



Wake-Up Calls

Classic Cases in Business Ethics

Second Edition

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How Shall We Know If Our Products Are Safe?

Diverse Perspectives on Tires and Automobiles

Questions to Keep in Mind

1. Concerning the Pinto crash described in this case: Which facts are known to be true? Which facts are still contested? What don't we know about the crash? What is at stake, ethically, in what we know or don't know about this crash?
2. What are the four perspectives used here to review the Pinto case? How do these perspectives overlap, and how do they differ?
3. What kind of conflict can occur between those who engineer a product and those who market it? How did that conflict play out with the Ford Pinto?
4. As a formal decision-making procedure, what are the steps of cost benefit reasoning? What are the advantages and disadvantages of this kind of reasoning?
5. Based on this chapter, how would you describe the relationship between the auto industry and the government concerning product safety?
6. What is the ethical significance of the jury decision in the Ulrich case?

We buy things to make our lives easier. All kinds of things: household appliances, sophisticated computers and digital communications tools, and machines large and small. Normally we don't give much thought to the safety of the various consumer goods we use each day. We don't worry about safety as long as everything works the way it should. But when the things we buy hurt us, we start to pay attention. In the worst cases, when many people are seriously maimed or killed by product failures, the general public can get upset and demand some kind of justice. It isn't always easy, however, to know what justice requires when products fail. If the reasons for the product failure are unclear and complex, people may have difficulty locating a simple target for their righteous anger. Businesses involved in product safety issues fear they will become ensnared in arguments about their liability. The government has the duty to protect the public welfare, but it may not be at all obvious how the government should get between consumers and business. For all concerned, it can be difficult to pin down exactly who is responsible, and for what.

Automobile tires are a classic case in point. We all rely upon them whenever we ride in a car, but we almost never give them a second thought—that is, until the tires start to kill us. It is not always easy, though, to say who is to blame and who has the responsibility for making things right.

Bridgestone/Firestone, Inc., makes tires. It has been making tires since 1900, when Harvey Firestone founded the Firestone Tire & Rubber Company in Akron Ohio. In 1990 Bridgestone USA, a subsidiary of Tokyo-based Bridgestone Corporation, acquired Firestone. Today, Bridgestone/Firestone makes and sells thousands of different kinds of tires. For many years it enjoyed a positive reputation, a solid public image supported by its long-standing relationship with the Ford Motor Company, a major and faithful customer of the Bridgestone/Firestone tires.¹

Apparently, however, in the 1990s a big problem was brewing with Bridgestone/Firestone's ATX, ATX II, and Wilderness tires. Vehicle accidents linked to these tires have resulted in 174 deaths, more 700 injuries, and over 6,000 complaints.² The treads on many of these tires seemed to separate suddenly, causing blowouts and other failures, and often causing vehicle rollovers. These tires were used on various trucks and SUVs, but mostly on the Ford Explorer. The problem seemed most severe in hotter climates, with most of the North American complaints coming from Texas, Florida, and other southern states.

The media picked up the issue in spring of 2000, focusing public and governmental attention on the emerging problem. That May, a Houston television station reported that there was a connection between the Firestone tires and auto accidents in that area. Very quickly, the National Highway Traffic Safety Administration (NHTSA) was deluged with complaints about the tires and it opened an investigation that month. On August 9, 2000, Bridgestone/Firestone initiated a voluntary recall of some 14.4 million tires under investigation that were made in the preceding decade (about 6.5 million of these tires were still on the road). Since these tires were original equip-

ment on the Ford Explorer, Ford issued its own tire recall for buyers of its SUV, an action that involved about 13 million tires. Only after the recalls did both Ford and Bridgestone/ Firestone publicly apologize.³ Eventually Congress got involved, quickly passing the Transportation Recall Enhancement, Accountability, and Documentation Act (TREAD Act), which President Clinton signed on November 1, 2000.⁴

Recalls of this nature and magnitude are highly unusual and very costly, to both Bridgestone/Firestone and Ford. The negative business consequences extend far beyond the simple cost of the recall. There is a loss of public confidence that can linger for years, depressing future sales. In this case, the disputes surrounding the recall damaged a vital business relationship. After a nasty period of mutual criticism over questions of responsibility and liability for the problem, Ford and Bridgestone/Firestone ended their ninety-five-year contractual relationship. This messy situation was complicated by growing suspicions and accusations that either or both companies knew about the problem for some time without correcting it. During Senate hearings about the accidents, evidence surfaced that Bridgestone/Firestone had known about potential tread separation problems as far back as 1994. Internal memos from Bridgestone/Firestone and Ford showed that both companies acknowledged in 1997 that there were concerns about the tires.⁵ Apparently, however, Bridgestone/Firestone and Ford continue to disagree about who was really responsible.

