THE ECOLOGICAL BODY

Lisa Sideris

Fools, said I, you do not know Silence like a cancer grows — Simon and Garfunkel, "The Sounds of Silence"

THE POISON BOOK

"POISONING PEOPLE is wrong." Thus begins the September 23, 1962, New York Times book review of Rachel Carson's Silent Spring.1 "Miss Carson's" newest book, the review goes on to say, represents her latest treatment of a theme running through her previous three works, namely, "the relation of life to environment." Today — forty years after the publication of this review — there is something a little peculiar about these characterizations of Silent Spring. In the first place, to distill from this work a warning that people are in peril from chemical bombardment does not do justice to Carson's expansive view of life. The ominous hush that Carson prophesied was not, after all, the systematic silencing of humans, but the silencing of the nonhuman world. ("Silent Spring" was originally the title of Carson's chapter dealing with birds.)2 However, human silence was complicit in the more profound silencing of nature that Carson dreaded. Only by breaking this silence — the reticence of government agencies and chemical companies — could the silencing of nature and thus a "spring without voices" be averted.3 No doubt, the chemical companies wished desperately to silence Carson. When a minor ailment prevented her from appearing at a conference on air pollution, a newspaper proclaimed, "Author of Silent Spring Silenced by Cold."4 "What good news in chemical circles!" she laughed to her friend Dorothy Freeman.5

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The wording of the review of *Silent Spring* also suggests that, in the 1960s, the idea that life existed in "relation" to its environment was still so novel that it sufficed as a "theme" or even an "argument" for a book — or a series of books! During the time that *Silent Spring* was just beginning to germinate in Carson's mind, she employed similar language to describe the topic of her next book: "The theme remains what I have felt for several years it would be: Life and the relation of Life to the physical environment." In the early stages of writing, Carson temporarily settled on pugnacious-sounding titles, including *Man Against the Earth* and *The War Against Nature*. She remarked to Freeman that her basic line of argument could be summarized in a single sentence, one that she was considering as the opening passage for the book: "This is a book about man's war against nature, and because man is part of nature it is also and inevitably a book about man's war against himself." Her own distillation of her ideas differs significantly from that of the *Times* review; the war of "man against man," and the poisoning of people left in its wake, were somewhat secondary to the poisoning of nature.

Carson continued to experiment with titles. She also equivocated on the issue of whether humans were an integral part of nature or a hostile force acting against it. Dissatisfied with the working title *Man Against the Earth*, she wrote to a friend, "I still hope to get something better — although, in truth, man is against the earth!" At times, in letters to Freeman, she simply alluded to her new project as "the poison book." Freeman shuddered at this phrase, preferring to call it "your *Life* book." She often worried about the effect that the poison book was having on the health of its creator, and when Carson developed an ulcer, Freeman's fears seemed confirmed.

The title that Carson ultimately settled on, *Silent Spring*, shifts focus away from the dangerous conception that humans are at odds with nature. Carson's literary agent, Marie Rodell, proposed that the title *Silent Spring* fit the content of the entire book, not just the chapter on birds; Paul Brooks at Houghton Mifflin agreed that "metaphorically, *Silent Spring* applied to the book as a whole" (though some at the press considered it a "blind title"). Freeman found it much more to her tastes as well: "I have thought so often what a perfect title *Silent Spring* has been," she wrote to Carson. "And because a woman wrote it I like the femi-

dine quality of the sound of it as compared with *Man Against the Earth*." In the end, the book was both about poison and about life; it was, and is, about humans and nature. *Silent Spring* demonstrated that we cannot talk about one of these things without talking about the others. But first and foremost, Carson believed, we must talk about them. Her "poison book" prescribed a talking cure. It is surely a tribute to her efforts that the idea that all life is intimately related to its environment now goes without saying, however that relationship is to be construed.

Carson herself construed this relationship with a subtlety that is often overlooked. In both her ecological writing and her "battle" with cancer, she advocates the reform of scientific technology but not its abandonment, and while she tirelessly documents the destructive effects of the war against nature, she sees some form of struggle to control the natural world as inevitable.

