Ethical Problem Solving Techniques

• Moral Conflict resolution
  – Enquiries (Inquiries)
  – Line Drawings; single & multiple
  – Flow Charting
  – Middle ground solutions
General Methodology...

• Identification
  – Recognize/acknowledge a state of conflict
  – Identify source of conflict and stakeholders

• Analysis
  – Investigation, facts...
  – Alternatives, ranking...

• Action
  • Deciding on and initiating a course of action/resolution
Inquiries

- Normative (Also called Moral enquiries)
- Conceptual
- Factual
Normative (also called Moral enquiries)

• What are the moral issues here?
  – What is acceptable behaviour/practice?
  – E.g. bribes, cheating on assignments

• What behavior would normally be expected?
  – E.g. do not accept bribes, cheat, etc.
Conceptual Enquiry

• Defining terms, concepts
  – What is the meaning or applicability of an idea?
  – E.g. what constitutes a bribe vs a gift? Defining terms such as bribes & gifts.
  – E.g. what does proprietary really mean?
Factual Enquiry

- What is known about the case?
- Factual issues
  - E.g. was the “gift” offered or requested?
  - Was it accepted?
  - What is it’s true value?
- Simple comprehensive statement of the facts. (sometimes, simple is complex)
1. positive extreme: do not look at the previous report at all
2. negative extreme: copy the previous report, put your name on it and hand it in as your own.
3. use the same topic, but re-do all the research
4. use the same topic and use the previous report as a cited reference
5. use the same general ideas from the previous reports, but don’t bother citing
6. use the same topic and cited references as the previous report without credit
7. read the report only to get an idea of the format and detail required
8. use the same topic and cited references as the previous report but acknowledge
<table>
<thead>
<tr>
<th>Feature</th>
<th>Negative</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gift Value*</td>
<td>large</td>
<td>small</td>
</tr>
<tr>
<td>Timing*</td>
<td>before</td>
<td>after</td>
</tr>
<tr>
<td>Reason</td>
<td>Monetary</td>
<td>Educational</td>
</tr>
<tr>
<td>Responsibility*</td>
<td>Self</td>
<td>Others</td>
</tr>
<tr>
<td>Product Quality</td>
<td>Worst</td>
<td>Best</td>
</tr>
<tr>
<td>Product Cost</td>
<td>Highest</td>
<td>Lowest</td>
</tr>
</tbody>
</table>

*most important in this case

Ref: Fig 3.4, “Engineering Ethics – Concepts and Cases”, Harris, Pritchard, Rabbins, 2005
Flow Charting

Provides a visual picture of a situation and helps one establishes sequences, identify moral issues and consequences of actions.
• A very logical way to “dissect” a problem and to understand all of the consequences

• A very visual way to observe possibilities
• As with line graphs, one must be as objective as possible

• It is very similar to flow charting any engineering problem using a series of decision blocks that state yes or no
Start

Need original report for GE 449

Does original report mean orig topic?

Yes → Start report from scratch

No → Will using report be plagiarism?

Yes → Ask for copy of Report

No → Is it acceptable to plagiarize?

Yes → Start report from scratch

No
Creative Middle Ground Sol’ns

• Can be applied to other techniques
• Looks for creative options to either easy or hard choices
• Requires imagination, communication and determination...
• Ref: Fig 3.7 Harris, Pritchard, Rabbins
Other sources of help...

• Codes of Ethics provide prioritized criteria as guidance; e.g.:
  – Protection of the health and safety of the public is one of the most important obligations in professions such as engineering.
  • It is a guide to moral decisions related to this subject, and is entrenched in almost all code of ethics.
Example: (text page 27 and 47)

Paradyne Computers

• 1980, Paradyne bids to supply the Social Security Administration (SSA) with a new computer system

• Constraint: the system must “off the shelf type” rather than customized

• Paradyne’s computers failed the acceptance test
• Two years later, system finally worked after a lot of cost
• SSA found that Paradyne did not use off the shelf components but used technology under development
• The demonstration of the system used a different computer (Paradyne claimed there should be no difference)
• SSA made some mistakes in assessing Paradynes’ ability to produce complete computer systems
• Paradyne hired a previous SSA official to look at the problem who then negotiated a “relaxing” of the requirements
• System finally worked
Normative Enquiry

• Is lying an acceptable business practice?
  – What is the acceptable definition of lying.

• Is it OK to be deceptive to get a contract?
  – What are the ethical implications?

• Is conflict of interest an acceptable business practice
  – What does conflict of interest mean in the business world?

Note: You will see that the Conceptual Enquiry is similar. Fleddermenn therefore essentially combines the two enquiries.
Factual

- Off the shelf components (no new computers)
- Paradyne did not have a system running on existing computers
- Had never tested the prototype
- A former employee went to work for Paradyne and was a part of the lobby to reduce the constraints
Conceptual

• Is bidding to provide off the shelf products when the product was in the planning stage, a lie or reasonable business practices.
• What does “off the shelf” really mean?
• Is it ethical to place a Paradyne label on another computer.
• Is lobbying by a former SSA employee a conflict of interest?