Module: Data Governance, Compliance and Ethics

WEEKS 7-10: ETHICAL ISSUES PERTAINING TO DATA (OVERVIEW)

PRESENTATION TO "TRAIN THE TRAINER" VIENNA,

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Aims of presentation

Provide overview of module section ("Ethical Issues pertaining to data")

- Nature of ethics
- Branches of normative ethics
- Ethics in the "real world"
- IT and data ethics/socio technical systems

Research ethics, data management and practical implementation

Other issues covered in module section but not covered in presentation

- ACM code of ethics
- Ethical Impact Assessment
- Issues related to Health technology

2.1.1 Module aims and objectives

This module aims to provide learners with the knowledge and skills around the complex issues of data management and governance in an organisational context, including ethical and compliance issues that these present. <mark>Learners will explore the ethical, legal, and social implications of using data-driven technologies such as big data, analytics, internet of things, and machine learning.</mark> The students will learn how to establish processes and systems that consider best practices for data governance and adhere to ethical and regulatory requirements for data handling.

2.1.2   Minimum intended module learning outcomes

LO1 Demonstrate critical understanding of the governance and regulatory frameworks associated with the key data lifecycle stages for an effective management of data assets.

LO2 Demonstrate critical awareness and interpretation of the data privacy and data protection regulatory landscape in socio-technical environments.

LO3 Critically analyse and evaluate the main ethical, legal, and social implications of using data-driven technologies.

LO4 Investigate and appraise the interplay of fairness, accountability, and transparency in algorithmic decision-making systems and demonstrate awareness of technical solutions to enhance these concerns.

Sources and resources

- O'Keefe, K. & O Brien, D. (2018). *Ethical Data and Information Management : concepts, tools and methods*. Kogan Page. [ISBN: 978-0749482046].

- Reynolds, George W (2019). *Ethics in Information Management (sixth edition).* Cengage Learning (Inc.), Boston. [ISBN: 978-337-40587-4]

Overview of Ethics section

Topic	Lecture Topic	Lecture Detail
7	Ethical Issues Pertaining to Data I	Personal, professional, societal, and legal morality; Branches of normative ethics (deontology, utilitarianism, virtue theory, social justice, etc.); IT Ethics including spam, censorship and free speech, anonymity, cyberbullying, copyright, etc.
8	Ethical Issues Pertaining to Data II	Frameworks for ethical design and decision making (e.g., Ethical Impact Assessment, The data ethics canvas); Ethics in Research: considerations Before, During, and After; Codes of ethics and professional conduct (e.g., ACM)
9	Ethical Issues Pertaining to Data III	Ethic concerns in health technology, Pervasive monitoring and tracking; Image, video and sound capture; Perpetuity of data storage

Ethics looks at *what* you should do and, more philosophically, *why* you should do it.
Ethics is about obligations: it is the study of "should-ing".

Ethics

Morality, Ethics and Law (1/2)

Personal Morality

- One's personal <mark>beliefs</mark> about right and wrong

- Influenced by a range of personal, cultural, philosophical, religious and societal concerns

- Moral acts are those that conform to what an individual believes is right

Group, Professional or Organisational morality and ethical standards

- Codes of conduct. As a member of a group or profession, you may subscribe to or accept certain ethical <mark>standards</mark>

- May be informed by a range of historical, cultural, philosophical, religious, societal, aesthetic concerns

- Organisational ethics may be formalized or acknowledged through Code of Ethics or **Corporate Social Responsibility**
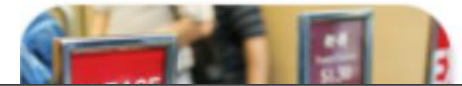
- Classical dilemma in literature - Group conflict may bring an individual into conflict with their own personal morality (eg Antigone, Hamlet, Sartre)
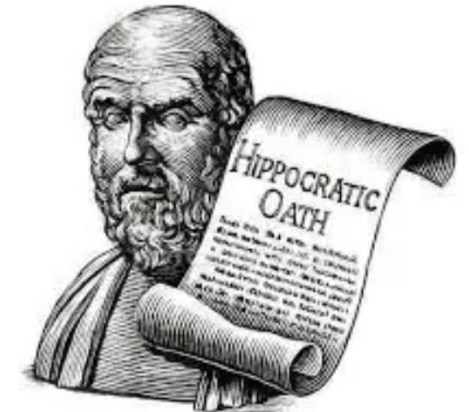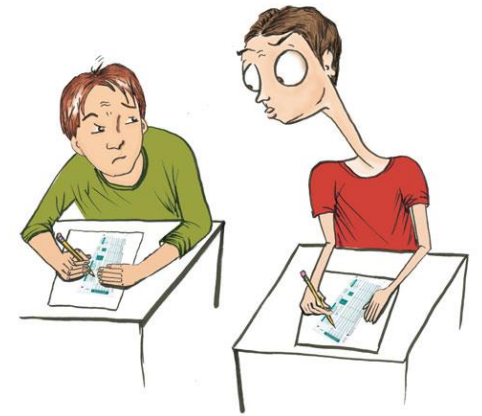
Morality, Ethics and Law (2/2)

Societal Morality

- Widely shared social <mark>conventions</mark>

- Form basis for an established societal consensus about what is ri... wrong

- Provide <mark>boundaries</mark> of generally acceptable behaviour

- Resolution of differences between views of what is acceptable ... process

Law

- System of <mark>rules</mark> that tells us what we can and cannot do

- Laws are enforced by a set of <mark>institutions</mark>

- Legal acts are those that conform to the law or at least do not contravene it

- <mark>Courts</mark> exist to resolve contradictions and ambiguities

> Musk responded to the EU and UK announcements on Tuesday, tweeting: "The extreme antibody reaction from those who fear free speech says it all."
>
> He later showed signs of willingness to adhere to regulations: "By 'free speech', I simply mean that which matches the law. I am against censorship that goes far beyond the law.
>
> "If people want less free speech, they will ask government to pass laws to that effect. Therefore, going beyond the law is contrary to the will of the people."

https://www.theguardian.com/technology/2022/apr/26/twitter-takeover-jack-dorsey-elon-musk

What Is The Subject "Ethics?"