**SILENCE, CANDOR, AND "THE RIGHT TO KNOW"**

Contemporary environmentalists have carried on this tradition, attempting over and over again to break the silence, to resume the stilled conversation about the environmental — and human — devastation wrought by chemical assaults on life. One notable example is ecologist (and like Carson, cancer patient) Sandra Steingraber who, according to some, has taken up the unenviable task of "shoulder[ing] the legacy of Rachel Carson." The dust jacket of Steingraber's powerful book *Living Downstream* bears an excerpt from a review by Terry Tempest Williams which reads: "Sandra Steingraber reminds us how the health of the land is inexplicably tied to our own." Inexplicably? Surely the appearance of this word is the result of an editorial lapse, and the reviewer said, or meant to say, inextricably linked. If there is one thing that Carson and Steingraber have demonstrated, it is that human and environmental well-being cannot be separated. The patient, painstaking pages and pages of factual documentation in each of these scientists' work has banished the inexplicability of this connection. Yet writers such as Carson and Steingraber are so necessary precisely because facts do not always speak for themselves.

*Silent Spring* gave voice to the facts. Professionally as well as personally, Carson valued candor above all else. Fact-facing was a way of life for Carson, a means of redeeming and transforming
silence. Silence she associated with paralyzing fear, deception, and death. The inevitable misunderstandings that occurred in the course of her long and intimate relationship with Freeman became most frightening when they trailed off into silence. During one such period, Carson describes reaching for the phone, in happy anticipation of the many thoughts she wished to share with her friend. But then, “I remembered certain things, and I was afraid, and the phone stood silent . . . I put up the phone feeling sick and 100 years old.”

Reconciliation after these painful silences felt as rejuvenating as a springtime thaw: “I do feel so much better about Us,” she wrote to Freeman. “One day all was a frozen winter landscape — then, suddenly and as if by magic, there was sunshine and release — and spring!” Spring for Carson was a medium of communication that transcended even the silence of death — communication among all life forms and between human beings. “As between you and me,” she wrote in her letter to Freeman, “the one who goes first will always speak to the other through many things — the songs of the veeries and hermits, and a sleepy white throat at midnight.”

The association of silence with spring was unthinkable to Carson. She armed herself — and the public — with facts in order to ensure that spring would never be silent.

Facts pointed the way to action and provided a basis for choice. “The choice, after all, is ours to make,” she reminds her readers in Silent Spring. “If, having endured much, we have at last asserted our ‘right to know’ and if, knowing, we have concluded that we are being asked to take senseless and frightening risks, then . . . we should look about and see what other course is open to us.”

In order to visualize alternative paths, we need only examine the “basic knowledge” we already possess, she argued. But as Carson knew all too well, the flow of information through society can become obstructed, creating distortions of fact and a dangerously narrow vision of what is good. In a discussion of the problem of invasive species, for example, Carson underscores the need for “basic knowledge of animal populations and their relations to their surroundings.” Much of this information is already available, she adds, “but we do not use it.”

Knowledge of nature becomes too compartmentalized and self-contained. Cut off from creative and vital exchange, the various branches of science turn moribund; before long, the deadly effects show up in nature:

We train ecologists in our universities and even employ them in our governmental agencies but we seldom take their advice. We allow the chemical death rain to fall as though there were no alternative, whereas in fact there are many, and our ingenuity could soon discover many more if given opportunity.

The ecologist has the necessary knowledge, but the chemical engineer pays no attention to ecology. Average citizens, in turn, assume that knowledge possessed by ecologists is beyond their comprehension; they rely instead on chemical specialists who selectively release information to the public, telling them only what they wish to hear. The result is a fall “into a mesmerized state that makes us accept as inevitable that which is inferior or detrimental.” Thus entranced, the public loses the “will or the vision to demand that which is good.”

Carson hoped that reacquaintance with some basic facts, and the relationship of those facts to one another, might awaken the public from its slumber and rekindle the desire for that which is good. She had little sympathy with the all-too-human tendency to ignore unpleasant truths, indicting the “vast majority” of the general public who “rest secure in a childish faith that ‘someone’ is looking after things.” It is always better to know, Carson believed, than not to know.

