Century-old origins of our contemporary food debates

Matthew Booker
North Carolina State University

The scene: A celebratory meal on an autumn evening. Toasts, laughter, traditional foods to welcome new members to the fraternity. In October of 1894, fraternities and sororities sat down to their annual pledge dinners at Wesleyan College in Middletown, Connecticut. Within days, twenty-three fraternity brothers became ill with typhoid fever, and after suffering terribly four died. Public health officials in Connecticut, New Jersey, and elsewhere definitively linked the raw oysters served at the dinners to an outbreak of typhoid fever.[1]

Typhoid fever is long gone from the memory of most Americans, though elsewhere it continues to kill a million people per year, mostly children. Forgetting can be a blessing. A French physician recalled losing his newlywed wife to typhoid:

> Shellfish and typhoid fever? It is the memory of atrocious suffering, of interminable nights without sleep, of the most painful fever and agitation, of nervous problems which make patients feel themselves odious to loved ones. And then it lasts so long, the convalescence is so prolonged, it seems as if health will never completely return. And it is the memory of the death of a much-loved being… so robust, so healthy before ingesting the fatal repast… And it was such a jolly dinner at which those shellfish were served…[2]

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[1] H. W. Conn, "The Outbreak of Typhoid Fever at Wesleyan University," in Connecticut Board of Health, *Seventeenth Annual Report of the State Board of Health of the State of Connecticut, 1893*

[2] V.M.Belin, *Coquillage Set la Fièvre Ostréo-Typhoide. Un Point d'Histoire Contemporaine* (Paris: Presses Universitaires de France, 1934), 7, quoted in Anne Hardy, "Exorcizing Molly Malone: Typhoid and Shellfish Consumption in Urban Britain, 1860-1960," *History Workshop Journal* 55 (2003), 72-88.

The Wesleyan case came in the midst of a crushing economic depression. 1894 is otherwise memorable for strikes, brutal crackdowns and a growing fear of open class warfare. Yet at a time when fewer than 5% of 18 year-olds attended university, Wesleyan's elite children should have been insulated from the economic crisis and violence. The illness that struck down these wealthy elites in their homes belied that safety and connected the students and their families to the sufferings of millions of Americans in an age of disease. As with millions of others who sickened and died in the United States that year, the food the brothers ate exposed them to danger.

The Wesleyan typhoid outbreak was one of many tragedies that contributed to popular demands for regulation of food at the turn of the twentieth century. Congress considered and rejected more than 100 food bills between 1879 and 1905. These demands culminated in the passage of the Pure Food and Drug Act of 1906. The act, with the companion meat inspection bill passed on the same day established the first comprehensive legislation governing food and drug safety in American history. The Pure Food and Drug, with updates in the 1920s, 1930s and 1970s, remains the basis for all food and drug regulation in the United States today. The initial act placed responsibility for food safety in the hands of the U.S. Department of Agriculture (USDA), and later modifications created and placed responsibility for food and drug safety in the Food and Drug Administration (FDA) and oversight of environmental threats to health in the Environmental Protection Agency (EPA). This triumvirate today inspect fresh

produce and meat, approve new drugs for human and animal use, and set standards for pesticides and factory emissions. Together, they are responsible for assuring the safety of every aspect of food safety from meat freshness to genetically modified crops.[3]

That brief version of the 1906 acts is familiar to generations of lawyers, food activists, and companies seeking the blessing of federal regulators. Depending on their fate in the process, the longevity of this basic framework is either an example of its remarkable flexibility and adaptability, or a consequence of Congress' failure to update the regulatory system for newer problems. Proponents of the latter view point to a fateful Reagan Administration decision not to request a new agency or regulatory agreement in the face of unprecedented decision how to regulate crops and drugs created by new techniques of genetic engineering. How to address a new era in which the value lies not in the product but the process? How to regulate a scramble for intellectual property which now dominates patent applications? How to ensure the safety of materials we put into our bodies created in labs and factories as much as fields? These debates over the broad categories of biotechnology, genetically modified organisms (GMOs), synthetic biology and personalized