Ethics (or Moral Philosophy) is a branch of philosophy that "involves systematizing, defending, and **recommending concepts of right and wrong behavior.**"

▶ Ethics is typically divided by philosophers into three main areas:

Metaethics

Study of the meaning of ethics - attempts to answer the fundamental philosophical questions about the nature of ethical theory itself, how truth values may be determined

Normative ethics

Study of moral duties, rules within its social context - what makes actions right or wrong, what makes situations or events good or bad, and what makes people virtuous or vicious

Applied/Comparative ethics

Application of ethical principles - examining specific controversial issues "Ethics in the real world"

- Is God or some ultimate arbitrator the ultimate source of moral guidance?
- Are ethical rules subjective or objective?

- How do we determine what to do and how to act? ?

- Is unauthorised computer file-sharing unethical?
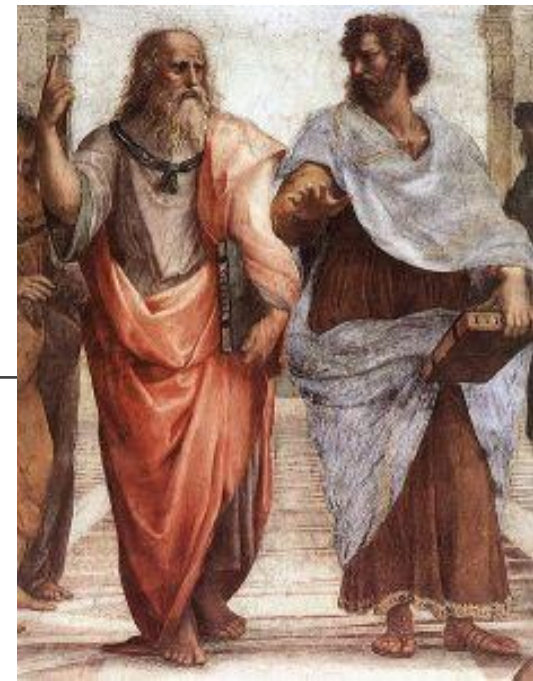- Do we have moral obligations to the environment?

Branches of Normative Ethics
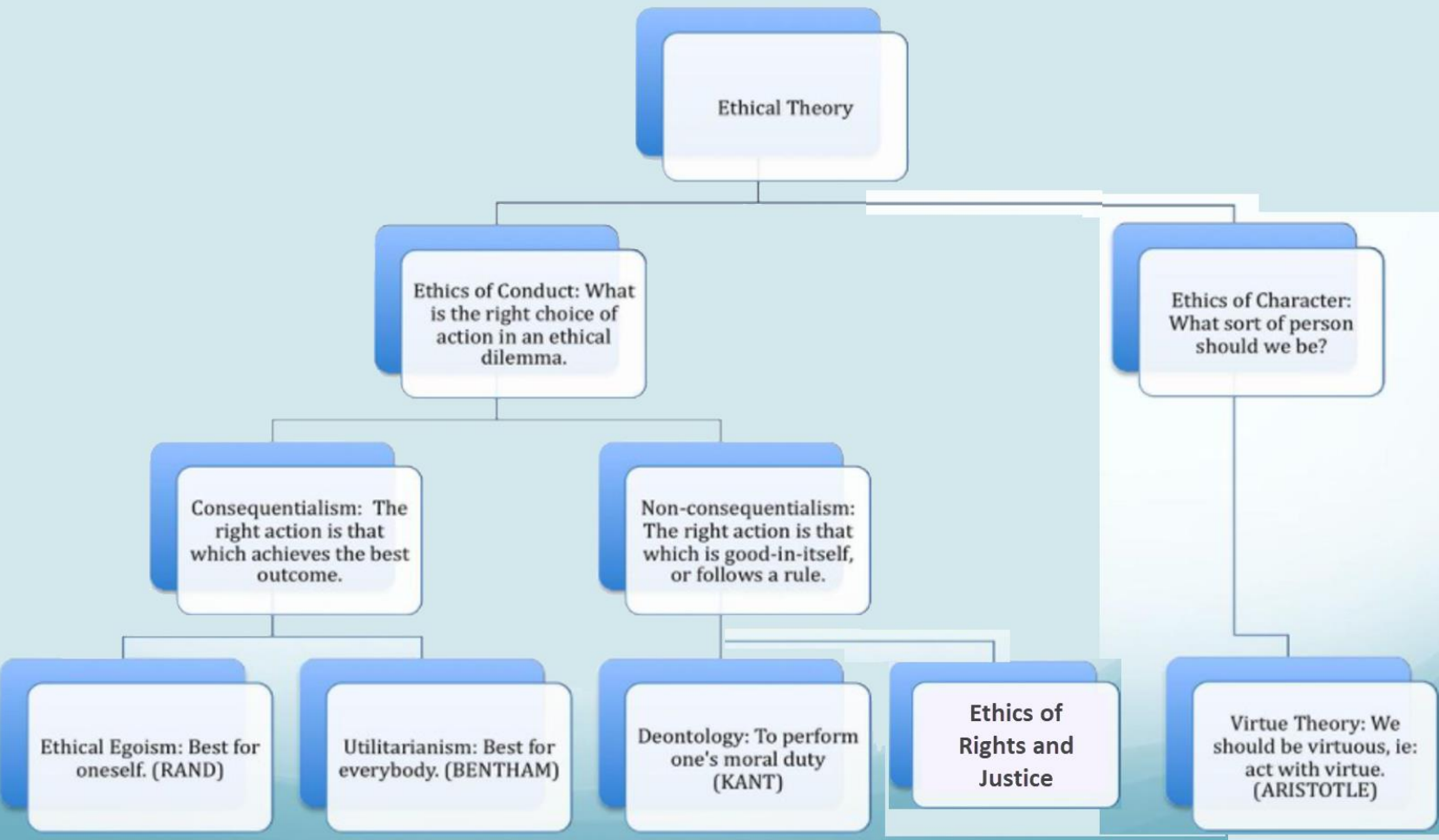
Virtue-based ethics

