RESPONSIBILITIES AND RIGHTS

Unit-IV

Responsibilities of Professional Engineers

- Collegiality and Loyalty
- Respect for Authority
- Confidentiality
- Behave! (Use your knowledge only for good…)
  - Conflicts of Interest
  - Occupational Crimes
  - Environmental responsibility

Collegiality & Its Elements

'Collegiality is a kind of connectedness grounded in *respect for professional expertise* and in a *commitment to the goals and values of the profession* and as such, collegiality includes a disposition to *support and co-operate with one's colleagues*'. - Craig Ihara

Collegiality & Its Elements (Continued)

The central elements of collegiality are *respect, commitment, connectedness and co-operation*.

- *Respect*: Acknowledge the worth of other engineers engaged in producing socially useful and safe products.
- *Commitment*: Share a devotion to the moral ideals inherent in the practice of engineering.
- *Connectedness*: Aware of being part of a co-operative undertaking created by shared commitments and expertise.

Collegiality & Its Elements (Continued)

- *Collegiality*, like most virtues, can be misused and distorted.
- *It should not be reduced to 'group interest' but should be a shared devotion for public good.*
- *It is not defaming colleagues, but it does not close the eyes to unethical practices of the co-professionals, either.*

Classifications of Loyalty

- ***Agency-Loyalty***
  - Fulfill one's contractual *duties* to an employer.
  - Duties are particular *tasks for which* one is *paid*
  - *Co-operating* with colleagues
  - *Following* legitimate *authority* within the organization.
  - Typically not a good match for engineering positions

- ***Identification-Loyalty***
  - You do your job to best of your abilities (always)
  - Identify with the goals of the organization and feel you are part of the team
  - More to do with emotions, attitudes, and a sense of belonging
  - More common with engineering positions

Which is best?

- Depends on person and situation, but…
- Generally find that people who identify with the goals and aspirations of the company will be more likely to "look out" for its interests
- Can be counter-productive if taken too far…

Importance Of Loyalty

- Loyalty (both agency and identification) is important to the Company and to the employee for many reasons
  - Productivity, moral
  - Maintaining Confidentiality
  - Promoting Team work
  - Exploiting investment in training
  - Stability in workforce

Loyalty can be misplaced (Can you be too loyal?)

- A real “Company man”
- Sometimes ethical issues are set aside to protect the organization with possible negative consequences
  - Hide illegal actions
  - Sabotage competitors
  - Falsify records

Professionalism and Loyalty

- Acting on professional *commitments* to the public is *more effective* to serve a company *than* just *following* company orders.
- *Loyalty to employers* may *no*t mean *obeying* one's immediate *supervisor*.
- Professional obligations to both an employer and to the public might *strengthen rather than contradict* each other.

Respect for Authority

- Authority is the “potential and resources” to accomplish tasks
- **Power** is the capability to do so
- Authority gives the right to control decisions affecting the company’s interests
- Engineers must respect the authority of their employers

Types of authority

- Martin and Schinzinger define two types of authority
  - Institutional authority
    - Associated with administrative position
  - Expert Authority
    - Accrues from specialized knowledge
  - (Similarly, there is positional and personal power.)

Institutional authority

- Those with authority have the right to administer their duties and the freedom to actually achieve organizational goals by expending the resources available to them

  This type of authority usually goes with the position:

  - Managers
  - Administrators
  - Project Engineers
  - Etc.

Problems

- Sometimes those with institutional authority do not have expert authority in some of the areas in which they are expected to make decisions.
- Consultation with those that have the expertise is very important (for engineers as well as those with institutional authority).

Expert authority

- ‘The possession of special knowledge, skill or competence to perform some task or to give sound advice’.

- Engineers may have expert authority but their institutional authority, *may only be*, to *provide management* with analysis of possible ways to perform a technical task, after which they are *restricted to following management’s directive* about which option to pursue. In large companies, *engineers, advisors and consultants* in staff function carry *expert authority*, while *institutional authority* is vested only with *line managers*.

Authority Vs Power

- *Ineffective persons*, even if vested with authority by their institution, *may not be able to summon* the power their position allows them to exercise. On the other hand, people who are *effective* may be *able to wield greater power* that goes beyond the authority attached to the positions they hold. Highly respected engineers of proven integrity belong to this class.

