

Code Of Ethics

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Situations often arise in engineering where a decision will affect a lot of people in potentially negative or harmful ways. In some cases, the decisions are cut and dry, but more often than not the best choice is unclear or not an option. That is, sometimes the right choice is a very difficult one, and other times there simply is no right choice. As engineers, we often make decisions that affect a large number of people, and inevitably some of these will be of the latter kind. This is why it is important to establish and follow a Code Of Ethics.

When I am faced with an ethical decision, I feel that it is necessary to reflect upon and give full attention to the potential outcomes. I spend time considering the implications of each choice, why the choices must be made, and the consequences of each. The main factors involved in this consideration are: how are other people affected, how is the final outcome affected, how is this choice better/worse than another, and are there alternative choices I have not considered. Among these, I think the first is most important. It is my belief, in agreeance with the IEEE Code of Ethics, that “the safety, health, and welfare of the public”¹ are of utmost importance.

In an ethics of engineering class, we did a case study on a murder investigation where the police believed that an Amazon Echo had recorded crucial snippets of audio.² Police wanted Amazon to hand over the audio recordings for use as evidence. This raises many ethical questions. Should Amazon oblige and hand over the data? Do they even store the data? If so, should they do this? How do the decisions in this case affect the future of data privacy?

During class, we discussed many of the factors at play. There is a delicate balance between improving and integrating technology in to our lives and the privacy concerns that arise from this. In order to improve voice assistance, the data does need to be kept (at least briefly) and analyzed, but that makes a large majority of people uncomfortable. Most people in our discussion group agreed Amazon should not be holding the data “longer than necessary,” but that is ambiguous and implies a decision that privacy is more important than improving technology. We finally concluded that the issue itself is a very difficult one, perhaps with no correct answer.

In thinking about the virtues of ethics and how they relate to making decisions like those faced by Amazon and its engineers, there are three that come to mind as being of utmost importance:

- Integrity
- Responsibility
- Self-Discipline

I believe **integrity** is crucial because it indicates strong moral standing, reflection, and good judgment. These are necessary attributes for making good decisions in the face of difficult questions. **Responsibility** requires accountability, moral obligation, and doing what's right in the face of what's hard. **Self-discipline** results in balance, reliability, and the strength to follow through on the integrity and self-discipline virtues. These three attributes are important to the case study because they are instrumental in making tough, balanced,

¹<https://www.ieee.org/about/corporate/governance/p7-8.html>

²<https://techcrunch.com/2016/12/27/an-amazon-echo-may-be-the-key-to-solving-a-murder-case/>

moral decisions. I feel that they largely encompass many of the other virtues of ethics, like honesty, fidelity, and charity. Thus the broad definition of these three ethics cover most or all moral and ethical decisions we as engineers will face. Of course, it's always the case that reality is much more nuanced and difficult than theory and discussion.

One of the most difficult aspects of being an engineer is a far cry from the technical know-how and problem solving creativity we are known for. It is the challenge of following a code of ethics and making good decisions for everybody involved. The plethora of moral and ethical dilemmas we will face requires us to hold true to certain virtues and constantly grow and reflect on decisions made by us and others. In this way, engineering is as much a philosophical profession as it is a technical one.