Nobody disputes that there is a problem when large numbers of people are injured or killed by their tires and automobiles. There is a natural and human desire to fix the problem and to seek justice for those who were wronged. We may wish for a simple "bad guy" to serve as the target of our moral outrage. But more often than not, there is no single, simple basis for problems like the Bridgestone/Firestone tires and the Ford Explorers. Though we may want to "cut to the chase" and settle these kinds of problems without delay, we should recognize and think carefully about the various ingredients in this kind of problem. In particular, it can be helpful to think about the Bridgestone/Firestone-Ford dispute from several different points of view, including those of engineering, political, and financial stakeholders.

The perspective of engineers is absolutely critical for issues of product safety, because the engineers design and help oversee the production of the products we use. Engineers share a fundamental commitment to safety and the integrity of the product. In theory, their duty to protect the public welfare comes before everything else. In practice, however, engineers fulfill their duties while working in particular contexts, which can complicate how they understand their duty. For example, all the major parties involved in the conflict over Bridgestone/Firestone tires included engineers, each of whom had a duty to protect the public. But these various engineers approached their duties with different concerns or emphases. Bridgestone/Firestone's engineers were concerned about the design of the tire itself and the conditions that would contribute to tire failure. Ford's engineers were concerned about the design of the Ford Explorer and how to reduce the chances of it rolling over during normal

driving maneuvers. The NHTSA engineers were charged with helping oversee highway safety. They monitor complaints, they test tires, and, when necessary, they advise whether to recall products.

In principle there is a general consensus that engineers should follow their duty to promote public safety. In practice, we need to recognize that engineers come to different conclusions. Bridgestone/Firestone engineers felt their tires were safe, and blamed the failure of certain tires on Ford's recommendation to consumers to maintain lower tire pressures than Bridgestone/Firestone recommended. The Bridgestone/Firestone engineers also felt that Ford was not willing to share information about its vehicles that would help everyone solve the engineering problems. Ford, in reply, claimed that its Ford Explorer was not more prone to roll overs than other SUVs, and that the Ford Explorer was not uniquely responsible for causing the tread separation on the Bridgestone/Firestone tires.⁶ The NHTSA engineers claimed that the tires had passed their required tests, and that they had no way to know of the potential danger to the general public until they began to receive complaints from consumers.

While the engineering perspective is critically important for discussions about product safety, engineers are not the only voice in the conversation. The political perspective is important, as is the financial point of view. Politically, there is a mandate to serve and protect the public good. And yet, there may be different views of what constitutes the public good and how we should best promote it. The financial perspective would have us situate product safety within a framework of costs and benefits. From this standpoint, we might need to acknowledge the futility of manufacturing a perfectly safe automobile tire if it costs so much that hardly anyone can afford to buy it.

The wake-up call that focused all these concerns around questions of product safety was the case of the Ford subcompact automobile, the Pinto. A careful review of this classic case can help us respect the complexity of product safety issues, while also reminding us of the terrible price to be paid when we do not give sufficient attention to the values of human safety and human life.

I. THREE DEATHS IN INDIANA

In 1979 the Ford Motor Company was charged with criminal homicide.⁷ For twenty weeks before a jury in an Indiana courtroom, Elkhart County prosecutor Michael A. Cosentino and Ford chief attorney James F. Neal debated whether Ford should be convicted of reckless homicide. According to the presiding Circuit Court Judge Harold R. Staffeldt, Cosentino needed to show that Ford Motor Company had engaged in "plain, conscious and unjustifiable disregard of harm that might result (from its actions)." In other words, a successful criminal charge would need to establish a criminal intent on the part of Ford and its agents. Also, according to Judge Staffeldt, to support the charge

of criminal homicide it would be necessary to prove that Ford's disregard of harm involved a "substantial deviation from acceptable standards of conduct."

What had Ford done to deserve such a serious, unprecedented charge of criminal homicide? Though some of the key details of the case were disputed, both sides generally agreed to the following facts:

On August 10, 1978, three young women were killed in an automobile accident involving a Pinto, a subcompact car made by Ford. They were Judy (eighteen years old) and Lynn Ulrich (sixteen years old), and their cousin Donna Ulrich (eighteen years old). They were driving a 1973 Ford Pinto on U.S. Highway 33 near Goshen, Indiana, sometime between 5:30 P.M. and 6:30 P.M. Their two-door Pinto had had several previous owners. For some reason, the three apparently had stopped their car on the highway. At the trial there was speculation that the gas cap had come off the car (they had recently fueled up at a self-service gas station), and perhaps they had stopped to retrieve it. While stopped, they were hit from behind by a van weighing almost twice as much as their Pinto. (There was a dispute over whether the Pinto was moving when it was hit. Prosecution witnesses, including the van's driver, estimated the Pinto was moving at about 50 mph. However, a hospital attendant testified for the defense that one of the three women said, as she was dying, that their car was not moving.) There were no skid marks on the road to indicate the van had tried to stop. The collision knocked the Pinto about 170 feet down the highway. Its gas tank ruptured and the car burst into flames. According to one witness to the accident, it looked "like a large napalm bomb going off."⁸ All three young women burned to death: Donna and Lynn at the scene of the accident; Judy lived a few hours but then died from her burns. (To eliminate any question about the cause of death, in November 1978 the bodies of the two sisters were exhumed for autopsies.⁹)

