Leadership Without Easy Answers

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The Belknap Press of
Harvard University Press
Cambridge, Massachusetts
London, England
1994

authority figure would likely respond defensively and inappropriately when the community retaliates.

Second, the Buchanan story suggests that having an authority relationship with people is both a resource for leadership and a constraint. Authority is a resource because it can provide the instruments and power to hold together and harness the distressing process of doing adaptive work. Authority is a constraint because it is contingent on meeting the expectations of constituents. Deviating from those expectations is perilous. Had Parsons not carefully monitored the trust of the family, she might have lost them.

Third, as learning takes place, Type I11 situations may be broken down partially if not completely into Type I1 and Type I components. This involves both process and technical expertise. When an authority distinguishes conditions from problems, she can bring tractable issues to people's attention. By managing attention to issues instead of dictating authoritative solutions, she allows invention. People create and sort through alternative problem definitions, clarify value .trade-offs, and test potential avenues of action. Creativity and courage can sometimes transform adaptive challenges into technical problems by expanding people's technical capabilities.

For example, Parsons and the Buchanan family transformed the Type III problem of impending death into Type II and Type I parts. Steve and Connie started seeing a counselor to help them find a way to prepare the children. They called an accountant to help clarify their financial needs. And Connie used a local agency to begin a job search and professional training.

The following case illustrates these implications in a large and public system.

Tacoma

On July 12, 1983, the head of the U.S. Environmental Protection Agency (EPA), William Ruckelshaus, took unprecedented action in a case involving a copper plant owned by the American Smelting and Refining Company (Asarco) near Tacoma, Washington." The Asarco plant was the only one in the nation to use copper ore with a high content of arsenic, and arsenic had been found to cause cancer. As authorized by Amendments to the Clean Air Act of 1970,

Ruckelshaus was expected to decide what to do about the plant; in particular, he had to determine what constituted an "ample margin of safety" in the plant's operation to protect public health.

This was both a technically and politically difficult question. In the years since the 1970 Clean Air Act Amendments had been written, scientists were discovering that many hazardous wastes lacked a clear threshold of safety. Even a minuscule amount of "nonthreshold chemicals" could produce adverse effects. As Ruckelshaus put it in his June 1983 address to the National Academy of Sciences, "We must assume that life now takes place in a minefield of risks from hundreds, perhaps thousands, of substances. No more can we tell the public: You are home free with an adequate margin of safety." The Asarco plant had long been regarded as one of the major polluters in the Northwestern United States, but it had also provided employment to generations of people since its opening in 1890. By 1983, nearly one hundred years later, the plant employed about 575 workers in the town of Ruston with a payroll of $23 million. It contributed significantly to the local economy through its purchases of $12 million worth of supplies, and it provided $13 million of revenue to auxiliary businesses in addition to paying $3 million in state and local taxes. If Asarco were to close the plant, the state of Washington would have to pay as much as $5.5 million in unemployment benefits. Closing the plant would be a devastating blow to a region where several major industries had not yet recovered from Recession.

Yet the numbers do not fully convey the significance of Asarco to Tacoma. A texture and a way of life had been woven around the plant. Seventy-year-old Owen Gallagher, a former mayor of Ruston and an employee of Asarco for forty-three years, spoke for many town residents when he told reporters from the ***Chicago*** Tribune: "I've worked in the plant all my life. So have my brothers, and so have my neighbors. We're not sick. This town was built around that plant. People came here looking for fire and smoke in the 1900's to find work. Now the government's complaining about that same smoke and trying to take our children's livelihood away." The Asarco company itself was well aware of the pollution problem. Under pressure from the regional air pollution authority, Asarco had spent about $40 million since 1970 in equipment and practices to reduce emissions.

In the late 1970s they had agreed to install, by 1984, secondary converter hoods at a cost of roughly $4 million to bring emissions down further. Indeed, the hoods were considered the best available technology to reduce pollution at a smelter like Asarco's. Going further would require one of three options: develop a new technology to reduce emissions; ship in low arsenic ore at high cost; or convert the entire plant to electric smelting, a different process altogether, at a projected cost of $150 million.

According to the company, any of these three options would force the closing of the plant. World copper prices had crashed between 1980 and 1982 from $1.45 per pound to 60 cents per pound. To break even, the Asarco plant required 82 cents per pound, which meant that at current prices it was losing money already.

The battle, like many environmental battles, was pitched between jobs and health. According to the EPA, installing the converter hoods as planned would reduce the risk of arsenic related cancer from four persons a year to one. Would this be acceptable? Did an "ample margin of safety" to protect public health require more? Should regulations demand zero emissions? Or was the livelihood generated by the plant worth the added risk of one case of cancer per year?