[3] Jennifer Kuzma, Pouya Najmaie and Joel Larson, "Evaluating Oversight Systems for Emerging Technologies: A Case Study of Genetically Engineered Organisms," *Journal of Law, Medicine and Ethics* (Winter 2009), 546-586.

medicine challenge the basic division into crops and livestock (USDA), food and drugs (FDA) and environment (EPA).[4]

Faced with contemporary debates over food safety and a longstanding regulatory framework, lawyers and policymakers often divorce the 1906 acts from their context. Their interest in the past is largely driven by how it restrains or enables actors in the present. The trouble with this approach is that ignores the initial motivations for regulatory action. The past becomes a flat landscape featuring cartoon characters whose complicated reasons and contradictions disappear. That is a mistake because those contradictions are built into the laws and institutions previous generations left behind.[5]

In this paper I want to take a small bite out of that full plate by returning to Connecticut in 1894. How did this episode and dozens like it in the late 19th century change assumptions about responsibility for food safety? What did Americans at that time see as dangerous, and what therefore the solution? And finally, how did those concerns and solutions shape the anxieties of our own time?

I am particularly interested in fear. Yi Fu-Tuan divides fear into two components: Alarm, and anxiety.

> Alarm is triggered by an unobtrusive event in the environment, and the animal's instinctive response is to combat it or run. Anxiety on the other hand is a diffuse sense of dread and presupposes the opportunity to anticipate. It commonly occurs when an animal is in a strange and disorienting milieu, separated from the supporting objects and figures of its

[4] Peter Barton Hutt and Richard A. Merrill, *Food and Drug Law: Cases and Materials*, 2nd ed. (New York: Foundation Press, 1991).
[5] For an example of the careful, but instrumentalist legal literature, see Hutt and Merrill, *ibid.*

> home ground. Anxiety is a presentiment of danger when nothing in the immediate surroundings can be pinpointed as dangerous. The need for decisive action is checked by the lack of any specific, circumventable threat.[6]

Tuan's description of fear aptly describes the terrifying, glorious conjunction of urbanization, industrialization and migration in the late 19th century United States, a kind of second Columbian Exchange that brought together ancient human plagues like cholera and typhoid with populations from all over the world in a new kind of living space, the industrial city. Between 1870 and 1930 U.S. population grew by 83 million people, of whom 23 million were immigrants. During the same period, the percentage of Americans living in cities rose from 26% in 1870 to 56% in 1930. Those identified as farmers dropped from 53% in 1870 to just 22% in 1930. To put this revolution most starkly: In the course of a single lifetime, an nation of farmers became a nation dominated by industrial, often-immigrant urban workers.[7]

US population and % increase from previous decade (rounded)

Year	Population	% Increase	% Farmers
1870	39,818,000	27	53
1880	50,156,000	26	52
1890	62,948,000	26	42
1900	75,995,000	21	40
1910	91,972,000	21	31
1920	105,711,000	15	26
1930	122,775,000	16	22
2010	308,746,000	10	2