The New York Times review of Silent Spring understood this much. Carson’s advice was “know the facts and do something about the situation,” the review noted. “She intends to shock and hopes for action.” But Carson, for her own part, did not find facts shocking so much as she found them comforting. Even when the news was bad, she embraced the “comparative peace of mind” that came from having “facts instead of guesses.”

Facts, once absorbed, could provide insulation against shock.

BODIES OF KNOWLEDGE

Carson was diagnosed with breast cancer in the spring of 1960, during the writing of Silent Spring, and she would receive much bad news for the next (and last) four years of her life. As a scientist investigating environmental hazards and as a cancer patient seeking the truth about her disease, she continually struggled with the problem of wresting facts from “specialists.” In letters
and conversations with her doctors, she implored them to be "direct and detailed" and demanded "no sugar-coating" of her condition, just as in *Silent Spring* she called for an end to chemical companies' "sugar coating of unpalatable facts" about pesticides, an end to their "little tranquillizing pills of half truth." She was adamant in asserting her right to know the unalloyed truth about her breast cancer at a time when concepts of informed consent and patients' rights were not well developed. At the time of Carson's diagnosis, it was not unusual for biopsy and mastectomy to be performed as a single procedure, with no inquiry into the patient's wishes regarding her own body. News of Carson's positive biopsy was dangerously delayed for nine months owing to the failure of her then surgeon, Fred Sanders, to disclose the truth about her malignancy and likely metastasis. "I was told none of this," she wrote to her editor, "even though I asked directly." From then on, she sought the advice of a surgeon willing to match her cancer.

While Carson valued truth-telling and the measure of comfort and control that facts afforded, she insisted that facts must be situated and interpreted within a larger framework. That framework — the bigger picture of science — ought to be approached with humility and mindfulness of all that is not yet known. Facts, in other words, had their own ecology for Carson, and she embraced this notion of ecology in all aspects of her life. Her respect for the relationships between parts and wholes was apparent in her life-long habit — instilled in her by her mother — of returning her "specimens" such as sea creatures to the natural environments from which she had removed them for the purposes of scientific study. For Carson, being scientific meant taking seriously the broad contours and the vast unknowns — the parts of the ecology of nature as well as the ecology of the human body that were only dimly understood. "Sometimes we have no choice but to disturb these relationships," she wrote, "but we should do so thoughtfully, with full awareness that what we do may have consequences remote in time and place."

Carson approached her disease much as she approached the environmental crisis her work had brought to light. She combined a profound appreciation for medical technology with an attitude of awe in the face of the mysterious functioning of the disease and the complex interconnections of the body. In her doctor, George Crile, whose wife would succumb to breast cancer a year before Carson's death, she at last found an ecological sensibility similar to her own. Her letters to Crile praise his frankness, his unusually perceptive grasp of the role of humility in science, and his sensitivity to the body's interrelated, systemic functioning. "You smiled when I suggested that medicine could ever be scientific," she wrote to him,

but one of the things I appreciate in you, and one of the things I mean by "scientific" is your awareness of what is not known and your unwillingness to rush in with procedures that may disrupt that unknown but all important ecology of the body cells. Carson was forever conscious of the limits of human understanding — as well as the opportunities for wonder that limits entail. Science, she believed, could never exhaust nature's mysteries, for "every mystery solved brings us to the threshold of a greater one." A good scientist never loses sight of all that eludes his or her grasp. In attempting to come to terms with her own death, Carson drew comparisons between the bewildering concept of personal immortality and the startling implications of modern physics. "Because I cannot understand something doesn't mean it doesn't exist," she wrote to Freeman. Certain scientific claims might appear confounding and implausible, she conceded, yet "these concepts deal with proven realities, so it is no more difficult to believe that there is some sort of life beyond that 'horizon.'"