- These theories <mark>judge a person by his/her character rather than by an action</mark> that may deviate from his/her normal behavior.
- The objectively right act is <mark>the one a person of a certain type ("the virtuous person") would choose</mark>.
- Definition of "good": Flourishing
- It takes the person's morals, reputation, and motivation into account when rating an unusual and irregular behavior that is considered unethical.
- Good behaviour is usually seen in terms of the "golden mean" – virtues are halfway between two vices (courage is a virtue – but is on a spectrum between cowardice and rashness)

- How to apply Virtue Theory?
  An action is morally permissible, if and only if, it is the action that a virtuous person would have taken in the circumstances.
  If a person X, displays the virtues, S1, S2, S3, S4... Sn in action A, then person X is justified in performing action A.

Flourishing is "when people experience positive emotions, positive psychological functioning and positive social functioning, most of the time," living "within an optimal range of human functioning."

ETHICAL ISSUES PERTAINING TO DATA   13

The key virtues according to classical philosophers

Plato

Cardinal Virtues:

Wisdom,

Courage,

Temperance

Justice.

Aristotle

Courage, Temperance,
Liberality, Charisma,
Generosity, Ambition, Patience,
Friendliness, Honesty
Wit /humour, Modesty,
Justice /Sense of right & wrong

Confucius

"To be able to practice five things everywhere under heaven constitutes perfect virtue: Gravity, Generosity of soul, Sincerity, Earnestness, Kindness"

Deontological Ethics

◦ It states that people should ==adhere to their obligations and duties== when engaged in decision making when ethics are in play

◦ Definition of "good": Fulfillment of moral obligations, duties. A deontologist will always keep his promises to a friend and will follow the law

◦ One flaw is that there is no rationale or logical basis for deciding an individual's duties

◦ Deontological ethics focus on the intent behind an action (its "rightness") rather than on its outcomes. Provided you took the right decision, the outcome is less important (Good actions justify what ever happens)

Examples of Deontological Theories:

• Divine Command Theory

• "The Golden Rule": "Do to others as you want them to do to you"

• Natural Law and Natural Right theories

• The Non-Aggression Principle

• Kantian Ethics (categorical imperative): Act in such a way that you treat humanity.."

Consequentialist Ethics And Utilitarianism

◦ An action is morally right **if it produces a greater quantity of good or happiness than any other possible action**. "The greatest good for the greatest number of people"

◦ Definition of "good": Acting to promote best outcomes

◦ Don't look at the intent of an action, look at the consequences. This provides a clear contrast with Deontological ethics

◦ Focus on the goals behind an action or decision, not the rules that determine it

◦ Ask the question "What is the greater good?" and respond to objections with "the ends justify the means"

◦ But consider – who is to decide what the greater good is? Is it fair to sacrifice the position of the minority so that the majority can benefit?

◦ Is the context or severity of an action not also relevant (e.g. is it right that some should die to save others?)

◦ Should data privacy be sacrificed for the "greater good of progress"

If Batman would make an exception of his "No killing rule", just this time, wouldn't that help make the world a better place?
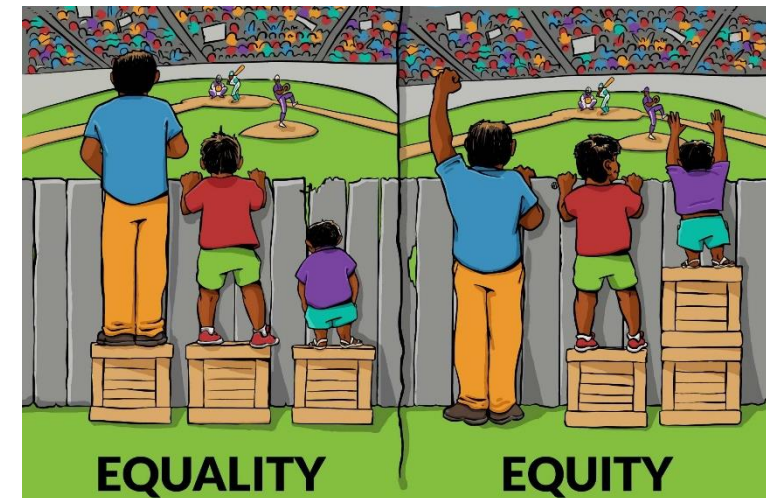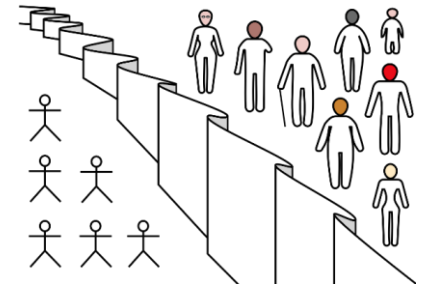
Social Justice based ethics

