



ENGINEERING ETHICS & ATTITUDE

Lecture 5.

**ATTITUDE & BEHAVIOUR
MORAL DECISION-MAKING TOOLS**

Dr. András Timár

professor emeritus

**University of Pécs, Hungary
Faculty of Engineering and Information Technology
Department of Civil Engineering
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ATTITUDE

- Attitude is an expression of *favour* or *disfavour* toward a person, place, thing, idea or event (the attitude object)
- It is an evaluation of any *attitude object*, ranging from extremely negative to extremely positive
- It is a feeling or way of thinking that affects a person's behavior, thus it can be difficult to measure because measurement is *arbitrary*, meaning people have to give attitudes a scale to measure it against and attitudes are ultimately a hypothetical construct that cannot be observed directly

BEHAVIOUR

- **The way in which one acts or conducts oneself, especially towards others; the reactions can be instinctual or learned**
- **Three types of behaviour patterns people exhibit when interacting with others:**
 - *PASSIVE* behaviour is non-confrontational and respectful without demanding reciprocity
 - *AGGRESSIVE* behaviour is the opposite; these people require respectful treatment without giving it in turn
 - *ASSERTIVE* behaviour refers to people being truthful with high self-esteem; they value others and have empathy and compassion for them
- **Behaviour refers to actions that stem from and are direct reactions to the feelings of fear, excitement, joy, sorrow or anger**

PROFESSIONAL ATTITUDES AND BEHAVIOURS

- **Professionalism is a set of attitudes and behaviours believed to be appropriate to a particular occupation demonstrated actively as traits of a professional**
- **Social scientists described professions as possessing sets of structural and attitudinal attributes that set them apart from occupations**
- **Structural attributes of professions and professionals can be distinguished from attitudinal attributes**



STRUCTURAL ATTRIBUTES

- **specialized body of knowledge and skills**
- **unique socialization of student members**
- **licensure/certification**
- **professional associations**
- **governance by peers**
- **social prestige**
- **vital service to society**
- **code of ethics**
- **autonomy**
- **equivalence of members, and**
- **special relationship with clients**

ATTITUDINAL ATTRIBUTES

- use of the ***professional organization as a major reference***, i.e., using professional colleagues as the major source of professional ideas and judgments in practice
- ***belief in service to the public***, i.e., one's professional practice is indispensable to society and benefits the public
- ***belief in self-regulation***, i.e., one's peers are the best qualified to judge one's work
- sense of calling to the field, i.e., ***dedication to the profession*** regardless of extrinsic rewards
- ***autonomy***, i.e., one can make professional decisions without external pressures from clients, non-professionals, and employers

EXAMPLES FOR ENGINEERING STUDENTS

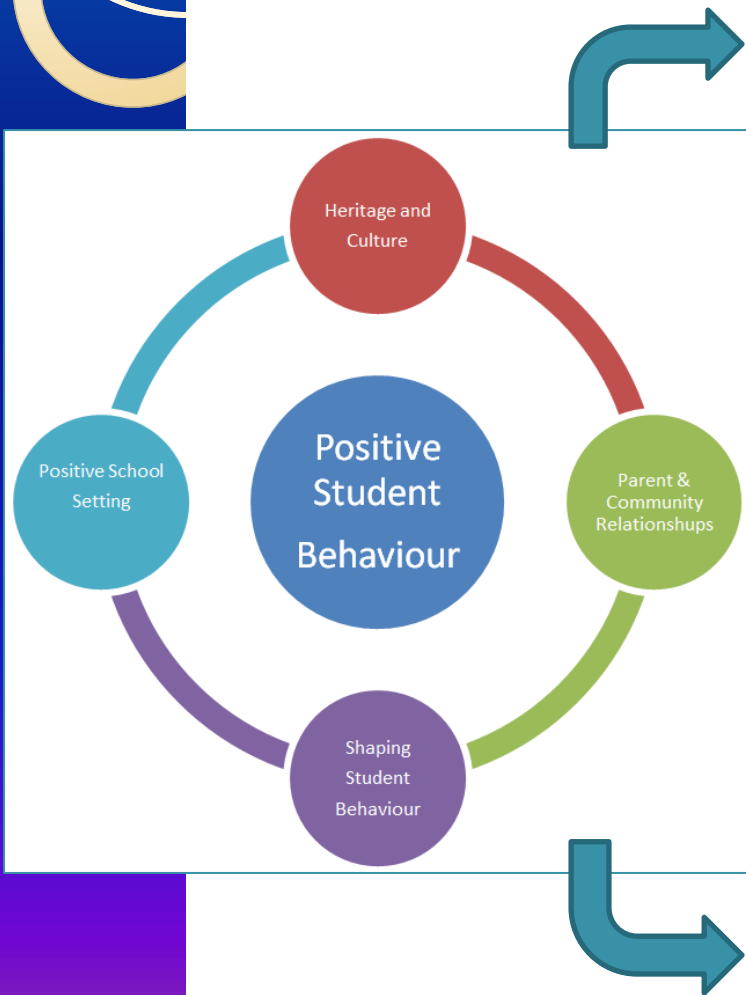
ATTITUDE	BEHAVIOUR
<i>Accountability</i>	Takes responsibility for actions
<i>Caring</i>	Volunteering Acts of service
<i>Desire for self-improvement</i>	Continued learning Self-instruction
<i>Diversity</i>	Fair treatment of all people regardless of demographic characteristics
<i>Honesty</i>	Behaviors that demonstrate honesty and trustworthiness
<i>Open-minded</i>	Increased receptiveness to new ideas
<i>Respect</i>	Dresses appropriately Punctual Maintains confidentiality
<i>Responsibility to learn</i>	Comes to class prepared Actively participates in class activities, such as engages in discussion
<i>Team player</i>	Engages in constructive peer assessment Accepts and applies constructive critique
<i>Values new experiences</i>	Desire to seek out and take on new challenges