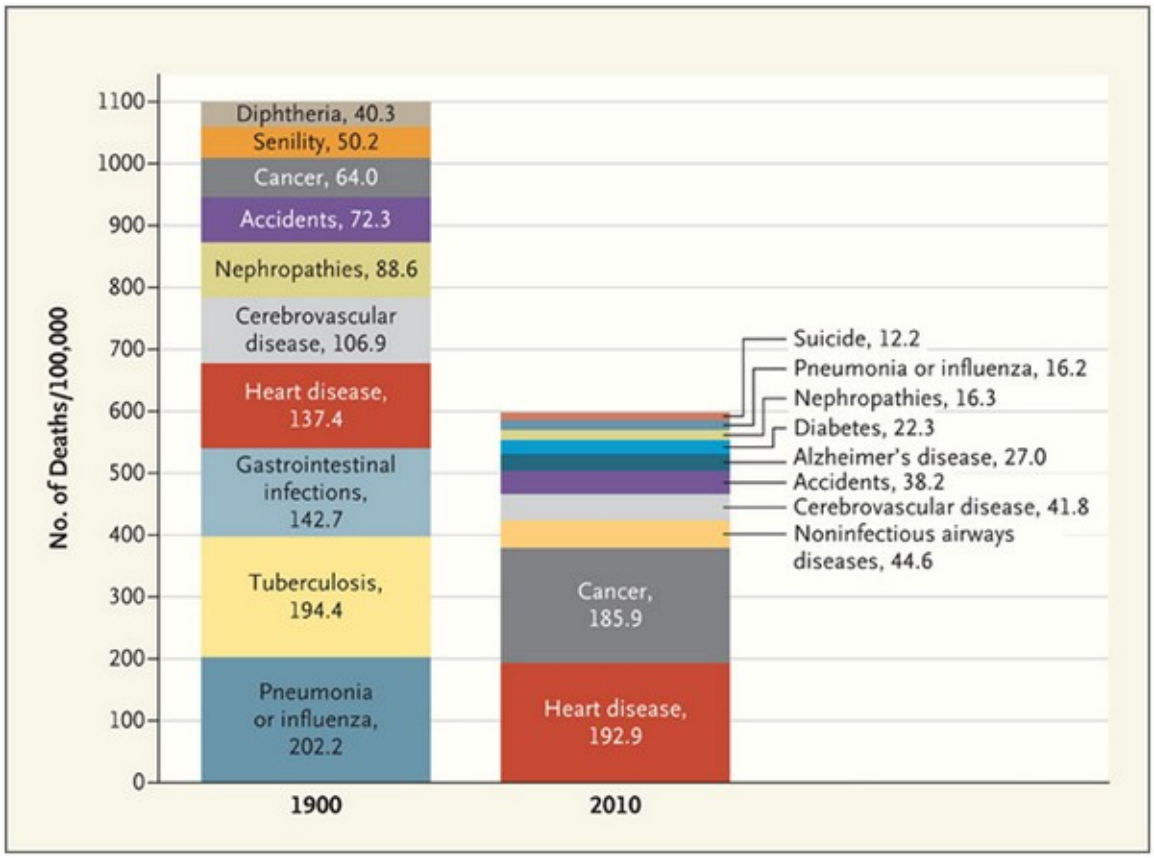
[6] Yi Fu-Tuan, *Landscapes of Fear* (New York: Pantheon Books, 1979), 5. See also Alison Blay-Palmer, *Food Fears: From Industrial to Sustainable Food Systems* (Hampshire: Ashgate Publishing, 2008), 4-7.
[7] U.S. Census Bureau.

Such fundamental change, so quickly, had a raft of consequences that a century later, historians have barely begun to write about this most important and consequential period in American history.[8] One theme of many of those histories is the anxiety felt by contemporaries. This is the age of fear: of scarcity (timber famine, currency shortages); of childhood suffering (infant mortality, the nurturing family); of world war; of natural catastrophe (dust bowls, floods, fires, the great earthquake); of confidence men and sharpers; of corporate monopoly power; of drugs and alcohol; of foreign ideas and terrorism; and of political corruption. But all these fears, the one most visceral and yet perhaps hardest to appreciate today is disease. 1870-1930 could be called the Age of Diarrhea.

Scholars know that the reuniting of the separated families of mankind via the Columbian Exchange unleashed a firestorm of disease on the indigenous peoples of the Americas. Asians, Africans and Europeans through long contact with domesticated species and with one another had developed partial immunity and resistance to highly contagious diseases like smallpox, influenza, and measles. When those diseases traveled to the Americas with traders, colonists and slaves, they burned through native populations leading to some of history's highest death tolls.[9] In the 1870s, as new waves of migrants from farflung parts of the earth packed into industrializing coastal cities, they set new records for crowding. In the overcrowded tenements and overwhelmed sewers of these

[8] There, I said it.
[9] Many works could be cited. As an introduction, I prefer Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900* (New York: Cambridge University Press, 1986) or Charles Mann, *1491: New Revelations of the Americas Before Columbus* (Knopf, 2005).

cities, contagion flourished. Most spectacular were diseases passed from person to person, particularly through what two authors dryly call “the fecal-oral route.” Cholera, typhoid fever, and other gastro-intestinal diseases ravaged the crowd, particularly those with weakest immune systems. This was a phenomenon of cities everywhere: In France, the death rate from typhoid alone, as late as 1930 was four per 100,000 of population; in Italy eleven per 100,000.[10] With tuberculosis and influenza, other diseases of the crowd, diarrhea and gastrointestinal infections caused nearly half of all American deaths in 1900.



