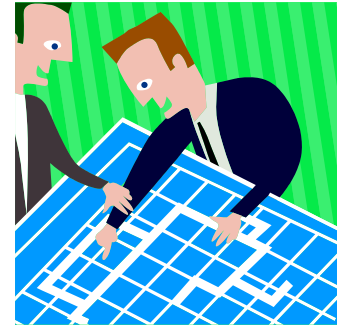




# INFO5990 Professional Practice in IT

## Lecture 10A



Ethics

The relevance of ethics to professionals  
in the IT industry



# Guest Lecture

Director - Paul Grainger  
Professionals Australia



- *Professionals Australia is the largest not-for-profit professional association for engineers and ICT professionals in Australia and has worked for over 65 years to provide career guidance and support to STEM professionals throughout their career. Currently there is over 25,000 members in industry as well as 6,000 students and young professionals in graduate programs.*
- *Paul is the National manager of the student and young professional program which provides tailored professional advice to young IT professionals looking to break into the industry. Having worked for over 4 years in this role he's helped thousands of young professionals get themselves into industry and successfully navigate their graduate positions into senior roles.*

# Assignment 2

- Next week is term break
- One more lecture/tutorial before submission
- Reports to be submitted online on the Sunday (changed from the Course Outline as requested by class)
  - **Between 3rd-10<sup>th</sup> of Oct 2015 at 11pm**
- **Format – Team name\_Assign2.doc**



- =====
- Presentations to be submitted online on the
    - **Between 2<sup>nd</sup> -10<sup>th</sup> Oct at 11pm** (changed from the Course Outline as requested by class)
  - **Format: Team name\_Assign2.ppt**
  - One person in group to submit both !



# Groups

- Make sure you are in the group
- Otherwise you get only 50% when your group may receive HD !



I will finish at 8.30pm today for those who are not in groups and add them on LMS today – final chance !

# By the end of this lecture you will be able to:

- Describe the characteristics of three examples of ethical frameworks
- Understand the relevance of ethics to professional in the IT industry
- Recognise the difficulty in making ethical decisions
- Appreciate that ethics can help IT practitioners to be better professionals

# Ethics through the ages

- The Golden Rule: “***So in everything, do unto others what you would have them do to you***”.  
**Bible**, (Matthew 7:12)
- Similar found in the Talmud, Koran, the Analects of Confucius and Mosaic law: e.g. “***Whatever is hurtful to you, do not do to any other person***”.
- “***If an action cannot be taken repeatedly, then it is not right to take at all***”.  
René Descartes (1596-1650)
- “***If an action is not right for everyone to take, it is not right for anyone***”.  
Immanuel Kant (1724–1804)

# Sets of 'rules' we live by

- Etiquette:
  - Codes of behaviour and courtesy
  - Failure to observe may lead to embarrassment
- Law:
  - Series of rules that are enforced by the police and the courts
  - Failure to observe these can result in fines or imprisonment
- Morals:
  - Standards of right and wrong generally accepted by our society
  - We develop a system of morals throughout our life
- Ethics:
  - General and abstract concepts of right and wrong
  - Can help guide our actions, particularly in our professional life

