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Issues of Responsibility in Engineering

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Issues of Responsibility in Engineering

Engineering is a noble profession, where professional engineers are called to display the uppermost level of decency and ethical standards in their work. According to NSPE (n.d), the services offered by engineers necessitate honesty, fairness, impartiality as well as equity in the profession and dedication in protecting public health, welfare together with safety of others. The NSPE argues that engineers must operate under professional standards that require adherence to the highest moral and ethical principles in their field.

With the advancements in technology that are continuously improving, and the amalgamation of resources that track every human activity, engineering now encompasses decision-making involving complex moral implications. In this regard, the NSPE suggests that engineers should gain the trust of the clients they serve, and they work with and commit themselves to a code of ethics that upholds the highest standards of work (NSPE, n.d). The standard of work requires engineers to approach their mandate with other discreet dispositions. Engineers have a moral responsibility to conform to the operating regulations and procedures that apply to their industry and fulfill their rudimentary responsibilities as defined in their terms of employment. In addition to that, the code of ethics in the engineering field results from concerted efforts of different members to ensure the field is organized in a structured manner based on standards agreed by engineers (NSPE, n.d). In addition to that, an engineer is not liable for the damages in every error. Through case and law, when one hires an engineer, they purchase the engineer's standard errors. However, in instances where the error is proved to be worse than the accepted levels of fault, the engineer must and should be liable.

Moreover, according to the NSPE (n.d), engineers often try to shift blame when something undesirable happens. In most instances, especially with people working in large

organizations, people quickly pinpoint that the project was handled by many people when wrongdoing happens. Hence pinpointing where the exact problem started is problematic. The approach is called the principle of collective action, where many individuals contribute to the cause of harm. Similarly, there is the principle of responsibility of action when a group of engineers causes harm. In this respect, the level of responsibility of every engineer participating in the project rests on the extent to which the party contributed to the action.

Moreover, there is the concept of responsibility and creative reasoning. According to the Murdough Center for Engineering Professionalism (n.d.), engineers should exercise their responsibility guided by creative reasoning in bringing an expert understanding intended to solve specific issues. Via different aspects, dealing with ethical concerns necessary for executing professional responsibility remains analogous in solving issues bordering on engineering design. Just as an engineer requires creative abilities that a design critic does not need, professional ethics requires engineers to be responsible beyond the scope of ethical practice in their work. For instance, client confidentiality requires expert judgment on the part of an engineer to ensure that sensitive project information is not disclosed to unauthorized entities.

The engineering field is witnessing rapid change brought by advancements in technology; engineers must be careful. Technology requires engineers to address comprehensive and multifaceted, and in other cases, design constraints. Where the social change is occasioned by technology, the risks for engineers are tremendous. An example is the increased risk of sabotage in engineering projects by disgruntled engineers. Nonetheless, engineers must stick to their ethical guidelines, principles, and professional training. In this perspective, engineers should avoid self-interest, fear and not exercise ignorance when executing their mandates. In addition to

that, they must strive to deal with egocentric tendencies and microscopic visions that can limit their achievement of set goals while impeding responsible action.

References

- Murdough Center for Engineering Professionalism. (n.d.). *Principles of ethical conduct in engineering practice under NAFTA | Ethics resources | Murdough center | TTU..* <https://www.depts.ttu.edu/murdoughcenter/resources/nafta-ethics.php>
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