EXAMPLES FOR EMPLOYEES

See video:



LEARNED BEHAVIOURS



MOTIVES FOR PROFESSIONALISM

- A desire for interesting and challenging work and *the pleasure in the act of changing the world*
- The joy of creative efforts. Where a scientist's interest is in discovering new technology, engineers interest is derived from *creatively solving practical problems*
- The engineer shares the scientist's job in *understanding the laws and riddles of the universe*
- The sheer magnitude of the nature – oceans, rivers, mountains and prairies – leads engineers *to build engineering marvels* like buildings, bridges, tunnels, etc., which appeal to human passion
- The pleasure of being in the presence of machines generating a comforting and *absorbing sense of a manageable, controlled and ordered world*
- Strong *sense of helping*, of directing efforts towards easing the lot of one's fellows
- The main pleasure of the engineer will always be to *contribute to the well-being of his fellows*



BEHAVIOUR & SOCIAL NORMS

- The *behaviour* of humans falls within a range with some behaviour being common, some unusual, some acceptable, and some outside acceptable limits
- The acceptability of behaviour depends heavily upon social *norms* and is regulated by various means of social *control*
- Without social norms (*including ethical* ones), human society would not function as it currently does
- Behavioural *standards vary* from place to place, they also change over time within the same society

DECISION MAKING TOOLS 1

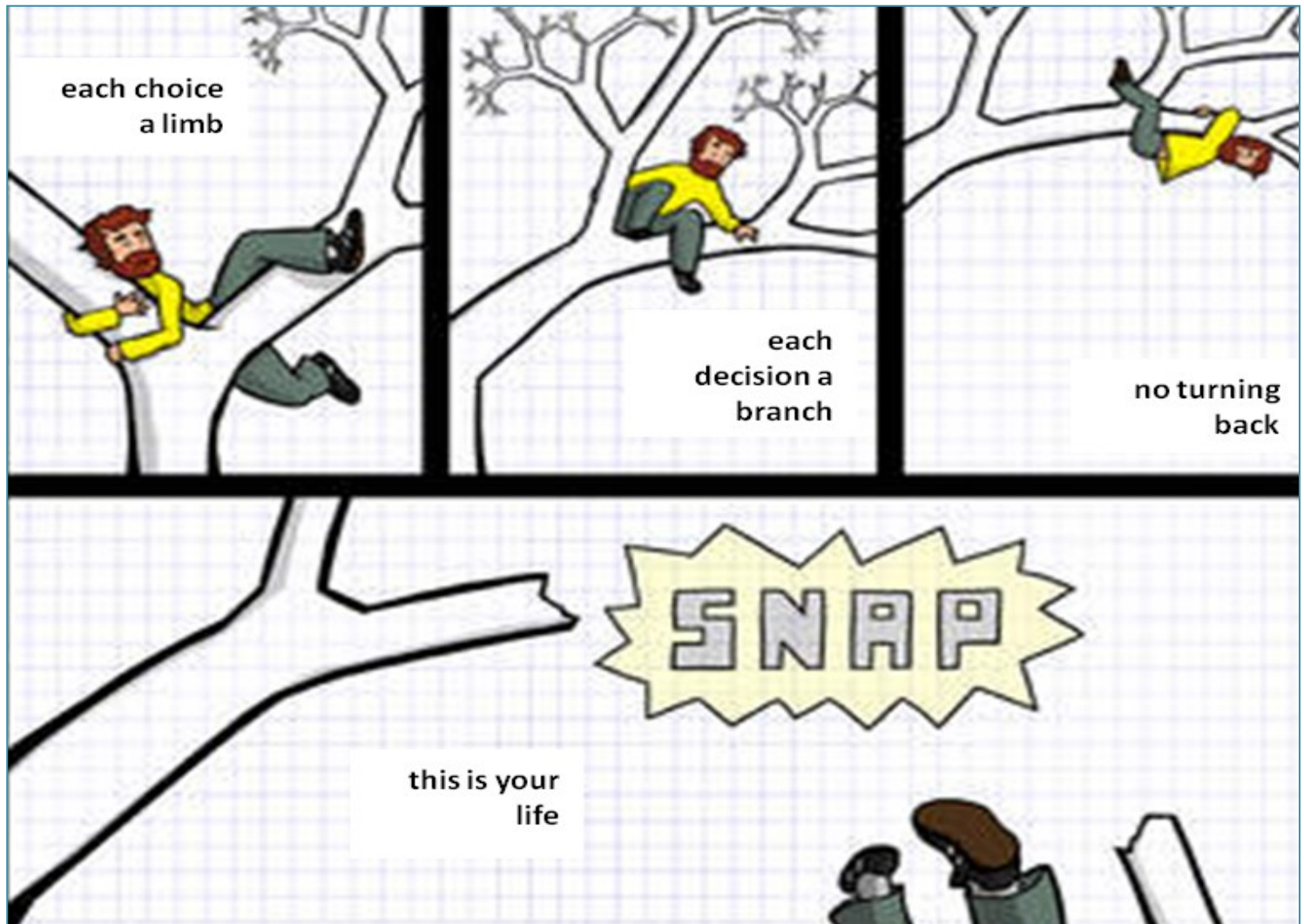
- A visualization of a complex decision-making situation in which the possible decisions and their likely outcomes are organized in the form of a graph that resembles a tree
- **Decision trees**/models are useful analytic tools for considering the ethical dimensions of a decision
- A decision tree consists of 3 types of nodes:
 - **Decision nodes**: These are commonly represented by squares. Decision nodes are used when a decision needs to be made between at least two alternatives
