Research Ethics

February 1st, 2022

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Agenda

- What is research ethics?
- Rights of the people involved
- The responsibilities of an ethical researcher
- Group discussion
- **15 min break**
- Scientific misconduct
- Design and creation projects
- Internet and research

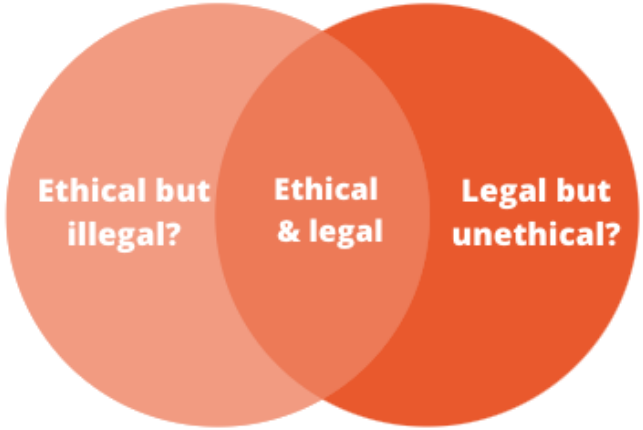
Research Ethics

"... a broad set of standards, values, and institutional arrangements that contribute to constituting and regulating research activities. These include the duty of honesty in research as well as responsibility to colleagues, other people, animals, the environment, and society in the widest sense"

National Committee for Research Ethics in Science and Technology (NENT, 2019)

Legal vs Ethical

- Research can be legal but not ethical.
- Institutions require that you consider the ethical aspects of your research project when you design it
- Different laws in different countries
  - Data protection rights of individuals (GDPR in EU)
  - Permissible to offer a prize?
  - Intellectual property rights (images, copyright of your thesis, software you produce etc.)
  - Restrictions on kinds of technology (unrestricted access to internet, encryption software, share technological innovations with other countries etc.)
  - The legal liability of software developers for the systems they create



Participants

6Ps of research – purpose, products, process, **participants**, paradigm, and presentation

People directly involved

The people you interview, observe, or ask to complete a survey

The researcher

You as a researcher, along with colleagues if you are in a research team

The academic community

Those who read, review, and learn from your research

Wider impact

People who may use or be affected by any computer-based product you design and create

