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Rachel Carson's environmental ethic – a guide for global systems decision making

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ABSTRACT

The technological advances of the twentieth century drive the two most critical challenges of the twenty-first century. Climate change results directly from fossil fuel combustion that dominates the energy production system globally since the 1900's. Synthetic chemicals with carcinogenic, mutagenic and endocrine disrupting properties contaminate the biosphere. Ten thousand years of physical and biological stability of the planet shows signs of destabilizing. Yet, the credibility of scientists has come under attack, and science has become politicized and isolated from the mainstream of public influence.

Rachel Carson, one of the most influential thought leaders of the twentieth century, offers a role model for addressing this critical problem. Through her gifted writing she shifted public opinion to understand the interconnectedness of all living systems. She spoke out as a scientist and an advocate in defense of protecting the natural world. Her recommendations based on sound science helped to shape the initial environmental protections that evolved through the nineteen seventies. She is a role model for the application of science in public policy. The acute environmental crises we face cross political and geographic divisions, and involve placing constraints on unfettered multi-national corporate interests whose only guide is success in the marketplace.

Rachel Carson's work synthesized the principles that support precaution in man-made intrusions into the living world. Her graphic illustrations of the interconnectedness of all living systems showed that we cannot harm the environment without in turn harming ourselves. Natural laws of biology, physics and chemistry affect all countries, regardless of political persuasion, religion, social structure or priorities. Rachel Carson's environmental ethic provides a guide for decision-making that draws from our common humanity, and our common place in the global ecosystem as animals. Rachel Carson's environmental ethic has four parts: Live in harmony with nature; Preserve and learn from the natural places of the world; Minimize the impact of man-made chemicals on natural systems; and Consider the implications of all human actions on the global web of life. Governing our multiple forms of civilization according to the common laws of nature that drive life on earth can help to cross the barriers that divide us. Rachel Carson's environmental ethic can enlighten the debate over intergenerational and inter-cultural justice because the choices we face are a matter of ethics, not technology.

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1. Rachel Carson's environmental ethic

Rachel Carson's legacy has three parts: her written work, her environmental ethic, and her iconic persona as a role model for conservation in action. All of the issues Carson addressed in her work remain today as challenges, including pollution from radiation, pesticides, and the combined effect of synthetic materials on living systems. Carson left a legacy to deal with these problems:

more informed and energized consumer-citizens who would rather understand the truth in all its complexity than what Carson called "little tranquilizing pills of half-truths."¹

Structural barriers in the form of market priorities and business interests remain as formidable forces today against Rachel Carson's message of precaution in protecting nature and the interconnected systems that support the living earth. Her success in penetrating the wall of opposition she faced may inform our struggle today to

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¹ Joan Moody, Department of Interior Office of Communications, Washington, DC at www.fws.gov/rachelpcarson.

shift the balance of markets and business priorities toward preserving our own life support system – the natural world. Her life and work offer a model for scientists as leaders in addressing the global challenges of the twenty-first century.

1.1. An introduction to Rachel Carson and her message

Rachel Louise Carson (1907–1964) was an author and scientist, recognized internationally as one of the most important people in 20th century, whose work helped form the modern environmental movement.² The post-World War II explosion of invention and industrial dominance launched the age of consumerism. In this heyday of industrial production, amidst the smoke and grime of the factories that marked the cities, and the clouds of pesticides that covered agricultural lands, rose the quiet, eloquent voice of Rachel Carson. She was a child of the Allegheny River,³ born in Springdale, Pennsylvania, in 1907, when the riverside still sported wading cows.⁴ In her time living in Pittsburgh from 1907 to 1929, she saw the industrial revolution manifest in the proliferation of factories making steel, glass, chemicals and power.

“From whatever direction one approaches the once lovely conjunction of the Allegheny and Monongahela the devastation of progress is apparent. Quiet valleys have been inundated with slag, defaced with refuse, marred by hideous buildings. Streams have been polluted with sewage and waste from the mills.”⁵

“The mills are like Hell with the lid off!”⁶

She was deeply concerned about the effects of this industrial activity on the natural world she loved. Her reflection in one of her last public speeches notes:

“In spite of the truly marvelous inventiveness of the human brain, we are beginning to wonder whether our power to change the face of nature should not have been tempered with wisdom for our own good, and with a greater sense of responsibility for the welfare of generations to come.”⁷

Rachel Carson stands as one of the most significant thought leaders of the twentieth century. The publication of *Silent Spring* in September 1962 unleashed a tidal wave of concern and captured the attention of citizens, politicians and industry magnates all over the world. The environmental movement worldwide took inspiration from Rachel Carson's eloquence in fusing science with action. She carried her message of precaution and preventive care for the Earth to the halls of Congress, and set in motion the groundwork for environmental protection in law.⁸ In the wake of *Silent Spring* also grew a persisting body of oversimplifications, myths and

caricatures of her work. Controversy has followed the path of Rachel Carson.⁹ She had the courage to challenge pollution in our time and the passion to plead for those who could not speak – the living things of the Earth we all share, and the generations who come after us.