Complicating these questions was the fact that the emissions, and thus the risks of cancer, were spread out over a twelve mile area that involved people even at a distance from the plant and its jobs. For example, Vashon Island lay two miles offshore, but because of prevailing winds it became, as one resident put it, "the dumping grounds for these pollutants without any benefits such as jobs or Asarco tax payments." Many islanders were afraid of the high levels of arsenic found in the urine samples of their children and in the soil from their local gardens. Should they bear the side-effects of Asarco? People in the city of Tacoma were in the same predicament. Receiving tons of air pollution a year from the plant, and few tax benefits, one member of the Tacoma city council said it was as if "somebody [were] standing on the other side of the city line with a thirty-ought-six [rifle] and firing it into Tacoma."

Who should decide? By habit and statute, Ruckelshaus and the EPA were supposed to decide. The company and many of its workers looked to the EPA to confirm the acceptability of the actions they were about to take by spending $4 million on converter hoods.

They were using the best available technology to reduce emissions from their plant. They looked to the EPA to resist taking action that would push them economically over the brink. Yet many area residents, along with environmental activists, looked to the EPA to provide "an ample margin of safety," and were quite willing to push the plant to the edge, if not over it, to reduce emissions significantly further.

Remarkably, Ruckelshaus, on July 12, 1983, refused publicly and dramatically to decide on his own. Going way beyond the perfunctory public hearings mandated by statute to accompany national rulemaking, Ruckelshaus proposed to engage the community at large in facing the problem. He announced the EPA's intention to solicit actively the views and wishes of the people that would be most affected by the EPA ruling. "For me to sit here in Washington and tell the people of Tacoma what is an acceptable risk would be at best arrogant and at worst inexcusable." As he later told the *Los Angeles Times:* "My view is that these are the kinds of tough, balancing questions that we're involved in here in this country in trying to regulate all kinds of hazardous substances. I don't like these questions either, but the societal issue is what risks are we willing to take and for what benefits?" Ruckelshaus even quoted Thomas Jefferson to back up his unprecedented stand: "If we think (the people) not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion."

Ernesta Barnes, the EPA's regional administrator in the Northwest, spoke to the local press as well on July 12. "We ask the public's help to consider the very difficult issues raised by arsenic air emissions. Together we must determine what is an 'acceptable' or 'reasonable' risk to public health from arsenic emissions." She announced that the usual public hearings would be preceded by "public workshops and other activities to inform you of the many technical issues involved."

Few people reacted positively. The press framed the issue starkly: "What cost a Life? EPA Asks Tacoma" *(Los Angeles Times),* "Smelter Workers Have Choice: Keep their Jobs or their Health" *(Chicago Tribune). The New York Times* ran an editorial that branded "Mr. Ruckelshaus as Caesar . . . who would ask the amphitheater crowd to signal with thumbs up or down whether a defeated

gladiator should live or die." For Ruckelshaus to "impose such an impossible choice on Tacomans was . . . inexcusable." The head of the local chapter of the Sierra Club said, "It is up to the EPA to protect public health, not to ask the public what it is willing to sacrifice not to die from cancer." In the community's opinion as well, Ruckelshaus was neglecting his duties. Local citizens called it "copping out." "We elected people to run our government; we don't expect them to turn around and ask us to run it for them."

Ruckelshaus fought back in various encounters with the press. In a letter to *The New York Times,* he wrote, "Your Caesar analogy is seriously flawed. The Roman Caesars asked the crowd for thumbs up or down before sparing or condemning the gladiator. In Tacoma, the ones being asked for their reaction are at risk themselves. No one ever asked the gladiator his opinion, which may be the principal difference between Rome and the EPA."" "Listen," he told the *Los Angeles Times,* "I know people don't like these kinds of decisions. Welcome to the world of regulation. People have demanded to be involved and now I have involved them and they say: 'Don't ask that question.' What's the alternative? Don't involve them?"

Resistance to Ruckelshaus also ran high within the EPA itself. Never before had the agency pushed problems back into the laps of a community. Like most government officials, managers within the EPA took seriously their charge to solve problems on behalf of the public. Indeed, public involvement seemed so messy a process compared with rational and expert decision making that even the public hearings demanded by law were seen more as a formality to be suffered than an essential component of the problem-solving process. As a regional staff member described, "At headquarters [in Washington, D.C.] they thought we were a bunch of bozos out here in the region. They could not understand why we were scrambling and bending over backwards to organize the workshops and put out easily digestible information for the public."