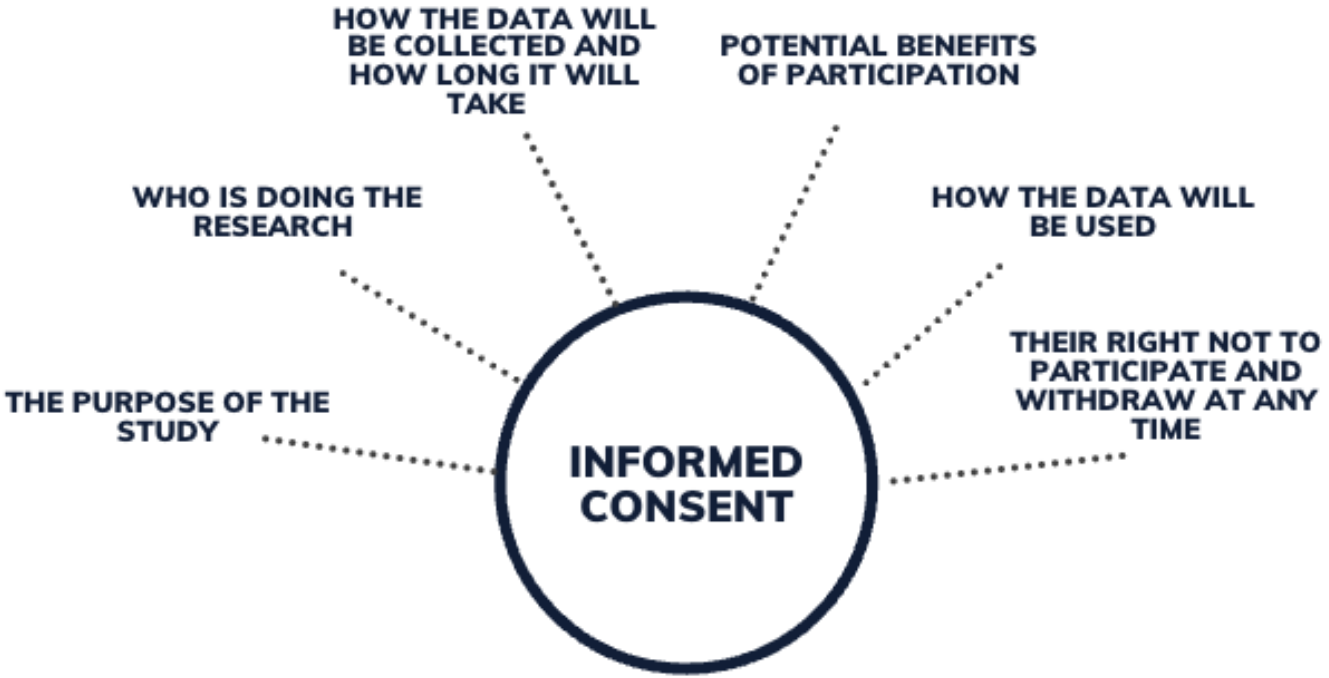
Rights of people directly involved

- Right not to participate
- Right to withdraw
- Right to give **informed consent**
- Right to anonymity
- Right to confidentiality

Participants should not suffer any adverse consequences – physiological, psychological, social, political, or economic

Example


THE MOST AMAZING, INCREDIBLE, REMARKABLE TRUE STORY EVER TOLD.
WINNER
WINNER
WINNER
THREE IDENTICAL STRANGERS


HOW THE DATA WILL BE COLLECTED AND HOW LONG IT WILL TAKE
POTENTIAL BENEFITS OF PARTICIPATION
WHO IS DOING THE RESEARCH
HOW THE DATA WILL BE USED
THEIR RIGHT NOT TO PARTICIPATE AND WITHDRAW AT ANY TIME
THE PURPOSE OF THE STUDY
INFORMED CONSENT

The responsibilities of an ethical researcher

- No unnecessary intrusion
- Behave with integrity
- Follow appropriate professional code of conducts
- No plagiarism
- Be an ethical reviewer

Client asks for a new computer system to be developed that enable covert surveillance of the organization's employees (secretly spying). What do you do?

LEGAL?

ETHICAL?

The responsibilities of an ethical researcher

- No unnecessary intrusion
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- No plagiarism
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Relevant Codes of Conduct

- ACM/IEEE-CS - Software Engineering Code of Ethics and Professional Practice
- NENT – Den nasjonale forskningsetiske komité for naturvitenskap og teknologi

- AoIR (Association of Internet Research)
- AIS (Association of Information Systems)
- APA (American Psychological Association)
- ASA (American Sociological Association)
- BCS (British Computer Society)

ACM/IEEE Code of Ethics

1. PUBLIC – Software engineers shall act consistently with the public interest.
2. CLIENT AND EMPLOYER – Software engineers shall act in a manner that is in the best interests of their client and employer, consistent with the public interest.
3. PRODUCT – Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.
4. JUDGEMENT – Software engineers shall maintain integrity and independence in their professional judgement.
5. MANAGEMENT – Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.
6. PROFESSION – Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.
7. COLLEAGUES – Software engineers shall be fair to and supportive of their colleagues.
8. SELF – Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession.

https://dl.acm.org/doi/10.1145/265684.265699

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NENT Guidelines

3 Research has a responsibility to contribute to greater global justice.

4 Researchers are responsible for conducting high-quality research characterized by **scientific integrity**, **truthfulness**, and **accountability,** and research institutions must create conditions that promote such practice.

8 Researchers must clarify the degree of uncertainty in their research and **evaluate the risk associated with the research findings.**

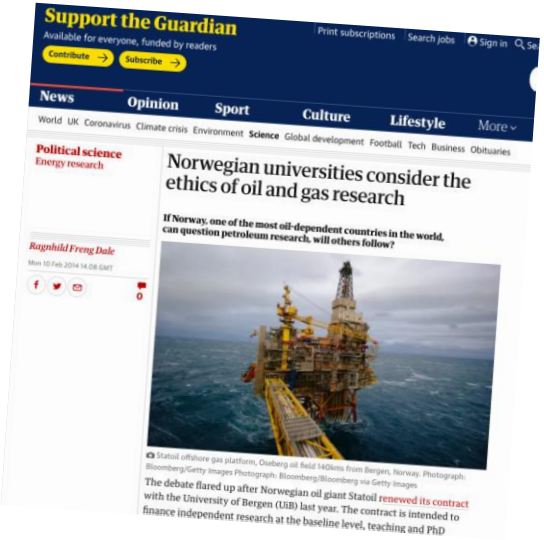
11 Researchers must protect the privacy of their research subjects.

Breakout rooms: group discussion (10 min)

Is research aiming at building autonomous weapon systems defensible from the research ethics perspective?

