Faculty of Engineering and Mathematical Sciences

Project Management & Engineering Practice
(GENG 5505)

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Ethical issues in business and project management: Engineering dimensions

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What is Ethics?
A two-dimension foundation

➢A moral dimension of Ethics

•Moral philosophy: Branch of philosophy that studies principles of right and wrong in human conduct (fr. L. *Ethicus* – customary behaviour) – the science of conduct.

• Set of guidelines: Models/frameworks constructed by society that direct/prescribe appropriate values and subsequent behaviours

• Often culturally determined (right or wrong in one culture may not be in another)

➢A normative dimension of Ethics
Asks the question: What is the right thing to do?

• Moral correctness based on personal values shaped by:
  - Family
  - Religion
  - Experience
- Personal feelings on how we should treat people and the environment as a whole

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Why Ethics? Martin et. al., 2009

- Moral awareness (i.e. Recognising moral issues);
- Moral reasoning (i.e. assessing opposing arguments on moral issues);
- Moral coherence (i.e. Forming consistent viewpoints based on facts);
- Moral imagination (i.e. Look for alternative responses to moral issues);
- Moral communication (i.e. Use of ethical language);
- Moral reasonableness (i.e. The ability and willingness to be morally reasonable);
- Respect for people (i.e. Genuine concern for the well-being of others and oneself);
- Tolerance of diversity (i.e. Respect for ethnic and religious differences and acceptance of reasonable differences in moral perspectives);
- Moral hope (i.e. Appreciation of possibilities of using rational dialog in resolving moral conflicts);
- Integrity and honesty (i.e. Maintaining moral integrity and honesty, and integrate the professional life and personal convictions).

Why Ethics? ……continues

➢Growing social responsibility movement since 1960's led to increased social expectations

- Social equality and distribution of welfare, happiness at work & leisure life satisfaction & overall quality of life (QOL)

- Environmental quality, human health, bioethics, animal welfare & potential impact on future generations

- Recognition that environment and balanced use of natural resources are vital for achieving a good QOL, both presently and for future generations;

➢Regulatory control

- Protection of workers, consumer, citizen, stakeholder and environment rights (relate to the concept of TBL).

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Why Ethics?.....continues

➢Demonstrated successes
• New sustainable business engineering and project management models

• New paradigms (competition = coopetition) i.e. cooperative competition & focus on relationship building throughout value chain

• Success involves long-term view, strong internal values driving behaviour, careful selection of compatible business partners, changes to technology, systems and processes consistent with above.

➢Sustainable development: "Meets the needs of the present without compromising the ability of future generations to meet their own needs."

Ethics and sustainable development are strongly related with respect to:

- Financial bottom line: (i.e. Make a profit while balancing the need for social, environmental, and natural resource balance);
- Social bottom line (i.e. Focus on society as a whole, not just shareholders);
- Environmental bottom line (i.e. controlling pollution and toxic emissions; preserve biological diversity);
- Natural resources (i.e. Conservation to the extent possible and search for substitutes for non-renewal resources).