As one might expect, the three public workshops held that August were controversial and packed with people, including a large number of smelter workers, union representatives, local citizen organizations, and environmental groups. The first workshop was held on Vashon Island, and the last two in Tacoma itself. The format was the same for all three, and all were covered by local and national television.

After a formal presentation by the EPA staff, with graphs and charts to illustrate the technical facts regarding arsenic emission, dispersion, and the risk of illness, the audience was divided into smaller groups to facilitate individual responses. The EPA staff distributed several handouts with fact sheets, illustrations of how hooding helped control emissions, and excerpts from Ruckelshaus's National Academy of Sciences speech which outlined his philosophy (and Jefferson's) of public education. They then circulated among the groups to answer questions and record the comments of participants.

Many of the comments had little to do with verifiable facts. Hired by the EPA to observe, the dean of the School of Public Health at the University of Washington remarked on how "the personal nature of the complaints and questions made a striking counterpoint to the presentations of meteorological models and health effect extrapolations." People asked whether or not they could eat food from their Vashon Island gardens, how much soil should they remove to make it safe, how would their pets be affected. One woman asked, "Will my child die of cancer?"

The workshops had both immediate and subtle effects. Immediately, the EPA and the public learned some lessons. As one analyst for the EPA described, "We . . . got educated. The questions raised at the workshops sent some people back to the drawing board." Several public groups asked the EPA to postpone the formal hearings, scheduled for late August, to allow them more time to prepare testimony. In the meantime, the public held more workshops on its own under the sponsorship of the city of Tacoma and the Steelworker's Union. Many more questions were raised, and not only questions about pollution and health, but about other options as well, like diversifying the local economy. Yet the EPA was still taking the heat. Some comments bordered on the openly hostile, "I have seen studies which show that stress is the main source of cancer; the EPA is one main cause of stress."

By the time of the hearings in November, the EPA had clarified several scientific questions raised by the public's involvement. Significantly, its computer model estimating the amount of arsenic emissions had been wrong. Yet the corrected model still predicted a risk of one additional cancer death per year from arsenic, even after placement of the new hooding devices.

The workshops and hearings surprised the staff at the EPA. As Ruckelshaus put it, local citizens had shown that they were "capable of understanding [the problem of the smelter] in its complexities and dealing with it and coming back to us with rather sensible suggestions." In fact, "the public-the non-technical, unschooled public came back with some very good suggestions as to how they could reduce the emissions of arsenic in the plant [and still keep it open]."

Perhaps of greater import, local people began to see the situation in a new light. Rather than view it solely as a conflict between jobs and health, many people began to see a new possibility: the diversification of the local economy. Although no one knew whether or not the plant would have to close in the near future, many could see that remaining so dependent on this one struggling industry was a bad idea.

No one, including Ruckelshaus, saw the new possibility at the start.[18] The idea of diversification, although obvious in retrospect, had not been part of anyone's mindset. The EPA, industry, labor, environmentalists, and local officials had been thinking in more narrow terms of emissions, health risks, and jobs. It took the noisy and conflictive process of public workshops, debates in the press, and the mobilization of neighborhoods to generate new ideas.

One year later, in June 1984, although Ruckelshaus had not yet come to a decision, Asarco announced that it would close the Tacoma plant the following year. Precipitated primarily by depressed copper prices and shortages of high-arsenic copper ore, Asarco nevertheless spread the blame for the shutdown to federal, state, and local environmental agencies for requiring it to install converter hoods costing $3 million by the end of that year. Furthermore, Asarco claimed that the EPA would require a great deal more investment in the future. Although this was not true, since Ruckelshaus had not yet made a final ruling, somebody would have to take the heat, and the EPA was the obvious lightning rod. As one worker told reporters, "I'll tell you something, it's the EPA's fault!"

Yet the community, however distressed, was also better prepared than it might have been. By the time the announcement came in 1984, the new goal had already been set: finding new jobs for the workers and attracting new industry to the region. When the plant closed in 1985, Tacoma and Ruston already had begun the task of

diversifying its economy. People had come to the early workshops displaying buttons labeled either "Jobs" or "Health." By the final workshops, people were sporting buttons that said "BOTH." In retrospect, nearly ten years later, Colin Conant, Executive Director of the Private Industry Council for Tacoma, looked back on the efforts of the Dislocated Workers Project for those laid off by Asarco.