Carson and Crile's shared appreciation of the unknowns of bodily ecology led her to embark on an experimental treatment with Krebiozen, an anti-cancer serum derived from living tissue which (it was believed) "really helps the whole body resist," as she explained optimistically to Freeman, "instead of attacking the local manifestations of the disease, as by radiation." Crile cautiously affirmed Carson's optimism about Krebiozen, noting that this sort of treatment might well provide "the type of biological specificity you are looking for in your ecological problems." Carson confessed to having far less confidence in the procedures of another doctor who did not share this ecological understanding of life processes. "Like most specialists," she complained to Crile, "he is looking chiefly at his own problem without much regard for the whole picture." Ironically, Carson and Crile agreed, the specialist often fails to grasp the importance of speci-
The narrow focus that treats a problem in isolation from its context endangers the broader ecology: only by trying to understand the whole system can an appropriate, specific response be generated from within the body.

Numerous passages of *Silent Spring* reiterate Carson’s general policy of suspicion toward narrow-minded specialists, such as chemical engineers, who would have the world “beat its plowshares into spray guns.” Carson decries the ascendency of the chemical specialist who—like the unenlightened surgeon—generally sees “his own problem and is unaware of or intolerant of the larger frame into which it fits.” Carson’s remarks to George Crile regarding his cautiously scientific approach to body ecology also echo her thoughts on the subject in *Silent Spring*. Here she drew direct parallels between the ecology of the natural world and “an ecology of the world within our bodies.” In the “unseen world” of the body, as in nature, “minute causes produce mighty effects; the effect, moreover, is often seemingly unrelated to the cause, appearing in a part of the body remote from the area where the original injury was sustained.” Just as chemical radiation and radical mastectomy ignore the ecological integrity of the cancer patient’s body, DDT’s eradication of an entire spectrum of life forms for the sake of a “beetleless world” reveals a shortsighted, arrogant, and scientifically uninformed methodology.

Despite her criticisms of the narrow focus of many scientists, Carson heartily approved of scientific controls and the attitude of detachment that allowed one to stand back from a complex tangle of problems, assess the risks and benefits, and thereby decide which road to take. If the public is to decide whether or not to continue on its present road, she writes in the opening pages of *Silent Spring*, it must do so “in full possession of the facts.” In her personal struggle with cancer, she noted that “for the most part” she managed “to be ‘matter of fact’” about her disease. Carson’s habit of detachment — both from her own “case” and the cases of environmental devastation she documented — undoubtedly permitted her to cope with the depressing burden of information her investigations had unearthed.

Carson maintained a *prima facie* respect for ecological interrelationships, but she did not counsel scientists to refrain from manipulating or controlling life processes. The leading pioneer of the environmental movement would not feel at home in the current climate of suspicion toward science that is apparent in many environmentalists’ — particularly ecofeminists’ — condemnation of detached, controlling, and objectifying methodologies. Unlike many contemporary advocates of an “ecological ethic” that endeavors to treat all organic beings as inviolable ends-in-themselves, Carson did not see human manipulation and even destruction of some parts of nature as inimical to an ecological sensibility. “Controlling” and “caring for” the environment were not mutually exclusive imperatives.

Perhaps for this reason, environmentalists in the ecofeminist camp generally pay scant attention to Carson’s work, despite her unique position as a prominent female environmentalist and science writer in a pre-feminist era. In keeping with Carolyn Merchant’s claim that mechanical philosophy and science induced the “death” of nature, ecofeminists, both religious and secular, have steadily critiqued “masculine” modes of detachment and objectivity embedded in the Western scientific perspective and its controlling gaze. As one ecofeminist asserts, “from the time of Rene Descartes on, science has advanced on the assumption that what is known is passive and inert, laid out before the subject so it can be reduced to its smallest parts, studied exhaustively, and thereby known.” In environmental literature, this model of analysis is repeatedly contrasted with an “ecological” model that jettisons the “objectifying, manipulative, and disen-gaged kind of knowledge,” proposing instead that we relate to all entities on terms of friendship, as “subjects” like ourselves.