Morally Justified Authority

- Institutions can try to direct engineers to do things that are not “morally justified”*
  - *can be defended as, or is generally accepted as morally acceptable
- Engineers may have a institutional obligation to obey a directive which is morally unjust but a moral and professional obligation not to
- Potential source of a moral dilemma

Obliged to respect legitimate authority…

- … but it should not be done blindly. (Professional moral autonomy means making independent moral judgments)
- Does not give right to ignore legitimate directives
- Respecting authority comes second when:
  - Lives are threatened
  - Financial corruption is involved
  - Grave economic loss may result

‘Zone Of Acceptance’ of Authority

- ‘A subordinate is said to accept authority whenever he permits his behavior to be guided by the decision of a superior, without independently examining the merits of that decision’- Herbert Simon

‘Zone Of Acceptance’ of Authority (Continued)

- Simon notes that all employees tend to have a *‘zone of acceptance’* in which they are willing to accept their employer’s authority.

- *Within that zone*, an individual, relaxing his own critical faculties, *permits* the decision of the *employer to guide* him.

- Employees generally *do not make an issue* of questionable incidents on morality, *out of a sense of responsibility* to give their employer leeway within which to operate and often *not to risk their jobs*.

- The *problem increases* when employees slowly *expand* the boundaries of *tolerance and rationalize* it.

This only shows that engineers should *never stop* critically *reviewing* the employer’s *directives* especially *on moral issues*.

Collective Bargaining

Is it possible for engineers to be professionals, dedicated to the highest ethical standards of professional conduct, and loyal to their companies while simultaneously being members and supporters of a union?

The question is too complex to allow a simple answer

Collective Bargaining (Continued)

- Many observers have argued that the ethical aspects of professionalism in engineering are inherently inconsistent with unionism.

  John Kemper writes:

  "There is a little doubt that unionism and professionalism are incompatible. Professionalism holds that the interests of society and of the client(or employer) are paramount. Unions are collective bargaining agents that sometimes place the economic interests of the members ahead of those of the client or employer"

Collective Bargaining (Continued)

- A number of professional societies have also held that loyalty to employers and the public is incompatible with any form of collective bargaining.

  National Society of Professional Engineers (NSPE) Code states,

"The engineer ……will act in professional matters for client, or employer *as a faithful agent or trustee*……He will *not actively participate* in strikes, picket lines or other *coercive action*"

‘Faithful Agent Argument’

- *Board of Ethical Review* argued that engineers *have a higher standard* than self interest and that their ethical duty is to act for their employer as a faithful agent or trustee.
- *Collective bargaining* is *inconsistent with loyalty* to employers because it
  - is against the desires of the employer
  - uses force or coercion against the employer and
  - involves collective and organized opposition.

  But *every instance* of such conduct *need not be unethical.*

An example

Three engineers sincerely feel that they are underpaid. After their representations to their bosses are in vain, they threaten their employer, politely, that they would seek employment elsewhere. Here, even though, they act against the desires of their employer and have acted collectively, they have not acted unethically or violated their duty.

‘Public Service Argument’

- The paramount duty of engineers is *to serve the public.*
- *Unions*, by definition, *promote* the *interests of their members* and whenever there is a clash of interests, the interest of the general public is ignored by them.
- A body of engineers can *promote engineers’ interest* within limits set *by professional concern* for the public good.

Benefits of Collective Bargaining.

- Unions have created *healthy salaries* and *high standard of living* of employees.
- They give a *sense of participation* in company *decision making*.
- They are a good *balance to the power* of employers to fire employees at will.
- They provide an *effective grievance redressal* procedure for employee complaints.

Harms Caused by Collective Bargaining.

- Unions are *devastating the economy* of a country, being a main *source of inflation*
- With unions, there is *no congenial (friendly)*, cooperative *decision making*.
- Unions *does not promote* quality performance by making job *promotion and retention based on seniority*.
- They *encourage unrest and strained relations* between employees and employers.

Conclusion

- Collective bargaining and its tactics are unethical depends on the details of any given situation.
- The formation of engineering unions is always unprofessional is like arguing that because a new technology involves risks it should never be developed.
- The moral assessment of unions is complex – number of morally relevant facts must be considered before judgment.

Confidentiality

- Keep confidential information confidential!
- Types of information
  - Public (available to anyone)
  - Private (restricted/conditional availability)
    - Confidential
    - Privileged
    - Proprietary
    - Trade secrets (and ~patents)

What information should be kept private?

- Test results and data
- Information on (new) products
- Designs of products
- Business information
  - Number of persons working on a job
  - Identity of suppliers
  - Marketing strategy
  - Production costs and yields
  - Etc.
- If in doubt, don’t let it out!

Confidential Information

- Any information that is desirable to keep secret. Usually has some exploitable value for business purposes (special processes, techniques, intellectual property etc.), or could have negative consequences if made public (compétitive information, plans etc.)

