

Question 1 case

When it comes to the safety of young children, fire is a parent's nightmare. Just the thought of their young ones trapped in their cribs and beds by a raging nocturnal blaze is enough to make most mothers and fathers take every precaution to ensure their children's safety. Little wonder that when fire-retardant children's pajamas first hit the market, they proved an overnight success. Within a few short years more than 200 million pairs were sold, and the sales of millions more were all but guaranteed. For their manufacturers, the future could not have been brighter. Then, like a bolt from the blue, came word that the pajamas were killers. The U.S. Consumer Product Safety Commission (CPSC) moved quickly to ban their sale and recall millions of pairs. Reason: The pajamas contained the flame-retardant chemical Tris (2,3-dibromoprophyl), which had been found to cause kidney cancer in children.

Because of its toxicity, the sleepwear couldn't even be thrown away, let alone sold. Indeed, the CPSC left no doubt about how the pajamas were to be disposed of—buried or burned or used as industrial wiping cloths. Whereas just months earlier the manufacturers of the Tris-impregnated pajamas couldn't fill orders fast enough, suddenly they were worrying about how to get rid of the millions of pairs now sitting in warehouses.

Soon, however, ads began appearing in the classified pages of *Women's Wear Daily*. "Tris-Tris-Tris ... We will buy any fabric containing Tris," read one. Another said, "Tris—we will purchase any large quantities of garments containing Tris." The ads had been placed by exporters, who began buying up the pajamas, usually at 10 to 30 percent of the normal wholesale price. Their intent was clear: to dump the carcinogenic pajamas on overseas markets.²⁰

Tris is not the only example of dumping. There were the 450,000 baby pacifiers, of the type known to have caused choking deaths, that were exported for sale overseas, and the 400 Iraqis who died and the 5,000 who were hospitalized after eating wheat and barley treated with a U.S.-banned organic mercury fungicide. Winstrol, a synthetic male hormone that had been found to stunt the growth of American children, was made available in Brazil as an appetite stimulant for children. DowElanco sold its weed killer Galant in Costa Rica, although the Environmental Protection Agency (EPA) forbade its sale to U.S. farmers because Galant may cause cancer. After the U.S. Food and Drug Administration (FDA) banned the painkiller dipyrone because it can cause a fatal blood disorder, Winthrop Products continued to sell dipyrone in Mexico City.

Manufacturers that dump products abroad clearly are motivated by profit, or at least by the hope of avoiding financial losses resulting from having to withdraw a product from the U.S. market. For government and health agencies that cooperate in the exporting of dangerous products, sometimes the motives are more complex.

For example, when researchers documented the dangers of the Dalkon Shield intrauterine device—among the adverse reactions were pelvic inflammation, blood poisoning, tubal pregnancies, and uterine perforations—its manufacturer, A. H. Robins

Co., began losing its domestic market. As a result, the company worked out a deal with the Office of Population within the U.S. Agency for International Development (AID), whereby AID bought thousands of the devices at a reduced price for use in population-control programs in forty-two countries.

Why do governmental and population-control agencies approve for sale and use overseas a birth-control device proved dangerous in the United States? They say their motives are humanitarian. Because the death rate in childbirth is relatively high in third-world countries, almost any birth-control device is safer than pregnancy. Analogous arguments are used to defend the export of pesticides and other products judged too dangerous for use in the United States: Foreign countries should be free to decide for themselves whether the benefits of those products are worth their risks. In line with this, some third-world government officials insist that denying their countries access to these products is tantamount to violating their countries' national sovereignty.

This reasoning has found a sympathetic ear in Washington, for it turns up in the "notification" system that regulates the export of banned or dangerous products overseas. Based on the principles of national sovereignty, self-determination, and free trade, the notification system requires that foreign governments be notified whenever a product is banned, deregulated, suspended, or canceled by a U.S. regulatory agency. The State Department, which implements the system, has a policy statement on the subject that reads in part: "No country should establish itself as the arbiter of others' health and safety standards. Individual governments are generally in the best position to establish standards of public health and safety."

Critics of the system claim that notifying foreign health officials is virtually useless. For one thing, governments in poor countries can rarely establish health standards or even control imports into their countries. Indeed, most of the third-world countries where banned or dangerous products are dumped lack regulatory agencies, adequate testing facilities, and well-staffed customs departments.

Then there's the problem of getting the word out about hazardous products. In theory, when a government agency such as the EPA or the FDA finds a product hazardous, it is supposed to inform the State Department, which is to notify health officials in other nations. But agencies often fail to inform the State Department of the product they have banned or found harmful, and when it is notified, its communiqués typically go no further than U.S. embassies abroad. When foreign officials are notified by U.S. embassies, they sometimes find the communiqués vague or ambiguous or too technical to understand.

But even if communication procedures were improved or the export of dangerous products forbidden, there are ways that companies can circumvent these threats to their profits—for example, by simply changing the name of the product or by exporting the individual ingredients of a product to a plant in a foreign country. Once there, the ingredients can be reassembled and the product dumped. The United States does prohibit its pharmaceutical companies from exporting drugs banned in this country, but

sidestepping the law is not difficult. “Unless the package bursts open on the dock,” one drug company executive observes, “you have no chance of being caught.”