Top Ten Causes of Death in the U.S.: 1900 vs. 2010.[11]

[10] Charles LeBaron and David Taylor, “Typhoid Fever,” in Kenneth Kiple, ed. *The Cambridge World History of Human Disease* (Cambridge University Press), 1071-1077.
[11] Jones et al., “The Burden of Disease.”

The anxieties of the industrial city were made worse by the helplessness of the sufferers. Workers did what they could to improve their living and working conditions. But the risks of that society were enormous and unevenly borne. Being struck by a train or drinking bad water were simply part of life. This made eating that much more significant, since everyone had at least some control about what they put in their mouths. And one of the foods that most people ate, on a daily basis, was oysters.

By 1860, there were two oyster industries in the United States: One for the rich, and one for the poor. There were very high-end oysters, derived from specific locations ("Blue Points," "Rockaways") with something akin to *merroir*. These were famous oysters, known for their flavor and freshness and they earned prices to match. These oysters were a luxury food, the filet mignon of shellfish, a must for celebrations like the one at Wesleyan in 1894.[12] But oysters also had a category akin to ground beef: "Southern" oysters, as they were called in the trade, were a hodgepodge of oysters gathered from multiple natural beds in the east, often from the Chesapeake, with significant additions from privately owned aquacultural beds. In fact the line between "natural" and "cultural" has never been murkier than in this industry. From at least the 1810s oyster growers regularly ferried adult oysters from Virginia and as far as Florida, stored them live on beds in Long Island Sound between New York and Connecticut, and resold

[12] I've been trying to track the popularity and price of these high-end oysters through 100 years of restaurant menus at the New York Public Library's "What's On the Menu?" crowdsourced big data project. Thanks to Stacy Roberts for sharing the work and the thinking about this history.

them into the urban markets not only of coastal cities but anywhere water would carry them: Up the Hudson River and along the Erie Canal. By the 1850s a handful of oyster growers in Connecticut and oyster dealers in New York had created an integrated production, distribution and marketing system. Growers in Connecticut grew adult oysters to maturity, collected the annual spawn in specially selected and prepared "beds" often amended with gravel or broken shell, then sold the tiny "seed" oysters to other growers to raise to marketable size in the nutrient rich waters off rapidly growing cities. When the trains came, oysters traveled to Chicago, to Minneapolis, to Salt Lake City, and after 1879, as seed oysters to new production areas in San Francisco Bay, Puget Sound and Southern California. Eventually, at the industries height around 1900, Long Island Sound was the nexus of a global aquacultural system that shipped millions of live shellfish by sea to European markets and that colonized new waters as far afield as Honolulu and Chile. Oysters were a food of the working poor, the Big Mac of the Victorian era.[13]

All this astonishing productivity rested on shellfish biology. Oysters filter huge quantities of water through their gills, straining out tiny particles of sediment and detritus. They digest the matter, convert it into highly nutritious, high-protein