Privileged information

- Available only on the basis of special privilege
  - If you are in a position of trust, you are often given this kind of information
  - Engineers often require this type of information to do their job

Proprietary information

- Information that the companies owns (as defined by the law) and can be legally protected (e.g. patents, copyrights)
- Usually considered an asset (has value)

Trade Secrets

- Proprietary (and other) information that the company wants to keep secret; it is not patented.
- It is protected by common law; if your secret is used by others, you can sue them or the employee that has divulged it. (re: agency loyalty; non-disclosure)
- Little recourse / protection if secret gets out (legally…)

Trade Secrets(Continued)

- The “secret” can sometimes be found through “reverse engineering”.
- The ethics of reverse engineering is a major issue for all, but still legal if done “properly” (product legally obtained).

Patents

- Makes idea public, but provides legal protection against others using the ideas for a period of time
- 20 year limit in most places
- The idea or concept is open for all to see and to modify or improve upon if they wish and then file a new patent on the improvement

Patents (Continued)

- Very expensive to file, maintain and defend.
- Some companies and entrepreneurs may not patent because of the chance of being taken to court for other patent infringements; having patent does not mean it does not infringe on other patents!!!

Engineers have a clear responsibility to maintain confidentiality, but…

- Public safety / interest trumps secrets
- There are “reasonable” limits if you move to a new employer / client
  - Must respect previous employers need to maintain confidentiality
  - Have a right to look out for your own interests

Factors affecting use of previous knowledge

- Length of time involved
  - Knowledge is timely; value diminishes with time
- Competition
  - More restrictive if directly competitive
- Agreements and incentives
  - Companies often offer “deals” or incentives in exchange for silence

- Consultant engineers can encounter moral dilemmas because in solving one problem, they develop a concept or technology that could be applied to a competitor to make their product better or cheaper.

How companies might handle you changing jobs when confidentiality is at risk

- Employee sign employment contracts that place constraints on future employment
- Company give positive benefits to those leaving such as special pension considerations, the opportunity to do consulting etc.
- Company works with employees to show the damage that can be done if information is passed on.

Conflict of Interest

"Professional conflicts of interest are situations where professionals have an interest which, if pursued, might keep them from meeting their obligations to their employers or clients."

Conflict of Interest (Continued)

Conflict of Interest arises when two conditions

are met:

1. The professional is in a relationship or a role that requires exercising good judgment on behalf of the interests of an employer or client and
2. The professional has some additional or side interest that could threaten good judgment in serving the interests of the employee or client. E.g. *When an engineer is paid based on a percentage of the cost of the design and there is no incentive for him to cut costs-* The distrust caused by this situation compromises the engineers' ability to cut costs and calls into question his judgment.

Gifts and bribes

- ‘A *gift* is a *bribe* if you can’t *eat, drink or smoke it in a day*’.
- ‘If you think that your offer of acceptance of a particular gift would have *grave* or merely *embarrassing consequences for your company if made public*, then the gift should be considered a bribe’.

Gifts and bribes (Continued)

- '*Bribe* can be said to be a *substantial* amount of money or goods offered beyond a stated business contract with the *aim of winning an advantage* in gaining or keeping the contract'.

Here '*substantial*' means that which is *sufficient to distort the judgment* of a typical person.

Conflict of Interest created by Interest in other companies

- When one *works actually for the competitor* or subcontractor as an employee or consultant.
- Having *partial ownership or substantial stock holdings* in the competitor's business.
- It may *not arise* by merely having a *spouse working for sub-contractor* to one's company, but it *will arise* if one's *job also includes granting contracts* to that subcontractor.

Conflict of Interest created by Interest in other companies(Continued)

- *Tempting customers away* from their current employer, while still working for them *to form* their own *competing business*.
- *Moonlighting* usually creates *conflicts* when working for competitors, suppliers or customers but *does not conflict when working for others without affecting* the present employer's business.

  'Moonlighting' means working in one's spare time for another employer.

Conflicts of Interest created by Insider information

- *Using inside information* to *set-up a business* opportunity for *oneself or family or friends*.
- *Buying stock* in the company for which one works is *not objectionable* but it should be based on the *same information* available to the public.
- The *use* of any company *secrets* by employee to *secure a personal gain* threatens the interest of the company.

Avoiding Conflicts Of Interests

- Consult all parties about the situation
- Consult company policies
- Consult the professional Engineering association
- Be completely open (declare)
- Recuse yourself when necessary

Occupational Crimes

- Occupational crimes are *illegal acts* made possible through one's *lawful employment*.
- It is the *secretive violation of laws* regulating work activities.
- When committed by office workers or professionals, occupational crime is called '*white collar crime*'.