Unfortunately for us, in the case of pesticides, the effects of overseas dumping are now coming home. In the United States, the EPA bans all crop uses of DDT and dieldrin, which kill fish, cause tumors in animals, and build up in the fatty tissue of humans. It also bans heptachlor, chlordane, leptophos, endrin, and many other pesticides, including 2,4,5-T (which contains the deadly poison dioxin, the active ingredient in Agent Orange, the notorious defoliant used in Vietnam) because they are dangerous to human beings. No law, however, prohibits the sale of DDT and these other U.S.-banned pesticides overseas, where thanks to corporate dumping they are routinely used in agriculture. In one three-month period, for example, U.S. chemical companies exported 3.9 million pounds of banned and withdrawn pesticides. The FDA now estimates, through spot checks, that 10 percent of our imported food is contaminated with residues of banned pesticides. And the FDA’s most commonly used testing procedure does not even check for 70 percent of the pesticides known to cause cancer. With the doubling of exports of Mexican produce to the United States since the signing of the North American Free Trade Agreement (NAFTA), the problem of pesticide-laced food has only grown worse.²¹

Question 2 case

Kermit Vandivier could not have predicted the impact on his life of purchase order P-237138, issued by LTV Aerospace Corporation.²² The order was for 202 brake assemblies for a new Air Force light attack plane, the A7D, and news of the LTV contract was cause for uncorking the champagne at the B. F. Goodrich plant in Troy, Ohio, where Vandivier worked. Although the LTV order was a small one, it signaled that Goodrich was back in LTV’s good graces after living under a cloud of disrepute. Ten years earlier, Goodrich had built a brake for LTV that, to put it kindly, hadn’t met expectations. As a result, LTV had written off Goodrich as a reliable source of brakes.

LTV’s unexpected change of heart after ten years was easily explained. Goodrich made LTV an offer it couldn’t refuse—a ridiculously low bid for making the four-disk brakes. Had Goodrich taken leave of its financial senses? Hardly. Because aircraft brakes are custom-made for a particular aircraft, only the brakes’ manufacturer has replacement parts. Thus, even if it took a loss on the job, Goodrich figured it could more than make up for it in the sale of replacement parts. Of course, if Goodrich bungled the job, there wouldn’t be a third chance.

John Warren, a seven-year veteran and one of Goodrich’s most capable engineers, was made project engineer and lost no time in working up a preliminary design for the brake. Perhaps because the design was faultless or perhaps because Warren was given to temper tantrums when criticized, coworkers accepted the engineer’s plan without question. So there was no reason to suspect that young Searle Lawson, one year out of

college and six months with Goodrich, would come to think Warren's design was fundamentally flawed.

Lawson was assigned by Warren to create the final production design. He had to determine the best materials for brake linings and identify any needed adjustments in the brake design. This process called for extensive testing to meet military specifications. If the brakes passed the grueling tests, they would then be flight-tested by the Air Force. Lawson lost no time in getting down to work. What he particularly wanted to learn was whether the brake could withstand the extreme internal temperatures, in excess of 1,000 degrees F, when the aircraft landed.

When the brake linings disintegrated in the first test, Lawson thought the problem might be defective parts or an unsuitable lining. But after two more consecutive failures, he decided the problem lay in the design: The four-disk design was simply too small to stop the aircraft without generating so much heat that the brake linings melted. In Lawson's view, a larger, five-disk brake was needed.

Lawson knew well the implications of his conclusion. The four-disk brake assemblies that were arriving at the plant would have to be junked, and more tests would have to be conducted. The accompanying delays would preclude on-time delivery of the production brakes to LTV.

Lawson reported his findings and recommendations to John Warren. Going to a five-disk design was impossible, Warren told him. Officials at Goodrich, he said, were already boasting to LTV about how well the tests were going. Besides, Warren was confident that the problem lay not in the four-disk design but in the brake linings themselves.

Unconvinced, Lawson went to Robert Sink, who supervised engineers on projects. Sink was in a tight spot. If he agreed with Lawson, he would be indicting his own professional judgment: He was the man who had assigned Warren to the job. What's more, he had accepted Warren's design without reservation and had assured LTV more than once that there was little left to do but ship them the brakes. To recant now would mean explaining the reversal not only to LTV but also to the Goodrich hierarchy. In the end, Sink, who was not an engineer, deferred to the seasoned judgment of Warren and instructed Lawson to continue the tests.

His own professional judgment overridden, Lawson could do little but carry on. He built a production model of the brake with new linings and subjected it to the rigorous qualification tests. Thirteen more tests were conducted, and thirteen more failures resulted. It was at this point that data analyst and technical writer Kermit Vandivier entered the picture.