 - **Chance nodes**: These may be represented by circles. Chance nodes represent points on the decision tree where there is uncertainty about outcomes (so there must be at least two possible outcomes represented)
 - **End nodes**: These may be represented by triangles. An end node is where a decision is made and its value or utility is identified

DECISION MAKING TOOLS 2

- **Creating a decision tree:**
 - Examine the situation and values
 - Think about the code of ethics
 - Hypothesize all possible solutions
 - Identify outcomes and consequences
 - Consult with others
 - Select action
 - Advocate for change if required



DECISION TREE



CASE STUDY

A₁

- John is employed at Bluestone Construction Ltd. as the senior engineer. He regularly meets with suppliers who offer them services and building materials. John discovers that Peter, representing one of the suppliers, is an avid golfer like himself. They begin comparing notes on their favourite golf courses. John says that he has always wanted to play at the Cherryvale Golf Club but has never had the opportunity because it is a private club. Peter says that his company have a corporate membership there for years and he can arrange a guest visit for John for that weekend, “I can easily organise for us to have a game on the company, we’ll even get a steak and few pints of beer afterwards out of it”.



- ***Should John accept this offer?***

LINE DRAWING

- The line drawing method can be used in this case for John to make his decision. The first step is to come up with the paradigm case of bribery and the paradigm case of not bribery and the features of bribery (a paradigm case is one that serves as a model of the problem you are trying to solve). The next steps are to draw the table, evaluate the options and then the line and finally make the decision

FEATURE	PARADIGM BRIBERY	TEST CASE	PARADIGM NOT BRIBERY
Gift size	<i>Large</i>	-----┐-----	<i>Small</i>
Timing	<i>Before decision</i>	-----┐-----	<i>After decision</i>
Reason	<i>Personal gain</i>	-----┐-----	<i>Educational</i>
Responsibility	<i>Sole</i>	-----┐-----	<i>None</i>
Product quality	<i>Worst</i>	-----┐-----	<i>Best</i>
Product cost	<i>Highest</i>	-----┐-----	<i>Lowest</i>

