ETHICAL ISSUES IN TECHNOLOGY MANAGEMENT

EMGT 510-610

Engineering And Technology Management Department

J.W. Cox

Ethical Issues in Technology Management

EMGT 510-610 Portland State University An engineering Dean at MIT once commented that "until they become a manager, the young engineer interprets their work largely as a means to ends chosen by other people. A neat separation of ends and means is basic to this view of the relation of technology and values.@ * The rub comes, as Samuel Florman wrote in the Existential Pleasures of Engineering, because "frequently, outcomes and consequences are totally unforeseenCi.e., Henry=s car liberated millions of Americans Band also produced traffic jams, pollution, accidents etcYY@

Purpose: This new course is designed to meet the needs of engineers who are or will be moving into greater responsibility for management as they advance in the profession.

The course will emphasize and bring together the theory of ethical behavior and the real world applications faced regularly in the business world today. This will not be a"cookbook" course where, if you are confronted with options A and B, then the ethical answer will invariably be X. Rather, we will deal with all kinds and shadings of gray. Ambiguity will abound.

The course will seek to do several things:

- stimulate our ethical imagination,
- help us to recognize ethical issues,
- help us to analyze relevant ethical concepts,
- stimulate our sense of responsibility,
- help us deal with ethical ambiguity and disagreement.*

There will be a focus on:

- discussion based on the readings and case studies
- individual writing assignments based on the readings
- a group term project will be based on a case study. For example:

^{*} Michael Pritchard, "Professional Responsibility: Focusing on the Exemplary" Science and Engineering Ethics4. No.2 (April 1998.)

- % The 1990's Explorer: Ford, Firestone, and Bridgestone
- % The Bophal, India Dow Chemical Case
- % The Hyatt Hotel Pedestrian Bridge Collapse
- % The Challenger Explosion
- % The mobile home: balancing the need for affordable housing against vulnerability to tornado destruction

(The actual list of cases to choose from will be much longer and may be different. Some students will want to focus on a case with which they are presently dealing.)

Class Outline

Each class evening will be divided into three parts:

In part ONE, or roughly the first hour, I'll present and comment on the subject for the evening. For example, in Week 2, the topic will be "ethics as it came to us from the ancient world and the middle ages." For each week, there will be readings suggested that are intended to deepen your understanding of the subject. A gentle warning: at first, this is going to sound like you have wandered into a philosophy course. Not to worry, for that is just where we must begin. In the column on the far right, you will occasionally find materials that I will have placed in the Reserve Room of the PSU Library.

After a 10-15 minute break, in part TWO (aka the second hour), we will be working in small groups discussing and analyzing (after week 1) the week's readings and assignments and a case study each week.

A second 10-15 minute break and we will then reconvene for the concluding part of the evening as a whole class to process and work through/over the efforts of the small groups and deal with questions and issues that arose from their work on that week's case study. In the final moments, I will sketch out and comment on the theme and assignments for the next week.

Wednesday evening 5:30-9:10

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EMGT 510-610 WEEKLY TOPICS and ASSIGNMENTS

Week	Class Focus	
1	Intro and Outline	
2	Ancient World and Middle Ages	
3	Kant, Mill, Locke	
4	Wm. James, Charles Peirce and John Dewey	
	Pragmatism, WWII and the Holocaust	
5	The 20 th Century & Situation Ethics	
	The Existentialists	
6	Where does all this leave us?	
	Corporate and Individual Responsibility	
	Enron and Whistleblowing	
7	The Environment	
8	Bioengineering	
	Hello Dolly- Peter Singer	
9	Term Project Presentations	
10	Presentations concluded	

Books required for Ethical Issues in Engineering/Technology Management – EMGT 510/610

Introduction to Engineering Ethics Roland Schinzinger and Eric Martin ISBN 0-07-233959-4 McGraw Hill

Ethical Issues in Professional Life Joan C. Callahan ISBN 0-19-505362-1 Oxford Press

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The readings are arranged by week to match up with the topics of Lecture and Discussion. Please consider this schedule a rough approximation, which I will adjust as we move through the material. If we need more time to bring our discussions and thinking together, we will adjust for that.

Each week or segment will direct you to readings in Schinzinger and Martin (where we are reading entire chapters) and Callahan, where we will read sections noted by chapter, a number of the article, and the author's name. There will be some additional assignments on reserve in the Library.