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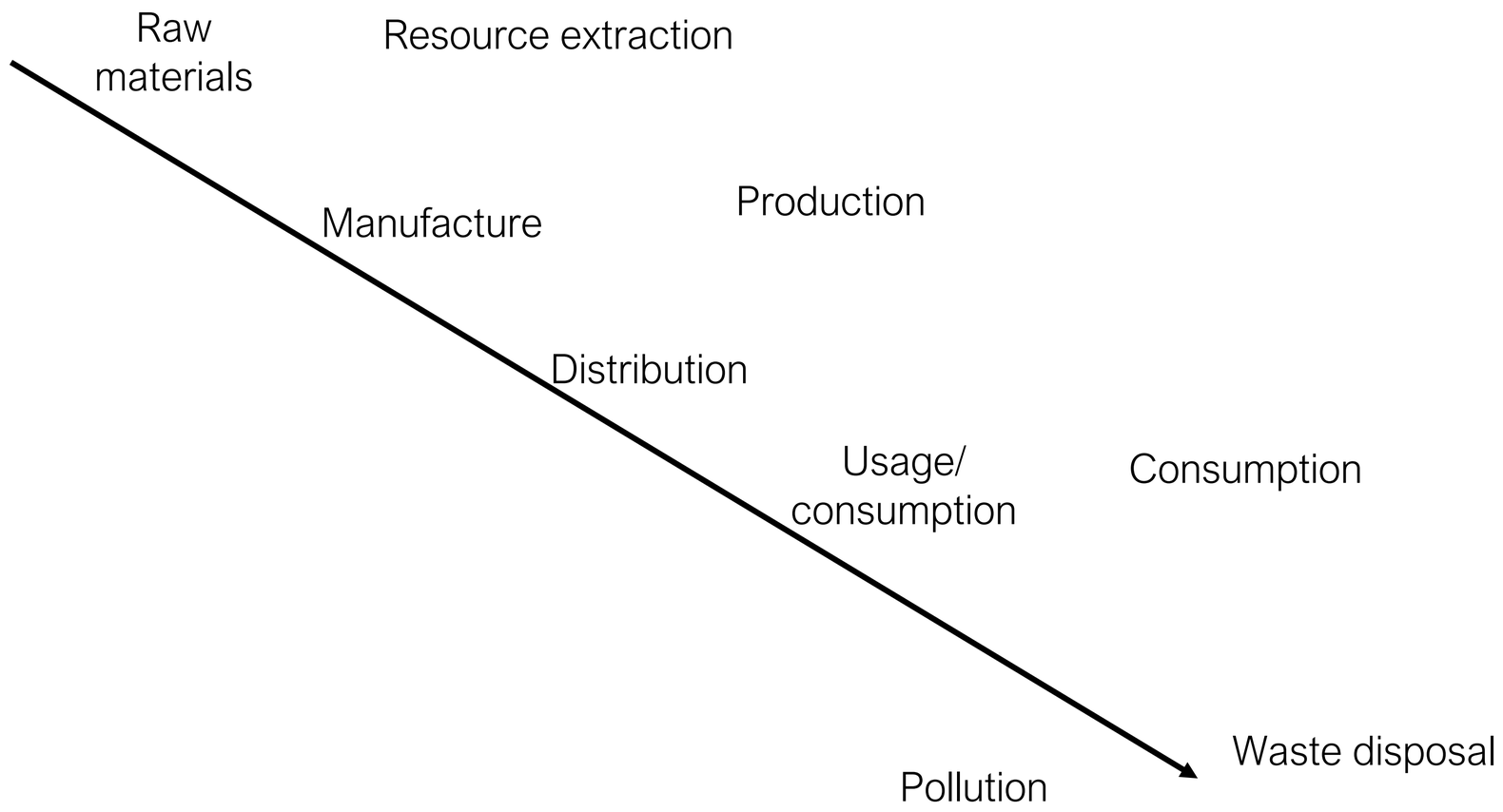
Engineering ethics defined:

"....consists of the responsibilities and rights that ought to be endorsed by those engaged in engineering, and also of desirable ideals and personal commitments in engineering"

Martin et al, 2009, p.8

Resource/product Life Cycle Thinking – ‘Cradle to Grave’

(Mont et al, 2007)



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Engineering tasks/responsibilities and possible ethical problems (Martin et al., 2009)

1. Conceptual task: i.e. To solve a problem/create an opportunity. Examples of possible problems: Unrealistic assumptions;
untrue feasibility studies; violation of patents and/or trade secrets, test of prototype done only under most favourable conditions, not complete etc.;

2. Design: i.e. Specifications. Examples of possible problems: Design changes not carefully checked, lack of risk identification and management plan, etc.

3. Manufacture: i.e. Scheduling tasks, fabrications of parts, assembly/construction, quality control, testing. Examples of possible problems: Promise of unrealistic completion date; bribes, inadequate testing of purchased parts, etc.

4. Implementation: i.e. Monitoring social & environmental product/project effects. Examples of possible problems: No formal procedure for following project/product effects on society & environment, etc.;

5. Final task: i.e. Recycling/disposal. Examples of possible problems: Lack of attention to ultimate product disposal; fail to provide public notification of hazards, etc.

Examples of ethical issues in Engineering Practice

- Intellectual property (IP) issues;
- Environmental ethics;
- Ethics and research;
- Risk management, safety and health issues;
- Gift giving, bribery and corruption;
- Whistle-blowing;
- Computer ethics;
- ….

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“If you are not prepared
to resign or be fired for
what you believe in,
then you are not a worker,
let alone a professional.
You are a slave”

H. Gardner, 2007

Reading week 9a

Gardner Howard, 2007, The Ethical mind, Harvard Business Review, pp. 51-56