Ehrlich versus Commoner: An Environmental Fallout

Early in 1970, Bernard Berelson, president of the Population Council in New York City, invited 20 or so scientists and population experts to meet in his office to see if any kind of consensus could be reached on population policy in the United States. Among the distinguished assemblage were John Holdren, the associate of Paul Ehrlich, Stanford University population biologist and author of the best-selling *Population Bomb*; and Barry Commoner, the "Paul Revere of ecology," as he is known in some circles, and soon-to-be author of the best seller *The Closing Circle*.

It was at that meeting that the first wound was opened in a dispute that has festered for the last 2 years between Commoner and Ehrlich.

According to Ehrlich's colleague Holdren, a physicist at Lawrence Livermore Laboratory and an admittedly biased witness, Commoner took the opportunity to unburden himself of an unexpected "tirade" against Ehrlich and biologist Garrett Hardin, accusing both of harboring population philosophies that were improper morally and politically, coercive, and totalitarian.

The conflict, briefly, centers around the issue of what factor or combination of factors is the most serious threat to man's environment. Ehrlich believes that nothing will curb deterioration of the ecosphere unless population growth is immediately slowed. Commoner thinks the population question has been overblown by many environmentalists and that the real villian is the misuse of technology. He opposes any population policy that even implies coercion in lowering the birthrate.

The two authors have been attacking each other's views with growing signs of irritation and mutual disaffection in various forums, such as speeches, conventions, and the magazine *Environment*, which Commoner helped found in 1968. It has gotten to the point, says Ehrlich's assistant Paul Growald, where each man has been "spending valuable time figuring out ways to embarrass the other."

Commoner has adopted the stance of being above it all, but Ehrlich feels he has been attacked personally, notably in *The Closing Circle*, which contains disparaging references to persons (not named in the text) who would employ coercion to inhibit population growth.

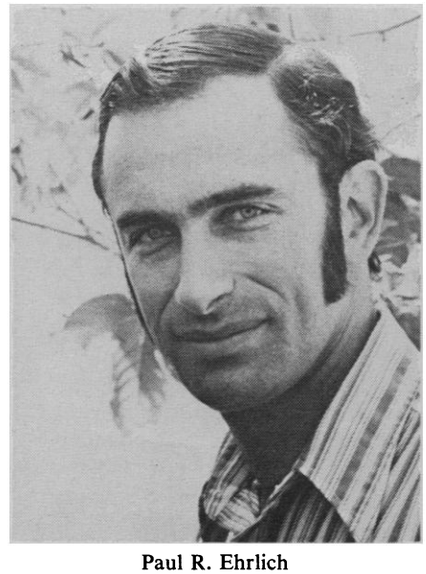
The bulk of opinion among physical and social scientists seems to be that both parties are carrying their views to the extreme, Ehrlich being an "alarmist" and Commoner strangely obstinate in exonerating population growth. Demographer Ansley Coale, for example, is not crazy about either approach and believes that ideological commitments on both sides are obscuring the scientific questions. Commoner "is sort of mystical about the balance of nature but somehow absolves the role of population growth," he says, while Ehrlich, "a real missionary on ZPG [zero population growth]," is regarded by many demographers as being to population what the Women's Christian Temperance Union is to alcohol.

Coale thinks demographers and social scientists tend toward the Commoner view, while physical scientists are more in sympathy with Ehrlich. Philip Hauser, demographer at the University of Chicago, thinks this is probably so. Hauser himself thought the *Population Bomb* "atrocious," and Ehrlich "about as naive as the day is long" on matters outside his discipline. "The thing I would trust Ehrlich with is butterflies," says Hauser (Ehrlich is also a lepidopterist).

As for Commoner (a plant physiologist by trade), he, like Ehrlich, has made important contributions to public understanding of America's environmental problems. But many observers believe he has marshaled facts that support his position and ignored the rest. Says Harvard demographer Roger Revelle: "he has tended to push a kind of lawyer's brief rather than an objective examination of all the evidence."

The dispute seems to have reached exaggerated proportions because of the nature of the protagonists—both are very strong personalities who approach their task with a certain sense of mission. Ehrlich has repeatedly sought to sit down with Commoner to iron out their differences for the sake of the greater ecological good, but Commoner has refused. Commoner's attitude, judging from a brief interview with *Science*, is that the scientific issues have all been aired in print, and the politics should be hashed out in public rather than by "elitist agreement" among professionals. Ehrlich finally got so depressed about the "counterproductive" nature of the debate that he issued a press release recently announcing his intention to "bury the hatchet" with Commoner and suggested they start working together on areas of mutual agreement, namely, "the detection and correction of faulty technologies and on finding ways to a more equitable distribution of wealth."