# Ethics and Morality

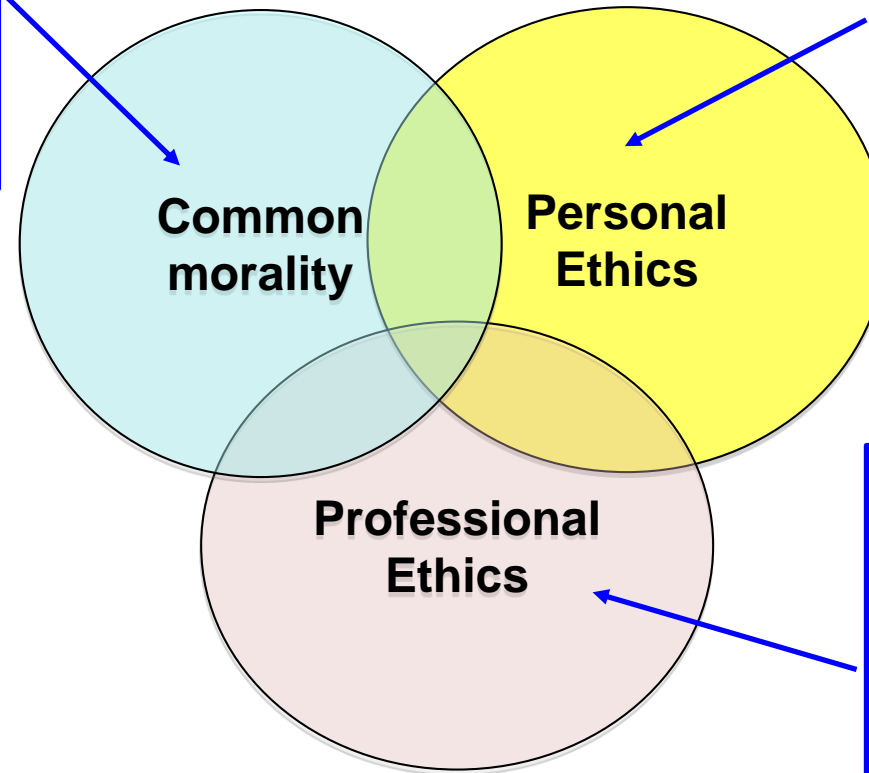
- Common morality
  - the set of moral ideals shared by most members of a culture or society
- Personal ethics
  - the set of an individual's own ethical commitments, usually acquired in early home or religious training but often modified by later reflection
- Professional ethics
  - a set of standards adopted by professionals to apply when they are acting in their professional capacity



# Our ethical framework

Examples :

- Don't tell lies,
- Don't frighten little children,
- Don't sleep with brother's wife



Examples:


- Avoid alcohol,
- Help old ladies across the street,
- Attend church regularly

Examples:

- Keep company secrets,
- Tell the truth in company reports
- Admit a conflict of interest

# Question 1

The question of whether to make a pirate copy of some software or not is a matter of:

- A. Etiquette
-  B. Law
- C. Moral judgment
- D. Professional ethics
- E. None of these

Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Score / 6
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	

# Question 2

Kicking the ball into touch in soccer if a player is injured to stop the game is a matter of:



- A. Etiquette
- B. Law
- C. Moral judgment
- D. Professional ethics
- E. None of these

Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Score / 6
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	

# Ethical theories

## 1. Consequentialism

- The evaluation of an action depends on the non-moral consequences that the action brings about.
- The morality or otherwise of an action is determined by its consequences.
- Often expressed as "*The ends justify the means*".

“Nine theories of ethics that rule the world”,  
<http://jan.ucc.nau.edu/~dgs2/theories.pdf>

# Some tricky questions for consequentialists

- What sort of consequences count as good consequences?
- How are the consequences judged and who judges them?
- Who is the primary beneficiary of moral action?
- What about unknown or unforeseen consequences?

# Example: what would you do?



- Just ahead you see a man running out of an appliance store with an box under his arm. He jumps into a waiting car and takes off.
- The shop owner runs out calling “Stop thief”!
- You are just about to follow to get the registration of the getaway car when the traffic lights in front of you turn **RED**.
- What do you do?
- What are the consequences?



# Ethical theories

## 2. Utilitarianism

- the moral standard should be promotion of the best long-term interests of everyone concerned, i.e. positive consequences for everyone
- *Ethical Altruism*: positive consequences for others
- *Ethical Egoism*: positive consequences for the individual making the decision

# Example: what would you do?

- Doctors plan an experiment on a small number of subjects.
- There is a risk that most of them will die, but it may mean that a cure will be found for a disease that will relieve the suffering of millions of people.
- Utilitarianists will approve if they see that the action produces the greatest good for the greatest number of people.



# Ethical theories

## 3. Deontology

(from Greek δέον, deon, “obligation, duty”)

- ‘Goodness’ or ‘rightness’ is determined by examining the acts themselves, rather than consequences, or even the intentions of the person doing the act.
- Deontologists consider rules and duties.
  - Golden Rule: “Do unto others as you would have others do unto you”.
  - Rule: Always tell the truth
  - Duty: Report criminal activity to the authorities

# Some tricky questions for deontologists

- Is it all right to lie if telling the truth will hurt someone?
- If the person who doing the 'right thing' lacks virtue or has a bad intention in doing the act is it still ethical?
- Is a person doing 'their duty' with malicious intent acting ethically?


