consumerism, convenience, and modernity. These points are touched on to a lesser extent in my product case studies—for instance, Dixie Cups were linked to the health of children and schools, which fell under women’s domain. However, since many public health reformers were women, this gendered aspect served to reinforce the health aspect of this particular product. Convenience was important to McDonald’s and the manufacturers of polystyrene clamshells, while modernity also influenced the shift to Dixie Cups. It is important to note that this is not an exhaustive list of factors.

Each of my first two chapters indicate that there are different considerations that strongly influence the positive or negative perception of a product. The third chapter, Saran Wrap, illustrates that these factors can exist and still fail to illuminate a standpoint regarding disposability. Saran Wrap’s disposability is not a contested or valuable point. Being disposable does not make it bad or good. It is rarely considered when the product is discussed; and it is not a key part of marketing campaigns. This is especially important because it illustrates that disposability does not always have to be a moral factor. Disposable products do not always create benefits or cause harm; they may simply exist. Rathje wrote that some kinds of garbage are invisible. They pass through the public eye unperceived. It is

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<sup>9</sup> Sharra Vostral, *Under Wraps: A History of Menstrual Hygiene Technology* (Lanham, MD: Lexington Books, 2008), 61.

clear that this concept may apply to some disposables, and it may not apply to others. The reasons why are not always entirely straightforward; they are varied and broad, and depend on society, media, and culture.

What this means is that consumers must strive to understand the truth. One of my survey respondents, when asked why they selected polystyrene as the worst for the environment, remarked that they had seen “all those ads about how long it takes [containers] to decompose and everything.” Even today, people are getting information about disposable products from word of mouth and disseminated media. This thesis has clearly illuminated that the mechanisms which assign ‘good’ or ‘bad’ values to single-use disposable products have been subjective, are subjective, and will continue to be subjective. It may be possible to objectively measure the effects of a certain product, but it is inherently subjective to determine whether the benefits and harms are worth the product’s use. It is up to individuals to consider how this valuation influences product use, and what this determination means about consumption and disposability.

## Appendix

### Survey Questions

1. Of the following 3 products, which if any do you most associate with being bad for the environment? And why? Dixie Cups, polystyrene (Styrofoam), and Saran Wrap.
2. Which if any of these products would you prefer to replace with a reusable product? If you would, why? Dixie Cups, polystyrene hamburger containers (Styrofoam containers for a Big Mac, for example), Saran Wrap.
3. Which if any of these products would you not want to replace with a reusable product and why? Same products as #2.

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