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Carolyn Krause provides a summary of Steve Stow's oral history interview with Alvin Trivelpiece when he was the director of the Oak Ridge National Laboratory. Get ready to learn a lot about the man who spent just a few years in Oak Ridge, but who brought a lot of experience to the job.

Alvin Trivelpiece, ORNL director from January 1989 to April 2000, grew up in the agricultural community of Stockton, California, and rose to become director of the Department of Energy's Office of Energy Research (now Office of Science).

Trained as an electrical engineer and physicist, Trivelpiece has long been interested in education and continued learning. A tall man who could ride a unicycle, he achieved a balanced view of how DOE works at the top and how it can benefit—and harm—its national laboratories.

As a youth he became interested in radio through a book he read and his friendship with an amateur radio operator next door. He liked taking things apart in his grandfather's saw shop to learn how they work.

"I've always been amused," Trivelpiece told ORNL's Steve Stow in a 2003 oral history interview, "because what you learn from taking a clock apart is that someone will say, 'Don't try to do that again, because you can't get all the gears and springs back together easily.'

"But I wonder today about a kid who takes apart an electronic clock and finds a battery, a couple of LEDs (light emitting diodes), and a small computer chip. What do you learn from that? In that sense I think kids today are a little bit deprived."

Trivelpiece gave a book report once on E. O. Lawrence and visited the University of California at Berkeley, where he later taught. He became interested in mathematics. He got a job as a construction lineman but was laid off when a recession hit California in 1948. He started to hitchhike to New Orleans but stopped off at the home of his aunt in San Luis Obispo. Her husband was on the faculty at Cal Poly (California Polytechnic State University).

"I was wet, cold, and hungry," Trivelpiece said. "They took me in and discouraged me from going to New Orleans. They suggested I go to Cal Poly. It cost me all of five dollars a quarter to go there then." Trivelpiece continued his education and earned a Ph.D. degree in electrical engineering from Caltech (California Institute of Technology in Pasadena). Part of his doctorate is in physics, which interested him more than electrical engineering. However, in 1993, he was elected to the National Academy of Engineering.

He received a Fulbright Scholarship in 1958 to study and work in the Netherlands, where he was shocked to learn that people there were still talking about World War II and their experiences in Bergen-Belsen and other Nazi death camps.

"I got involved in a lot of international activities over the years, and my early experiences in the Netherlands paid great dividends," he said. "I came to realize that people do things differently in different places – not wrong, but different."

Trivelpiece became a plasma physics professor at the University of Maryland, and before coming to Oak Ridge, he was executive officer of the American Association for the Advancement of Science, which was largely concerned with issuing publications, such as the prestigious Science magazine.

In between, he was assistant director for fusion research for the U.S. Atomic Energy Commission (1973-75), vice president for engineering and research at Maxwell Laboratories in San Diego

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(1976-78), corporate vice president at Science Applications, Inc., in La Jolla, Calif. (1978-81) and director of DOE's Office of Energy Research (1981-87).

In 1985 Trivelpiece initiated DOE's efforts to interest high school students in becoming scientists and engineers to fill the many jobs expected to be open in future decades. DOE was interested in persuading talented American boys and girls to prepare for careers in science, math and technology.

Secretary of Energy John Herrington had asked him for the third time, "AI, what can we do with our national laboratories to help inspire young people to consider careers in science and engineering?"

"Well, maybe what we ought to do," Trivelpiece said, "is invite the smartest kid in each state in computer science and let them go out to Lawrence Livermore in California and work on the Cray computer there for two weeks sometime."

A few hours later Trivelpiece heard from Herrington that both he and President Reagan "think this is a really great idea." In fact, Reagan wanted to visit the young selectees at Livermore but later canceled the trip because he was scheduled for an operation.

"This idea of a high school honors program in which students spend time at a DOE facility took hold," Trivelpiece told Stow. "The next year, we expanded it to Argonne and then Fermi Lab. Oak Ridge had a program for smart kids in the environmental sciences."

The program was beneficial not only to the students but also to the national labs as an effective recruiting tool. In Trivelpiece's letter to Herrington, he wrote, "I think the high school honors program was one of the more important things we did together while we were in office."

As ORNL director, Trivelpiece learned about the negative effects of federal policies on DOE's national labs. Early on, he was frustrated by the visits of the "Tiger Teams" required by his former employer.

Whatever good they brought about, he said, was offset by the presence at ORNL of some 80 "tiger" people full time for 60 days; the requirement that ORNL managers write a 1000-page report in a few days in response to the Tiger Team's 1400-page report; and the demand that ORNL spend a billion dollars to fix "deficiencies" identified by the tigers.

"We found that all but \$60 million of that billion dollars had been requested by ORNL long before the Tiger Teams were thought of," Trivelpiece said. He was somewhat insulted by the Tiger Team report's implication that "we would ignore major risks to worker and public health and safety -- and not spend money to reduce them."

The lab was forced to increase its number of audits and to fix the identified "deficiencies," greatly boosting its overhead rate (percentage of DOE research funds spent on services, including meeting new environmental, safety and health regulations). DOE then criticized ORNL for allowing its overhead rate to rise so much.

Trivelpiece was also concerned about the "lost opportunity cost." Researchers were required to clean out closets and dispose of "junk" in labs instead of writing proposals and doing experiments to advance ORNL and DOE's scientific and technical interests.

Unfortunately, some of that tossed junk Trivelpiece "regarded as relevant to the laboratory's past history." That was not good for a man and scientific community interested in continued learning.

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NEXT: How Alvin Trivelpiece benefited ORNL

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I think we too often take for granted the skills and abilities that individuals who lead our laboratory bring to the task. Carolyn has just shown us a brief review of the education, experience and dedication AI Trivelpiece brought to the job of director of ORNL. He was here for only a short few years, but he brought a breadth of experience and knowledge as well as connections to individuals of influence from across the nation. And, Carolyn has promised more to come!



Alvin Trivelpiece with Secretary of Energy Bill Richardson, Congressman Fred Thompson and Congresswoman Marilyn Lloyd in the background



Alvin Trivelpiece with "Little Al" - Albert Einstein

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Alvin Trivelpiece