The state charges against Ford in the Ulrich case constituted the first criminal prosecution of an American corporation in a case involving alleged product defects that were responsible for the loss of human life. The prosecution claimed that Ford executives *knew* that the Pinto's gas tanks tended to explode when struck from behind, and that they did nothing to correct the problem, selling hundreds of thousands of Pintos anyway.¹⁰ Though only monetary penalties were involved in this case—Ford faced a potential penalty of only \$30,000—it had broader financial significance for the automobile company: A guilty verdict in the Ulrich case would strengthen multimillion-dollar damage suits filed by Pinto owners involved in other accidents.¹¹ Also, the Ulrich case was closely followed nationally because of its serious implications for public policy debates about enforcing product safety laws.¹²

To better understand this case, we need to review it from several perspectives. First, it is important to adopt a historical perspective because the Ulrich case was not an isolated incident. Second, we will look at the Pinto from an engineering perspective. Here we will seek to understand the various pressures and deadlines that bear on product development in highly competitive situations. Third, we will look at the Pinto case from an economic perspective that

weighs the comparative costs and benefits of product safety decisions. Fourth, we will conclude by looking at the broader political context of the Pinto debate. Here we will focus on the development of governmental safety standards for the automobile industry. Having reviewed the issue of Pinto's safety from historical, engineering, economic, and political perspectives, we should be in a position to judge for ourselves the true lesson of the Ulrich case for ongoing issues of product safety and corporate responsibility.

II. A HISTORICAL PERSPECTIVE: THE CONTROVERSIAL ACHIEVEMENT OF THE PINTO

The Pinto played a vital, if controversial, role in Ford's competitive strategy in the early 1970s. At that time the American automobile industry was plagued by rapidly changing global competition, unforeseen political events, and shifting consumer tastes. The Pinto was central to Ford's strategy to survive these complicated events.

Following World War II, the American automobile industry enjoyed an undisputed global leadership. Even in the narrow, twisting streets of foreign cities, large American cars were coveted as the status symbol of choice. By many accounts, this uncontested superiority lulled the American auto industry into a false sense of complacency. American auto manufacturers were not prepared for the fundamental changes in the 1970s that challenged their ways of doing business.

Americans had a love affair with the big automobile. Gas efficiency was not even a consideration, thanks to the unquestioned availability of cheap fuel. But in the 1970s, the Arab oil embargoes and corresponding rising fuel prices sparked a new consumer interest in smaller, gas-saving cars. The four U.S. auto makers—General Motors, Ford, Chrysler, and American Motors—were all hurt by growing American imports of foreign subcompact cars. The U.S. manufacturers' large automobiles enjoyed higher profit margins compared to their smaller cars, and so the U.S. auto executives were reluctant to give up on the big car. But comparatively higher profit margins on large automobiles are meaningless when people stop buying them. The American auto industry needed new strategies for survival.

Among the four U.S. auto makers, Ford was well equipped to respond to the changes in consumer demand. Founded in 1903, the Ford Motor Company had been family-owned and managed until its first public stock offering in 1956. Against its principal competitor, General Motors, Ford was more successful in identifying and pursuing unique market niches. Traditionally, Ford had been strong in the small car market, having introduced a compact car, the Maverick, in 1969. But in the face of more aggressive for-

eign imports, Ford needed to go even farther and to develop quickly a subcompact automobile.

Ford's president at that time, Lee Iacocca, put his weight behind the rapid development of the Pinto, urging that it be ready for 1971. With unusual urgency, Ford succeeded in producing the Pinto as a 1971 model. The Pinto became one of Ford's best selling cars, and helped Ford compete successfully against foreign auto imports. It was also clear that Ford's competitive strategy would need to depend on the Pinto for some time to come: Its next-generation small car, the future successor to the Pinto, would not be ready for possibly another ten years, because of the time it would take to develop the innovations necessary for a genuinely new automobile design.