John Rawls (1921-2002) and the "veil of ignorance"

◦ These also focus on the "common good" but identify the position of the weakest in society as a measure of the common good (that is those whose interests would most likely be less represented because of status, wealth, health etc)

◦ Societal welfare can only therefore be judged by the welfare of its citizens who are in the weakest position.

◦ Those who are not disadvantaged should sacrifice some happiness overall to assure that the distribution is "just"

◦ John Rawls (A Theory of Justice, 1971) argued that the basic rules governing society should be designed to benefit most those least well off. Others (Gauthier, Morality by Agreement, 1986) have argued that, at a minimum, any social policy should not improve the condition of those already better off by making those already worst off worse off yet

  ◦ How is an action likely to affect their ability to live a good life for those least advantaged in a society?

  ◦ Do special measures have to be implemented to ensure that their interests are taken into account?

EQUALITY   EQUITY

Ethics in the "real world" (1/2)

Theories of Ethics

- Utilitarianism-based ethics: An action is morally right if it produces a greater quantity of good or happiness than any other possible action. "The greatest good for the greatest number of people"

- Rights-based ethics: Individuals have rights that should not be sacrificed simply to produce a net increase in the collective good.

- Relativism: Maintain that truth is subjective, merely a matter of opinion (cultural or personal).

- Virtue-based ethics: Is concerned with a person's motivation for action and not with the action itself. Instead of defining moral rules as obligatory duties, the emphasis lies on the individual to develop good habits of character based on these rules, this theory emphasizes moral education.

Example: A company is behind on production due to this Covid19 situation. Should management force employees to work on Saturday just to get caught up?

Ethics in the "real world" (2/2)

Example: A company is behind on production due to this covid19 situation. Should management force employees to work the weekend just to get caught up?

Exercising
YOUR ETHICS
Bringing Moral Strength to Business

Approach:

- Utilitarian based
- Rights based approach
- Relativist based
- Virtue based

Outcomes:

- Mngt <u>would</u> mandate Saturday work, a greater number of customers would benefit from having the service

- Mngt <u>would not</u> mandate Saturday work, against the employees' rights

- Mngt <u>would not</u> make the employees work on Saturday, if manager were in employees' position, he wouldn't want to work

- Mngt <u>would</u> make the employees work on Saturday, the strong work culture of the company is very centered around maintaining production
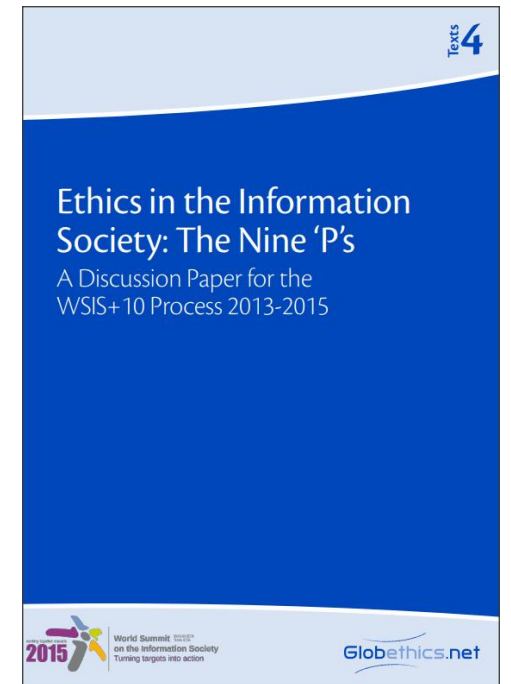
Fundamental ethical values (1/2)

Fundamental values for the knowledge societies are:

1. **Justice/equity**: Every individual has an inalienable dignity and is entitled to equal rights; deep respect for each other cultivates justice; fair and equal access to information enables members of civil society to reach for bilateral understanding.

2. **Freedom/Agency**: Human dignity calls for the development of various freedoms: in the Internet context, for example, the freedom of expression, of beliefs and of access to information might conflict. As a consequence, freedom, equality and responsibility must balance each other.

3. **Care and compassion**: A capacity for empathy and respect leads to solidarity and reciprocal support.

