From *Silent Spring*

Date: September 27, 1962
Author: Rachel Carson
Genre: book (excerpt); serial

Summary Overview

Rachel Carson is a significant figure in American liberal history. She is best known for her groundbreaking work in environmental science and activism, particularly through her influential book *Silent Spring* (1962). Carson's work raised awareness about the dangers of pesticides and environmental pollution, helping to spark the modern environmental movement and leading to important policy changes, including the establishment of the Environmental Protection Agency (EPA).

In 1962, nature author and marine biologist Rachel Carson's book *Silent Spring*, which gained a wide audience by virtue of its being serialized over the summer in the *New Yorker* magazine, exposed the hazards of the pesticide DDT, which at the time was used in large quantities on agricultural crops. Further, the book awoke in many people a critical awareness of what had always been thought of as technological progress with respect to human control over the environment, including control over the land, air, and water on which all life depends. The book, in short, represented a watershed moment in American environmental history. Carson's work reflected values centered on conservation, scientific responsibility, and government intervention to protect public health and the environment.

Defining Moment

The end of World War II brought many technological advances from the battlefield into the lives of everyday Americans. Many of these innovations, such as pressurized airplane cabins that made high-altitude aviation and air transportation possible, synthetic rubber, and polyester contributed to the economic boom of the 1950s that saw the creation of a large American middle class. However, other innovations that were coming into their own had deleterious impacts not all of which were apparent to the public. For example, although nuclear weapons had made the United States the dominant superpower up to that point, atomic testing caused radiation to enter the American food and water supply. Another, more ubiquitous threat came in the form of dichloro-diphenyl-trichloro-ethane, or DDT—a pesticide commonly used during the war to kill pests that might spread diseases like malaria and typhus. The compound was widely credited with saving thousands of lives during the war, and it earned its inventor, P.H. Müller, a Nobel Prize in 1948. DDT became available to the general public in 1945.

Rachel Carson in 1943. Photo via Wikimedia Commons. [Public domain.]

Whereas prior pesticides were usually targeted at particular classes of insects, DDT had many uses and could kill large numbers of species of insects and other pests at once. It was heavily marketed, both as a sprayable pesticide and as a component in other household products designed to rid American homes of pests. During the last part of World War II, over 4,300 tons of DDT were produced, and by 1963 that production had risen to over 81,000 tons. Although a few scientists and nature writers had warned of the potential environmental effects of using such a wide-spectrum pesticide, the vast majority of the American public remained blissfully unaware of the dangers DDT presented.

Author Biography

During the 1930s and 1940s, Rachel Carson worked for the U.S. Bureau of Fisheries, both as a marine biologist and as a writer for a weekly educational radio program produced by the Bureau. Additionally, she began writing articles on the marine environment for local publications in the Chesapeake Bay region, gaining recognition in larger, national publications by the early 1940s. By the early 1950s she had left the Bureau to write full-time, producing *The Sea Around Us* in 1950. The book was a bestseller and established her as one of the most important nature writers of her generation. *Silent Spring* came out in 1962 to even greater acclaim. Carson died in 1964.

Historical Document

Excerpt from *Silent Spring*

During the past quarter century...[human power over the environment]...has not only increased to one of disturbing magnitude but it has changed in character. The most alarming of all man's assaults upon the environment is the contamination of air, earth, rivers, and sea with dangerous and even lethal materials. This pollution is for the most part irrecoverable; the chain of evil it initiates not only in the world that must support life but in living tissues is for the most part irreversible. In this now universal contamination of the environment, chemicals are the sinister and little-recognized partners of radiation in changing the very nature of the world—the very nature of its life.

Strontium 90, released through nuclear explosions into the air, comes to the earth in rain or drifts down as fallout, lodges in soil, enters into the grass or corn or wheat grown there, and in time takes up its abode in the bones of a human being, there to remain until his death. Similarly, chemicals sprayed on croplands or forests or gardens lie long in the soil, entering into living organisms, passing from one to another in a chain of poisoning and death. Or they pass mysteriously by underground streams until they emerge and, through the alchemy of air and sunlight, combine into new forms that kill vegetation, sicken cattle, and work unknown harm on those who drink from once pure wells...

Document Analysis

Rachel Carson wanted to use *Silent Spring* not only to make people aware of the specific threat that DDT posed, but to help them understand that DDT and things like it radically impacted large segments of the environment and had consequences that might not yet be known. Her holistic approach to the natural world was not a commonly held one among the general public in the 1950s and early 1960s. In the opening paragraphs of the second chapter of *Silent Spring*, Carson warned that the technological developments that had altered the nature of peoples' relationships to the natural world could have disastrous side effects. Whereas pesticides had been used for centuries to eliminate pests and increase agricultural production, the introduction of new substances like DDT that could radically alter the ecosystem by eliminating large numbers of insects and other creatures on which ecological processes depended, would have dramatic impacts on the world.

By the early 1960s, people were aware of the negative impact that radioactive fallout from atomic explosions could have on the environment. Carson wanted to tie pesticides like DDT to people's understanding of dangerous substances like radioactive elements, stating "chemicals are the sinister and little-recognized partners of radiation in changing the very nature of the world—the very nature of its life." She explained that chemicals did not simply evaporate after killing their intended targets, but rather remained in the environment, transported over long distances to places they were not intended to go, such as streams and rivers, crops, and livestock. Moreover, they might change their composition in the process, becoming more or less harmful, as the case may be, but always leaving their mark. Through these largely unstudied metamorphoses, substances like DDT found their way into peoples' homes and their bodies, completing, as it were, a "chain of poisoning and death."

Essential Themes

The reaction of the American public, as well as the American chemical industry, to *Silent Spring* was swift and dramatic. On the one hand, chemical companies complained that a world without pesticides would represent a return to the dark ages, where insects would overrun the earth and people would need to worry anew about famine and disease. Industry groups waged a publicity campaign to discredit Carson, playing to peoples' prejudices regarding the expertise of women scientists. The science and approach used in *Silent Spring*, however, were sound, and numerous other scientists came forth to defend her work. President John F. Kennedy was deeply impressed by Carson's work and ordered his Science Advisory Committee to investigate DDT.

Scientific study revealed that, as Carson had suggested, pesticides were building up in the American food supply. Many attribute the rise of the modern American environmental movement to *Silent Spring*. Her book sold over two million copies and led people to demand the changes for which she was calling. Grassroots groups formed to promote environmental awareness and seek solutions to particular problems. Although she died of breast cancer less than two years after the book's publication, Carson became, and has remained, an environmental icon. She framed environmental questions in ethical terms, forcing people to think about what kind of world they wanted to live in. After her death, other activists continued to spread her message, influencing the federal government to enact several major pieces of environmental protection legislation in the late 1960s and early 1970s, including as the Clean Air Act, the Clean Water Act, and the establishment of the Environmental Protection Agency. DDT, too, was finally banned in 1972.

—Steven L. Danver, PhD

Bibliography and Additional Reading

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