## From the Instructor

Students in WR 100 "Topics in Public Health" study an 1854 cholera outbreak, a 20th-century meatpacking scandal, and the emergence of industrial farming, events that provide an opportunity to examine the values embedded in public health discourse and practice. For example, under what circumstances should policy makers limit personal freedom in the interest of promoting public health? To what degree are tradeoffs between individual and collective interests justified? And are individual freedom and "the common good" by definition at odds? These questions are as critical to contemporary policy debates on food safety as they were to Victorian Londoners contemplating the need for a sanitation infrastructure to stem the spread of disease.

Popular food writer Michael Pollan asserts his belief that enlightened self-interest is not at odds with the common good when he advises the average consumer to "stop participating in a system that abuses animals or poisons the water or squanders jet fuel flying asparagus around the world. You can vote with your fork... and you can do it three times a day."(1) Put differently, when consumers understand the hidden costs of factory farmed food, they will exercise personal choice in a socially responsible way. Critics say Pollan's views are elitist, while so-called "foodies"—and public health advocates—hail him as "way ahead of the curve." In the final essay of WR 100, students were asked to respond to his statement, drawing on course readings that represent 150 years of public health history.

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# **Opposing Industrial Food**

Americans today are accustomed to having access to a selection of diverse and inexpensive food options available in numerous produce markets. The diversity and affordability of these products are the result of industry-wide practices promoting high rates of output along with heightened efficiency. Advancements in farming procedures and technologies allow for exorbitant quantities of production from increasingly concentrated production plants. Unfortunately, these practices have proven to be "unsustainable" due to overuse of natural resources, environmental damage, and a failure of the food system to provide sufficiently nutritious products to the general population ("Voting" 2–3). In his article "Voting With Your Fork," Michael Pollan, Knight Professor of Journalism at the University of California, Berkeley, argues that the informed consumer can combat this system by avoiding consumption of industry-produced food, thus promoting change through communal action (4). This notion of consumer freedom, however, fails to consider the practicalities of adjusting buying habits and budgets to accommodate this movement, and it overstates the ability of consumers alone to spark such radical development. While the ideas and values supporting long-term reform through a collective shift in consumer habits are sound, it remains unrealistic to expect that the average consumer possesses the capacity to make such adjustments-and hold such influence-under present-day circumstances.

Factory farms, also known as Concentrated Animal Feeding Operations (CAFOs), produce the majority of the "meat, poultry, eggs, and milk" sold in the U.S. today (Weeks 25). This accounts for a great margin of the food consumed by Americans, as the "typical American eats more than 200 pounds of meat per year," a number that "continues to rise" (Niman 3). In order to keep up with demand, as well as to generate increased profits, the food industry has developed techniques to concentrate food production into small areas and minimize extraneous costs. This involves forcing high volumes of animals to live in densely packed quarters, which raises issues concerning animal health. The food industry's solution is to administer a variety of antibiotics to the animals raised on factory farms; however, while enabling many of these animals to survive, the antibiotics also "help generate drug-resistant bacteria and spread infections in humans" (Weeks 25). In effect, the very measures used to produce food are directly at odds with the well-being of American consumers.

The damages sustained by the food industry's practices extend not only to the population, but to the environment as well. These damages exist in the forms of overuse (of natural resources) and pollution. According to Pollan, the rigor and scale of "industrial agriculture" cause it to "literally consum[e] the soil and genetic diversity on which it depends" ("Voting" 2). This disproportionate use of resources is impossible to uphold. In addition, the extraordinary output of CAFOs coincides with an excessive production of waste, which, combined with a lack of appropriate processing measures, results in extensive environmental pollution. Factories often store this waste in "lagoons," which lack secure fortification-they overflow from "light rains," and are lined with polyethylene that can be "punctured by rocks ... allowing [manure] to seep beneath ... and spread and ferment" (Tietz 2). Additionally, farmers attempt to deal with this waste by spraying it over their fields as a fertilizer, albeit in excessive amounts, which can result in "hundreds of acres" being covered by "shallow mud puddles of pig [waste]" (Tietz 2). This practice results in high amounts of unnecessary pollution, expanding the environmental footprint of factory farms while failing to provide any beneficial gains towards production and efficiency. Due to the dominant position of industrial corporations within today's infrastructures, it is beyond consumers' abilities to take action influential enough to pressure them into altering these practices.

While pollution from waste is problematic enough, it is made worse by the high levels of nutrients contained within (Weeks 31). A result of the numerous antibiotics supplied to the animals within factory farms, this nutrient-rich waste can have devastating effects on entire ecosystems.

