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Speaking Truth to Power

The Legacies of Rachel Carson
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Rachel Carson is perhaps the most significant environmentalist of the 20th century; she is often considered to be the founder of contemporary environmentalism. However, her contributions to society go further, inspiring us through her writings and public testimony to lead our children to experience the wonder of nature and to approach the natural world with awe and reverence. Her writings include pamphlets and short essays written for the US Government Bureau of Fisheries (that became the Bureau of Fish and Wildlife); newspaper feature articles about nature; three popular best-selling books about the sea (Under the Sea Wind, The Sea Around Us, and The Edge of the Sea); her important environmental analysis, Silent Spring; and her essay “Help Your Child to Wonder” (intended as a guide for parents and later published in book form as A Sense of Wonder). These offerings present a compelling blend of poetry and science as well as a combination of passion and politics. Carson's writings promote her belief that direct experience of the natural world may inspire "a sense of wonder" and reverence. This belief underlies Carson's understanding of the essence of education, an understanding we would do well to embrace.

Carson's Educational Philosophy

Carson's educational philosophy advocates direct experience of subject matter, individual goal-setting, and focus on one's strengths and interests. As such, this view provides a powerful corrective to the contemporary movement toward rigid uniform standards and high-stakes testing.

Even as a student Carson had strong beliefs about the value and function of education. An essay she wrote when she was a high school senior indicates her insistence on seeing education as an adventure, as the individual discovers what she needs to understand and sets her own goals for achievement. Carson wrote:

Scholarship...must be intensely individualistic. Each student is essentially a law unto himself. He must analyze his personal needs, take stock of his individual assets, and determine for himself the best means of reaching his individual goal.... Education is a spiritual adventure...[that comes] not by academic spoon-feeding, but through the undaunted efforts of an adventurous mind. ("Intellectual Dissipation")

Her love of nature was shaped by a pedagogy that advocated direct experience and avoided rote learning and memorization of facts. She teaches us that "a sense of wonder" must be the foundation that inspires children to learn (Carson, A Sense of Wonder). Facts, names, dates, and other details will follow once the child—or indeed any individual—has formed a personal relationship to a subject and is motivated to learn more. Carson argues that all education must be highly personal and based on the individual's interests, strengths, and needs. When the student is deeply involved with the subject matter, education becomes a "spiritual adventure" ("Intellectual Dissipation").

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Carson's deep love of nature partly evolved from a pedagogical revolution. Her mother was inspired by the nature-study movement, which gained prominence when Rachel was a child. This movement argued for the...
replacement of the “dry as dust” study of inanimate models in science courses with field work (Bailey 8). This new pedagogy stressed experiential learning to involve the student’s fullest engagement with the subject. Carson shared this philosophy. The practice of inspiring wonder through direct experience—rather than teaching students to memorize facts as preparation for high-stakes testing—is a model for educators to follow. Such an approach encourages students to seek knowledge themselves and may lead to lifelong learning (as it did for Carson).

According to the noted botanist Liberty Hyde Bailey, a chief proponent of the nature-study movement, children should be encouraged to discover nature through experience, rather than through books. Its goal is “to put the pupil in a sympathetic attitude toward nature for the purpose of increasing the joy of living . . . to enable every person to live a richer life, whatever his business or profession may be” (4-5).

Nature-study avoids mechanical memorization and cataloging of specimens and tries to make knowledge a “comprehensive whole” (8). Bailey argues that instead of “close and specialized study of inert or dead form, [one should] place the children in the fields and woods that they might study all nature at work” (10), for “mere facts are dead, but the meaning of the facts is life” (14).

In her short essay “Help Your Child to Wonder” (later published in book form as A Sense of Wonder), Carson advises parents to awaken the child’s emotions and interest, rather than merely naming the animals and plants they find. According to Carson observation of nature would motivate the child to learn more about the observed creatures and phenomena. In fact, experiencing nature with a child often reawakens an adult’s appreciation of nature. The values embraced by nature-study resonate in Carson’s life and writings, perhaps nowhere more clearly than in her important Silent Spring. (See Lisa H. Sideris for a fuller discussion of the influence of nature-study on Carson.)

Silent Spring

Carson’s book Silent Spring is another major aspect of her legacy. Carson was fundamentally a generalist who saw nature as a whole, rather than a specialist who focused on a small part of that whole. From that perspective she was moved to analyze and understand the human impact on the environment and to see the consequences of human interventions (such as the widespread spraying of pesticides). Her vision of nature’s intricate web of life led her to question the belief held by some that humans can control nature, a view that she conceived of as arrogant.

Silent Spring, her graphic and compelling description of the damage caused by the widespread aerial spraying of toxic persistent organochlorine pesticides such as dichlorodiphenyltrichloroethane (DDT), opened our eyes to the issue of pollution and highlighted the interconnectedness of the natural world, indeed, of all living beings. This monumental book led to the establishment of the Environmental Protection Agency (EPA) and to the banning of domestic use of DDT. Another result was the restoration of the population of eagles, ospreys, and other wildlife that had been decimated by DDT. Silent Spring politicized the environmental movement and reframed the popular belief in the objectivity and benignity of science. The year 2012 marked the 50th anniversary of Silent Spring, yet its message remains even more crucial for us today as we face the increasing threats of pollution and global climate change.