That may mark the end of an increasingly acrimonious debate, but a harmonious partnership is hardly in the offing. Commoner, on hearing of Ehrlich's intentions, denied any hard feelings. "If he wants to bury his hatchet, fine. I have no hatchet to bury; my



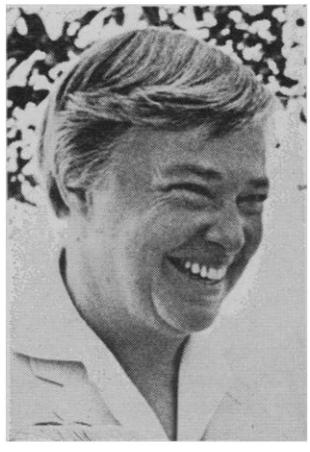
Paul R. Ehrlich

Barry Commoner

Ray Nominated to AEC

When she moved out to Fox Island in Puget Sound not long ago, Dixy Lee Ray traded in her red Jaguar convertible and bought something more suitable for the terrain—a Toyota land cruiser with four-wheel drive and a big winch on the front bumper. Now she's very much at home bouncing over the island's rough roads with her two constant companions—Jacques, a miniature French poodle, and Ghillie, a Scottish deerhound whom she describes as "a big bag of affection."

Last week, President Nixon nominated Dixy Lee Ray, one of the few women prominent in marine biology, to serve on the Atomic Energy Commission (AEC). She admits that few things could wrench her away from the woods and orchards of her 65-acre retreat, but she's nevertheless eager to take up the job. And if friends and colleagues from Woods Hole to Scripps are right, it won't be long until her imprint on the commission becomes evident.



"Temperamentally, she's well suited to this sort of job," says a colleague who served with her on the President's Task Force on Oceanography, a policy advisory group that met in 1969. "She works well with committees and she's not afraid to say what she thinks," he said. Another friend, one of 17 years' standing, described her as a "very fluent speaker and not one to say Yes when she means No."

At 58, Ray is well respected as a marine biologist (her special interest has been crustacea that attack wood). She has taught off and on for 24 years at the University of Washington, where she holds an associate professorship, and she spent 3 years in Washington, D.C., in the early 1960's as a consultant to the National Science Foundation. For the past 9 years, though, she has devoted nearly all her time to administering the Pacific Science Center in Seattle, a cluster of six buildings that originally housed the science exhibition of the Seattle World's Fair in 1962. With financial help first from the NSF and later from the state of Washington and some 75 school districts in the area, she and a small staff transformed the exhibition into a popular teaching museum for the general public and for use by the state's elementary and secondary schools.

Ray has not followed the affairs of atomic energy closely in the past, and she concedes that she has "a lot of homework to do" before expressing herself on the subject. Still, she does have three missions in mind as an AEC commissioner, if, as expected, the Senate confirms her nomination. (She would replace Wilfrid Johnson, whose term has expired.)

For one, she wants to encourage the growth of nuclear medicine, a field she finds exciting. Second, advancing the public understanding of science has long been a major interest of hers, and, she says, few fields are more sorely in need of it than atomic energy. "I feel some progress can be made in easing the fears and apprehensions that attach to nuclear energy," she said in a telephone conversation. "And this will have to be done, after all, since the technology isn't going to go away."

Finally, Ray is eager to involve herself in the AEC's tangled web of environmental affairs. In this area, she describes herself as firmly a moderate, "in the sense that I don't lead marches and predict doom." She is nevertheless convinced that nuclear energy can have its untoward effects. "There is no question that such problems as thermal pollution are real. We have to have the wisdom to recognize that our technology can have adverse effects and, at the same time, that we need nuclear energy."—ROBERT GILLETTE

task is to discuss the *issues*, as I see them, which I shall continue to do, as I have in the past," said he.

Furthermore, several recent incidents have done nothing to warm up their relationship. Last February, for example, Ehrlich suggested in a press release that the scientific community develop "courtroom-style forums" to judge and render advice on controversial proposals from scientists such as Commoner and William Shockley, the Stanford physicist who has urged genetic studies of the relationship between race and intelligence. "Shockley's racial crusade and Commoner's one-sided treatment of the complexities of the environmental crisis are typical of a dangerous trend of politically active scientists who appeal to the public for support when they receive little or none within their professions," Ehrlich is quoted as saying.

Ehrlich acknowledges that mentioning Commoner in the same breath with a man of Shockley's unpopular views is "perhaps open to misinterpretation." Commoner, who professes only vague recollection that such a parallel was drawn, says, "Anybody who associates me with Shockley must be, to put it mildly, poorly informed. The entire notion is ludicrous."

Then Commoner did something last spring that really antagonized the Ehrlich crew. Ehrlich and Holdren prepared a sharp critique of *The Closing Circle*, which Ehrlich calls a "dreadful book," and Holdren calls "an extraordinarily counterproductive and damaging book" (it has been generally well reviewed elsewhere). They circulated their critique, and the *Bulletin of the Atomic Scientists* agreed to publish it. They asked Commoner for a rebuttal to publish at a later date; Commoner wanted a simultaneous rebuttal, so the *Bulletin* postponed publication of the two pieces from April to May in order to give Commoner more time. Imagine the reaction when the April issue of *Environment* appeared carrying both the critique and Commoner's rebuttal. The *Bulletin*'s editor acknowledged that he was "disagreeably surprised"; Ehrlich's associates were astounded and particularly annoyed at what they saw as *Environment*'s attempt to play the articles as a "scoop" or as a public service they were rendering in getting the dispute out into the open.