#### **Peter Stevens**

This is encompassed by the damages sustained by the Chesapeake Bay and its surrounding areas, which become victims of poultry manure flowing from multiple rivers into the bay itself. The nutrients prevalent in the waste act as a "fertilizer" to promote a surplus of algae growth, which dies, decomposes, and consumes oxygen. This process creates "dead zones": large, lifeless spans of water that constitute 40% of the bay's volume, in which life forms die if they become trapped ("Poisoned Waters"). In addition to severely damaging the bay's ecosystem, polluted waters themselves can be harmful even to humans—one can become sick simply by coming in contact with contaminated water ("Poisoned Waters"). Not only is environmental pollution a pressing issue due to its frequency, it is exacerbated by the very actions taken by the food industry—the use of antibiotics—to make such production (and, thus, such pollution) possible.

To oppose the industrial food system, Pollan proposes that Americans take individual action to purchase foods from sources that do not promote concentrated production, overuse of injections, and widespread pollution. He claims the current system "depends on our ignorance of how it works for its continued survival," which is to say, consumers only continue to take part in the industrial food system due to a lack of general education of how it functions ("Voting" 3). If individuals were better informed of the negative implications stemming from the industrial food system, he claims, they would refuse to purchase industrially produced food and would instead exercise free will to explore other options ("Voting" 3). Nevertheless, it is not only the responsibility of individuals to advocate for change in this system. Although it is becoming easier for individuals to find markets catering to more wholesomely produced food, such as Trader Joe's and Whole Foods, these alternatives remain more expensive than traditional options. Likewise, although it is possible for individuals to find information regarding the origin of the food they purchase, the information is not always readily available, nor is it clearly stated (Niman 2). The difficulties faced by consumers in finding, interpreting, and understanding the origins of purchased food are at odds with their ability to make informed decisions.

Supporters of Pollan's views may argue that the "cheap food" produced by the industrial food system is "dishonestly priced," and, rather, is "unconscionably expensive," embodied in costs to the environment, public health of Americans, and health care ("Farmer" 2, 15; "Voting" 3). Moreover, prices are driven down by government subsidies, further contributing to their "artificial" cost. Thus, it is a worthy investment for consumers to pay more up front for their food, a price based on "value" (Niman 2). However, this argument is based on the premise that the majority of consumers have both the monetary means and access to these resources to take advantage of them. It assumes that, despite the limited information that the food industry provides, the average family has sufficient access to what they need to know in order to make these changes.

In reality, it is difficult for many families to make the adjustments necessary to subsist on non-industrially produced food. Given the current economy, the disparity between the up-front price of industrially and nonindustrially produced food can be too much for families to accommodate, as maintaining a balanced budget provides challenge enough already. There is also the question of proximity—although farmers' markets and other alternative sources of food are becoming more common, they are not available in all areas, an inconvenience not all consumers are prepared to deal with. Finally, there is the issue concerning consumers' desire and ability to spend time researching alternatives to industrially produced food. Even individuals with the money and accessibility to alternative markets may become disillusioned with the opaque and ambiguous vocabulary found on food labels and the difficulties with making sense of them (Niman 3, 5, 6).

Therefore, the responsibility of opposing the currently wasteful and destructive industrial food system falls on the government as well as on consumers. Although consumers have a responsibility to make informed decisions that benefit them (and, in this case, that benefit the general population), the government has a duty to oversee and verify the information made available to consumers to make such decisions possible. Furthermore, it is beyond the capacity of individuals alone to combat the pollution resulting from industry practices. Although the government is taking measures to regulate farmers' spraying of manure over fields and polluting bodies of water, these measures are clearly not enough (Weeks 39). Additionally, if the government were to subsidize smaller-scale produced foods, they "could be as inexpensive as the [food] coming out of factory farms," further addressing the disparities between what consumers should do and what is practical for them (Niman 2–3). It is the complementary efforts of

### **Peter Stevens**

the government and individuals—the former assuming responsibility for more universal controls, allowing the latter to make informed decisions that are necessary to transform the primary food production methods of America.

While Americans continue year by year to purchase their food within a flawed system, the need for trends to shift becomes increasingly urgent. The fundamental purpose of the food system, to provide a population with sufficiently nutritious food products, is unfulfilled by the current industry, which is focused on the quantity of food produced over its nutritional qualities. Indeed, Pollan claims, "Historians of the future will marvel at the existence of a civilization whose population was at once so well-fed and so unhealthy" ("Voting" 2). When taken into consideration with the scope and destructiveness of the pollution produced by this system, as well as with its inevitable burning out of natural resources, the pressure mounts to change the way we produce food. Otherwise, America potentially faces a national security risk resulting from an inability to supply its own population with sufficient food products. A nation incapable of feeding itself is extremely vulnerable to foreign pressures, losing its leverage in "international dealings" ("Farmer" 9). This concept is unprecedented for a nation with such significant standing in the international world today and, ideally, will remain so.

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