Rachel Carson's book *Silent Spring* created a revolution in thinking about the relationship between people and their environment when it was published in 1962. Her message is even more compelling today. Concerns she raised about chemical pollution and ecosystem balance are manifest in climate change from greenhouse gas emissions and endocrine disrupting chemicals broadly distributed throughout the biosphere. Rachel Carson set forth an environmental ethic through her writing and speeches based on fifteen years of intense study of the oceans, and the relationships between the creatures of the sea and of the land. Unlike many natural history scientists before her, she placed the role of human actions in the center of the pollution problems that were evident as the consequences of industrial activity. We experience today global evidence of the unintended consequences of the conveniences of modern life. In these times of global stress and increasing pressure on the Earth's resources, Rachel Carson's principles of the human ecosystem offer guidance about preserving the life support system of the living Earth – clean water, fresh air, fertile soil, and the biodiversity of species. Applying her principles provides a pathway to a sustainable future.

1.2. Rachel Carson's environmental ethic

The body of Rachel Carson's written work encompasses her five published books, and voluminous writing.¹⁰ Her environmental ethic draws from all of the phases of her life experience, and pervades all of her work. Many have summarized her ethic as a precautionary principle, though that concept was fully articulated nearly a decade after her writing.¹¹ Rachel Carson's environmental ethic has four key principles based on her understanding of the science behind the complex systems of Earth's biosphere. These principles can guide decisions about human interactions with the natural world today.

1.2.1. Live in harmony with nature

Rachel Carson observed the life cycles of organisms in detail, recording their interactions along food chains and analyzing the forces that shape their viability. She was careful in her own studies to respect the natural order of creatures, even returning her specimens to the tide pools from which they had been collected when her observations were complete.¹² She connected human history to the long continuum of life, from the oceans to the mountains, and

⁹ See, for example, 'Silent Spring' is Now Noisy Summer Pesticides Industry Up In Arms Over a New Book Rachel Carson Stirs Conflict -Producers Are Crying 'Foul' John M. Lee/New York Times 22Jul62.

¹⁰ Rachel Carson's writing over eleven years in the Fish and Wildlife Service includes her field notes, "Conservation In Action" series, "Food From the Sea" series and other articles. See www.fws.gov/rachelcarson. Her three ocean books: *Under the Sea Wind*, *The Sea Around Us*, and *The Edge of the Sea*, established her reputation as a popular nature writer with great credibility as a scientist. Her widespread standing as an author propelled *Silent Spring* to prominent attention even before it was formally published in September 1962, based on the excerpts printed in the New Yorker during the summer of 1962. Carson's notes, letters and papers are collected for study in the Lear/Carson Collection in the library of Connecticut College in New London, and in the Yale University Beineke Rare Book Library. Some of her speeches and letters have been collected and published separately as *The Sense of Wonder* (published posthumously), and *Lost Woods*, a collection of her essays, letters and speeches edited by Linda Lear.

¹¹ "The Precautionary Principle" Report of the United Nations. 2005.

¹² John Juriga. *Bob Hines – National Wildlife Artist*. Beavers Pond Press. Edina, MN. 2012. Page 72.

² For a detailed biography of Rachel Carson see: Linda J. Lear. *Rachel Carson: Witness for Nature*. Houghton Mifflin Harcourt, 2009. Also the Web site: www.rachelcarson.org.

³ Child of the Allegheny" was coined by Linda Lear, used for the Carson Homestead Web page in the 2007 Carson Centennial celebrations.

⁴ Lynn M. Ross. History of Springdale PA, 1906 to 2006- Centennial Edition.

⁵ Joel Tarr (Ed.) *Devastation and Renewal: An Environmental History of Pittsburgh*. University of Pittsburgh Press. Pittsburgh. 2003. Pages 3–4.

⁶ James Parton *Atlantic Monthly*. January 1868.

⁷ Rachel Carson. 1963 lecture to the Kaiser Foundation Hospitals and Permanente Medical Group of San Francisco, in *Lost Woods: the Discovered Writing of Rachel Carson*. Ed. Linda Lear. Beacon Press 2004.

⁸ Rachel Carson Testimony, Hearings before the Senate Subcommittee on Reorganization and International Organizations of the Committee on government Operations, "Interagency Coordination on environmental Hazards (Pesticides)" June 4, 1963, 88th Congress, First Session, (Washington D.C. Government Printing office, 1964).

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