People Committing Occupational Crimes

- Usually have *high standard of education*
- From a *non-criminal family background*
- Middle class male around *27 years of age* (70% of the time) with *no previous history*
- *No involvement in drug* or alcohol abuse
- Those who had *troublesome life* experience in the childhood (Blum)
- People *without firm principles* (Spencer)
- Firms with *declining profitability* (Coleman, 1994)
- Firms in highly *regulated areas and volatile market* - pharmaceutical, petroleum industry.(Albanese, 1995)

Industrial espionage

- Industrial espionage is an attempt to gain access to information about a company's plans, products, clients or trade secrets.
- In most cases, such conduct, especially when it involves accessing trade secrets is illegal.
- Sometimes rival companies will search through public records in order to make guesses about a company's actions. However, when the search goes from the public to the private, it becomes an illegal act and punishable with jail time and financial penalties.

Price Fixing

- An act was passed, which *forbade* (prevented) companies from *jointly setting prices* in ways that *restrain free competition* and trade. Unfortunately, many senior people, well respected and positioned were of the opinion that '*price fixing'* was good for their organizations and the public.

Employers Endangering Lives of Employees

- Employers indulge in exposing their employees to safety hazards. They *escape criminal action* against them, by paying *nominal compensations* even if their crimes are proved in court. And even this happens *only when the victim sues company* for damages under civil law.

RIGHTS OF ENGINEERS

The engineer's problem has centered on a conflict between professional independence and bureaucratic loyalty, rather than between workmanlike and predatory instincts.- Edwin T. Layton, Jr.

Engineers' Moral Rights

- Engineers' moral rights fall into categories of *human, employee, contractual and professional rights.*
- As human beings, engineers have fundamental right to live and freely pursue their legitimate personal interests.
- In particular, they have a human right to pursue their work and not to be unfairly discriminated against in employment on the basis of sex, race, or age.

Professional Rights

Engineers as professionals also have special rights arise from their professional role. Those include:

- Basic right of professional conscience (right to exercise professional judgement in pursuing professional obligations)
- Right to refuse to engage in unethical activity
- Right to express one's professional judgement, including right to dissent
- Right to warn the public of dangers
- Right to fair recognition and remuneration for professional services

Employee Rights

An employee rights are any rights that apply or refer to the status of employees. It can be categorised as contractual and non-contractual rights.

a) Contractual right arise solely out of an employee contract created by organisational policies or contracts. For example, right to receive a salary of certain amount.

b) Non-contractual rights exist even if not formally recognised in a contract or company policy, such as

- Right to choose outside activities
- Right to privacy and employer confidentiality
- Right to due process from employer
- Right to non-discrimination and absence of sexual harassment at the workplace

Professional Rights & Ethical Theories

Professional and employee rights can be justified by reference to ethical theories.

1. A rights theory would derive the right of professional conscience from a fundamental human right to pursue legitimate interests, where such interests include moral obligations.
2. A duty theory might appeal to the fundamental human duty employers have not to harm others (e.g., the public) by handicapping engineers seeking to meet their professional obligations.
3. A utilitarian theory would argue that the greatest good is promoted by allowing engineers to pursue their obligations.

In general, the importance of professional duties means that the importance of the right to meet those duties must be recognised.

Whistle-blowing

Whistle blowing is an *act of conveying information* about a *significant moral problem* by a *present or former employee*, *outside approved channels* (or against strong pressure) to someone, in a position to take action on the problem.

Features of Whistle-blowing

The features of *Whistle blowing* are:

- **Act of Disclosure**: *Intentionally conveying information outside approved organizational channels when the person is under pressure not to do so from higher-ups.*
- **Topic**: *The information is believed to concern a significant moral problem for the organization*.
- **Agent**: *The person disclosing the information is an employee or former employee.*
- **Recipient**: *The information is conveyed to a person or organization who can act on it.*

Types of Whistle Blowing

- ***External Whistle blowing:*** The act of passing on information outside the organization.
- ***Internal Whistle blowing:*** The act of passing on information to someone within the organization but outside the approved channels.
- ***Open Whistle blowing:*** Individuals openly revealing their identity as they convey the information.
- ***Anonymous Whistle blowing:*** Individual conveying the information conceals his/her identity.