> We created a model for re-training the workforce, and the community got behind it. We got many, many people involved on advisory committees: the labor union, United Way, the Private Industry Council, Asarco, the Economic Development Board, employees, and the State Employment Security Department. People might do it that way now, but back then nobody was. The support made a big difference in how well people adjusted. It could have been much more psychologically disruptive. There were far fewer casualties than there might have been without so many people and organizations backing us up. Since Asarco's closing, there have been several more closings in the area and we basically applied the same model. We learned a lot from how we did it then.[19]

In addition to helping the workers adapt, the Asarco effort also served as a model in later years for resolving other environmental disputes in the Tacoma area. According to Doug Sutherland, Mayor of Tacoma during that time:

> It gave us substantial experience that has helped us in many other situations. For example, another major facility in the area is the Simpson Paper Mill, which had a problem with water pollution. Well, we modified the Asarco process, got all the relevant people involved, and it worked beautifully. No law suits. What really came out of this [Asarco effort] was a process and a group of people who were used to looking at an issue together without taking a litigative approach.[20]

Implications

Ruckelshaus recognized that the Asarco situation represented an adaptive challenge rather than a technical problem. Consequently, he resisted pressures from within the EPA and from the public to provide

an authoritative solution. Instead, he chose to engage people in facing the challenge. By doing so, he laced an unusual problem in the laps of his own agency. The EPA had no real experience in orchestrating public deliberation. Public hearings routinely had been pro forma, with presentations of technical arguments by interested parties and little more. Hearings tended to focus on narrowly defined issues, without much creativity in exploring new possibilities like diversifying a local economy. Parties did not talk to one another; they presented testimony to a panel of EPA administrators and experts.

The EPA had never seen itself in the role of orchestrating public thinking on problems. In the public workshops in Tacoma, it quickly found itself "over its head" in problems about which its technical expertise meant little. What could pollution experts say about the value of jobs versus the value of health, or ways to cope with a risk-filled life, or paths to economic diversification?

Bearing the brunt of managing the tasks of informing and involving the public, the regional EPA office exhausted itself in the undertaking. Roughly thirty people devoted full time for four months to this one case. Was it worth it? According to one official, the whole "process proved terrifically costly and time-consuming." And in the end, the decision was still the EPA's to make.

Yet there were at least three significant benefits. First, within the EPA itself, the staff at headquarters began to appreciate what it meant to be on the frontlines. Because the regional staff had frequent contact with area groups, they knew better how to engage with the public. On arriving in Tacoma, staff from Washington, D.C., had quickly found themselves out of touch with the real-world import of scientific findings at the local level. As one regional staff member put it, "When they arrived in Tacoma and found themselves face-to-face with a well-informed and often angry public, they began to appreciate our problem a little better." Now, information relevant to public policymaking would flow up from the frontlines rather than just down from headquarters. That made policymaking better. Routine procedures to involve the community began to change. In following years, the EPA began to act as a frequent sponsor and forum for negotiation among stakeholders to resolve environmental dispute. Furthermore, the agency began routinely to make use of the

central distinction Ruckelshaus had made in Tacoma-between the science of assessing risk and the problem of managing the public implications of living with risk. The focus on risk management broadened the mission of the EPA, giving a larger context to its previously narrow scientific orientation.[22]

Second, the Tacoma experiment in public deliberation restored the credibility of the EPA, which in 1983 had just come out of two years mired in public scandal. The Reagan Administration, entering in 1981, had taken the extreme position that favoring industry meant opposing environmental protection. Anne Gorsuch Burford, Reagan's first appointee to head the EPA, had stymied every program to regulate business. She crusaded against the "excesses" of the environmentalists and polarized public debate by framing the issue starkly as a trade-off between jobs and the environment.[13] The result was a scandal-producing disregard for the mandate of the EPA to provide environmental protection. The White House was forced to retreat, and it did so by bringing back William Ruckelshaus. The EPA's first head administrator in 1970, he had established the agency's credibility with both environmentalists and the business community. Now he was back to restore it.

Less than four months after returning to the EPA, Ruckelshaus went to Tacoma. As we have seen, instead of being lauded, he was excoriated initially for shirking his responsibilities. Over time, however, the Tacoma effort at public involvement made big strides in terms of credibility. As a member of the Washington Environmental Council put it, the EPA's cooperation and openness went "a long way toward restoring trust and confidence in the agency here in the region." Even previous skeptics of public deliberation later praised the effort. Ruth Weiner of the Sierra Club, who had criticized Ruckelshaus earlier for "copping out," stated at the conclusion of her public testimony that the Clean Air Act "requires public involvement." "Moreover," she said, "in becoming involved, the public begins to appreciate the difficulty attendant on making regulatory decision, the ease with which EPA can be made a scapegoat because the agency's blunders are so readily magnified, and the inadequacy of simply identifying 'heroes' and 'villains' in environmental protection. It may have been hard work and a headache for all of us, but the public involvement is most certainly worth it."