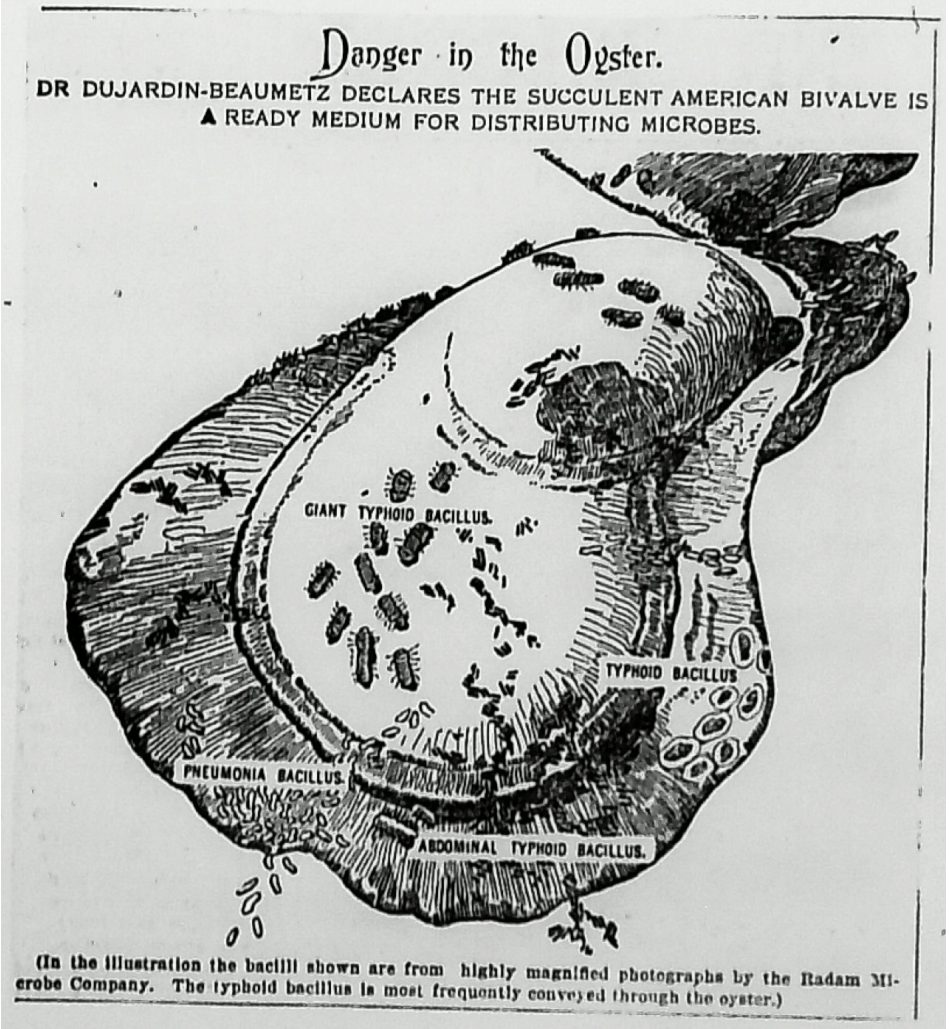
[13] Matthew Morse Booker, "Oyster Growers and Oyster Pirates in San Francisco Bay," Pacific Historical Review 76 (2006); Booker, *Down by the Bay: San Francisco's History Between the Tides* (Berkeley and Los Angeles: University of California Press, 2013); Christine Keiner, The Oyster Question: Scientists, Watermen, and the Maryland Chesapeake Bay since 1880 (Athens, Ga., 2010); Darin Kinsey, "Seeding the Water as the Earth": The Epicenter and Peripheries of a Western Aquacultural Revolution," *Environmental History* 11:3 (July 2006), 527- 566; Jeffrey Bolster, "Opportunities in Marine Environmental History," *Environmental History* 11:3 (July 2006), 567-597; Charles S. Elton, *The Ecology of Invasions by Animals and Plants* (Chicago: University of Chicago Press, 1958).

meat, and expel clear water and any grit. Because they are a creature of the tidal zone, oysters are also capable of enduring great extremes of cold and heat, wet and dry. When the tide goes out, oysters close their shells and survive on the moisture trapped within. Similarly, in near-freezing temperatures, oysters can enter a kind of suspended animation. Growers discovered that oysters can be stored for more than a week out of water with ice and simple insulation in wet straw or seaweed. These adaptations to the rich but stressful environment of the tides made oysters ideally suited to long distance transport in the age before refrigeration. It meant that oysters could be moved by men, not just by currents. And it meant that oysters were perfectly suited to feed on the waters of coastal cities, fertilized by huge quantities of untreated human and animal waste. Oysters ate the city, and the city ate oysters.[14]

This tight coupling of urban and food systems is surprising to us today and while it was a brilliant adaptation to new conditions, it also carried new risks. Oysters filter everything that flows their gills, including the living bacteria from the guts of creatures upstream. Upstream were forests, farms, dairies; but also hospitals, garbage heaps, factories. Downstream, oysters turned waste into meat, but they also completed a cycle between host and victim. Unharmed by the bacteria they harbored, oysters did not discriminate between the good filth and the nasty filth.