Procedures to be followed before Whistle Blowing

- *Except* for extreme *emergencies*, always try *working through normal* organizational *channels*.
- Be *prompt* in expressing objections.
- Proceed in a tactful manner with *due consideration to the feelings* of others involved.
- As much as possible, *keep supervisors informed* of your actions, both informally and formally.
- Be accurate in observations and claims and *keep all formal records* documenting relevant events.
- *Consult* colleagues for *advice* and also to *avoid isolation*.
- *Consult the ethics committee* of your professional society before going outside the organization.
- *Consult a lawyer* regarding potential legal liabilities

Conditions to be satisfied before Whistle Blowing

Richard T. De George suggests the following:

- The *harm* that will be done by the product to the public is *serious* and considerable.
- The individual makes his/her concern *known to his/her superiors*
- If one does not get any proper response from immediate superiors, then one should *exhaust the channels* that are available *within the organization* including the board of directors.
- One must have *documented evidence* that would *convince* a reasonable and impartial *observer* that one's view of the situation is correct and the company policy is wrong.
- There must be *strong evidence* that making the information public will in fact *prevent the threatened serious harm.*

Prevention of Whistle Blowing

The following *actions* will *prevent/reduce* whistle blowing:

- Giving *direct access* to higher levels of management by announcing '*open door'* policies with guarantee that *there won't be retaliation.* Instead such employees should be *rewarded for fostering ethical behavior* in the company.
- This gives greater freedom and promotes open communication within the organization.
- Creation of an Ethics Review Committee with *freedom to investigate complaints and make independent recommendations* to top management.
- Top priority should be given to *promote ethical conduct* in the organization *by top management*.

Prevention of Whistle Blowing (Continued)

- Engineers should be *allowed to discuss in confidence*, their moral concerns with the ethics committee of their professional societies.
- When there are differences on ethical issues between engineers and management, *ethics committee members* of the professional societies *should be allowed* to enter into these discussions.
- *Changes and updating* in law must be explored by engineers, organizations, professional societies and government organizations on a continuous basis.

Intellectual Property Rights

- *Intellectual Property* is a product of the *human intellect* that has *commercial value*
- Many of the rights of the ownership common to real and *personal property* are also *common* to *Intellectual Property*
- Intellectual Property can be *bought, sold, and licensed*
- Similarly it can be *protected against theft* and *infringement* by others

Patent, Design & Trademark together with

Copyright form *TOTAL INTELLECTUAL PROPERTY*

Patent

- Derived from the Latin word ‘LITTERAE PATENTES’ which means ‘Open Letters’ or ‘Open Documents’ to confer rights and privileges.
- A contract between an Inventor and the Government
- An exclusive privilege monopoly right granted by the Government to the Inventor
- Invention may be of an Industrial product or process of manufacture
- Invention should be new, non-obvious, useful and patentable as per Patents Act
- The right to the inventor is for limited period of time and valid only within the territorial limits of a country of grant.

Examples: *a drug compound, a tool, maybe software effects*

DESIGN

- Meant for beautifying an industrial product to attract the consumer public
- Shaping, Configuration or Ornamentation of a vendible Industrial product
- Exclusive ‘Design Rights’ to the originator for a limited term
- Patents & design embrace the production stage of an industrial activity

TRADE MARK

- Trade Mark is a name or symbol adopted for identifying goods
- Public can identify from the Trade Mark from whom the product is emanating
- Trade Marks protection is given for an industrial product by the Government

COPY RIGHTS

The right to original literary and artistic works

- Literary, written material
- Dramatic, musical or artistic works
- Films and audio-visual materials
- Sound recordings
- Computer Programmes/software
- SOME databases

Example: Picasso's Guernica, Microsoft code, Lord of the Rings

Need For A Patent System

- Encourages an inventor to disclose his invention
- Encourages R & D activities as the industries can make use of the technology, & avoids redundant research
- Provides reasonable assurance for commercialisation.
- Provides an inducement to invest capital in the new lines of production and thus , help for technical development and up gradation.
- One may get a very good return of income through Patent Right on the investment made in R & D.

Effect of Patent

- A patentee gets the exclusive monopoly right against the public at large to use, sell or manufacture his patented device.
- A patentee can enforce his monopoly right against any infringement in the court of law for suitable damages or profit of account.
- The Government ensures full disclosure of the invention to the public for exchange of exclusive monopoly patent right to the inventor.

Discrimination

- Discrimination generally means *preference* on the grounds of *sex, race, skin colour, age or religious outlook*.
- In everyday speech, it has come to mean *morally unjustified treatment of people on arbitrary or irrelevant grounds*.
- Therefore to call something ‘Discrimination” is to condemn it.
- But when the question of justification arises, we will call it *‘Preferential Treatment’*.

Sexual Harassment

- The term *'sexual harassment'* is currently applied into a wide variety of sexually oriented acts and practices that may involve physical and psychological attacks, coercion, abuse of authority and variety of unwanted provocations.