The Pinto seemed to be a triumph for Ford, but it was also controversial. The Ulrich case was not the first instance in which people were injured or killed by exploding Pintos. In 1977 Mark Dowie, an investigative journalist who studied the Pinto phenomenon, wrote a classic article called "Pinto Madness" that appeared in the somewhat radical magazine *Mother Jones*. Dowie claimed:

By conservative estimates Pinto crashes have caused 500 burn deaths to people who would not have been seriously injured if the car had not burst into flames. The figure could be as high as 900. Burning Pintos have become such an embarrassment to Ford that its advertising agency, J. Walter Thompson, dropped a line from the end of a radio spot that read "Pinto leaves you with that warm feeling."¹³

Ford executives were outraged by Dowie's assertions, which they dismissed as inaccurate and misleading. Some aspects of Dowie's account, especially his presentation of Ford's cost/benefit reasoning, have been strongly criticized. Shortcomings to his article notwithstanding, Dowie had started a debate that would persist until and after the Ulrich case, and thus his article will be cited and examined later in this chapter.

At the Ulrich trial, Ford defense attorney James Neal argued that it was not fair to question the Pinto's safety record against abstract or arbitrary standards. To the contrary, he claimed, a particular product's safety record can be assessed only *contextually*, in relation to similar products made at that time. When the safety record of other U.S. subcompacts is taken into account, he said, it is fair to conclude that Ford followed "acceptable standards of conduct" in developing and selling the Pinto.

Neal emphasized important similarities between the Ford Pinto and other manufacturers' subcompact automobiles: Their gas tanks are made of similar materials; the gas tanks of subcompacts all tend to be placed near sharp metal parts (like the differential housing) that might puncture the tank; and subcompact automobile bodies are welded similarly in that they are usually made without what is called a "frame body." Neal even pointed out that the Pinto is superior to some other subcompacts in safety features: The Pinto has a safety guard rail built into the left side of the car, whereas the Chevy Vega has none.

According to U.S. government information, said Neal, the Pinto performed as well or better than most other subcompacts with respect to collisions and fires.

If the Pinto is viewed against more general automobile standards and performance features, it does not compare as well. The Pinto does not have the safety features of many larger automobiles. But Neal argued against comparing the Pinto to larger cars, saying such a judgment would be like comparing apples to oranges. He said:

There is no way you can compare a Pinto with a Lincoln, a Pinto with a standard car, a Pinto with a Cadillac, or a Pinto with a Mercedes. Nor is there any way you can compare any of these other subcompacts with those kinds of cars. And, members of the jury, our world is ending for those kinds of cars.¹⁴

Among other contextual considerations that Ford thought relevant to the Pinto's safety in the Ulrich case was the condition of Highway 33, where the Pinto collision and explosion took place. According to defense attorney Neal, Highway 33 had an eight-inch curb, which was so high that it prevented the Ulrich car from getting completely off the road when it stopped. According to Neal, even a large automobile stuck on a highway under similar circumstances would explode if hit from behind by a large, speeding van. His point: Under normal circumstances, the Ford Pinto is reasonably safe according to "acceptable standards of conduct." It is comparatively safe when viewed against the safety features and performance of other subcompacts. True, the Pinto may not be *completely* safe, when judged against standards more fitting for larger cars. But such a comparative judgment would be unfair. The Pinto is safe for what it is—a subcompact automobile—and that is the only relevant standard for safety.

III. AN ENGINEERING PERSPECTIVE: BUSINESS PRESSURES ON DESIGN AND PRODUCTION

Dowie's article, "Pinto Madness," claimed that Ford was so eager to get the Pinto to market that it sped too quickly through critical design and preproduction tests. Among Dowie's charges:

- Ford engineers discovered in preproduction crash tests that rear-end collisions would rupture the Pinto's fuel system extremely easily.
- Because assembly-line machinery was already tooled when engineers found this defect, top Ford officials decided to manufacture the car anyway—exploding gas tank and all—even though Ford owned the patent on *a much safer gas tank*.¹⁵

What were the grounds to support Dowie's claim?

In 1967 Lee Iaccoca established the goal to have the Pinto in Ford's showrooms by 1971. Moreover, Iaccoca imposed the "limits of 2,000" on the engineers: The Pinto must weigh less than 2,000 pounds and cost no more than \$2,000.¹⁶ Formal planning began at once in June 1967 and production was started in August 1970. According to Dowie, this twenty-five-month period was shorter than usual, as the typical time span from conception to production of a new car is forty-three months. Some of the accelerated schedule can be explained by the Pinto's simplified car design and Ford's innovations in streamlined management.