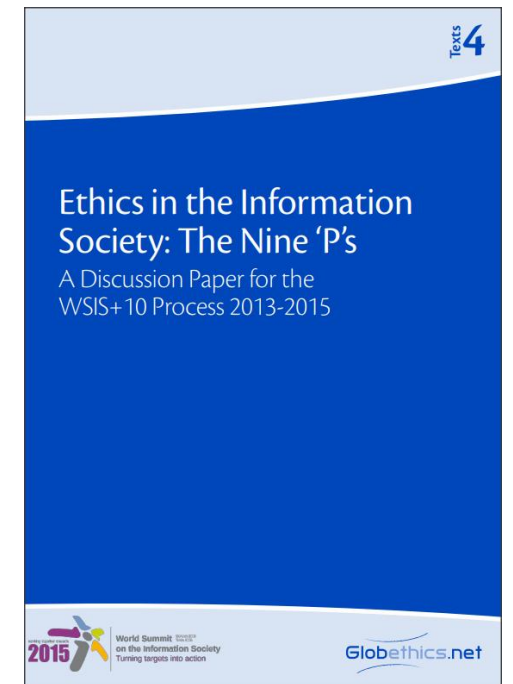Source: Ethics in the Information Society: The Nine "P" s. (2013)

Texts 4

Ethics in the Information Society: The Nine 'P's
A Discussion Paper for the WSIS+10 Process 2013-2015

2015 World Summit on the Information Society
Turning targets into action

Globethics.net

Fundamental ethical values (2/2)

5. **Participation**: The right and ability to participate in societal life and in important decision-making processes are core values.

6. **Sharing**: The sharing of information and knowledge in the Internet context enables and leads to sustainable relationships between human beings, and, as a result, strengthens communities.

7. **Sustainability**: In the long term, sustainable projects are significant for the protection of a viable environment for all human beings.

8. **Responsibility**: Assuming accountability for one's own actions is a core requirement in a societal setting. The level of responsibility must correspond to the levels of the individual's power, capacity and capability

Source: Ethics in the Information Society: The Nine "P" s. (2013)

Texts 4

Ethics in the Information
Society: The Nine 'P's
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… and yet, ethics in the business world …

Several trends have increased both the risks of and the potential negative impact of inappropriate or unethical behaviour in business. Why?

- Globalization creating complex work environments
- Increased competition mean organizations challenged to maintain profits / revenue
- New services and products enhance capacity for negative consequences for certain groups
- Heightened vigilance by stakeholders:
  - Employees
  - Shareholders
  - Regulatory agencies
  - Researchers!

Former Cambridge Analytica chief receives seven-year directorship ban

Alexander Nix handed penalty for 'potentially unethical' behaviour linked to scandal

▲ Cambridge Analytica's former chief executive Alexander Nix has been barred from acting as a company director for seven years. Photograph: Tolga Akmen/AFP/Getty Images

Alexander Nix, the former boss of Cambridge Analytica, has been banned from serving as a company director for seven years over "potentially unethical" behaviour linked to his position at the centre of a global scandal.

"Principle-based" ethics

We build on the discussion of sources to consider ethics for data systems based on first principles.

We know that it is unlikely that any set of rules can cover every eventuality especially given the pace at which technology evolves. To do this we consider

- The application of Ethics as part of a broad perspective of IT as being part of a broader "Socio-technical" system particularly in related to how we might approach an **ethics impact assessment**
- The application of ethics as part of a **broader research approach.** (This will be particularly relevant to the course project that asks students to review these issues in relation to their own work).

What are Information Technology (IT) ethics?

IT ethics is the study of the ethical issues arising out of the use and development of electronic technologies.

Its goal is to identify and formulate answers to questions about the moral basis of individual responsibilities and actions, as well as the moral underpinnings of public policy.

IT ethics raises new and unique moral problems because IT affects not only how we do things but how we think about them, it challenges some of the basic organizing concepts of moral and political philosophy such as property, privacy, the distribution of power, basic liberties and moral responsibility."

Nissenbaum *Information Technology and Ethics* (1998)

Tech

Uber's self-driving operator charged over fatal crash

🕐 16 September

REUTERS

The self-driving Volvo hit a pedestrian at 39mph, despite the presence of a safety driver

Recall: "the context for IT ethics"

"...the use of information technology in society is creating a rather unique set of ethical issues that requires the making of new moral choices on the part of society and has spawned special implications for its members. Technology itself is not the only, nor necessarily the most responsible, cause of these issues. All ethical questions arise initially out of human agency. Technology, due to its capability to augment mental and physical powers of human beings, does stand in the role of co-conspirator. The lure of power-enhancing capabilities makes technology an inducer of sorts, a necessary but not sufficient underpinning to many of the ethical issues we face today."

Mason "Applying Ethics to Information Technology Issues" (1995) 38 Communications of the ACM 55

Recall: "the context for IT ethics"

"…the use of information technology in society is creating a rather ==unique set of ethical issues== that requires the making of ==new moral choices== on the part of society and has spawned special implications for its members. Technology itself is not the only, nor necessarily the most responsible, cause of these issues. All ethical questions arise initially ==out of human agency==. Technology, due to its capability to augment mental and physical powers of human beings, does stand in ==the role of co-conspirator==. The lure of power-enhancing capabilities makes technology an inducer of sorts, ==a necessary but not sufficient== underpinning to many of the ethical issues we face today."

Mason "Applying Ethics to Information Technology Issues" (1995) 38 Communications of the ACM 55

"This discovery of yours will create forgetfulness in the learners' souls, because they will not use their memories; They will trust the external written characters and not remember of themselves."
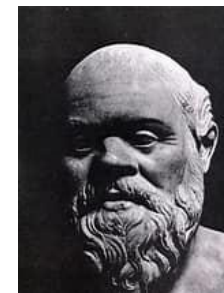
Socrates (469-399 B.C.) on the latest Greek technology – Writing!

Information Technology and socio-technical systems

An Information technology system requires the use of computers to store, retrieve, transmit, and manipulate data or information.

A **socio-technical system** (STS) is one that considers requirements spanning hardware, software, personal, and community aspects.