The two articles are edged with sarcasm, with each of the two authors sighing that the other had apparently failed to grasp even the rudiments of his argument. Commoner's rebuttal is in temperate, if condescending, lan-

guage; the impression he conveys is of one who seeks to rise in Olympian fashion above those foolish enough to question his judgment. Ehrlich and Holdren, on the other hand, fired by what they see as personal attacks on Ehrlich, are in there punching. "Preposterous evasion," "self-righteous philosophical ramblings," and "seductive misinformation" are a few of the qualities they perceive in the Commoner opus.

Both parties have sneered at each other's mode of calculations. The Ehrlich camp says Commoner simply does not have a grasp of figures, and even the fact-filled Ehrlich has been noted by one reviewer (René Dubos) as having endowed oysters with enough DDT that they could be chopped up and used as pesticide.

We then move on to the Stockholm Conference on the Human Environment and its main sideshow, the Environmental Forum. The forum, heavily attended by representatives of underdeveloped "third world" countries, was the place where subjects such as population and the Vietnam war, which were taboo on the main agenda, were noisily explored.

Ehrlich's assistant Growald says he did painstaking groundwork for a panel on population to be composed of Ehrlich, a Swede, and a Senegalese. When Ehrlich arrived, however, he was bombarded with demands to include more third world people. Five additional panel members were accepted, and Ehrlich found himself in a seven-to-one situation in which he was being showered with hostile questions from the floor.

According to Growald, the events had been masterminded by Commoner, who had stayed up planning until 3 a.m. the previous morning. Commoner sat secluded on a balcony overlooking the proceedings; from time to time, he retreated to write out probing questions to be relayed down for use by those on the floor.

Commoner ridicules this version. "It is scurrilous, absolutely scurrilous, to propose that the scientists in the third world did that at anyone's bidding." He points out that there was a great deal of spontaneous program organizing throughout the forum and that Ehrlich, being there for only 1 day, did not understand "the temper of the whole program."

Indeed, one reason the two men's views clash is that Ehrlich has been attempting to put the debate on a purely scientific basis, whereas Commoner considers politics to be very much part of the equation. When you're playing bridge and your opponent's playing poker, it's hard to agree on the rules.

—CONSTANCE HOLDEN

RESEARCH NEWS

Report on Astronomy: A New Golden Age

Very few people have never questioned what course they would follow if they were starting their careers over again, and the answer given frequently by physical scientists these days is astronomy. In a recently released report to the National Academy of Sciences, an eminent committee characterized the past decade as a "new golden age of astronomy" during which "an explosion in dramatic discoveries occurred." The pace of discovery has been so rapid that the unfolding story of astronomy has an excitement unsurpassed in the physical sciences, and many bright young men and women have been attracted to the profession.

The current era of new ideas, according to the Astronomy Survey Committee, chaired by Jesse L. Greenstein of the California Institute of Technology, started with the optical measurements of extremely large redshifts of quasars in 1963. Many discoveries, including quasars, pulsars, the cosmic background radiation, clouds of complex interstellar molecules, and the retrograde rotation of Venus, have been made with radio telescopes. Other discoveries—of x-ray stars and infrared galaxies (whose energy output in the infrared far exceeds that in optical and radio frequencies)—and the rocket ultraviolet discovery of hydrogen molecules in interstellar space, have been made with instruments newer than radio telescopes and capable of exploring virtually all the regions of the electromagnetic spectrum from the ground or space.

Not long ago, the study of the universe was the prerogative of a small number of men largely isolated from the rest of science, who were supported for the most part by private funds and were comfortable with projects that spanned decades. The profession has always been a consortium of colorful individuals, a community with a tradition of sharp, sustained, and, at times, personal debates. In the last two decades, however, federal support for astronomy has burgeoned, the ranks have swelled, and many scientists trained in other fields have become practicing astronomers. With typically measured pace, the deans of astronomy have discarded their 19th century style of doing science for the advantages of late 20th century organization and instrumentation.

The keynote of the Greenstein report is that modern instrumentation, used with great ingenuity, has made possible the exciting discoveries of the last decade, and many advanced technologies are now available or nearly available so that 11 new programs are needed to maintain the present rate of progress. The programs almost all feature new instrumentation. Four recommendations are given top priority and listed in order of preference.

The most urgent recommendation is the very large array (VLA) radio telescope that has already received initial funding in the 1973 budget of the National Science Foundation. With a design based on a theory called "aperture synthesis," the VLA can economically attain great resolving power comparable to that of optical telescopes. The concommitant recommendation of an expansion of research support for moderate-sized radio telescopes is one of many indications of a concern for the balance between research efforts at universities and the larger national facilities.

For optical astronomy, the committee recommended a major program to develop electro-optical detectors, which can multiply the light-gathering power of existing telescopes as much as 25 times. Most of the cost of the optical program, however, was designated for new optical telescopes, such as a prototype of a novel multimirror design, several telescopes of the 100-inch class, and a large multimirror telescope of