- The line is closer to the paradigm not bribery - thus John is advised that it would be OK to take the gift but he must be careful if the company wants to change suppliers or they want to redo the contract, John should act impartially to avoid *conflict of interest*

CASE STUDY

A₂

- ***John accepts the offer.*** With Peter and two other members of the Club he plays a friendly game of 18 holes, according to standard competition rules. Although he never plays for money, following a short debate, he accepts („for the sake of fun”) the proposal of Peter to bet an amount of 20\$ by each hole and that losers pay the drinks of the winners in the Clubhouse at the end of the game. John and his teammate Henry are winning at 5 and losing at 2 holes, so they pocket 60\$ each. When they are drinking their beers Peter remarks that it would be justified to ask for a return game. John could repeat his visit (invited by his teammate, Robert) at the next guest-day of the Cherryvale Golf Club

- ***Should John accept this offer too?***



CASE STUDY

A₃

- ***John accepts the offer.*** This time the result of the game is less satisfactory from their point of view, but John and Henry are pocketing again 20 Dollars each. After a while, supported by the recommendation of Peter and Henry, John becomes a member of the Cherryvale Golf Club. Sooner or later John became acquainted with the idea that betting is accepted at the golf course and bets are raising from time to time. Although Peter also wins some game, all in all John is much better off concerning material gains. He doesn't record his money, but it seems obvious that the money pocketed from Peter exceeds by far several hundred US Dollars. Peter remains all that time a distinguished supplier of Bluestone Ltd.

- ***Do you see any moral problem in this relationship?***



CASE STUDY

A₄

- At a management meeting dealing with the efficiency of the suppliers it is announced that the CEO of Bluestone Construction Ltd. intends to *reduce the number of suppliers by 20%*, because the company may have difficulties in case its cost-efficiency couldn't be improved. Everybody is asked to report as soon as possible proposed reductions related to his/her responsibility
- John discusses eventual opportunities with two fellow engineers of his team, concluding that from the currently engaged 10 suppliers they should continue cooperation with only 8 in the future
- *Should John reveal that Peter, representing a supplier of Bluestone Construction Ltd became his good friend from the golf course?*



CASE STUDY

A₅

- John reveals at the gathering, that he plays golf regularly with Peter, therefore his impartiality might be in doubt. His fellow engineers reassure him, however, that they also have various relationships with people employed by other suppliers and everybody should strive to make an unbiased analysis to reach a fair decision. During the deliberations, it becomes obvious to John that in case he would like to elaborate a common proposal, the supplier represented by Peter will be among the losers
- *Should he mention his premonition or yield the ground to his colleagues to make a proposal?*
- (In that latter case if his colleagues put forward a proposal to terminate the contract of two suppliers – either including that of Peter’s or not - he isn’t obliged to take part unequivocally against the opinion of his workmates)



CASE STUDY

A₆

- John leaves to his colleagues to take the initiative. They propose unanimously that Peter's company has to be among those with whom the contract should be terminated. John has no objection. The group decides however to consult with their pillow and postpone the final decision until the next day.
- As scheduled earlier, John and Peter are playing golf in that afternoon. They are good friends, so John feels, he should tell Peter the bad news to be expected soon. Peter vehemently points out that he has done everything in favour of Bluestone Ltd and assumed that the working relationship between their companies is excellent, thanks especially to John. Finally he ask John about his standpoint defended during the deliberations with his colleagues
- ***What could be the answer of John to this question?***



CASE STUDY

A₇

- John says that he didn't object the proposal of his colleagues. He reminds Peter: „I was obliged to remain impartial, since they all acknowledged that have similar relationships affecting this decision making process. But we agreed to support the best proposal for Bluestone Ltd, our employer. Friendship shouldn't hamper business. Although it was extremely difficult, I couldn't draw a conclusion different from that of my colleagues”.
- Peter's face had gone red listening John's explanation presented in a kind of agony. Finally he burst out: „I can hardly credit my ears! What kind of friend are you actually? Do you forget who arranged your membership in Cherryvale? What do you think about your ability to play golf? Do you believe that all your gains are obtained thanks to your mastery and expertise? Do you think, you really play so much better than me?”
- ***Could Peter's reproaches assessed as justification of John's right behaviour?***



CULTURAL RELATIVISM

- Diversity means that there are no *absolute* standards for moral judgment
- Any standard for determining **right** and **wrong** behaviour is *relative* → (relativism)
- *Ethical relativism* is the belief, that there is no moral truth that applies to *all people* at *all times*
- *Cultural relativism* says that each person's culture is the standard by which actions are to be measured
- „*When in Rome do as the Romans do*” is a simplified statement of cultural relativism

