

Summary of Michael Davis' "Thinking like an Engineer"

January 31, 2005

By: Harley Christensen © 2005

www.harleyc.com

Engineers have long considered themselves to be “professionals”, made possible by their near general adoption and use, formal affiliations aside, of a code of ethics. Varying code of ethics drafts are effective only through the actions of the engineers who abide by them. In his essay “Thinking like an Engineer”, Michael Davis gives examples of ethical challenges facing engineers, and takes direct aim at validating the use of ethical codes by the engineering profession.

As a climactic opening, Davis relates the story of the Challenger space shuttle, highlighting not the disaster itself, but the dilemma of an engineer, Robert Lund, responsible for approving the launch. Sandwiched between his assumed application of a professional ethical code and the wishes of a capitalistic corporation, Lund decides (seemingly contrary to ethical code) to launch the shuttle. Given that the loss of life caused by this event is widely known, most readers would quickly conclude that Lund’s decision was absolutely incorrect, without first considering the true nature of the dilemma he faced. The Challenger disaster is hardly an effective example on which to base an evaluation of this type.

Setting Lund aside for a time, Davis gives a simplistic description of the need for ethics in engineering, and which groups are benefited as such. He establishes that members of an “organized profession” have need for a formalized code to conglomerate them in the eyes of those they serve. Continuing, he gives excellent explanations of how engineering ethical codes provide “a guide to what engineers may reasonably expect of one another”. His core point, that ethical codes provide the “rules of the game” for engineers.

With a professional code in place, it is up to the engineers to obey the code on an individual level. Davis states that engineers are not held to their ethical code by “anything so contingent as a promise, oath, or vow”, they participate in their profession under the statutes of the ethical code on their own accord. Drawing upon Lund’s decisions, Davis effectively demonstrates that in order for a code of ethics to be truly effective, it must be properly understood and applied. Otherwise, the benefits of being an “organized profession” will not be wholly realized.

Davis shows that within the engineering profession, interpretation challenges arise from both an individual’s understanding of the ethical code wording, as well as the contexts in which they are to be applied. To drive his point, Davis gives a tiresome analysis of the meaning of the word “public”. Though relevant, his definitions do little to add weight to his arguments.

In closing, Davis reiterates the responsibility that professional engineers have to correctly abide by their ethical code. They alone are responsible for incorporating the code into their work, and ensuring others do the same. With the help of ethical codes, engineers, as organized professionals, can more effectively serve their clients and benefit one another.