It implies an understanding of the **social** structures, roles and rights (from the legal and **social** sciences) to inform the design of **systems** that involve communities of people and **technology**.
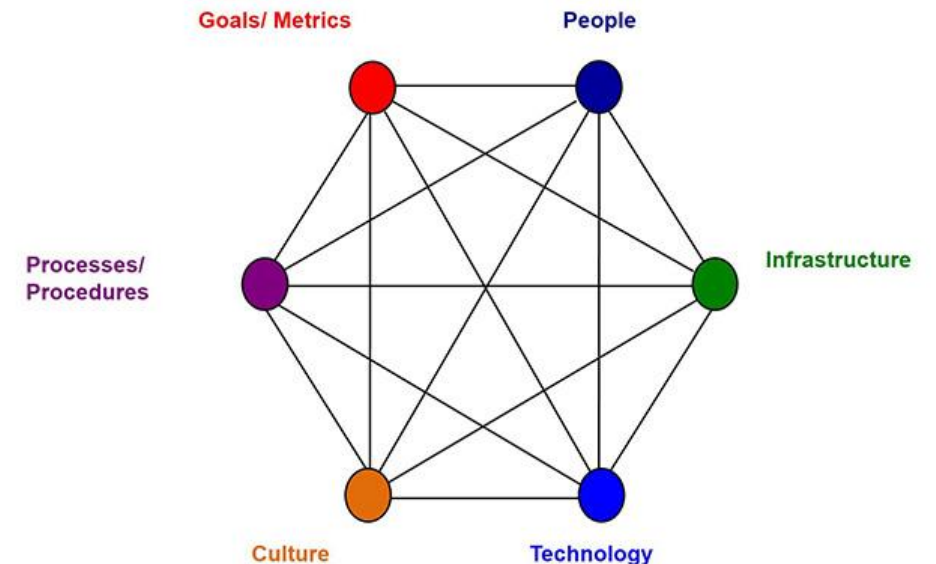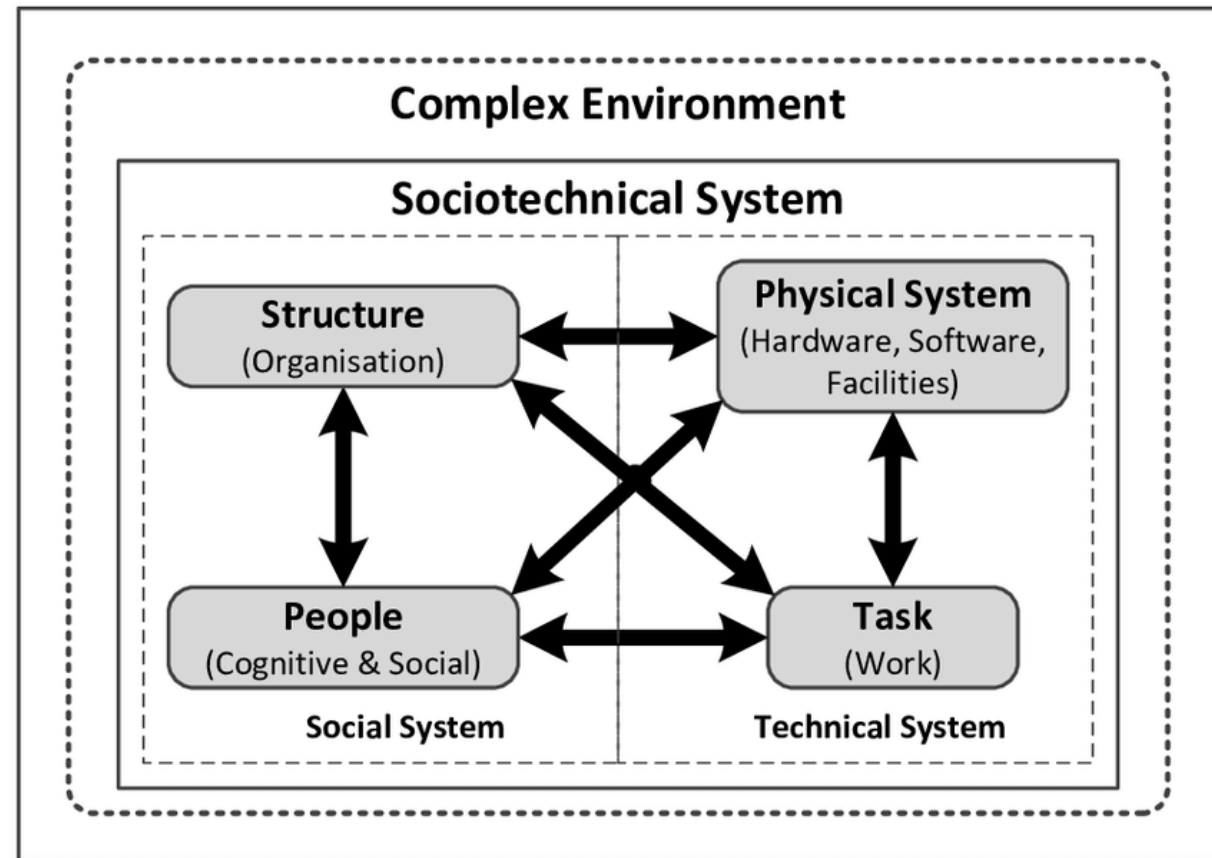
Modelling Complex Socio-Technical Systems

Bostrom and Heinen's model

Technical system
- ◦ Technology
- ◦ Business processes and tasks

Social system
- ◦ Management practices
- ◦ Organization culture
- ◦ People (cognitive and social behaviour)

Complex Environment

Sociotechnical System

Structure (Organisation)

Physical System (Hardware, Software, Facilities)

People (Cognitive & Social)

Task (Work)

Social System

Technical System

Bostrom, R.P. & Heinen, J.S. 1977. MIS problems and failures: A socio-technical perspective. Part I: The causes. MIS Quarterly, 1(3), pp. 17.

