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Software Engineering 329

**Assignment #2**

**Report Content (Assignment’s Questions).**

**What is the purpose of having/following a “Code of Ethics”?**

According to the NSPE Code of Ethics for Engineers, engineering is an important profession and it has a direct and vital impact on the quality of life of all people. Thus, in providing their services, engineers require honesty, impartiality, fairness, and equity, and must be dedicated to the protection of public health, safety, and welfare. Also, a code of ethics set rules that should be followed so that knowledge is not misused and so that people are not harmed for the benefit of a person or a business.

A code of ethics is usually established by a professional order as a way to protect the public and the reputation of the professionals, engineers Following the Code of Ethic will help them better perform under a standard of professional behavior that requires adherence to the highest principle of ethical conduct. When these codes are followed, engineers (as well as every person following these codes) will create a much more stable work environment where employers, employees, vendors, stakeholders, and consumers are able to have more faith in each other’s work and claims. Thus, making a more productive work environment, a better society, and avoided issues, and confusions.

**When you are faced with an ethical situation, how do you, personally, go about making a decision? What factors are involved in making your decision?**

In making a decision, I try to think of positive and negative outcomes of what I am doing. Personally, I try to follow a very important rule that my father taught me; “Do unto others as you would have them do unto you.” Out of common respect, this rule reminds me to always treat everyone with respect, be honest all the time with myself, my work, and my workforce mates. Moreover, I would look at how things have happened when I or others (team members) have made a comparable decision before which sometimes can also heavily weigh into the decision I end up making. Finally, I will hold preeminently the safety, health, and welfare of the public. These may not be major ethical decisions, but these are the ethical decisions that I mostly face every day or every time I work on a project, and I feel that being ethical even through the smallest of problems is essential if I hope to later be ethical during bigger problems.

**What case study was discussed in your small group? How did the ethical considerations introduced by your group members differ from your own? How were they alike? Was your group able to come to a consensus on what the most “ethical” decision would be?**

The case study that was discussed in our group was the VW Scandal. Which was the Volkswagen emissions scandal (also called "emissionsgate" or "dieselgate") started on 18 September 2015, when the [United States Environmental Protection Agency](https://en.wikipedia.org/wiki/United_States_Environmental_Protection_Agency)(EPA) issued a notice of violation of the [Clean Air Act](https://en.wikipedia.org/wiki/Clean_Air_Act_(United_States)) to German automaker [Volkswagen Group](https://en.wikipedia.org/wiki/Volkswagen_Group). The agency had found that Volkswagen had intentionally programmed [turbocharged direct injection](https://en.wikipedia.org/wiki/Turbocharged_direct_injection) (TDI) [diesel engines](https://en.wikipedia.org/wiki/Diesel_engine) to activate some [emissions](https://en.wikipedia.org/wiki/Exhaust_gas) controls only during laboratory [emissions testing](https://en.wikipedia.org/wiki/Emissions_testing). The programming caused the vehicles' Nitrous Oxide output to meet US standards during regulatory testing but emit up to 40 times more Nitrous Oxide in real-world driving. Volkswagen deployed this programming in about eleven million cars worldwide, and 500,000 in the United States, during [model years](https://en.wikipedia.org/wiki/Model_year) 2009 through 2015.

We talked about the code of ethics and particularly highlighted the code that ensures employers do not have any conflict of interest within their place of business. Honestly, our ethical consideration was pretty much the same, we agreed that VW should have not sell all those cars without fixing the Nitrous Oxide problem; moreover, because that they sold the cars even though the cars had a deficiency in them and caused harm to people.Finally, the ethical decision that we agreed upon was that Volks Wagen should have not distributed those cars and fixed the issue.

**Reflect on the “Virtue of Ethics” as it relates to the case study your group discussed. Choose three of the six virtues that you feel are most related to your case study and briefly write about them. Why did you choose the three you did? How are they relevant to the case study? Why are the other virtues less relevant? Is there another ethical virtue you feel could apply to your case study that is NOT included in the “Virtue of Ethics?” Why or why not?**

The first one would be honesty, the Volks Wagen company breaks this principle at the VW Scandal case. The engineer in this case made an honesty mistake by hiding the Nitrous Oxide situation for the company which resulted in a multitude of issues later on and harmed people.

The second virtue is Integrity, The car designers did not display any integrity when it failed the system integrity test which was to check if the car had any issues, also because they would remedied the defects of the car if they had integrity in their situation.

Finally, the most important virtue that the company is missing is Responsibility. Furthermore, by not telling the customer about the problems of the products they were sold, they potentially put the users of those products at risk and also the reputation of the customer, which would be severely weakened if anyone got injured. If the company had responsibility, they would have checked the work after every personnel have finished his/her part, and would have prevented such catastrophic outcomes and unnecessary problems. Rather than using money and assets to measure human lives, the usage of the money and assets should be used to measure how safe we are making the products for those human lives.

I would add that the company should have the virtue of Charity, because charity can be viewed as compassion and mercy toward human life. In the Volks Wagen case, we can really see that lack of charity toward every single person that was responsible for the VW Scandal. Other than what I mentioned, I do not feel that there is any other virtue that would be accepted as a virtue of this case. If the company didn’t lack honesty, they would have been able to prevent the Nitrous Oxide issue; if the company didn’t lack integrity, they would have found the problem with the system; if the company had responsibility, they would have been able to prevent unnecessary problems by utilizing their funds in order to help people rather than measuring their profits; and finally, if the company had charity, the would have been able to better appreciate the true value of the customers they are selling the products for.