Carson might well have been perplexed by such proposals. To be sure, her writing condemns the extreme, heretical claim of some scientists that humans can and ought to direct the course of nature. As articulated by some, she notes, the control of nature “is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man.” Carson’s critique of controlling, Neanderthal science is one of the most widely quoted of all her remarks in *Silent Spring*, yet the context of this statement deserves closer scrutiny. In fact, she did not object to the control of nature *per se*. Rather, she endorsed what she called biological or natural control instead of chemical control. As she argued in a speech made shortly after the publication of *Silent Spring*, "I criti-
cize modern chemical control not because it controls harmful insects, but because it controls them badly and inefficiently.\textsuperscript{43} She understood, too, that different degrees of control over nature were warranted by different contexts. In the "highly artificial," monocultural farmlands of modern America, she notes, even biological controls will not succeed without the careful planning and direct intervention of scientists, while in relatively wild forests, "with a minimum of help and a maximum of noninterference from man, Nature can have her way."\textsuperscript{42} The most important distinction between biological and chemical control is an "awareness" in the former "that we are dealing with life."\textsuperscript{43} Working together rather than in isolation, she insisted, specialists can create a new definition of control — one that remains conscious of the living nature of organisms. Such methodologies all have one thing in common:

they are biological solutions, based on understanding of the living organisms they seek to control, and of the whole fabric of life to which these organisms belong. Specialists representing various areas of the vast field of biology are contributing — entomologists, pathologists, geneticists, physiologists, biochemists, ecologists — all pouring their knowledge and their creative inspirations into the formation of a new science of biotic controls.\textsuperscript{\textdagger}

This form of control from within the "fabric of life" places humans back in nature, even as we manipulate its processes to suit our ends.

\textbf{The Final Battle}

Some scholars have noted parallels in Carson’s writing between war — especially Cold War — rhetoric and human efforts to eradicate insect "enemies." In \textit{War and Nature}, Edmund Russell observes that "Carson relied on literal and metaphorical similarities between chemical warfare and pest control" in making her case against DDT and other widely used pesticides.\textsuperscript{45} Not surprisingly, military metaphors often shaped her view of her cancer as well. "I still believe," she wrote to Dr. Crile, in "the old Churchillian determination to fight each battle as it comes (‘We will fight on the beaches’ — etc.) and I think a determination to win may well postpone the final battle."\textsuperscript{46} Carson’s final battle would come only a few months later on April 14, 1964, but she lived long enough to glimpse the revolutionary impact of her environmental crusade.

In the closing chapter of \textit{Silent Spring}, Carson’s denunciation of pesticide use employs a steady stream of military language. But, again, her objections are lodged specifically against chemical, rather than biological, "warfare." Indeed, she often invokes the metaphor of war in support of natural pest controls, citing a "whole battery of armaments," new "line[s] of attack," and means of "direct destruction" available to those willing to seek the permanence of biological solutions in place of quick-fix chemicals. One of the "more attractive possibilities" emerging from biological approaches, she notes, involves "what might be termed an experiment in psychological warfare" wherein entomologists use insects’ own sexual secretions to confuse and trap males of the species.\textsuperscript{47} Compared to such creative methods, she argued, chemical pesticides were an inferior means of warfare, "as crude a weapon as a cave man’s club."\textsuperscript{48} Better — and more discriminate — weapons were available. Crude chemical controls provided irrefutable evidence of a Darwinian struggle in nature, Carson noted, for spraying resulted in the weeding out of the "weaker members" of insect populations, leaving the "strong and fit . . . to defy our efforts to control them."\textsuperscript{49} If we are to succeed in this war, she argued, we must learn the art of "forging weapons from the insect’s own life processes," thereby turning the "strength of a species against itself."\textsuperscript{50} She had dropped the references to warfare from the title of her book, but the motif of combat persisted in more subtle forms. In the end, Carson’s position on the human war with nature was not so much that of a pacifist as of "a smart general" devising a set of battle plans superior to those of conventional warfare.\textsuperscript{51} Biotechnology, if properly applied, was one such plan, an alternative approach that succeeds by "taking account of such life forces . . . seeking to guide them into channels favorable to ourselves."\textsuperscript{52} In other words, biological pest control was to the farmer what — she hoped — Krebiozen would become to the cancer patient.\textsuperscript{53}