Socio-Technical Systems Illustration

STS are systems that include technical systems but also operational processes and people who use and interact with the technical system. Socio-technical systems are governed by organisational policies and rules.

Illustration:
- Software engineers in Silicon Valley may build a software with all sorts of bells and whistles expecting everyone to be tech-savvy.
- People are in fact elderly and unaccustomed to the interface
- That's the reason we are interested not only in technical dimension but also domain of Socio-technical systems

Improving organisational ethics

Data Governance

- Roles and responsibilities: Appoint corporate ethics officer
- Board of Directors to set and model higher level of ethical standards
- Establish a corporate code of ethics

Data management

- Undertake social audits
- Employees should take ethics training
- Employee appraisals and recruitment to include ethical criteria
- Ensure an ethical work environment

Source: adapted from Reynolds (2019)

Research ethics, data management and practical implementation

Research Ethics

"**Research** is a formal, systematic application of the scientific approach to the study of a problem to discover new information or expand and verify existing knowledge"

Different ethical emphasis between the protection of the subject of the research and the general advancement of knowledge

Advancement of Knowledge | Protection of Subject Welfare/ Rights

So it's "just grabbing the data" (?)

Authors showed that most **researchers adopt a "personal ethics"** approach to decision-making about the use of social media (SM) sites as a source of data for research

"For one computer scientist mining data for aggregation and data modelling, data was generally thought of as **usable without the need for any form of permission**: 'the idea of just grabbing the data, maybe six months, maybe potentially years after it was written, **I don't think that requires ethical approval or necessarily the consent of the people involved'**" (researcher 9)

Samuel, G., Derrick, G. E. and van Leeuwen, T. (2019) 'The Ethics Ecosystem: Personal Ethics, Network Governance and Regulating Actors Governing the Use of Social Media Research Data', *Minerva*. Springer Netherlands, 57(3), pp. 317–343. doi: 10.1007/s11024-019-09368-3.

Why Be Concerned About Ethics In Research?

If the objective of research is to "discover new information or expand and verify existing knowledge" it is important when conducting research involving people that this knowledge does not come at the expense of their welfare or rights.

Research ethics provide a guideline or set of principles that support researchers in conducting research so that it is done justly and without harming anyone in the process.

It is the duty of the researcher to ensure they are carrying out their research project in line with established ethical standards.

Every step of the research project, from formulating your research question to publication, needs to be informed by ethics to ensure integrity of the project.

Ethics Consideration

To be considered when your project falls into one scenario or both of them

Scenario 1
Human participants are involved in your study • Requirement specification stage • App Interface design feedback • Evaluation and Testing stage • Surveys and Interviews • Etc.

Scenario 2
Secondary Dataset(s) is used in your study • Data is/was collected by someone • Data is taken from a web site(s) • Data is provided by a company • Etc.

- **Primary data** – data collected by the investigator conducting the research/work (e.g. measurements, interviews, tests)

What is a human participant?

"A living individual about whom an investigator (professional or student) conducting research obtains;

○ 1.Data or

○ 2.Identifiable private information

Through intervention or interaction with the individual."

Universal Guiding Ethical Principles for researchers

1. Respect Others' Autonomy

2. Free and informed consent

- Information,
- Voluntariness and
- Comprehension

3. Veracity

4. Respect for Vulnerable Persons

5. Privacy and Confidentiality

6. Justice and Inclusiveness

7. Consider Harms and Benefits

- Minimising Harm (Non-maleficence)
- Maximising Benefit (Beneficence)

Practical implementation of Ethics in Research

BEFORE Your Research
- Create a Data Management Plan (DMP)
- Create Data
- Make your Data FAIR

DURING Your Research
- Store & Secure your Data
- Create Metadata
- Gain Informed Consent

AFTER Your Research
- Share your Research Data
- Preserve your Research Data
- Licence your Data

https://libguides.ucd.ie/data/intro

Ethical Principles: <u>**Before**</u> The Research Process

What are the **ethical strengths and limits of the methods**?

Have the **data been used ethically** in a similar context before?

Are the methods respectful of your respondents' capacity and willingness to participate? Some methods will work better with some groups than with others.

Are there any **potential unintended consequences of your research**, e.g. disclosures of sensitive information, that may arise through those methods, potentially causing stress or embarrassment?

Do the methods proposed fit with the ethics principles mentioned earlier? If not, can the exception be justified? Is what you are proposing to do justifiable in terms of the benefits, risks and harms of your research?

Sampling

Selecting samples or **groups of people to study** is one of the first tasks in designing your study, and the first ethics question you face in sampling is **who you include, or exclude.**

- You should be clear about why the people you want to study need to be involved.
- You should also reflect on who is left out of your study, and why.

Your sample will often determine which ethics committee you need to go to, and who you need to seek permission from, so it is critically important to think through the ethical implications of the sampling strategy you develop.