[14] Booker, "Oyster Growers," and for a visualization of the cycle from "nursery," to "feedlot" to urban market, see Gabriel Lee, Alec Norton, Andrew Robichaud and Matthew Booker, "The Production of Space in San Francisco Bay: San Francisco Bay's Atlantic Oyster Industry, 1869-1920s," Spatial History Project, Stanford University, May 15, 2009.

Upstream: Children Playing Near a Dead Horse, New York City, 1893.



Downstream: Danger in the oyster.[15]

By the 1890s, germ theory was slowly replacing older ideas of the environmental and behavioral causes of disease. In the United States and Britain, germ theory paralleled what people knew because of oyster panics like that at Wesleyan. As Nancy Tomes has shown, the "rules" that came with the new germ theory were often readily accepted because they tended to parallel the rules of sanitary science. Germ theory "[justified] widely accepted precautions of ventilation,

[15] "Danger in the Oyster," New York *World*, August 30, 1896, 24.

disinfection, isolation of the ill, and general cleanliness" as well as "bestowed germicidal rationales on already trusted strategies of protection."[16] Flush toilets and sewer systems removed waste from homes but also increased the biological pollution flowing into city waterways. Oysters provided some of the key evidence linking human waste to the terrible scourges of typhoid fever and cholera. After the outbreak at Wesleyan, an examiner for the Connecticut State Board of Health carefully reconstructed the event, interviewing witnesses and cooks, tracking all the foods served, and in a nifty bit of detective work, pinpointing the sick person whose private sewer carried bacteria into the Quinnipiac estuary, just upstream from the bed where a New Haven oyster dealer was freshening his oysters before delivery to Wesleyan's fraternities and sororities.[17]

Traumatic episodes like the Wesleyan case were common in the late 19th century, as a casual keyword search of the digitized New York *Times* reveals.[18] Food poisoning, food fraud, dangerous foods spurred state legislatures to enact many local laws. As the oyster industry indicates, the food system was already national and even global, and thus food safety was not a matter for states alone. Yet not until 1906 did Congress give the U.S. Department of Agriculture the right to regulate food safety and set standards of purity, and more importantly, create

[16] Nancy Tomes, *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge: Harvard University Press, 1998), 57.
[17] Hardy, "Exorcizing Molly Malone," 79-82; Conn, "Outbreak of Typhoid Fever at Wesleyan University."
[18] Here is a brief list from the *New York Times*, *The Fishing Gazette*, and my research in manuscript collections at the Whitney Museum in New Haven and Beinecke Library at Yale: 1839, 1855, 1894, 1896, 1902, 1924, 1926. As with all things oyster, the first place to look is Ernest Ingersoll, *The History and Present Condition of the Fishery Industries: The Oyster-Industry* (Washington, D.C.: Government Printing Office, 1881).

an enforcement mechanism located in the USDA's Bureau of Chemistry. The great chronicler of the 1906 act is James Young, who painstakingly reconstructed the path to the bill. Young found that Congress acted only twice prior to 1906. The first U.S. legislation in 1848 responded to anger at ineffective and fake drugs given to US troops in the war with Mexico. That conflict was the deadliest in U.S. history. For every 1000 soldiers who served, 110 died, overwhelmingly from yellow fever, diarrhea and cholera, waterborne diseases of the camp. Seven times more U.S. soldiers died from disease than from combat. Public opinion blamed fraudulent medicines as aggravating factors, and Congress passed a bill banning "adulterated" imported medicines in 1848.[19]

Young points to the key role of British legislation in shaping the U.S. debate. From their first bill in 1860 (Food Adulteration Act) to the Sale of Food and Drugs Act of 1875, Parliament had paired food and drugs; similarly, reformers in the U.S. paired the two. Young argues that it was expedient for Congress to legislate against impure drugs after troops once again died in large numbers from disease during the Spanish American War. But he and other writers also point to persistent business concerns about British bans on poor quality imported food from the U.S.[20]