### Q3. Which of the following best describes the action of a deontologist?



- A. Look to the highest authority in terms of law
- B. Decide who is going to benefit the most
- C. Consider all of the outcomes
- D. Determine which action is best for me
- E. Toss a coin


Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Score / 6
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	

## Q4 Which of the following best describes the action of a consequentialist?

- A. Look to the highest authority in terms of law
- B. Decide who is going to benefit the most
-  C. Consider all of the outcomes
- D. Determine which action is best for me
- E. Toss a coin

Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Score / 6
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	

## Q5 Which of the following best describes the action of a utilitarian egotist?

- A. Look to the highest authority in terms of law
- B. Decide who is going to benefit the most
- C. Consider all of the outcomes
-  D. Determine which action is best for me
- E. Toss a coin

Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Score / 6
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	

# Example: what would you do?

- You observe your best friend, Jack, at a conference in a passionate embrace with a woman you know not to be his wife, Jill.
- A few days later you meet Jill and she asks if you have observed Jack acting strangely.
- You know that lying is wrong and feel that it is your duty to tell Jill the truth.
- Should you tell the truth and wreck Jack's marriage or lie, and hope that things will work out for the best?

# Ethical behaviour in your professional life

1. 'unethical' does not necessarily mean 'unlawful' or 'illegal'
2. Something that is 'legal' is not always 'ethical'
3. Ethical behaviour incorporates three levels of involvement
  - Responsibility
  - Accountability
  - Liability

# Responsibility

- A moral concept
- You accept the consequences and obligations of your decisions and actions, as a member of the human race
- Blame (or praise) is attributed to individuals (rather than collectives or groups)
- Notions of guilt or shame may apply, but legal punishment or compensation does not necessarily result.



# Accountability

- An organisational concept
- You need to be able to justify your decisions on rational grounds and be prepared to be held responsible for such decisions
- 'Accountability' is mechanism for assessing responsibility for decisions made and actions taken
- It does not necessarily attribute blame in a moral sense
- It goes beyond legal liability: someone or some group is answerable
- It can apply to individuals, groups of individuals, or corporations.

# Liability

- A legal concept
- Existing laws give any individuals affected, including those downstream, the right to recover costs resulting from your actions
- ‘Liability’ does not attribute blame or fault in a moral sense to those held ‘liable’
- Typically ‘liability’ applies in the case of corporations and property owners.
- Compensation can be required even when responsibility in a formal or moral sense is not admitted.

# Examples of unethical behaviour in IT

- copying software illegally (piracy)
- disclosing personal information
- failing to give proper advice to boss
- using company assets for private purpose
- using privileged position to gain favour
- failing to take due care with data security
- failing to treat colleagues or seniors with respect

# Apparent gender differences in IT

Comm. ACM,

Scenario	Disagree (M / F)	Agree (M / F)
1. OK to keep and not pay for software sent by mistake and not listed on invoice	55 % / 68%	45% / 32%
2. OK to use company resources to do write programs for friends in own time	11% / 16%	89% / 84%
3. OK to make a copy of statistical data encountered at job site for own purposes if not excluded by contract	51% / 72%	49% / 28%

# Ethical behaviour at University

## *Academic honesty*

Are you responsible, accountable or liable?

- ***Plagiarism***

presenting another person's ideas, findings or work as one's own by copying or reproducing them without due acknowledgement of the source.

- ***Recycling***

the submission for assessment of one's own work, which is substantially the same as that which has previously been counted towards another unit of study.

- ***Collaboration***

working in a group on an assignment which is supposed to be done individually.

# Professional ethics dilemmas

## 1. Conflict of interest

- A conflict of interest occurs when “*influences, loyalties, temptations, or other interests*” exist that might affect a professional’s judgment
- A conflict of interest may be actual, potential or apparent
- What action can you take that is considered ‘ethical’?

# Professional ethics dilemmas

## 2. Whistle blowing

- Whistle blowing is “the act of an employee informing authorities of harmful, dangerous, or illegal activities by the company he/she works for”.
- The whistle blower may suffer harmful consequences as a result
- What action can you take if you have evidence that management is not observing ‘best practice’?
- What guidelines exist?