If your sample includes particular groups in the population, such as children and young people, or vulnerable adults (a person aged 18 years or over who may require assistance to care for themselves, or protect themselves from harm or from being exploited)

You will have additional requirements and considerations to address; for example getting **consent** from guardians, as well as the participants.

Information & Consent

To recruit potential participants, you need to provide them with information about your project, in order for them to be able to give you their fully **informed consent**.

Informed consent comprises three major elements:

- **Information**-When providing information researchers must ensure that participants are given sufficient detail about the nature of the research and the procedures involved; the information should highlight the objectives of the study, and any potential risks and benefits.

- **Voluntariness**-Consent must be freely given and may be withdrawn at any time. Undue influence may take the form of inducement or authority over prospective participants.

- **Comprehension** -Voluntary participation implies that participants make an informed choice while informed consent assumes that the information given is accurate. Both principles are underpinned by the principle that participant understands what it is they are being asked to participate in.

Ethical Principles: <u>**During**</u> The Research Process

Ethical issues of using group-based methods:

- Participants should be **recruited ethically** by providing them with the appropriate information about your research so that they can make an informed decision.

- Researchers need to be aware of the risks associated with research methods that allow for unpredictable interaction between participants or when potentially sensitive topics are being investigated.

- There is a **risk of limited confidentiality** when participants participate in the research process as they might accidently repeat sensitive information they learn about other participants to those not involved in the project.

- There is also a risk that **participants may overshare or contribute sensitive information during the data collection process** that may put them in danger of being ridiculed by their peers later on.

Managing Your Data

Dealing with data is a key element of research ethics, regardless of whether you are collecting new data, or if you are using existing data for secondary analysis or review

Data management is also increasingly highlighted by funders and research ethics committees as an explicit priority for researchers

In part this reflects the legal requirements of the GDPR, but this concern is fundamentally rooted in key ethics principles, about the anonymity and confidentiality that participants are promised when they give their informed consent

Anonymizing Your Data

Remove direct identifiers, e g personal information such as names and addresses

Aggregate or reduce the precision of variables that might be identifiable, e g recode postcode or neighbourhood data to Dublin North, Dublin South Galway urban, Galway rural

Generalise text variables to reduce identifiability

Restrict continuous variables to reduce outliers

Pay particular attention to anonymising relational data, for example, some anonymised variables may become identifiable when considered in combination, combining location with special educational needs

Be aware of case studies where research results have been "de-anonymized" (see case study on Moodle Sweeney, Latanya (2000) *"Simple Demographics Often Identify People Uniquely"*

Data Storage And Security

Whether you are collecting new data or accessing existing data, you need to consider:

Your planning should take account of what you need to do with hard copies, such as, paper notes of interviews; computer files with anonymised data that are not identifiable; and computer files with personal or identifiable data.

Data Storage and Security

Files -including computer files -that contain personal or identifiable data (such as names) come under the terms of the Data Protection Act.

If your research involves data that comes under the remit of the GDPR -and most research does -then it is a good idea to check with the Data Protection Officer in your organisation, to see if there are any standard protocols you should be following.

Computer files including those that have been anonymised still need to be held securely and can only be shared according to the terms of your consent from participants. Thus -for example -you need to get prior consent from participants if you plan to archive data for use by other researchers.

These files need to be encrypted or password protected, and only accessed by agreed members of the team.

Particular care needs to be taken if you are sharing files within the research team -e.g., on shared computer drives, or by email -or if you are transferring personal data beyond the research team (e.g. if a gatekeeper is giving you a list of contacts).

Ethics Principles: <u>After</u> Research

Data sharing and long-term preservation

Data should be made "as open as possible, as closed as necessary".

Think about sharing data before you begin your project, do not share what was not authorised.

The length of time you store data depends on the nature of the research project and the resultant data (most researchers will store data for at least 5 years after final publication)

A Data Repository allows researchers to upload and publish their data, thereby making the data available for other researchers to re-use
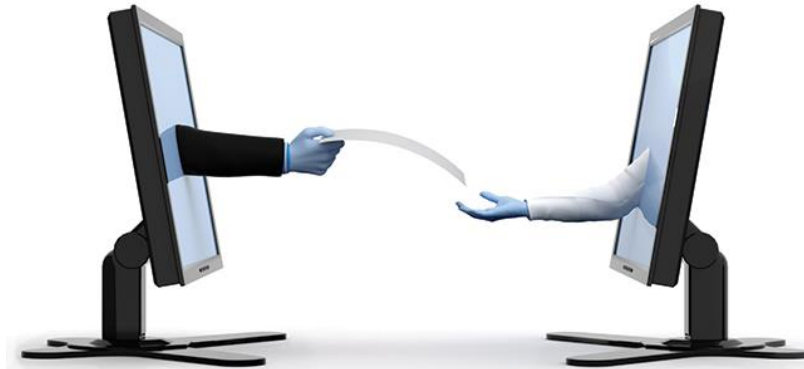
Conclusion

Source: https://theodi.org/wp-content/uploads/2021/06/AdobeStock_410183096-scaled.jpeg

Aims of presentation

Provide overview of module section ("Ethical Issues pertaining to data")

- Nature of ethics
- Branches of normative ethics
- Ethics in the "real world"
- IT and data ethics/socio technical systems

Research ethics, data management and practical implementation

Other issues covered in module section but not covered in presentation

- ACM code of ethics
- Ethical Impact Assessment
- Issues related to Health technology

Review

Any Comments or Questions?