But Dowie charged that this accelerated schedule didn't give the Ford engineers sufficient time to do their job right. Consequently, a number of critical design and engineering issues did not receive sufficient attention or were not implemented adequately. For example, one particularly controversial point concerned the safest place to put the gas tank. Like most cars made in the early 1970s, the Pinto's gas tank was behind the rear axle. But late in the Pinto's design process, a study showed it would be safer to place the tank directly above the rear axle, which would better isolate it from the point of impact by a rear-end collision. But engineers weighed this benefit against other problems: Putting the tank above the rear axle increased the threat of spilled fuel igniting in the passenger compartment. The new location also raised the car's center of gravity, making it more difficult to handle. Besides these safety issues, the new tank location would reduce the Pinto's storage space, would make it difficult to design a Pinto station wagon or hatchback, and would make the car more difficult to service. These factors needed to be weighed carefully, something Dowie claims the engineers did not have time to do because of the 1971 deadline.

Another design issue that was debated in the Ulrich trial was whether the Pinto's gas tank should have been fitted with a rubber bladder. Some studies showed that such a device lessened the chance that the tank would rupture in a car collision. But according to Ford defense attorney Neal at the Ulrich trial, no other American cars had a rubber bladder in their gas tanks, except the Corvette Stingray. The reason was, according to Ford, that such devices don't work well in actual situations, depending on the climate where the car is used and depending on the kind of collision the car experiences. Also, there was a concern at Ford about the cost of introducing effective gas tank bladders. Would this design issue have received more careful attention if the Pinto had been on a more typical production schedule?

At issue here are the contrasting fundamental values or outlooks associated with engineers and marketing-oriented executives. According to Dowie, an anonymous Ford engineer said, "This company is run by salesmen, not engineers; so the priority is styling, not safety."¹⁷ It is not clear whether a more generous production timetable would have facilitated a consensus on design safety among the engineers and marketers at Ford. We do know, however, that Ford is not alone in having this kind of conflict in perspective.

Engineers would like to have all the time necessary to test their designs fully and to implement them without compromise. Marketers would like to put their products on the market as soon as possible, in order to beat the com-

petition. Caught in the unavoidable tension between these two orientations is the nagging question of what counts as adequate product safety.

IV. AN ECONOMIC PERSPECTIVE: WEIGHING THE COSTS AND BENEFITS

One of the more disturbing aspects of the Ford Pinto case was Ford's use of cost/benefit reasoning to make decisions that directly affected consumer safety. The cost benefit issue was brought to public attention by Dowie's article, which published a Ford internal memorandum that weighed the positive value of human life against the cost of improving Ford gas tanks. It is important to emphasize that this Ford memo is concerned only with fuel tank fires caused by a rollover, not by rear-end impact. Also, this memo measures the costs of reengineering all Ford cars, not just the Pinto. Thus, contrary to how many have interpreted Dowie's report, this Ford memo was not doing a cost/benefit analysis to determine specifically how to deal with Ford Pintos that were exploding from rear-impact collisions. Nevertheless, this infamous Ford cost/benefit analysis is linked permanently in public consciousness with the Pinto issue. Also, Neal's arguments in the Ulrich case uses cost/benefit judgments to defend the Pinto's design. We need to be careful not to confuse this Ford memorandum with the arguments made in the Ulrich case. But it is appropriate here to review the way in which this Ford memorandum introduces cost/benefit reasoning to discussions of automobile safety, even if this memo was not used by Ford to make any safety decisions directly affecting the Pinto. This review is warranted by the pervasive impact of cost/benefit reasoning on business decisions in general and on product safety issues in particular. Our purpose here is to use this memorandum to display the kind of logic that is operative when an economic perspective prevails in discussions of product safety.

First, what is cost/benefit analysis? It is a formal decision-making procedure that, in the best of possible worlds, follows the following steps:¹⁸

1. The project or policy to be analyzed is identified.
2. All the impacts, both favorable and unfavorable, present and future, on all of society, are determined.
3. Values, usually in dollars, are assigned to these impacts. Favorable impacts will be registered as benefits, unfavorable ones as costs.
4. The net benefit (total benefit minus total cost) is calculated.
5. The decision to be made is based upon the rule that in any choice situation, we should select the alternative that produces the greatest net benefit.

Of course, in actual circumstances it is impossible to identify and to assign accurate values to *all* the impacts of a proposed project or policy. Nevertheless,

cost/benefit analysis is widely used in business because it upholds capitalism's basic commitment to economic efficiency.

The underlying presupposition, that we should put scarce resources to their most valuable use, has guided informal decision-making since the dawn of humankind. But the systematic and quantitative application of cost/benefit reasoning to decisions is a more recent phenomenon. It was first employed by the U.S. government to analyze water resource projects in the 1930s and blossomed in strategic analysis methods developed during World War II. Today, nearly every organization of any size, business or otherwise, employs some kind of formal, quantitative cost/benefit reasoning procedure for project and policy decisions.

