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Computer Engineering 394

An Essay on Ethics

Engineers can create some of the grandest projects conceived. With this power comes a moral, ethical responsibility. A standardized code of ethics helps cover engineers, not just at a particular firm or industry, but all engineers work together ethically. This essay will explore the ethical decision-making process, examples that were covered to demonstrate this, and relevant ethical virtues.

I ask myself a set of questions when approaching an ethical dilemma, which are meant to help work my way through the “gray” area that often exists in ethics. First, I ask, “is this legal?” This fairly straightforward question doesn’t always have an easy answer. It does, however, rule out some potentially terrible decisions. “Is this up to the standards the client/customer is expecting?” This is largely a question about doing something right rather than covering something up. Sometimes, the easy solution to a problem is not the right one, and this question aims to address that. “Is this safe?” is another question that should always be asked. Some projects have an easy “yes” answer, while others can be much more difficult. There are sometimes unavoidable risks, but accounting for them and having plans or systems to prevent or react to potential risks make otherwise hazardous situations much more acceptable. Finally, I ask, “Is this up to my own standards?” It is in my own best interest to maintain my standard for my reputation. It is in my interest to do things in a way that I believe is the best way to do something. Acting in my own interest with this question is in the best interest of other people

involved. These questions tend to narrow down the answer to an engineering ethical dilemma. As I progress through my career, I will continue to use this set of questions where my choices will likely only have more and more ramifications.

Ethical issues and strategies introduced in class meshed well with the question set I use myself, but some differences added another helpful perspective. Perhaps the most notable ethical issue presented in class was one concerning the Ford Motor Company's Pinto. In this example, Ford developed a vehicle they knew would have safety issues. These issues were related to where the gas tank was situated and the potential of its eruption in the event of being rear-ended. Ford's calculations showed that they determined it was cheaper to pay for the deaths and injury of customers than to implement what would be needed to make the car safer. They put a price on human life. Asking the questions set for myself, the answer to "Is this up to the standards the customer is expecting?" is clearly a no. The answer to "Is this safe?" is extremely not. Finally, this would not be up to my own standards. The class provided a different way to measure the ethical issues presented, but it yielded a similar result. IEEE had a standard that included "to avoid injuring others, their property, reputation, or employment by false or malicious action." This is fairly specific but exactly represents the major issue of this case. Another standard was that of the 5 P's, and one of them was "Priorities." The idea is that the priorities of those developing a project like this were straight by being safe and fair. This is not safe or fair, and it is clear that the priorities were set for money over human life, and other students reiterated this thought in a discussion over this topic.

The final piece in evaluating ethical issues is reviewing the "Virtue of Ethics" to draw connections with the relevant virtues. The six "Virtue[s] of Ethics" are comprehensive as they cover all significant ethical questions while still being fairly concise. When comparing it to my

case study of Ford's issue with the Pinto, three virtues stood out as being the most relevant: integrity, honesty, and responsibility. Integrity is considered "moral uprightness," and good principles are shown through moral decisions. In the case of the Pinto, this was practically non-existent. Moral principles were not found in the slightest when time and money took priority over human life in a completely intentional and preventable way. If ethical principles were involved, such a decision to continue with the Pinto's design would not have occurred. The next virtue, honesty, is considered the pinnacle of all virtues as it encompasses being truthful, fair, and open. While truthfulness can always be a gray area, being fair and open is often more clear. The Ford Motor Company may not have directly lied about the safety of the vehicle, it's clear they were not being fair in how they described their reliability and were not open with the public on the danger they were intentionally being subject to. The third virtue, responsibility, is about accountability, dependability, and reliability by holding up your moral obligations to others. This is extremely relevant to the case study due to the lack of fulfilling moral obligations. People depended on their vehicles to get them to where they needed to go, but they depended on it having the safety features they'd expect. The public relied on safety being accounted for. It was the Ford Motor Company's moral obligation to design and produce a safe vehicle, and they did not. While other virtues, like charity and fidelity, were somewhat relevant, the three described were the most connected to this case study due to how violated they were. Perhaps the only thing not directly covered by these virtues was to prioritize the safety of both the people working on the project and those using the project. Other issues indirectly covered this, which is worth mentioning as the blatant disregard for safety was the center of this issue.

By comparing my ethical assessment strategy with those we learned in class and applying them to a case study, I could better grasp just how real these issues are and how important it is to uphold our ethical responsibility as engineers. Small decisions can snowball into large consequences, so having a system in place to ensure good judgment will have large ramifications throughout my career.