Food safety in the age of industrialization was a shared problem in industrial nations around the world. One of the "intellectual brokers" who carried

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[19] James Harvey Young, *Pure Food: Securing the Pure Food and Drugs Act of 1906* (Princeton, NJ: Princeton University Press, 1989), 6-17.
[20] Young, *Pure Food*, 40-52; I. D. Barkan, "Industry Invites Regulation: The Passage of the Pure Food and Drugs Act of 1906," *American Journal of Public Health* 75: 1 (January 1985), 18-26.

ideas across the Atlantic was the British chemist Arthur Hill Hassall. Hassall had influenced a foundational 1860 British law that later provided a model for a series of food safety bills promoted by U.S. grocers and food manufacturers. These men sought to ensure consistent quality to benefit trade more than they worried about health threats.[21] Industry groups sponsored competing legislation to punish or exclude competitors, and a handful of consumer-oriented bills also made it into Congress in the late 19th century. Yet almost every one of the more than 100 food purity bills introduced into Congress between 1879 and 1906 failed. Narrow coalitions, competing interests, the extreme partisanship of the era, and especially, James Young argues, fear of an overly powerful government, led all but two of those bills to fail. The exceptions were bills to regulate glucose (corn syrup) and oleomargarine. Both glucose and margarine were new products of scientific experimentation. Each acted as a substitute for staple foods (cane sugar and butter), and each had powerful enemies in the producers of those staples.[22]

A key purpose of the 1906 act was to regulate dangerous industrial practices, such as those blamed for exposing oysters to typhoid, and therefore oyster eaters to typhoid, at Wesleyan in 1894. A consistent problem for food regulators was the power of industries to lobby for changes beneficial to their interests. One of the first to see this threat was Harvey Washington Wiley, head

[21] Daniel Rogers, *Atlantic Crossings: Social Politics in a Progressive Age* (Harvard University Press, 2000), 4; "1875 Sale of Food and Drugs Act," http://www.legislation.gov.uk/ukpga/1875/63/enacted accessed March 1, 2015.
[22] Young, *Pure Food*, 66-94.

of the U.S. Department of Agriculture's Bureau of Chemistry. Wiley had been one of the key figures in promoting the 1906 Pure Food law, and enforcement was entrusted to his Bureau of Chemistry.[23] In 1911, Wiley and the USDA targeted "floating," by which oysters were moved from salt water growing areas to brackish areas near the mouths of creeks and rivers. Oystermen "floated" oysters so they would absorb more of the fresh water, plumping up and shedding some of the mud and encrusted saltwater algae just before sale. The New Haven oyster grower who sold his oysters to Wesleyan fraternities moved his oysters into the Quinnipiac River in 1894, where they were exposed to typhoid from a nearby sewer. In the fall 1911 the Board ruled that floated oysters were adulterated and banned storing oysters in waters of less saline content from which they are taken.[24] But in 1927, after industry complaints, the USDA considered removing its ban. Now at *Good Housekeeping* magazine, Wiley complained about the threat to once again float oysters as a threat to consumers.

> The administration of the food law is gradually being transferred to manufacturers of food products… Here is a great industry which had been saved from practical destruction by the original ruling of the Department that no water of any kind should be added to oysters in shipment or otherwise… This is a complete surrendering to the industry of the task of making rules and regulations for conducting the industry, not in the interest of the consumer but in the interest of the producer.

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[23] John P. Swann, "The History of the FDA," in Meredith Hickmann, ed., *The Food and Drug Administration* (New York: Nova Science Publishers, 2003), 10-11; "Harvey Washington Wiley," Chemical Heritage Foundation, http://www.chemheritage.org/discover/online-resources/chemistry-in-history/themes/public-and-environmental-health/food-and-drug-safety/wiley.aspx accessed March 1, 2015.

[24] "Oystermen Consider Needs of the Industry. They Favor Unpolluted Water and the Floating of Shellfish a Necessity," *The Fishing Gazette*, January 6, 1912, 30-31.

