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Ethics in Engineering

Pratap Narayan Ajmera[1] and Virendra Sharma[1]

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Abstract:

Ethics is precisely a branch of philosophy that is used to study human behavior and ideal way of being. In today's world generation is consumed with practical approach and trying to reach new heights in less time, which sometimes compromises the ethical value. Ethics is the very essence of humanity, and any unethical work is deemed to be condemned by the society. Hence, in this study we will be focusing on the various ethics and codes that should be followed by engineer during their course of work and why it is important to be followed.

Ethical instructions are not always visibly evident, some professionals sometimes disagree about what is right and what is wrong so in here we will be underling the flow of work that needs to be followed and also chalk out the questions that an engineer need to ask himself before any decision making.

Keywords: *Ethics, Engineering, Normative Theory, Professionalism*

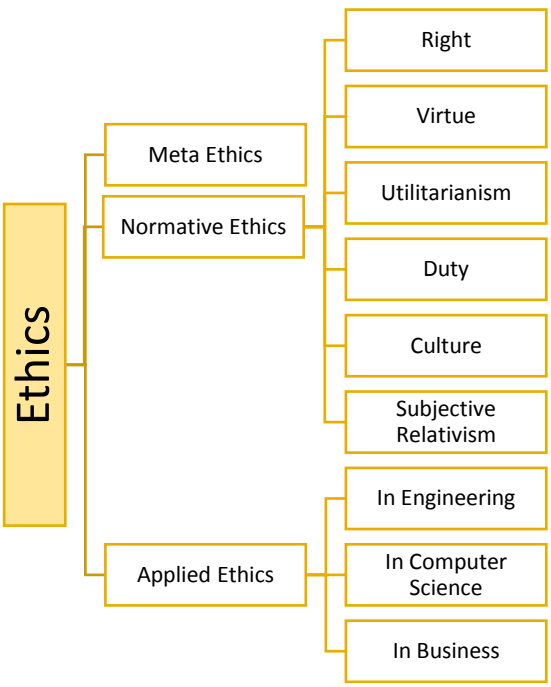
Authors:

1. *Mechanical Department, Mahakal Institute of Technology, Ujjain M.P. INDIA.*

Introduction

Ethic is supposed to be methodical philosophical study of morality, it is basically to judge whether something is right or wrong in human conduct, and that set of rules or principles should govern the code of conduct.

According to Robinson ethic is often divided into three i.e. Meta-ethics, applied ethics, and Professional ethics.



Robinson Model of Ethics

However, some authors believe that ethics is closely divided into: Normative Ethics, Social Ethics, Professional Ethics, and Personal Ethics.

Where professional ethics is a set of code that is employed in professional world. Broadly speaking professional ethics is the set of standards that is adopted by professionals, Harris has mentioned in his book Engineering Ethics: Concept and cases that there are quite a lot of significant characteristics of professional ethics.

- Professional ethics is frequently connoted as "Formal Code".
- These Formal codes are promulgated by different societies.
- Professional ethics precedence over personal morality.

Yet many believe that there is pressing need of ethics in the field of engineering. In spite of the fact that engineers holds widely divergent sets of moral beliefs as do other professionals.

According to National Society of Professional Engineer (NSPE) code of ethics: An engineer is bound to follow ethical obligations and he or she is to act in professional manner and has to work as "faithful agent and trustee" in professional matters.

Professional ethics are very important for an engineer and what governs that professional ethic is normative ethics. Hence this study focuses on importance of normative ethics in engineering and relation between normative ethics and professional ethics.

Normative Ethical Theory

There are almost eight theories of ethics, but we here in this study will focus on normative ethical theory. As it articulate and support an ethical code i.e. it provides justified and dependable set of principles which determines what is moral and what goes immoral as an act.

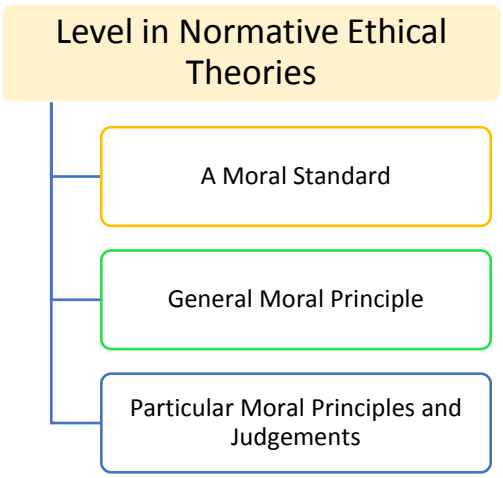
J.W Gray in his study under heading "Moral Theories (Normative Theories of Ethics) states that-

Normative ethical theory by definition symbolize methodical attempts to explain moral and ethical phenomenon. And help us figure out what actions are correct or let's say right and what is wrong.

Some of the prevalent normative theories include:

- Utilitarianism
- The categorical imperative
- Aristotelian virtue ethics
- Stoic virtue ethics
- W.D. Ross's intuitionism

All normative ethical theories share certain theoretical and physical characteristics that includes:



Elements of Normative Ethical Theories

In order to come to a conclusion or judge a situation, it is of sheer importance to make a clear distinction between the elements within the moral judgment.

Following are the elements that should be kept in mind while creating moral judgment:

- Motive
- Intention
- Character
- Action
- Characteristics
- Consequences

Engineer's Codes of Ethic in Today's World

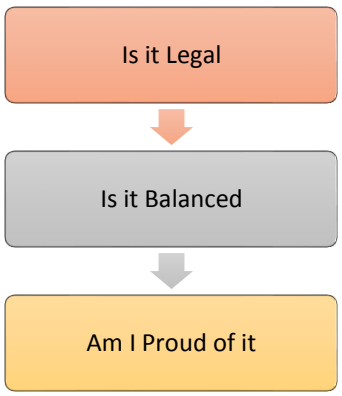
Davis suggests that engineering to him seems to be unique as the number of competing codes have been proposed and adopted over the years. And he further adds that engineering is a diverse field and wherein one code of ethic cannot be applied to all, as some engineers prefer to do independent practice while others are employee of large organizations, also there duties differ from based on their position.

Although number of codes suggested and adopted is sought of "NIH" (Not Invented Here) phenomenon, one the view that single code should be written in order to preserve the unity of the profession. In view of this it is once again important to review the basis of ethics and various theories that can be suggestive of better approach.

Following are the Engineers Ethics:

- An engineer deals with what is good, and what is supposed to be bad.
- What are their moral obligations and duties?
- A set of moral principles that they are bound to follow.
- It is believed that duty and right ethics take priority over utilitarian ethics and virtue ethics.
- In taking decision balance approach is needed.

An Engineers Check List of Work Flow



Conclusion

It can be concluded that whatever profession it may be, professionals are required to accept responsibility

in making decisions that are consistent with safety, health and welfare of the public, also an engineer is required to avoid real or perceived conflicts of interest whenever possible, at any cost he or she has to be honest and realistic in approach. Bribery should be rejected. And before decision making at every stage he or she is bound to follow work flow checklist.

And largely these codes of conduct is based on normative ethical theories, as it draws the basis of codes.

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