Vandivier was looking over the data of the latest A7D test when he noticed an irregularity: The instrument recording some of the stops had been deliberately miscalibrated to indicate that less pressure was required to stop the aircraft than actually was the case. Vandivier immediately showed the test logs to test lab supervisor

Ralph Gretzinger. He learned from the technician who miscalibrated the instrument that Lawson had requested the miscalibration. Lawson later said he was simply following the orders of Sink and the manager of the design engineering section, who were intent on qualifying the brakes at whatever cost. For his part, Gretzinger vowed he would never permit deliberately falsified data or reports to leave his lab.

A month later, the brake was again tested, and again it failed. Nevertheless, Lawson asked Vandivier to start preparing the various graph and chart displays for qualification. Vandivier refused and told Gretzinger what he'd been asked to do. Gretzinger was livid. He again vowed that his lab would not be part of a conspiracy to defraud. Then, bent on getting to the bottom of the matter, Gretzinger rushed off to see Russell Line, manager of the Goodrich Technical Services Section.

An hour later, Gretzinger returned to his desk looking like a beaten man. He knew he had only two choices: defy his superiors or do their bidding.

"You know," he said to Vandivier, "I've been an engineer for a long time, and I've always believed that ethics and integrity were every bit as important as theorems and formulas, and never once has anything happened to change my beliefs. Now this.... Hell, I've got two sons I've got to put through school and I just ..." When his voice trailed off, it was clear that he would in fact knuckle under. He and Vandivier would prepare the qualifying data; then someone "upstairs" would actually write the report. Their part, Gretzinger rationalized, wasn't really so bad. "After all," he said, "we're just drawing some curves, and what happens to them after they leave here—well, we're not responsible for that." Vandivier knew Gretzinger didn't believe what he was saying about not being responsible. Both of them knew that they were about to become principal characters in a plot to defraud.

Unwilling to play his part, Vandivier decided that he, too, would confer with Line. Line was sympathetic; he said he understood what Vandivier was going through. But in the end he said he would not refer the matter to chief engineer H. C. "Bud" Sunderman, as Vandivier had suggested. Why not? Vandivier wanted to know.

"Because it's none of my business, and it's none of yours," Line told him. "I learned a long time ago not to worry about things over which I had no control. I have no control over this."

Vandivier pressed the point. What about the test pilots who might get injured because of the faulty brakes? Didn't their uncertain fate prick Line's conscience?

"Look," said Line, growing impatient with Vandivier's moral needling, "I just told you I have no control over this thing. Why should my conscience bother me?" Then he added, "You're just getting all upset over this thing for nothing. I just do as I'm told, and I'd advise you to do the same."

Vandivier made his decision that night. He knew, of course, he was on the horns of a dilemma. If he wrote the report, he would save his job at the expense of his conscience.

If he refused, he would honor his moral code and, he was convinced, lose his job—an ugly prospect for anyone, let alone a forty-two-year-old man with a wife and several children. The next day, Vandivier phoned Lawson and told him he was ready to begin on the qualification report.

Lawson shot over to Vandivier's office with all the speed of one who knows that, swallowed fast, a bitter pill doesn't taste so bad. Before they started on the report, though, Vandivier, still uneasy with his decision, asked Lawson if he fully understood what they were about to do.

"Yeah," Lawson said acidly, "we're going to screw LTV. And speaking of screwing," he continued, "I know now how a whore feels, because that's exactly what I've become, an engineering whore. I've sold myself. It's all I can do to look at myself in the mirror when I shave. I make me sick."

For someone like Vandivier, who had written dozens of them, the qualification report was a snap. It took about a month, during which time the brake failed still another final qualification test, and the two men talked almost exclusively about the enormity of what they were doing. In the Nuremberg trials they found a historical analogy to their own complicity and culpability in the A7D affair. More than once, Lawson opined that the brakes were downright dangerous, that anything could happen during the flight tests. His opinion proved prophetic.

When the report was finished, copies were sent to the Air Force and LTV. Within a week test flights were begun at Edwards Air Force Base in California. Goodrich dispatched Lawson to Edwards as its representative, but he wasn't there long. Several "unusual incidents" brought the flight tests literally to a screeching halt. Lawson returned to the Troy plant, full of talk about several near crashes caused by brake trouble during landings. That was enough to send Vandivier to his attorney, to whom he told the whole sorry tale.

Although the attorney didn't think Vandivier was guilty of fraud, he was convinced that the analyst/writer was guilty of participating in a conspiracy to defraud. Vandivier's only hope, the attorney counseled, was to make a clean breast of the matter to the FBI. Vandivier did. At this point both he and Lawson decided to resign from Goodrich. In his letter of resignation, addressed to Russell Line, Vandivier cited the A7D report and stated: "As you are aware, this report contains numerous deliberate and willful misrepresentations which ... expose both myself and others to criminal charges of conspiracy to defraud."

Vandivier was soon summoned to the office of Bud Sunderman, who berated him mercilessly. Among other things, Sunderman accused Vandivier of making irresponsible charges and of arch disloyalty. It would be best, said Sunderman, if Vandivier cleared out immediately. Within minutes, Vandivier had cleaned out his desk and left the plant.

Two days later Goodrich announced it was recalling the qualification report and replacing the old brake with a new five-disk brake at no cost to LTV.

