



SNS COLLEGE OF ENGINEERING

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AN AUTONOMOUS INSTITUTION



Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai

ENGINEERS AS RESPONSIBLE EXPERIMENTERS

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Although the engineers facilitate experiments, they are not alone in the field. Their responsibility is shared with the organizations, people, government, and others. No doubt the engineers share a greater responsibility while monitoring the projects, identifying the risks, and informing the clients and the public with facts. Based on this, they can take decisions to participate or protest or promote.

The engineer, as an experimenter, owe several responsibilities to the society, namely,

1. A conscientious commitment to live by moral values.
2. A comprehensive perspective on relevant information. It includes constant awareness of the progress of the experiment and readiness to monitor the side effects, if any.
3. Unrestricted free-personal involvement in all steps of the project/product development (autonomy).
4. Be accountable for the results of the project (accountability).

Conscientiousness:

Conscientious moral commitment means: (a) Being sensitive to full range of moral values and responsibilities relevant to the prevailing situation and (b) the willingness to develop the skill and put efforts needed to reach the best balance possible among those considerations. In short, engineers must possess open eyes, open ears, and an open mind (i.e., moral vision, moral listening, and moral reasoning). This makes the engineers as social experimenters, respect foremost the safety and health of the affected, while they seek to enrich their knowledge, rush for the profit, follow the rules, or care for only the beneficiary. The human rights of the participant should be protected through voluntary and informed consent.

Comprehensive Perspective:

The engineer should grasp the context of his work and ensure that the work involved results in only moral ends. One should not ignore his conscience, if the product or project that he is involved will result in damaging the nervous system of the people (or even the enemy, in case of weapon development) A product has a built-in obsolete or redundant component to boost sales with a false claim. In possessing of the perspective of factual information, the engineer should exhibit a moral concern and not agree for this design. Sometimes, the guilt is transferred to the government or the competitors. Some organizations think that they will let the government find the fault or let the fraudulent competitor be caught first. Finally, a full-scale environmental or social impact study of the product or project by individual engineers is useful but not possible, in practice.

Moral Autonomy:

Viewing engineering as social experimentation, and anticipating unknown consequences should promote an attitude of questioning about the adequacy of the existing economic and safety standards. This proves a greater sense of personal involvement in one's work.

Accountability:

The term Accountability means:

1. The capacity to understand and act on moral reasons

2. Willingness to submit one's actions to moral scrutiny and be responsive to the assessment of others. It includes being answerable for meeting specific obligations, i.e., liable to justify (or give reasonable excuses) the decisions, actions or means, and outcomes (sometimes unexpected), when required by the stakeholders or by law. The tug-of-war between of causal influence by the employer and moral responsibility of the employee is quite common in professions. In the engineering practice, the problems are:

(a) The fragmentation of work in a project inevitably makes the final products lie away from the immediate work place, and lessens the personal responsibility of the employee.

(b) Further the responsibilities diffuse into various hierarchies and to various people. Nobody gets the real feel of personal responsibility.

(c) Often projects are executed one after another. An employee is more interested in adherence of tight schedules rather than giving personal care for the current project.

(d) More litigation is to be faced by the engineers (as in the case of medical practitioners). This makes them wary of showing moral concerns beyond what is prescribed by the institutions. In spite of all these shortcomings, engineers are expected to face the risk and show up personal responsibility as the profession demands.