Overall, Carson’s faith in scientific progress was balanced by an abiding skepticism of the sort of scientific idolatry pervading post-Sputnik America and the widespread mentality that "worships the gods of speed and quantity."\textsuperscript{54} In 1958, she lamented to Freeman that human history had turned a new and frightening corner with the emergence of technologies capable of altering
the very course of life on earth. Before Sputnik, it was plausible to believe that much of Nature was forever beyond the tampering reach of man — he might level the forests and dam the streams, but the clouds and the rain and the wind were God's... Now the most farfetched schemes seem entirely possible of achievement. And man seems actually likely to take into his hands — ill-prepared as he is psychologically — many of the functions of "God." 56

Rachel Carson defied neither humans nor nature. She staked out a middle ground between all-out control of nature and a naive reverence for all that is "natural." Scientists — and indeed citizens — must rely on a firm foundation of facts, combined with an attitude of humility "before the vast forces with which they tamper." 56 Certainly we should proceed into the vast unknowns, she believed, but we should do so with caution. In dealing with the environmental crisis as well as her own health crisis, Carson consistently endeavored to take in this whole, integrated, and interrelated picture, fully aware that neither she nor any human being could completely apprehend that larger framework in which the processes of life — and death — unfold. Forty years after the publication of Silent Spring, the subtleties and the creative tensions in Carson's philosophy of life continue to make her work relevant and compelling.

NOTES

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5. Freeman 248. Carson had originally intended to write a book on evolution and ecology, or life and its environment, as she calls it. Later she decided to fold these ideas into an even more preening project dealing with pesticide misuse, what would become Silent Spring.

6. Freeman 380.


8. Freeman 254 (my emphasis).


10. Freeman 401.


12. Terry Tempest Williams, comments on dust jacket, Living Downstream, by Steingraber, front cover.

13. Freeman 312.

14. Freeman 366, 446.

15. Carson, Silent Spring 278.


20. Freeman 313.

21. Freeman 450.


23. Ellen Leopold writes that the "practice of fusing diagnosis with primary surgical treatment, universal at the time of Rachel Carson's surgery, survived well into the 1960s." In the forty years since Carson's diagnosis, advances in anesthesiology have been "matched by the rise of informed consent," which extended the legal doctrine of self-determination into the medical arena, requiring that patients be informed in advance of the risks and possible benefits of any procedure recommended to them" (A Darker Shade: Breast Cancer, Women, and Their Doctors in the Twentieth Century [Boston: Beacon, 1999] 125).

24. Leopold 130.

25. Carson, Silent Spring 64.


28. Freeman 447.

29. Freeman 442.

30. George Crile, letter to Rachel Carson, Leopold 146.


32. Carson, Silent Spring 69.


34. Carson, Silent Spring 189.


36. Freeman 490.

37. Perhaps it is Carson's "masculine" way of thinking and knowing that makes her unpalatable to environmentalists with ecofeminist sensibilities. Her use of war metaphors for humans and the environment, as I discuss below, are also worth noting.

"THE WORK OF YOUR OWN HANDS":
Doing Black Women's Hair as Religious Language in Gloria Naylor's Mama Day

Monica A. Coleman

I think hands must be very important . . . Hands: plait hair . . . knead bread . . . spank bottoms . . . wring in anguish . . . shake the air in exasperation . . . wipe tears, sweat, and pain from faces . . . are at the end of arms which hold . . . Yes hands . . . Let's start with the hands . . .

I.

In her 1988 novel Mama Day, Gloria Naylor creates a story-world filled with complex and emerging Western, African, and African American spiritualities and cultures. Naylor uses a variety of mini-narratives and symbols to connect divinity and the process of creation. One such symbol that she employs consistently throughout the novel is the image of hands, particularly hands doing Black women’s hair. The movement of hands metonymically invokes women’s work and functions as a nonverbal symbolic language for divine activity — (re)creating, curing, and blessing. That is, in Mama Day, Black women’s hair is not just the locus of divine activity, and hands are not just the vessels through which divine activity is transmitted. Rather, the doing of hair — washing, combing, parting, oiling, brushing, braiding, twisting, and even cutting hair — is a language, a nonverbal language, for talking about God and God’s activity in the world.

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