Third, and perhaps most significantly, the communities of Tacoma and Ruston began seeing the need to adapt. Certain facts were now being faced. Asarco's use of outdated technology in its Ruston plant made it only sporadically competitive in the world copper market. The town's reliance on a single industry placed it in a precarious position of dependence. In addition, some people were paying the price of the plant in terms of health, yet without benefit from jobs or tax revenues.

With the advantage of hindsight, we can see these benefits of public engagement. However, when Ruckelshaus broke precedent by involving the public in solving its problem, he met resistance from every quarter: industry, environmental interests, labor, the press, and within the EPA itself. With problems as tough as jobs, health, and economic diversification, it is no wonder that everyone expects authority to make the decision. That seems our inclination-to look to someone or some agency to take the heat in choosing what to do. Ordinarily, these expectations act as constraints on people in authority, inhibiting them from exercising leadership. Yet Ruckelshaus cut against the grain when he insisted that the public realize that the job of regulating pollutants was not simply a technical matter of setting safe thresholds of emission. Trade-offs would have to be made that involved value conflicts not amenable to scientific analysis. And if those trade-offs between jobs and health were to be faced, then perhaps new adaptations might be achieved in the face of loss.[24]

Ruckelshaus insisted that these problems represented challenges to business-as-usual. At the very least, public attitudes toward living with risk had to change. Otherwise, agencies like the EPA would continue to be called upon to do the impossible, to provide fixes for what could not be fixed by fiat from above. Hard choices were necessary, requiring people to clarify and change their values. The EPA could stimulate those changes but it could not make them.

The technical experts within the EPA played a central role. They provided information regarding the conditions requiring an adaptive response. Their expertise was crucial in distinguishing the technical from the adaptive facets of the problem and for clarifying the choices. How much arsenic would be contained by a secondary hooding device, and how much would that reduce the risk of cancer? How did those estimates compare with other plant modifications?

How much income to the community would be lost if the plant closed? Framing and answering these and many other questions required technical expertise essential to the community's problem solving. Surely in most situations, as in this one, experts are necessary to tease out the complex relationship between an adaptive problem and its technical components, but only if they see the difference. Ruckelshaus did see the difference. He provoked an adaptive response, not only in Tacoma, and not only within the EPA, but in the nation. The events in Tacoma stimulated a national debate on how to manage environmental risk in which people began to learn about the enormous costs of "cleaning up" the environment. They had been pushed to face realities that would require all sorts of invention and adjustment. But the task of mobilizing an adaptive response was not easy. Nearly everyone resisted. After leaving the EPA, Ruckelshaus looked back on his experiment:

> Perhaps I underestimated how difficult it would be to get people to take responsibility, to educate themselves and one another about such a difficult issue. Probably not more than a relatively few citizens of Tacoma learned that for issues like this there is no "right" answer . . . They would have to decide what they wanted for their community. They would have to determine their own future. But even if a handful learned this lesson, then you have the basis for others learning it. You have the beginnings of a tradition of public deliberation about hard issues. And you also have all the other people in the country who watched what happened there in Tacoma, and indirectly learned the same lesson.[25]

The stories of both Barbara Parsons and William Ruckelshaus suggest a strategy of leadership consisting of several principles. I introduce them here and return to them shortly. First, they identified the adaptive challenge-the gap between aspirations and reality and focused attention on the specific issues created by that gap. Recognizing that they were working with a problem that existing technical expertise could not solve satisfactorily, they shifted from giving authoritative solutions to a plan for managing people's adaptive problem-solving. Second, they regulated the level of distress caused by confronting the issues. They paced the rate of challenge and gave structure to the

process. This was not just a matter of planning and then implementing the plan by force of their authority. Ruckelshaus and Parsons had to improvise as each of their actions generated information about the capacity of people to engage the issues and learn.

Third, they kept attention focused on relevant issues. For Parsons, that meant a whole sequence of problems demanding attention. For Ruckelshaus, it meant focusing attention within the EPA on the need to manage risk, rather than merely assess it scientifically. It meant challenging the nation to come to terms with the realities of environmental risk, rather than imagine quixotically that risk could be eliminated altogether.

Finally, Parsons and Ruckelshaus devised a strategy that shifted responsibility for the problem to the primary stakeholders. In doing so, they had to change people's expectations of authority and basis of trust.

Both of these people had considerable resources with which to exercise leadership. Their authority not only constrained them but also provided them with several kinds of power. Our discussion so far has suggested some of the dimensions and applications of their power, but a fuller investigation of the resources of authority is essential. A person intent on leading must know the tools at her disposal.