Ethics Instruction...Ideas for Moving Forward

By Scott Civjan, Ph.D., P.E.

The July 2021 Structural Forum article presented the general state of ethics instruction and some shortcomings. This second article offers ideas that might better influence engineering ethics instruction.

Modifying personal behavior begins with understanding how we make decisions and the broader impact of our personal decisions. Unfortunately, ethics curricula rarely approach the topic at the personal level, leaving a disconnect between assessing "correct" behavior and acknowledging the personal reactions at the moment the decision is made.

Many decisions are made or heavily influenced through gut feel, reflex, and "norms." Other situations allow time to contemplate but can still be heavily influenced by our initial reaction. How many times have we seen something that did not seem quite right, decide to move on, and then later worry that we should have said something? Assessing questionable decisions from past experience, no matter how small the consequence, can train response to future situations. With reflection, we can change our behavior or decide to repeat our response if we see no consequences of our decision. The latter is especially true if a precedent was set or followed. Company culture can dominate these decisions, allowing questionable actions via a slow, imperceptible shift resulting from erratically enforced rules or a tendency to avoid communication or conflict. Ethical lapses can be accelerated by placing insufficiently trained early-career engineers in positions inspecting the work of people who have more experience. How can we prepare engineers to make sound decisions and open lines of communication when an ethical dilemma arises?

Awareness of our personal decision process is a start. We make decisions based on past experiences and values, adapting in new situations. Through evaluating day-to-day decisions, understanding how they become routine, and examining our reactions to decisions that affected us, we can prepare ourselves for future decisions. We can learn to react proportionately and minimize unwarranted whistleblower actions and decision avoidance.

Codes of Ethics case studies are not always straightforward. When a new engineer sees a calculation or field practice that they think is incorrect, but senior personnel tells them that it is typical, they face an ethical dilemma. There is uncertainty in whether the situation is understood completely, variation from expectation is justified, and sufficient information exists to override seniority opinion. The ethical decision has less to do with Code of Ethics criteria and more to do with whether to defer to the experience or explanations of others. Do you risk stopping a job until you can learn more, or risk allowing job continuation? Who should you communicate with when making your decision? The decision is more difficult when direct implications to public safety, technology issues, or risk communication are uncertain. Specific statements from Codes of Ethics may be difficult to apply, but contemplating how decisions are made and comfort level with previous decisions can modify future behavior.

Incorporating other perspectives is also critical. Engineering projects can have competing goals; maximizing profit, meeting schedule, minimizing risk, or mitigating environmental and societal impacts. Depending on your role in a project, any of these could be the primary decision driver. The impact on others may not be apparent. Other stakeholders may feel similarly about a competing goal. It becomes easy to assume that peripheral issues fall outside of your responsibility or that you should defer to someone else. Differing perspectives are always present, including amongst different disciplines working on a project, owner-engineer-architect-contractor relationships, user and public concerns. Acknowledging different local/regional/international norms, getting support from all stakeholders, and thinking about voiceless stakeholders are all essential, though not equally applicable to all projects.

What seems like an ethical dilemma to a new engineer is often due to not understanding the implications of a decision. Other times it could be an eye-opener to senior members of a company to be asked why something has become common practice. Therefore, conversations about ethics are important to develop clear communication and expectations.

When discussing ethics with students, coworkers, or mentees, consider the following:

- Discuss decision-making processes that different people may use. How do you make decisions (immediate and long-term)?
- Start with immediately relatable scenarios and slowly/incrementally expand situations to those they have not experienced. Minimize arms-length discussions of ethical decisions and include reflective components through "how did you respond to" prompts about previous decisions.
- Discuss the influence of peer pressure and office culture on decisions. Acknowledge that these develop over time and can result in ethical fading (failing to realize that there is an ethical component in a decision.)
- Incorporate diverse perspectives in discussions and acknowledge the effects of implicit bias in decisions. Acknowledge the reliance on the dominant culture for ethical values and the potential to marginalize other perspectives.
- Discuss tradeoffs between short and long-term interests.
- Include social justice and equity in the decision process and discuss impacts to the company, owner, and project interests. Discuss competing interests.
- Focus on a continuum of ethical decisions (daily life, work, global impact). This includes breaking down the compartmentalizing of ethical topics as having distinct personal versus societal impacts. Instead, discuss these topics as a continuum where ever-widening perspectives are included in the decision.
- Provide ASCE/NSPE Codes of Ethics as a separate topic representing a minimum threshold of ethical responsibility.

Further categorization is needed to use case studies effectively. For instance, identifying cases based on the experience of the decision-maker and personal versus societal dilemmas would be useful. In addition, evaluate how relatable the case study scenarios are to the audience and organize them in incremental imaginative leaps. The next goal would be to develop examples to fill scenario gaps and provide incremental instruction from current personal experience through a career.▪

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