# Professional ethics dilemmas

## 3. Disobedience

- Should computer scientist refuse to design military software if he or she believes war is immoral?
- Should you refuse to collate data to create electronic dossiers on fellow employees?
- What would you do?



# Why ethics matters

## The Challenger Disaster

Engineering failure or a question  
of professional ethics?

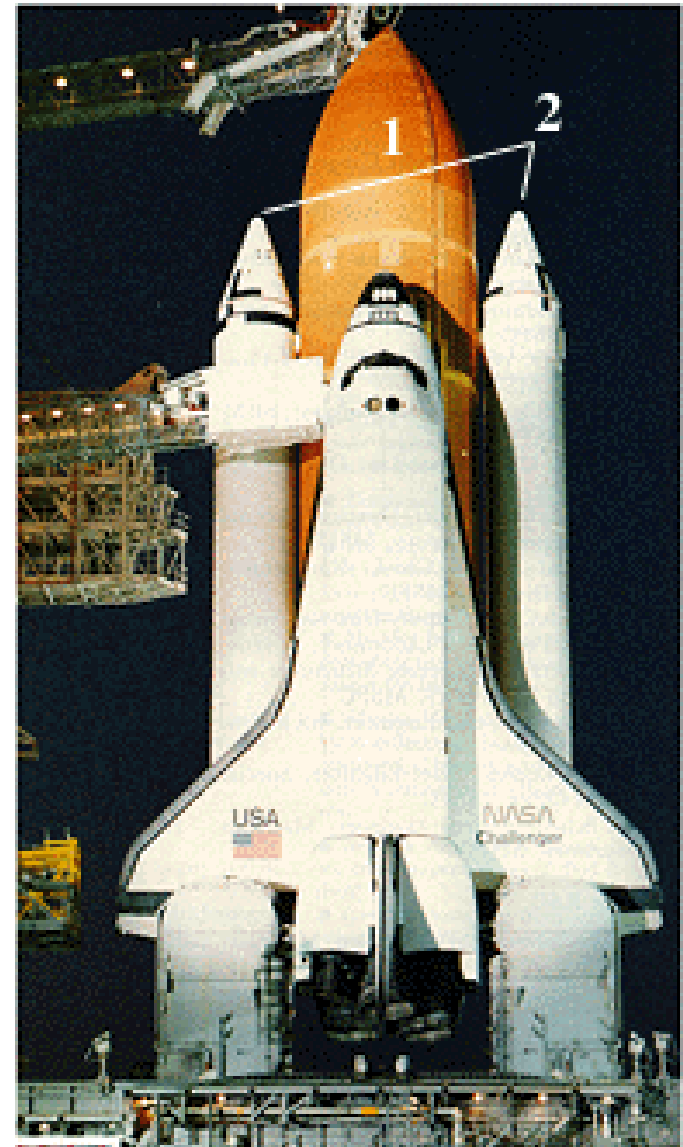
The Challenger launch, January 28th, 1986

<http://www.engineering.com/Library/ArticlesPage/tabid/85/articleType/ArticleView/articleId/170/The-Space-Shuttle-Challenger-Disaster.aspx>

# What happened?

- O-rings were eroded and unable to seal and hot gases leaked out.
- A flame plume breached an external hydrogen / oxygen tank leading to an explosion
- Challenger broke apart
- All seven crew members died