With this book Carson challenged powerful chemical companies and government agencies. Her friends and colleagues warned her that she would be attacked by chemical companies and other proponents of the pesticide programs. Despite this, Carson persisted, struggling to complete the book after being diagnosed with breast cancer, undergoing chemotherapy, and suffering from a range of health problems. Some government agencies tried to deny Carson access to information, and she had to rely on her network of colleagues, friends, members of the National Audubon Society, and other scientists.

Her friends’ warnings proved accurate. Chemical companies threatened lawsuits to prevent the book’s publication, and when that attempt failed, they spent a quarter of a million dollars on publicity to discredit the book and Carson herself. Critics argued that banning pesticide spraying would thrust us back into the dark ages, ensuring widespread starvation, rampant disease, and general misery. (Interestingly, despite the original obstruction and denial by
chemical companies, the American Chemical Society named Silent Spring a National Historic Chemical Landmark in October 2012.

Silent Spring opened the eyes of Americans to the dangers of excessive pesticide use. It challenged government policies that responded too quickly to perceived dangers without adequate research into causes and effects. It challenged the belief that science is objective, benign, and free of errors. It engendered a shift in environmental thinking from preservation and conservation of individual species and local places to a broader view of an ecological whole. It politicized the environmental movement and changed its strategies to activism and to seeking regulation to control technology and remediation of ills. Chiefly, the book made Americans aware of their place as integral components of the natural world.

The book is a classic of environmental thought that has retained its value and remained in print since its original publication. (Stein 106)

In Silent Spring Carson argued that "the obligation to endure gives us the right to know" (13). The book challenges our belief that science and technology can control the natural world, for this assumption leads us to imagine ourselves apart from nature rather than a part of nature.

Carson's work confronted the linkages between powerful chemical companies and governmental agencies. Despite suffering from the last stages of metastasizing cancer, Carson continued to speak publicly about her work. She asked the US government to investigate the results of its spraying projects and to use less destructive methods of controlling insect damage. In her testimony in Congress and in speeches she gave at various venues she argued for governmental transparency, and she urged that government agencies be responsible to the public. She stressed the importance of educating the public about science and ecology, and she urged citizens to inform themselves and to make their views known to their representatives. She pointed to the dangers of industrial grants to universities: "Support of education seems desirable, but on reflection we see that this does not make for unbiased research" (The New Englander, April 1963). She warned about the increasing political influence of corporations and the diminishing power of nonprofit organizations, citing laws that allowed lobbying expenses to be declared legitimate business expenses, while nonprofit agencies could lose their tax-exempt status if they tried to influence legislation. Carson was farsighted in recognizing these trends. We still face the issues of growing corporate political influence.

Nature's intricately linked systems are more complex than we yet understand. Therefore, Carson asks us to recognize our place in the world around us and to treat the earth respectfully. Her work calls on us to rekindle our sense of wonder at nature's power and beauty, and to tread lightly on the earth so that it will continue to sustain us and our descendants. Her words invite us to learn about the environment we inhabit and challenge us to become better informed about the manifold implications of environmental issues.

Her work calls on us to rekindle our sense of wonder at nature's power and beauty.

In her four slim volumes that blend fact and poetry, Carson teaches us that the earth and the oceans are living entities, shaping and shaped by their interactions with the living creatures that inhabit them. Among these creatures humans are having the greatest impact and our alteration of the environment is turning out to be far greater than Carson imagined possible. Like many in her time Carson had believed that the fisheries were an inexhaustible resource. However, we now realize that overfishing and ocean trawling are depleting that resource as well as decimating the ocean creatures killed or wounded as "by-catch." Similar exploitation of other extractive resources such as oil and natural gas is leading to scarcity, pollution, and more destructive extraction techniques.

For many, Carson's life is an inspiring model of conviction and courage. Her love of nature remained with Carson throughout the years. (Stein 106)
her life, bringing her joy, sustaining her in good and bad times, and animating her books. Indeed, in her essay "Help Your Child to Wonder," posthumously published in book form as A Sense of Wonder, Carson writes that "those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts" (100). Following Carson's teachings we must approach learning as more than a series of measured hurdles to cross, or tests to complete successfully. We can do this if we encourage students to renew their sense of wonder, to find and pursue their interests, and to see their learning as a lifelong adventure.

Works Cited

Karen Stein is professor of English and of Gender and Women's Studies at the University of Rhode Island. She teaches and writes about contemporary North American women writers. She wrote Rachel Carson (Sense, 2012) and is currently writing a critical study of US poet Adrienne Rich.

Call for Submissions

The Assembly on American Literature is accepting articles for the 2014 issue of Notes on American Literature. This year's theme is Bridging Fact and Fiction. The Editorial Board welcomes articles that connect historical context and current issues to canonical and contemporary works of American fiction and nonfiction. Articles may range from 1,500 to 2,500 words using the most recent MLA style guide. The deadline for the next round of blind peer review is July 31, 2014. If you would like to submit an article describing your research on American authors or their works and/or your ideas for teaching them, please send an email attachment to mabeld.mk@gmail.com and tmhunt@eiu.edu. Notes on American Literature is a peer-reviewed journal of the National Council of Teachers of English's Assembly on American Literature. http://www.ncte.org/assemblies

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