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Engineering Ethics Summary: The Ford Pinto Case

In 1968, Ford had plans to manufacture a small affordable car to reach customers for whom cars were too expensive. In order to achieve this, one of Ford’s restraints in the design was the 2000/2000 rule: the car could not exceed 2000 lbs. nor could it cost more than $2000. The idea behind this restraint was to make a suitable car for a first time car buyers and invest in them, in hopes that these customers would stick with Ford for their future car purchases. Unfortunately this approach brought on many design restrains as well, engineers had to “reinvent the wheel” of contemporary car designs to accommodate these limitations. It was customary to place the gas tank between the bumper and rear axle, providing adequate trunk space. The gas tank on the Ford Pinto was nine inches away from the rear axle, which was a big deal considering there were bolts protruding the case of the rear axle and facing the rear bumper. This meant that if a Pinto were to be rear-ended its gas tank would be forced up to the rear axle and the bolts would puncture it causing a leak, or much worse. From inception to production, the Ford Pinto came to be in only twenty five months while the industry standard was generally forty three months to make a new car. The Ford Pinto engineers were rushed to complete the car to keep up with the competitive market and had to cut corners to meet such deadlines.

Right after the onset of the first Ford Pinto model in 1971 the National Highway Travel Saftery Administration (NHTSA) made new safety regulations that paid close attention to post crash survivability. Because the Ford Pinto came out prior the car was not illegal to produce. This turned out to be calamitous because gas tank explosions usually occurred in the Ford Pinto upon any collision of at least thirty-one miles per hour. And such was the case for Lily Gray, an elderly woman in Orange County Florida, in August 1977. She was driving her 1972 Ford Pinto hatchback with her neighbor Richard Grimshaw, who was thirteen. Lily’s car had stalled in the middle of the road due to a problem with her carburetor—the Pinto was also infamous for constantly breaking down while driving—and her car was rear-ended at about thirty miles per hour. She died upon impact and Richard was seriously burned. This is only one of the estimate five to nine hundred casualties as a result of the accidents with 1971-1976 model Ford Pinto cars.

Ford used cost/benefit analysis to justify it not recalling the affected vehicles. To do this it deemed a human life to be valued at roughly $200,000 and estimated the compensations owed to society (medical costs, funeral costs, property damage, employer losses, insurance, etc.) would total $49.5 million. Court ruling allowed this compensation as opposed to a recall, which would’ve cost $137 million. Still it’s not to be overlooked that Ford, rather arbitrarily, put a prices of the lives of those affected to justify not paying the recall price.

In the Ford Pinto case quality and safety were deemed less important than time and manufacturing costs. The engineers involved failed to abide by the IEEE code of ethics in that they didn’t set out to avoid the injury of others, their property, or their employment. As soon as the NHTSA effected regulations that would deem the Pinto unsafe, Ford should have promptly disclosed to the public that the Pinto did not meet these standards. The fact that they rushed production, chose to not amend the design, and did not disclose the design’s shortcomings show that, ultimately, the manufacturing and distribution of the Ford Pinto was irresponsible and unethical.