Wiley continued, "The Food and Drugs Act was based on commercial practices which were detrimental and injurious to the consuming public. If the oyster industry is permitted to make its own regulations and its own scientific investigations there is no reason to believe that all other industries will in the near future be accorded the same privilege."[25]

Wiley lost on floating oysters. But the oyster growers won a pyrrhic victory. States did close waters to shellfish harvest, and they often chose to keep them closed rather than to clean them up. Today's U.S. shellfish-growing area is a tiny fraction of its 1890s peak, and oysters today are only a food of the rich, not the poor.[26] Whether protected by the state or taxed, oystermen relied on clean, sheltered, accessible waters. That was a limited and rapidly disappearing resource in the twentieth century, one unprotected by pure food laws and only partially by the series of laws from the 1940s to 1970s called the "Clean Water Act." The 1906 act addressed the problems of the industrial city: Human and animal wastes, bacterial contamination, and corrupt business practices leading to fraudulent food. But it did not address the problems that plague the 21st century.

In Wiley's day, the word pollution meant waste: Stinking, visible, filth. Today pollution more often means toxins: Invisible, cumulative danger that is not biological in nature but rather chemical and environmental. This includes heavy

[25] Harvey Washington Wiley, *The History of a Crime Against the Food Law* (New York: Devinne-Hallenbeck, 1929), 392-393.
[26] As with almost everything else, New Orleans is an exception. For some of those exceptions, see Ari Kelman, *A River and Its City: The Nature of New Orleans* (Berkeley and Los Angeles: University of California Press, 2006).

metals, pesticides and new cocktails of chemicals mingled in sewage treatment plants and in irrigation canals. Hormone disruptors (Langston, Toxic Bodies) These newer fears are products of our own time, with its own peculiar conjunction of science, technology and food production. Our world, in the early 21st century, seems just as anxious and imperiled as the industrial cities of the early 20th century. Like a century ago, we face great change, and it is frightening. Unlike that generation, however, we inherit the legislation and institutions built to address previous food fears. Some work very well indeed. Municipal water supply, sanitary landfills, sewage treatment plants, vaccination campaigns, pasteurization of milk—these multi-decade investments in public health caused a fundamental shift in the age of death and cause of death of the American population. We live longer and healthier lives because of decisions made to address the problems of the industrial city.

But some of the solutions of 1906 created unexpected problems. Regulation disproportionately benefited large companies who could afford the infrastructure to harvest, process, refrigerate and distribute food to the required standards. The reformers of yesteryear targeted disease-causing bacteria and biological wastes. Sterilized, plastic-wrapped, highly processed food is safe by the standards of 1906. But it can be unhealthy in ways that were not imagined. Today's Americans are threatened by chronic illnesses like diabetes, high blood pressure and obesity, the products of too much of a good thing, "problems of

plenty."[27] Our modern food system, with its vast farms and even larger corporate processors, seems hardly recognizable as "agriculture" in the sense of a century ago. This is profoundly unsettling and has engendered its own reform movements, variously promoting vegetarianism, organic food, local food, and other alternatives to the conventional system. The trend to the city and the factory and away from the farm that began in the 19th century has nearly been completed in the 21st. As Richard Walker notes, "large portions of the agrarian labor process have been shifted off the farm and into the factory. The whole of the agro-production complex employs ten the number of people as farming. While only a miniscule one-fiftieth of Americans work on farms today, over one-fifth work in the food system as a whole. ...this is less a matter of factories *in* the fields, as Carey McWilliams called them, as of factories and fields *working together*."[28]

The food system Walker describes can seem totally removed from the world of 1894. Yet echoes of that past remain not only in the continuing relevance of agricultural production and consumer anxiety about food safety, but in the regulatory frameworks created after 1894. Some of the origins of our contemporary food debates lie in the highly successful solutions of a previous time. Truly, there is still no place of grace.[29]

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[27] R. Douglas Hurt, *Problems of Plenty: The American Farmer in the Twentieth Century* (Chicago: Ivan R. Dee, 2002).
[28] Richard Walker, *The Conquest of Bread: 150 Years of Agribusiness in California* (New Press, 2004), 9.
[29] T. Jackson Lears, *No Place of Grace: Antimodernism and the Transformation of American Culture, 1880-1920* (New York: Pantheon Books, 1981).