As reported in the Dowie article, Ford made a cost/benefit calculation to decide *not* to make a safety modification to the gas tanks of their automobiles (keeping in mind that the memorandum reviewed here was not written with the Pinto specifically in mind). According to a Ford internal memorandum entitled, "Fatalities Associated with Crash-Induced Fuel Leakage and Fires," which Dowie made public in his article,¹⁹ Ford reasoned as follows:

The issue: Should we make a technical improvement costing \$11 per car that will prevent gas tanks from rupturing so easily?

The memorandum indicates that benefits are calculated as follows:

Savings: 180 burn deaths, 180 serious injuries, 2,100 burned vehicles

Unit Cost: \$200,000 per death, \$67,000 per injury, \$700 per vehicle

Total Benefit: $180 \times (\$200,000) + 180 \times (\$67,000) + 2,100 \times (\$700) = \$49.5 \text{ million}$

The costs are calculated as follows:

Sales: 11 million cars, 1.5 million light trucks

Unit Cost: \$11 per car, \$11 per truck

Total Cost: $11,000,000 \times (\$11) + 1,500,000 \times (\$11) = \$137 \text{ million.}$

Applying the basic rule of cost/benefit reasoning (select the alternative that produces the greatest net benefit) we see that the total cost (\$137 million) clearly outweighs the total benefit (\$49.5 million). Therefore, it is rational to conclude that Ford should not make the \$11 per unit technical improvement to its gas tanks.

Cost/benefit reasoning is open to some powerful objections, which Dowie and others use to critique the reasoning in this internal Ford memorandum. The following extract summarizes some of the problems associated with this form of reasoning:

Benefit-cost analysis is especially vulnerable to misapplication through carelessness, naivete, or outright deception. The techniques are potentially dangerous to the extent that they convey an aura of precision and objectivity. Logically they can be no more precise than the assumptions

and valuations that they employ; frequently through the compounding of errors, they may be less so. Deception is quite a different matter, involving submerged assumptions, unfairly chosen valuations, and purposeful misestimates.²⁰

Picking up on this issue of where we get our valuations and estimates, the Ford cost/benefit analysis can be challenged on its valuation of human life, which it estimates to be \$200,000. Where did Ford get this figure? From the U.S. government! In 1972 the National Highway Traffic Safety Administration issued a report that calculated a human life to be worth \$200,726. It estimated as follows:²¹

Component 1971 Costs

FUTURE PRODUCTIVITY LOSSES

Direct \$132,000

Indirect 41,300

MEDICAL COSTS

Hospital 700

Other 425

PROPERTY DAMAGE 1,500

INSURANCE ADMINISTRATION 4,700

LEGAL AND COURT 3,000

EMPLOYER LOSSES 1,000

VICTIM'S PAIN AND SUFFERING 10,000

FUNERAL 900

ASSETS (Lost Consumption) 5,000

MISCELLANEOUS ACCIDENT COST 200

TOTAL PER FATALITY \$200,725

(Note: These figures are from a 1972 NHTSA study. In 1977 the amount was adjusted to \$278,000 to account for inflation. Presumably human life would be worth more today, even with the lowered inflation rate of recent years!)

The above calculation estimates the cost to society every time someone is killed in a car accident. Is this a justified valuation of human life? In particular, where does the \$10,000 for "victim's pain and suffering" come from? Dowie reports that he was unable to find anyone, in the government or at Ford, who could explain the rationale for this figure. Presumably there are people who will object to a \$10,000 valuation of human pain and suffering (even if we take into account that these are 1971 dollars): First, because it is too low an amount. Second, and more devastating for cost/benefit reasoning about product safety, because it is inappropriate to put any price tag on human life.

One reason that we tend to accept cost/benefit calculations that affect human life is that the human lives in question are "anonymous" or "statistical." Humans have a tendency to toss out cost/benefit reasoning when the lives of known persons are at stake. Thus a community will spend a large sum of money to rescue five identified miners trapped in a mine when the same

amount of money could have been used instead to install better safety features in the *next* mine that would save many more lives overall than the currently trapped five. Rationally, according to cost/benefit reasoning, we should save more "statistical" or future lives than fewer "known" lives now. But many people are uncomfortable with this kind of rationality.²² When Ford, and other companies, make cost/benefit trade-offs between product cost and human life, they do not have particular persons in mind. Ford's executives were not thinking about, nor did they even know, the three Ulrich young women when they contemplated the \$11 improvement to their gas tanks. And this oversight, says Dowie, is precisely what is wrong with cost/benefit reasoning applied to these kinds of issues. He says:

And you could talk "burn injuries" and "burn deaths" with these guys [cost/benefit policy makers], and they didn't seem to envision children crying at funerals and people hiding in their homes with melted faces. Their minds appeared to have leapt right to the bottom line—more safety meant higher prices, higher prices meant lower sales and lower sales meant lower profits.²³

The greater impact of "known" lives on our judgments about safety explains why Ford put its own engineers on the defense stand at the Ulrich trial. For these engineers attested that not only did they drive the Pinto, but they let their wives and children drive the car too!

