



NO REGRETS: Salvador Castro lost his job for blowing the whistle about a defective medical device but says he'd "do it again in a heartbeat."

THE WHISTLE-BLOWER'S DILEMMA

Speaking out may be the ethical thing to do, but too often it comes at a steep price **BY JEAN KUMAGAI**

CAREERS

When Salvador Castro, a medical electronics engineer working at Air-Shields Inc. in Hatboro, Pa., spotted a serious design flaw in one of the company's infant incubators, he didn't hesitate to tell his supervisor. The problem was easy and inexpensive to fix, whereas the possible consequences of not fixing it could kill. Much to his surprise, though, nobody acted on his observation, and when Castro threatened to notify the U.S. Food and Drug Administration (FDA), he was fired. "I was shocked," Castro says.

Castro's case is far from unique. Indeed, it's the rare whistle-blower who manages to expose wrongdoing and remain on the job. The vast majority suffer a fate similar

to Castro's—they end up being harassed, fired (often on trumped-up charges), and blackballed from their professions. The financial and emotional strain can snowball further, breaking up marriages, draining bank accounts, and taking a toll on physical and mental health.

"I've interviewed hundreds of whistle-blowers over the years, and hardly any have been successful in both not suffering reprisals and leading to a change in the situation," says Brian Martin, an associate professor in science, technology, and society at the University of Wollongong, in Australia, who has written a how-to for whistle-blowers [see "To Probe Further"]. "Even if you've got everything going your way, it's still hard to be successful."

And yet, an open society relies on those who are willing to come forward and reveal wrongdoing. Think of Roger Boisjoly, the Morton Thiokol engineer who tried to avert the *Challenger* disaster and later testified about how his company ignored problems with the shuttle's booster rockets. Or perhaps the most famous whistle-blower of all, Deep Throat, who exposed criminal activity within the Nixon administration. The act of speaking out is even built into certain codes of professional ethics. The IEEE code, for example, states that engineers shall "protect the safety, health, and welfare of the public and speak out against abuses in those areas affecting the public interest."

How then can the ethical engineer do the right thing and not sacrifice his or her career?

Everyone who works with whistle-blowers agrees that there are certain basic steps that potential whistle-blowers can and should take to protect themselves—and that very few actually take such steps, much to their detriment. When Martin found that the people he interviewed were making the same mistakes over and over again, he decided to lead off his book with a chapter on "seven common mistakes" whistle-blowers tend to make.

Mistake number 1: trusting too much. "Most whistle-blowers believe the system works," Martin says. "So when they find a lapse in their organization, their instinct is to go to their boss or through the regular grievance process. And then they're shocked when bad things start to happen." Dina Rasor, principal investigator for the Military Money Project, observes, "Whistle-blowers tend to have a real strong sense of right and wrong." Her organization, which looks into fraud and waste at the Pentagon, is run under the auspices of the National Whistleblower Center, a non-profit advocacy group in Washington, D.C. "They're the ones who believed as kids that if you throw a ball through a window and you just tell the truth, you won't get spanked. Most of us learn to ignore that message. Whistle-blowers don't."

Among the other mistakes Martin cites are that people don't collect enough evidence of the problem they're trying to expose, don't build support among colleagues and others, and don't wait for the right opportunity to come forward. "My advice to most people is, 'Don't do it—until you're done investigating, preparing

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an escape route, and weighing your options,” he says.

That last piece of advice is especially important. “People think the right thing to do is just speaking out. But there are many different ways to do the right thing. It may be best to wait and collect more information. You also have to look at the consequences, for yourself, your family, your colleagues.”

“I hate the term whistleblower,” says IEEE Fellow Stephen H. Unger, a computer science professor at Columbia University in New York City. He has a long-standing interest in engineering ethics, and as chairman of the IEEE Ethics Committee in the 1990s he helped develop a set of guidelines for engineers faced with ethical dilemmas. “It conveys the wrong impression, of someone running around, being noisy and disruptive, behaving in an erratic way. Which is the very opposite of all the engineer whistle-blowers I’m aware of. They did everything they could to avoid publicity, to avoid making waves. Engineers are very quiet people.”

His basic message for any engineer who’s contemplating speaking out is to “make sure you’re right. Check and recheck whatever calculations you’ve made, talk to people on the other side so that you understand their case, and be able to back off at any time if you see your case is weak.”

“Don’t exaggerate at all,” Unger adds. “You could be 99 percent right, but if you make one little mistake, they’ll focus on that to discredit you.”