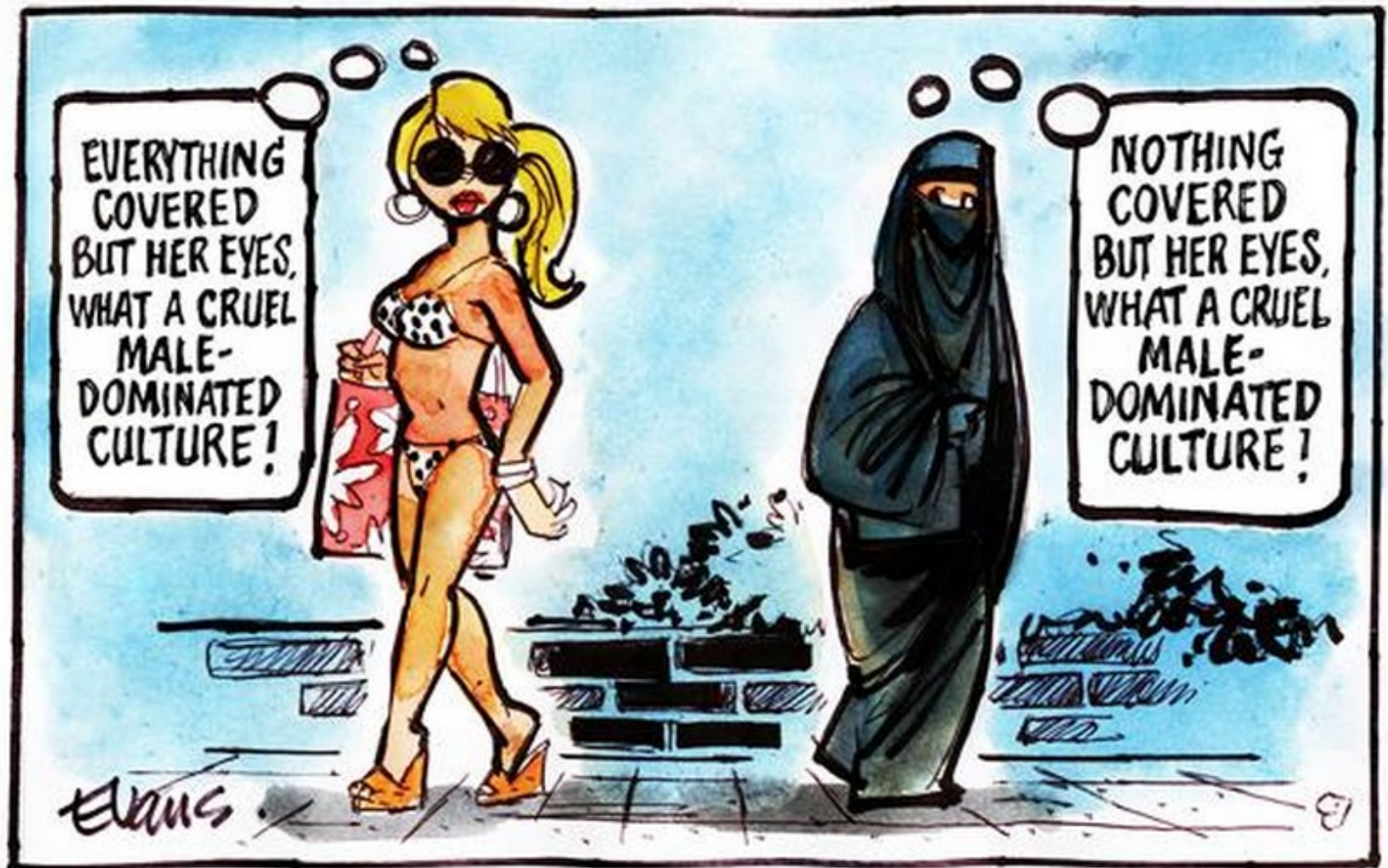


DENIAL OF CULTURAL RELATIVISM

- The statement has nothing to do with the *superiority* of Roman ethics: no ethical system is better than any other, because
 - The only thing we can say about different behaviours or practices is that they are *different*, not that they are *better* or *worse*
 - Better and worse are *comparative terms* that make sense only with a measure not tied to any culture
- Every society has to have some *structure* and *order* or it cannot survive and ethical standards are included into that social structure
- Although ethical standards differ from one place to the next, to *preserve* social order, people is *obligated* to follow the norms of the culture they live in



CULTURAL RELATIVISM?



Source: <https://thesocietypages.org/socimages/files/2008/12/1.png>