V. A POLITICAL PERSPECTIVE: WHO SETS THE CONSUMER SAFETY STANDARDS?

The Dowie article claimed that Ford actually lied to the government in order to delay the enactment of government automobile safety standards, standards that would have required Ford to change the Pinto gas tank's design. An important background to the Ulrich accident is the long-running battle between Ford and the government over the auto safety standards. At issue is who should determine the appropriate level of safety for the American consumer.

For most of America's history, the fundamental business rule has been "let the buyer beware." Consumers had relatively low expectations about the reliability and safety of business products. Following World War II, the United States experienced a shift in attitude toward a more aggressive consumerism that said, in effect, "let the seller beware!" Increasingly, consumers demanded the *right* to safe and reliable consumer products and the U.S. government stepped in to enforce that right. The auto industry successfully resisted governmental safety regulation until the 1960s. Inspired by consumer advocate Ralph Nader's classic critique of the Corvair automobile, *Unsafe at Any Speed*, the American public looked for help from governmental groups like the Environmental Protection Agency and private consumer advocate groups like the Center for Auto Safety. Ford's most extended safety battles, however, were with the

National Highway Traffic Safety Administration (NHTSA) a regulatory agency in the Department of Transportation. From the start, the auto industry and NHTSA were adversaries, as reflected in the following battle between Ford and NHTSA over safety standards affecting the Pinto.

Before 1969 during the design stage of the Pinto, there were no federal government car safety standards specifically on gas leaks from rear-end crashes. In January 1969 NHTSA proposed the first rear-end fuel system integrity standard, called Standard 301. It required that a stationary vehicle should leak less than one ounce of fuel per minute, if hit by a 4,000-lb barrier moving at 20 mph. Standard 301 was called a "moving barrier" test because the barrier rams into the car, not the car into the barrier. Ford responded by supporting Standard 301, adopting it as a design objective for all its cars. It tested the Pinto against this standard and made adjustments to its gas tank to bring it into compliance.

In 1970, after Ford had already started manufacturing the Pinto, NHTSA revised Standard 301 to be a 20-mph fixed barrier standard. In this test, the car is pulled backward into a fixed barrier. The entire automobile industry opposed this revision, saying that the fixed barrier test puts nearly twice as much stress on the car as the comparable moving barrier test. Moreover, the auto makers said, the revised Standard 301 is unrealistic because cars almost never back into objects at that speed. Most rear-end collisions were at speeds of less than 20 mph (as in the moving barrier standard), and only 0.45 percent of injury-producing rear-end collisions also included a fire.²⁴ Ford proceeded to use its own 20-mph moving barrier standard. It also started to work on ways to pass a 30-mph moving barrier test, which it thought the NHTSA would eventually propose. In 1973, NHTSA surprised Ford by proposing a 30-mph *fixed barrier* rear-end fuel system integrity standard, effective September 1976 for all 1977 models. NHTSA also proposed a fuel system integrity standard for cars that roll over in accidents. Ford opposed this requirement, using for its argument the cost/benefit analysis cited earlier.

In 1977 Motor Vehicle Safety Standard 301 was amended to implement all provisions of the proposed fuel system integrity standard, affecting all 1977 model. Shortly thereafter, Dowie's article appeared in *Mother Jones*. Ford vehemently denied that it had purposely delayed Standard 301, saying that it had only opposed "certain excessive testing requirements."²⁵ NHTSA initiated an investigation into the Pinto's fuel tank system. Ford complained that the basis for NHTSA's inquiry was unfounded and that NHTSA was motivated by political, not safety, concerns.

In May 1978 NHTSA said that pre-1977 model year Pintos were subject to fuel leaks and other problems.²⁶ In June 1978, Ford agreed to a recall, but it did not agree with NHTSA's view that the Pinto design involved an "unreasonable risk" to safety. Ford conceded that NHTSA had identified some areas for practical improvement (like replacing the fuel filler pipe and installing a polyethylene shield across the front of the fuel tank). Ford's recall cost the company \$20 million after taxes.²⁷ In response to Ford's action, NHTSA closed its long-standing investigation without making a final determination about the Pinto's safety.

This long-running feud between Ford and NHTSA illustrates the tension between the auto industry and the government concerning product safety. The government seeks to represent the interests of the consumer, who individually are not able to press for better safety standards. The automobile industry seeks to provide products at prices that consumers are willing to pay. Concerning the Ulrich case, Ford concedes that it *could* build a safer car—like a tank! But few consumers would desire or be able to afford such a vehicle.