Because of the many bad things that happen to whistle-blowers, Dina Rasor likens the act to “setting your hair on fire for one glorious minute.” She has two words of advice for would-be whistle-blowers: remain anonymous. “If there’s any way to get the information out—through a nonprofit, or a trusted

reporter, or a friend—without identifying yourself and having your fingerprints all over it, that’s preferable to going public. Then the fraud becomes the issue, and not you.”

A common tactic used against whistle-blowers is to dig up—or manufacture—personal or professional problems. When Rasor first began investigating Pentagon fraud back in the 1970s, “people who didn’t like what I was doing spread rumors that I was a lesbian, or that I was ‘living in sin’ with a man. At the time, that was scandalous stuff,” Rasor recalls. “I was in fact living with a man—my husband.”

Some people find the idea of leaking information sneaky or cowardly, she adds. “But if you’re doing it because there’s some horrible fraud going on, it’s the smart thing to do. If whistle-blowers could get up and be protected, I’d say come forward. But the reality is they can’t.” An insider is also in a much better position to keep the investigation going, she points out. Once the person’s identity is known, any further access to critical evidence usually evaporates.

A number of organizations now exist to help whistle-blowers publicize their messages without having to put their careers on the line. In the United States, the National Whistle-blower Center, the Government Accountability Program, and the Project on Government Oversight are three such groups. Rasor runs a Web site, <http://www.quitam.com>, which educates whistle-blowers on filing suits against contractors or others who have defrauded the U.S. government.

If used carefully, the Internet can also be a boon to whistle-blowers; anonymous remailers let people send e-mail that can’t be traced to its source, and Web sites make it easier both to publicize wrongdoing and to offer advice to whistle-blowers. [For more about staying anonymous online, see “The Illusion of Web Privacy” in this issue.]

Martin, for one, believes the climate for whistle-blowers is gradually improving. Over the last few decades, he notes, media coverage and public attitudes toward whistle-blowers have improved. He adds, though, "Problems tend to arise in an organization when people are too afraid or too powerless or too cynical to speak out. Whereas if more people are willing to speak out, then it's less likely a problem will occur in the first place."

As for Salvador Castro, he sued Air-Shields for wrongful termination, and his case has been tied up in the Pennsylvania courts for nearly eight years; the company has tried three times to have the case dismissed but hasn't succeeded yet. The IEEE, of which Castro is a Life Member, has promised to file an amicus curiae brief on his behalf should his case go to trial.

In the process, Castro has had a crash course in labor law and whistleblower protections. Before his dismissal, for instance, he'd never considered Pennsylvania's "at-will" employment laws, which allow companies to fire workers "for a good reason, or a bad reason, or no reason at all," he says. Had his employer been polluting a stream rather than designing defective medical devices, he might still be on the job; the Federal Water Pollution Control Act

and other environmental legislation make it illegal to fire someone for blowing the whistle, but the FDA has no such protection.

Meanwhile, his old employer has changed hands twice since firing him; most recently it was acquired by Germany's Draeger Medical. Air-Shields, which didn't respond to IEEE Spectrum's interview requests, recently offered to settle out of court; Castro declined. "This will set a precedent for all engineers in Pennsylvania," he says. "The next guy who figures he can fire an engineer for doing the right thing will think twice."

Although he has worked only sporadically since his firing, Castro has no regrets about his actions. "I'd do it again in a heartbeat," he says. Nor has his long fight gone unrecognized. In 2001, the IEEE Society on the Social Implications of Technology presented him its Carl Barus Award, given for outstanding service in the public interest. And in December 1999, the FDA finally forced his former employer to recall the incubator and correct the defect Castro had brought to light four years before. ■

TO PROBE FURTHER:

Two guides to blowing the whistle are Brian Martin's *The Whistleblower's Handbook: How to Be an Effective Resister* (Jon Carpenter Publishing, 1999) and *Courage Without Martyrdom: A Survival Guide for Whistleblowers* (Fund for Constitutional Government, 1997), by Tom Devine of the Government Accountability Project (<http://www.whistleblower.org>). Martin's Web site, <http://www.uow.edu.au/arts/sts/bmartin/dissent/>, also has useful links about whistle-blowing.

Stephen Unger's *Controlling Technology: Ethics and the Responsible Engineer* (Wiley, 1994) examines ethical and moral conflicts that engineers face on the job and offers practical advice on how to deal with them.

The IEEE Ethics Committee's "Guidelines for Engineers Dissenting on Ethical Grounds" is available at <http://onlineethics.org/codes/guidelines.html>.