

The Standards of Life, Liberty, and the Pursuit of Happiness

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Abstract

This paper explores the meaning of standards and their importance in modern society by establishing what it would be like if standards did not exist, through a retrospective look at society before the enforcement of standards incorporated into regulations in certain businesses. This paper uses historical examples such as the meatpacking industry in the early 1900s, and the chemical industry in the 1960s, to explicate the necessity of the formation of federal-level regulatory agencies like the U.S. Food and Drug Administration (FDA) and the U.S. Environmental Protection Agency (EPA). These two agencies were created to serve and protect the public from harmful business practices. Their legislative formation was the due to public outcry sparked in part by revelations into the practices of these two industries exposed in two revolutionary novels, *The Jungle* by Upton Sinclair, and *Silent Spring* by Rachael Carson. *The Jungle* revealed the horrific conditions of the meatpacking industry, which helped precipitate the force behind both a meat inspection law and a comprehensive food and drug law, based on standards, culminating in the establishment of the FDA. *Silent Spring's* attack on the indiscriminate use of pesticides fueled an environmental movement, creating the foundation for the creation of the EPA to protect both the health of the environment and the constituents of it.

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Standards can be defined as written definitions, limits, or rules, approved and monitored for compliance by an authoritative agency or professional or recognized body as a minimum acceptable benchmark. Within the definition, there are three classifications: government standards and specifications enforced by law; proprietary standards developed by a firm or organization and placed in public domain for widespread use; and voluntary standards established by consultation and consensus and available for use by any person, organization, or industry.¹ Regardless of the classification, all standards have the purpose of establishing some sort of guiding principles to meet specific well-defined goals or needs based on consensus and due process. As such, they are vitally essential to a functional civilized society. Without any standards or, in many cases, enforcement of said standards through regulation, the world as we know it would be a different and much more difficult place to live in. For example, without standards, commercial products could go untested, which would be disastrous for consumers as they could be rendered sick from spoiled food or harmed by hazardous chemicals within goods. In addition, communication and collaboration between people, machines, parts, and products in a global marketplace would be nearly impossible without international standards that enable comparison and interoperability. In essence, standards are a necessity, as they are collective knowledge: powerful tools that can help drive innovation and increase productivity by making organizations more successful and the lives of everyday people easier, safer, and healthier.²

As a current engineering student majoring in environmental engineering and aspiring for a career as a professional engineer, I have been educated on a code of ethics – specifically, the National Society of Professional Engineers (NSPE) Code of Ethics for Engineers. The first and

¹ <http://www.businessdictionary.com/definition/standards.html>

² <http://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/>

foremost fundamental canon of the code is to “Hold paramount the safety, health, and welfare of the public,” a tenet to which I plan to abide to the best of my ability. Standards are instruments to realize this principle; however, they need to be implemented and enforced properly to have any substantial merit.

The United States is often seen as having a democratic capitalist political-economic system; in other words, the American economy is built upon a capitalist foundation ingrained into the political system.³ Of course, such a system has its benefits: indices of economic freedom correlate strongly with higher income, life expectancy, and standards of living.³ Nevertheless, unfettered capitalism has its own drawbacks. Corporations are inherently revenue-driven and as a result, in an unregulated capitalistic scenario, bribery and corruption would flourish, corners would be cut in the sake of profit margins, human rights violations would be rampant, and the income inequality gap would be wider than ever. It would transform a once representative democratic republic into a corporate plutocratic oligarchy. Therefore, to prevent this situation from occurring, enforceable federal regulations and standards are an absolute requirement.

An example of strong federal standards to protect U.S. citizens are the regulatory standards set forth by the U.S. Food and Drug Administration (FDA), which is responsible for protecting the public health by assuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, [the] nation’s food supply, cosmetics, and products that emit radiation.⁴ Standard-setting activities include matters such as the development of performance characteristics, testing methodology, manufacturing practices, product standards, scientific protocols, compliance criteria, ingredient specifications, labeling, or other technical or policy criteria. The storied history behind the establishment of the FDA is a clear illustration of

³ <https://www.boundless.com/business/textbooks/boundless-business-textbook/economics-and-business-2/businesses-under-capitalist-systems-28/capitalism-in-the-u-s-154-7826/>

⁴ <http://www.fda.gov/AboutFDA/WhatWeDo/default.htm>

the essential nature of standards. *The Jungle* was a novel written by the American journalist and novelist Upton Sinclair in 1906. Sinclair was considered a muckraker, a journalist whose actions exposed corruption in government and business. In his novel, Sinclair portrayed the harsh conditions and exploited lives of immigrants in Chicago and similar industrial cities. However, what was most deplorable to the contemporary readers was his exposure of the health violations and unsanitary practices in the American meatpacking industry during the early 20th century. It was his intense description of diseased, rotten, and contaminated meat that shocked the public and led to new federal food safety laws.⁵

