

Engineering Ethics - Ethical Theories

Ethics is that branch of philosophy that deals with morality. An engineer with ethics is a person who is expected to possess the moral integrity with rich ethical values. The ethics are mainly divided into two categories depending upon the morality of humanity. They are –

Consequential Ethics

The Consequential ethics are values the outcome of which determine the morality behind a particular action. A lie which saves a life, comes under this.

Non-consequential Ethics

The non-consequential ethics are values followed where the source of morality comes from the standard values. The moral law which states that a lie is a lie, and shouldn't be done, though it ends in a good deed can be taken as an example of non-consequential ethics.

Types of Ethical Theories

Depending upon the ethics a person is intended to follow, four theories were postulated by four different philosophers. These theories help to create the fundamentals of obligation suitable and applicable to professional and personal conduct of a person in his everyday life.



Let us discuss each theory in detail.

Golden Mean

The Golden Mean ethical theory was proposed by **Aristotle**. According to this theory, the solution to a problem is found by analyzing the reason and the logic. A **Mean value of solution** which will be between the extremes of excess and deficiency.

For example, the solution to the problem of environment pollution is neither by avoiding industrialization and civilization, nor by neglecting the environment completely. A mean solution that will work towards controlling the pollution and protecting the environment will also help.

Problem in Application

The application of this theory varies from one person to another with their powers of reasoning and the difficulty in applying the theory to ethical problems.

What is Golden Mean?

The Golden Mean virtue can be understood as the virtue of reaching a proper balance between extremes in conduct, emotion, desire and attitude. This theory phrased by Aristotle states that virtues are tendencies to find the **golden mean** between the extremes of too much (excess) and too little (deficiency) with regard to particular aspects of our lives.

The most important virtue is **practical wisdom**, i.e., morally good judgment, which enables one to discern the mean for all the other virtues. There are internal goods such as products, activities and experiences should never clash with the external goods such as money, power self-esteem and prestige. The standards of excellence enable internal goods to be achieved. The external goods when extremely concerned, though by individuals or by organizations, threaten the internal goods.

Rights-based Ethical Theory

The Rights based ethical theory was proposed by **John Locke**. According to this theory, the solution to a problem is by realizing that every person has a right to live. Live and let live is the philosophy behind this theory. The rights of a person towards life, health, liberty, possession, etc. are taken care of under this theory.

For example, any action in terms of Capital punishment, Jails, Income taxes and Medical charges etc. come under this category.

Problem in Application

One rights of a person may be in conflict with rights of the other.

What does it mean?

Rights-based ethics is the recognition of human dignity at its most basic form. The ethics refer to the basic human rights whether they are positive or negative. Everyone has a right to live, liberty and the pursuit of happiness. Beauchamp and Childress, authors and ethical theorists, have defined the term "right" to be a "justified claim that individuals and groups can make upon other individuals or upon society; to have a right is to be in a position to determine by one's choices, what others should do or need not do."

The natural law states that human laws are defined by morality and not by some authority. This law is derived from the belief that human morality comes from nature. Any action done by a person that would prevent a fellow being from living a good and happy life, is considered immoral or unnatural. Any law should have some morals. Moral duty is the obligation to act based on ethical beliefs.

Duty-based Ethical Theory

The duty-based ethical theory was proposed by **Immanuel Kant**. According to this theory, every person has a duty to follow which is accepted universally, with no exceptions.

An example of this can be expecting all to be honest, kind, generous and peaceful.

Problem in Application

The universal application of this theory can be misleading.

What are these ethics?

Kant observed that everyone is bound to follow some moral laws. It is the choice we make to be morally sound though we have chances to do anything. This theory can also be called as **Deontological theory** or the **Absolutist theory**. According to this, it is our duty to obey the categorical imperative rules. To have good will, is to perform ones duty for the sake of duty and for no other reason.

The categorical imperative law states that Act only according to that maxim by which you can at the same time will that it should become a universal law.

There are **four virtues** that come under this law, which have to be discussed here.

Prudence

The quality of prudence states that every individual has a life that should be respected and every individual has duties which should be done without any exception. One should always be cautious to perform one's duties.

Temperance

Temperance is the voluntary self-restraint from the attractions. The temptations that might lead to the violation of duties and ethics have to be restrained. No false promises are to be made as they contradict the principles of duties.

Fortitude

Fortitude is the sense of having tolerance. No perfection can be maintained if happiness alone is sought and no happiness is achieved if perfection alone is sought. Both may or may not go with each other.

Justice

Every individual is a human being with a set of intrinsic values and morals. Truth and fairness are the aspects one should always bear in mind. People should be treated as separate individuals but never as a mere means of existence.

A free will and a will under moral laws are one and the same. We are free only when we act in accordance with our own best natures, while we are slaves whenever we are under the rule of our passions and wills. There should be a universally valid will, under which everyone can be free.

Utilitarian Ethics

The Utilitarian ethics was proposed by **John Stuart**. According to this theory, the happiness or pleasure of a greatest number of people in the society is considered as the greatest good. According to this philosophy, an action is morally right if its consequences lead to happiness of people and wrong if they lead to their unhappiness.

An example of this can be the removal of reservation system in education and government jobs, which can really benefit the talented. But this can have an impact on the rights of the minorities.

Problem of Application

Qualification of the benefits can be difficult.

What are these ethics?

Consider the cost-benefit analysis in engineering. A typical cost-benefit analysis identifies the good and bad consequences of some action or policy in a monetary aspect. It weighs the total good against total bad and then compares the results to similar tallies of the consequences of alternative actions or rules. This supports the idea of maximizing benefits against cost.

There are two main types of Utilitarianism. They are –

Act Utilitarianism

The Act Utilitarianism focuses on each situation and the alternative actions possible in the situation. Act Utilitarianism states that A particular action is right if it is likely to produce the higher level of good for the most people in a given situation, compared to alternative choices that might be made.

In accordance with this theory, the good done is only considered but not the way how it is done. For example, looting the richer to feed the poor, can satisfy and make a group of poor people, happy. But looting is not a way of morality. Hence act-utilitarianism seems to justify the wrong-doing.

Rule Utilitarianism

The Rule Utilitarianism states that Right actions are those required by rules that produce the higher level of good for the most people. We need to consider a set of rules, where they interact with each other. This was developed to clear the problem that occurs with act-utilitarianism.

Engineers with ethics should follow the rule-utilitarianism considering the point, Act as faithful agents or trustees of employers. So, engineers should abide by it even when an exception might happen to be beneficial. Like in the above example, one should seek the help of law and order to prove the guilt of richer and let see that the poor get benefitted.

Formulation of Ethical Theories

After having gone through the various ethical theories, one can understand that these ethical theories have to be formulated considering the following points –

- The concepts of the theory formulated must be coherent.
- The tenets of the theory should never contradict the other.
- The theory should never be defended upon false information.
- The theory should guide in specific situations comprehending all aspects possible.
- The theory should be compatible with individuals moral convictions in any situation.

Uses of Ethical Theories

Ethical theories help in the following areas –

- Understanding moral dilemmas.
- Justifying professional obligations and ideas.
- Relating ordinary and professional morality.