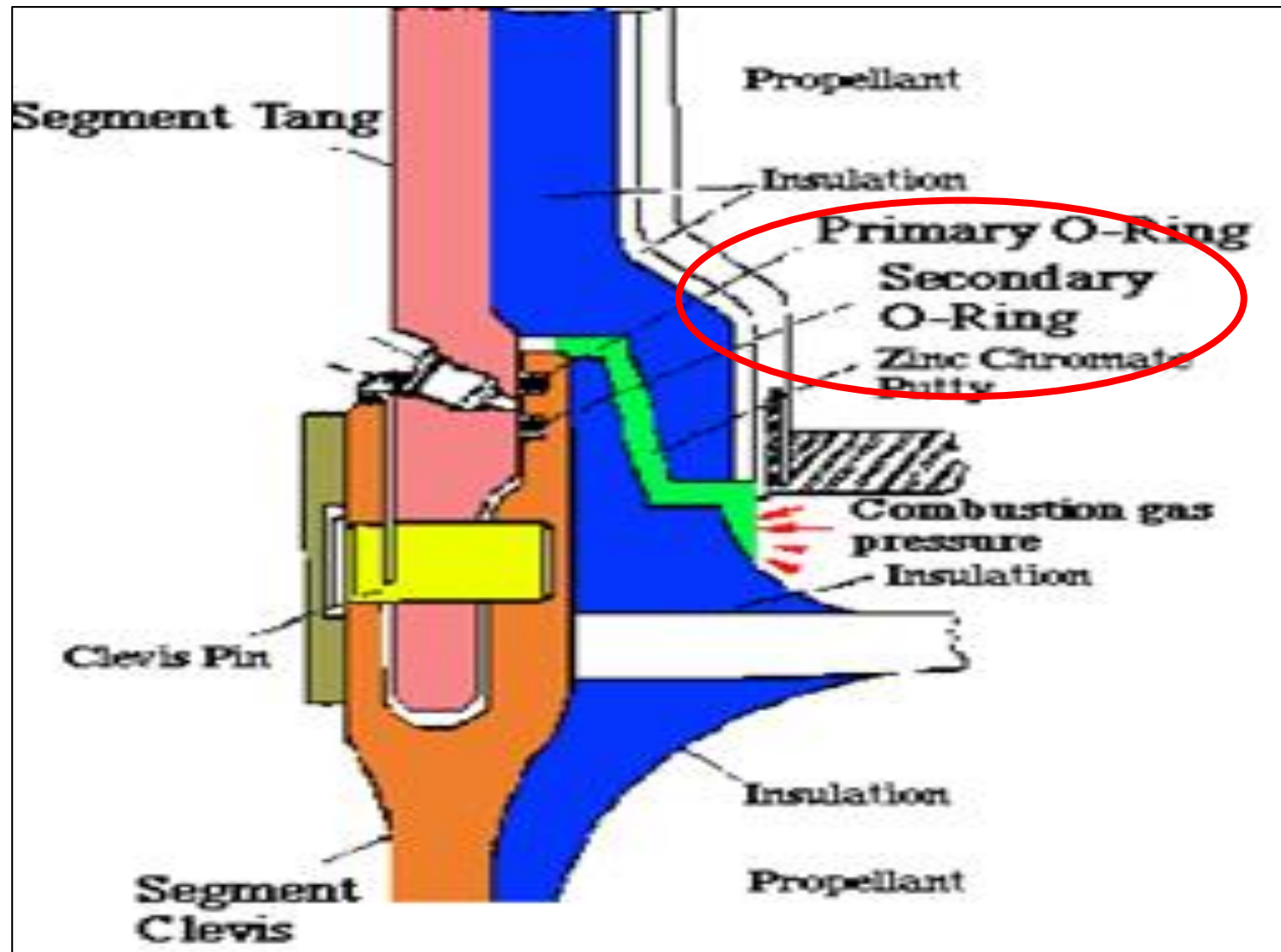
<http://onlineethics.org/CMS/profpractice/exempindex/RB-intro/Wrong.aspx>



Presidential Commission Report, p. 112

**The Challenger on the morning of its final launch. (1) The External Tank. (2) The Solid Rocket Boosters.**

# The “O ring”




# What went on before hand

1. In 1977 Chief engineer reported problems concerning the O-ring during previous launches
2. Rocket booster manufacturer, *Morton Thiokol* , recommended 'no-launch'.
3. Recommendation was questioned by space centre, as there was pressure to have rocket in space.
4. VP of *Morton Thiokol*, anxious to secure a new contract from NASA, advised supervising engineer, "*Take off your engineering hat and put on your management hat.*"
5. 'no-launch' recommendation was reversed

Q6. The situation occurring in the case of the Challenger disaster is described as which of the following?

Write down  
your score

- A. A case of insufficient testing
- B. An example of whistle blowing
- C. A case of political interference
-  D. A conflict of interest
- E. An example of over ambitious planning

Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Score / 6
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	