VI. THE OUTCOME OF THE TRIAL

On March 13, 1980, after a ten-week trial, the Elkhart County Jury reached a verdict in the Ulrich case. The verdict came after twenty-five hours of deliberations over a four-day period, including a session lasting more than fourteen hours and ended at 3 A.M. The jury was polled twenty-five times. According to jury foreman Arthur Selmer, the first vote by the jurors was four in favor of the conviction, eight against. Eventually there was but one holdout who favored a conviction, James Yurgilas, a self-employed mobile home salesman.

“I felt that it was a reckless automobile but on the other point you couldn’t actually prove that they didn’t do anything in their power to recall it,” said Mr. Yurgilas, whose eyes and facial expressions bespoke agony over his decision to yield.²⁸

The jury found Ford not guilty of criminal homicide in the Ulrich case. The verdict came during a meeting of Ford’s board of directors, who cheered loudly at the news. This case shows that it is very difficult, perhaps even pointless, to try to convict corporations of criminal charges in cases like this.²⁹ Not only was Ford acquitted in this case, avoiding the stigma of being the first company in history to be guilty of reckless homicide, but Ford now expected to counter more easily the maze of civil suits pending against it.

The Ulrich family’s response was more subdued. Earl Ulrich, father of two of the victims, said of the verdict, “I’m very disappointed. But this has nothing to do with us. This was the state of Indiana against Ford Motor Co.”³⁰

Even though the jury did acquit, this Pinto proceeding had a pervasive impact on the auto industry and society. According to Clarence Ditlow, executive director of the Washington-based Center for Auto Safety, “The bottom line of all this, from a consumer view, is that we will wind up with safer cars. . . . Manufacturers now realize they are in danger of criminal charges. Cost versus benefits of safety will be looked at closely.”³¹

From the standpoint of ethics, the jury’s acquittal has not diminished debate about product safety and corporate responsibility. Because of the stirring nature of the case, and because of the unprecedented severity of the criminal charge against Ford, this Ford Pinto case is a watershed in the evolution of public perceptions and judgments about product safety standards. Corporate critics still cite the Ford Pinto as a benchmark in their arguments about product safety.³²

QUESTIONS FOR REFLECTION

1. What should be the basis for our standards of product safety? Should our safety standards reflect the prevailing level of safety demonstrated in particular product categories? Or should our safety standards reflect an as-yet unattained ideal?
2. How much should Americans be willing to pay for automobile safety? In your opinion, is automobile safety a sufficiently high priority for automobile manufacturers and for consumers?
3. How pervasive do you think cost/benefit reasoning is in business decision-making, in the area of product safety as well as in other areas? Are you comfortable using cost/benefit reasoning for important decisions? What are the ethical risks of relying too exclusively on cost/benefit reasoning?
- What, ethically, are the advantages associated with this kind of reasoning?
4. Who bears primary responsibility for product safety? The manufacturer or the consumer? Which value should govern our thinking on product safety: "Let the buyer beware" or "Let the seller beware?"
5. While we can assign values to particular products (we price them), can we price human life? Why or why not? As a matter of actual practice, in our everyday decisions and actions, *do* we place a value on human life?
6. Do you think that a political solution (government regulation) is the best solution to the ethical problem of people being harmed by dangerous products?

SUGGESTIONS FOR FURTHER READING

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ENDNOTES

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12. Reginald Stuart, "Ford Auto Company Cleared in 3 Deaths," *The New York Times* (March 14, 1980): p. A1.
13. Mark Dowie, "Pinto Madness," *Mother Jones* (September/October 1977): p. 18.
14. *State of Indiana v. Ford Motor Company*, op. cit., p. 84.
15. Dowie, op. cit., p. 18.
16. "Ford Ignored Pinto Fire Peril, Secret Memos Show," *Chicago Tribune* (October 13, 1979): Sec. 2, p. 12.
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18. The description that follows draws on Edith Stokey and Richard Zeckhauser, *A Primer for Policy Analysis* (New York: W.W. Norton & Company, Inc., 1978): p. 136.
19. Dowie, op. cit., pp. 24, 28.
20. Stokey and Zeckhauser, op. cit., p. 135.
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31. Reginald Stuart, "Ford Won in Pinto Case, but the Memory Will Linger On," *The New York Times* (March 16, 1980): Sec. 4, p. 20.
32. See for example, Andrew W. Singer "Pinto Redux?" from *Ethikos* 6(4) (January/February 1993): 1–3, 6. This uses the saga of the Ford Pinto as a benchmark for assessing a more current controversy about the safety of General Motors Corporation's pickup trucks.