During this time, there was a major reform movement that had swept the U.S., known as the Progressive movement. The Progressive reformers reacted to problems caused by the rapid growth of factories and cities as a direct result of the capitalistic economy, such as those exposed by Sinclair. The president during the time of the progressive activism was Theodore Roosevelt, who favored large enterprises but also favored government regulation of them "with due regard of the public as a whole."⁵ Because of Sinclair's novel, President Roosevelt overcame meat-packer opposition and pushed through the Meat Inspection Act of 1906, a law that allowed inspectors of the U.S. Department of Agriculture (DOA) to stop any bad or mislabeled meat from entering interstate and international commerce based on stringent inspection standards. This also paved the way for Harvey W. Wiley, a chief chemist at the DOA, to succeed in his lobbying efforts in Congress for a federal food and drug regulation, leading to the formation of the FDA. This in turn led to increased consumer confidence in the quality of their purchased food and medication, thus benefitting businesses in return. Sinclair's efforts also indirectly led to efforts to champion the predicaments of workers. Soon after, the Department of Labor was created,

⁵ <http://www.crf-usa.org/bill-of-rights-in-action/bria-24-1-b-upton-sinclair-the-jungle-muckraking-the-meat-packing-industry.html>

followed by the Clayton Antitrust Act of 1914 and the Public Contract and Fair Labor Standards Acts, which mandated minimum wage, extra pay for overtime work, and basic child labor laws.⁶ In the end, the development and use of standards have been integral to the execution of the mission of FDA since its establishment, and among other federal level departments to protect the public and put their safety, health, and welfare at the forefront.

Another example of an important regulatory agency in the U.S. that relies on standards as a basis for regulation is the Environmental Protection Agency (EPA). The agency was established on December 2, 1970, by an executive order from President Richard Nixon to consolidate a variety of federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection⁷. The EPA's expressed mission is the establishment and enforcement of environmental protection standards consistent with national environmental goals. In addition, the EPA conducts research on the adverse effects of pollution and on methods and equipment for controlling it; the gathering of information on pollution; and the use of this information in strengthening environmental protection programs and recommending policy changes⁸. Similar to the formation of the FDA, the EPA's establishment was resulted from public outcry to hold businesses responsible for their activities that adversely impact people, due in part to the publication of an important novel that attracted an immediate countrywide reaction.

The novel in question is *Silent Spring* by marine biologist and conservationist Rachel Carson. Her book documented the detrimental effects on the environment of the widespread and unregulated use of chemical pesticides in the agriculture industry. She accused the chemical industry of spreading misinformation regarding the side effects of pesticides – DDT, in particular – on the environment and ecology. She termed these pesticides as “biocides,” as their effects are

⁶ <http://www.investopedia.com/financial-edge/0113/the-history-of-unions-in-the-united-states.aspx>

⁷ <https://www.epa.gov/aboutepa/epa-history>

⁸ <https://www.epa.gov/aboutepa/guardian-origins-epa>

not limited to just the target pests, but also to other animals in the ecosystem. Carson devoted a majority of *Silent Spring* to delineating DDT's consequences to the natural environment and cases of poisoning, cancer, and other illnesses attributed to DDT. She described that in several "laboratory tests on animals, DDT has produced suspicious liver tumors," and that scientists at the FDA reported the discovery of these tumors.⁹ Soon after, Dr. Wilhelm Hueper, author of *Occupational Tumors and Allied Diseases*, gave DDT the definite rating of a chemical carcinogen, a chemical substance capable of causing cancer in organisms. Carson then predicted that these consequences would be amplified in the future if their indiscriminate overuse were not regulated. And she claimed that overuse of these pesticides would create insect resistance through natural selection, thus making them useless in eliminating the target pest populations.

Carson's work drew national attention on the emergent environmental movement, and *Silent Spring* became a focal point of the new social movement rally for environmentalism and conservationism in the 1960s. Ultimately, the book played a key role in inspiring activism that led to the creation of the U.S. Environmental Protection Agency (EPA). No longer could corporations pollute the environment unnecessarily and extensively in the name of profit margins so easily or uncritically. Were it not for the EPA and other regulatory agencies that propose and enforce standards for environmental impact and related issues, we would be dealing with magnified climate change, mass species extinction, poor water quality, and health problems well beyond what we face today.

One landmark legislation by the EPA in 1980 to mitigate such concerns and give the agency the authority to enforce it is the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or the Superfund act. It provides a federal fund that cleans up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other

⁹ *Silent Spring*. Carson 1962, pp. 225

emergency releases of pollutants and contaminants into the environment¹⁰. With CERCLA, the EPA has the authority to clean up hazardous sites and then seek out those responsible parties, whether they are individuals or companies. Therefore, those who knowingly pollute the environment with hazardous waste and disregard proper standards of disposal are held financially accountable for their actions. As a result, CERCLA serves as a monetary incentive for corporations and individuals to adopt and uphold more environmentally sound business practices.

Standards are essential in our present state of the world to bring a semblance of order in a growingly uncertain future. Whether voluntary and market-driven, or incorporated into regulation by a government agency, standards protect the public from harmful business practices, streamline international interactivity, and ensure consumer satisfaction, among a myriad of other advantages. There are those who would argue that strict regulations can harm economic activity; however, on the contrary, the implementation of standards ultimately increases consumer confidence in products and services, thereby benefitting those businesses. Standards also drive innovation, as they create a common framework for innovation and establish the ‘rules of the game,’ from which entrepreneurs can ensure successful outcomes by identifying best practice within the ecosystems. Once standards are in place, the pace of innovation will be accelerated and success will be much more likely, thereby serving as a tool to survive a quickly developing, highly complex 21st century.

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