Week	Schinzinger & Martin	Callahan
1	The Professions & Moral Issues	Chapter 1, A Place to Begin
	Chapter One	(entire chapter)
2	Moral Reasoning & Ethical Theories	Chapter 2, Professionalization; Bayles,
	Chapter Two	Hughes & Barker
3	Engineering as Social Experimentation	Chapter 3, Professional and Ordinary
	Chapter Three	Morality: Carr, Gillespie and Nagel
4	Commitment to Safety	Chapter 4, Professionals and Clients
	Chapter Four	Bayles
		Chapter 5, Deception: Ellin Bok and
		Leiser
5	NA	Chapter 6, The Issue of Informed
		Consent (all four articles)
		Chapter 7, Privacy & Confidentiality (read
		the introduction and #26, 27, 28)
6	Workplace Responsibilities and Rights	Chapter 8, Individual and Collective
	Chapter Five	Responsibility (#33 French; #35 French;
		and p. 296, the Ford Pinto)
7		Chapter 9, Responsibility & Dissent (#38
		Bermel, Geiger & Johnson & Murray; #
		40 Whistleblowing, James; #41 Glazer;
		#42 Bok; p. 341, Challenger)
8	Global Issues: the Multinationals &	Chapter 10, Social Responsibility (#43
	Globalization: Social and Economic	Freidman; #44 Ashen; #45 Sher; #48
	Responsibility	McCullough)
	Chapter Six	Reserve: Bioengineering and the
	Chapter 6 continued: The Issue of the	questions it raises - TBA
0	Environment	
9	Can Ethics be Regulated and Should it?	Chapter 11, Character and Training (#50
	Regulation by whom?	Williams; #51 May; #52 Kultgr; #54,
		Good Doctors

Written Assignments: The Mechanics, Approach, and Evaluation

There will be a number of written projects. Most will be brief 2-3 page papers done individually, and the major term project will be a team effort to be presented during the last week or two of the term

While this is a seminar format wherein every student is free to consult and interact with classmates and others in terms of your research and thinking, your written work is expected to be your own work, with appropriate attribution of sources you consult and from which you quote. It is my practice to evaluate both the content and the style (form) of your work with, of course, content being the more important. One of my hopes for you in the course is that both your thinking and your powers of expression improve.

The first project - due after class in week three - will be a 2-3 page paper in which you comment on either the most difficult moral/ethical problem you have encountered, or believe you might face, as a professional in the field of technology management. In Part One, state the problem, including whatever background information someone else would need to understand. In Part Two, describe how you would think your way through the challenge, and in Part Three, how you either resolved or dealt with the issue (or if this is theoretical, how you would do so).

Make your citations simple: following a quote or significant use simply list the Author in parentheses (Smith) and at the end of the paper, on one page, list the materials used in the order you used them - John J. Smith, The Ethics of Modern Business, 1999, pp 23-24.

The second project – due at about midterm – will be 3-4 pages. I want you to obtain a copy of the current code for your branch of engineering or technology management focus and study it carefully. Check out the articles in the EEE journal "Engineering and Society" on codes and their uses and limitations. Analyze the code and point out its positive features and , in particular, comment on areas of the fields you are interested in where the codes do not give you the sort of guidance you would wish. In other words, the profession must believe that they are necessary, but are they sufficient?

The Term Project, which will be a team effort, will focus on a major case study that the team will identify and choose. I will meet with each team (2-3 students) to assist in the choices and, to facilitate matters, I will create each team with an eye to balance and having a mix of experiences and skills, etc. on each.

The resulting Team paper will be in the form of a Report from a Team of Ethicists brought in by management or the Corporate owners, or the City Council, etc. to review a specific case study situation. I will supply more detail on this project, which will be due in the final two weeks of the term and result in a presentation to the class and a written project report. What I have in mind is a two-fold grade based on my evaluation of the overall quality of the project and, in addition, an "effort-contribution" grade that each member of the team will confidentially assign fellow team members (now there's an ethical challenge!).

While I am on the subject of evaluation, a word about the approach I will use. Since this is a graduate course, I realistically think there are only four possible grades in the course.

- A-- Superior Work clearly meets the standards of graduate work.
- B-- Acceptable work
- D/F-- Work that is not at the passing level for graduate school
- I-- The work was not completed such that it could be evaluated, due to circumstances not within the control of the student and generally with the advanced approval of the professor.

I am happy to answer any questions about the course and requirements.

Office hours are generally in the afternoon prior to class, during breaks on course meeting nights, or by other appointment.

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