

# Engineer and society essay



**ASSIGN  
BUSTER**

Case 1: An inspector discovers faulty construction equipment and applies a violation tag, preventing its continued use. The inspector's supervisor, a construction manager, views the case as a minor infraction of safety regulations and orders the tag removed so the project will not be delayed. What should she do?

The moral dilemma she suffered is either she should report the faulty to the higher administration, and told them the consequences if it is ignored or just follow the orders of her supervisor, removing the violation tag and continue the project. The moral issues occurred in this case is her supervisor that just selfishly ignored the faulty so that the project will not be delayed. In making a judgement, the inspector should consider and think what will happen if she follow her supervisor's order. Her supervisor supposed to follow the safety regulation, and solve the problem before continuing the project.

The option that is available are she could just follow her supervisor's order without further action, or discuss with her supervisor about the faulty occurred and urge him to consider again, or report the faulty to the higher administration and let them act. The option that is required is that the inspector should discuss again with her supervisor and apply the violation tag as required, thus it will satisfy the safety regulation and keeping her career. The other option, will possibly cause her to lose her job, as the first option, the false will be blame on her if any accident happen, and the second option probably will make her supervisor report to higher administration for she report the faulty without the right procedure.

Case 2: A software engineer discovers that a colleague has been downloading restricted files that contain trade secrets about a new product that the colleague is not personally involved with. He knows the colleague has been having financial problems, and he fears the colleague is planning to sell the secrets or perhaps leave the company and use them in starting up his own company. Company policy requires him to inform his supervisor, but the colleague is a close friend. Should he first talk with the friend about what he is doing, or should he immediately inform his supervisor?

The software engineer having a dilemma that either he should talk and advise his close friend for the unnecessary download of the files or inform his supervisor as soon as possible. The moral issue in this case is the engineer's friends who download the restricted files from the company archives. He should not be download the files as it have nothing to do with him. The software engineer, and his friend, as an employee, has to follow the company policy. As in the policy, the engineer should inform to his supervisor regarding the unnecessary downloaded files by his friend, and his friend should not download or taking any trade secrets from the company.

The available option are that the software engineer inform his supervisor what is his colleague do, or the software engineer can talk with his friend first, asking what is he intend to do with the downloaded files, and advise him. The software should inform his supervisor immediately about the action of his colleague, as the engineer is tie with the company policy, so the supervisor can investigated and take an action to the engineer friend. The other option, is suitable, but it will cause the engineer and his friend to lose their job, if his friend ignore the advice given to him.

Case 3: An aerospace engineer is volunteering as a mentor for a high school team competing in a national contest to build a robot that straightens boxes. The plan was to help the students on weekends for at most eight to ten hours. As the national competition nears, the robot's motor overheats, and the engine burns out. He wants to help the dispirited students and believes his mentoring commitment requires he do more. But doing so would involve additional evening work that could potentially harm his work, if not his family.

The moral dilemma that the aerospace engineer faces is either to help the students during evening for the competition or he just leaves the dispirited students without helping them. He can help them with the additional evening work, encourage them or give some idea to them how to overcome that problem. Another solution is that he can just ignore these students and continue doing his work. The aerospace engineer should help these students even he is just volunteering to help them. By doing this, he could help these students to achieve their goal in the competition, and motivated them to join another competition.

Case 4: During an investigation of a bridge collapse, Engineer A investigates another similar bridge and finds it to be only marginally safe. He contacts the governmental agency responsible for the bridge and informs them of his concern for the safety of the structure. He is told that the agency is aware of this situation and has planned to provide in next year's budget for its repair. Until then, the bridge must remain open to traffic. Without the bridge, emergency vehicles such as police and fire apparatus would have to use an alternate route that would increase their response time by approximately

twenty minutes. Engineer A is thanked for his concern and asked to say nothing about the condition of the bridge. The agency is confident that the bridge will be safe.

The moral issue in this case is the agency is opening the bridge to public without thinking any consequences. The agency should consider what will happen if the bridge is open to the public. They should consult with any engineer involved before making any decision. The solution in this case are, the agency should repair the bridge as soon as possible, before opening to the public. Another solution is opening the bridge to the public, without any action taken. The agency should repair the bridge as soon as possible, with the help from engineer, because the sooner the bridge is repaired, the less risk for a catastrophe to occurred. Another solution is permissible, as long as the agency opening up the bridge only for the emergency vehicle, not for public, because in term of engineering, the bridge may be collapse if it is used continuously.

Case 5: A cafeteria in an office building has comfortable tables and chairs, indeed too comfortable. They invite people to linger longer than the management desire. You asked to design uncomfortable ones to discourage such lingering.

The moral issue in this case is the worker who lingering around longer than what the management provide. The management should apply a new ways to solve this before hiring designer to design a new uncomfortable chairs and tables. The solution available is the management can introduce a new system such as thumb print after the break. Another solution is that the

management can hire an architecture to design a lesser comfortable to place in the cafeteria. The best option is that, the management should introduce a new system, as it will discipline the worker who likes to linger around than the management desired. Another option, will likely to satisfy the management, but it will happen again if the worker already manage to suit themselves with the uncomfortable tables and chairs.