OR

Is extensive research collaboration with the industry aiming at extraction of petroleum defensible from the research ethics perspective?



Examples from Rune Nydal in IDT8000

NTNU

15 min

break

Scientific Misconduct

A serious problem in science?

"Scientific misconduct is defined as falsification, fabrication, plagiarism and other serious breaches of good scientific practice that have been committed willfully or through gross negligence when planning, carrying out or reporting on research."

(Act on ethics and integrity 2006)

Percentage in survey of U.S.-based scientists who reported having engaged in questionable research practices

15.5%	Changing a study under pressure from a funding source.
15.3%	Dropping data from analysis based on a gut feeling.
12.5%	Overlooking others' use of flawed or questionably interpreted data.
10.8%	Withholding details of methodology or results.
7.6%	Circumventing minor rules protecting human subjects.
6.0%	Failing to present data that contradicts one's own previous research.
1.7%	Unauthorized use of confidential information.
1.4%	Using another's ideas without permission or giving credit.
1.4%	Questionable relationships with students, subjects or clients.*
0.3%	Not properly disclosing involvement with firms whose products are based on one's own research.
0.3%	Ignoring major rules protecting human subjects.
0.3%	Falsifying research data.*

*Qualifies for prosecution under federal rules

NOTE: Not all categories in the study are shown.

Source: NTNU Lecture: Serious breaches and questionable research practices by Rune Nydal & https://www.nature.com/articles/435718b

Results of the Fanelli study (2009)

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2685008/

Admitted to have fabricated, falsified or modified data or results at least once –a serious form of misconduct by any standard

Approximately 34%, admitted other questionable research practices

Would report/challenge colleagues' scientific misconduct

Established principle: Honest mistakes is not scientific misconduct

- Vi har ikke grunnlag for å tro at vedkommende har prøvd å lure seg til en doktorgrad, sier viserektor for forskning ved Universitetet i Agder, Dag Gjerløw Aasland.

Religion- og etikkstipendiat tatt for fusk

Av Forskerforum
Publisert 5. desember 2012

Doktorgradskandidat blir fratatt graden etter at det er oppdaget 17 sider plagiat.

Stillinger

Se alle stillinger

Source: NTNU Lecture: Serious breaches and questionable research practices by Rune Nydal & http://www.forskerforum.no/religion-og-etikkstipendiat-tatt-for-fusk/

Plagiarised text - Original text (1/176)

In the view of Public interest theory, stimulated by market failure and especially monopolistic abuses by corporations, governments starts limiting corporate prerogatives and take control of some market activities. Until the early 1960s market failure was regarded as the motivating reason for regulatory intervention. Statutory regulation or public ownership was meant to eliminate or reduce inefficiencies generated by particular types of market failure (Majone 1996). Behind the notion of market failure is one of the most celebrated results of neo-classical economics, which has come to be known as the fundamental theory of welfare economics. This theorem states that, under certain assumptions, competitive markets lead to an efficient allocation of resources, that is, to a situation in which someone can be made better off without, at the same time, making someone else worse off. Such a situation is characterised as Pareto-efficient (or Pareto- optimal), after the Italian economist and sociologist Vilfredo Pareto (1848-1923) who first formalised the notion of economic efficiency. We speak of market failures when the conditions for the validity of the fundamental theorem are not satisfied, so that markets do not lead to efficient outcomes. There are several explanatory factors for market failure, some of the most common being monopoly power, negative externalities, information failures and inadequate provision of public goods[12]. As will be learned in the later chapters of

INTRODUCTION

Until the early 1960s the prevailing theory of regulation regarded market failure as the motivating reason for regulatory intervention. Statutory regulation or public ownership were supposed to eliminate or reduce the inefficiencies engendered by particular types of market failure. Behind the notion of market failure is one of the most celebrated results of neoclassical economics which has come to be known as the fundamental theory of welfare economics. This theorem states that, under some assumptions, competitive markets lead to an efficient allocation of resources, that is, to a situation where there is no rearrangement of resources – no possible change in production and consumption – such that someone can be made better off without, at the same time, making someone else worse off. Such a situation is said to be Pareto-efficient (or Pareto-optimal), after the Italian economist and sociologist Vilfredo Pareto (1848–1923) who first formalized the notion of economic efficiency.

We speak of market failures when the conditions for the validity of the fundamental theorem are not satisfied, so that markets do not lead to efficient outcomes. For example, in a perfectly competitive market, firms expand output to the point where price equals marginal cost – the cost of producing an additional unit of their product. However, a monopolistic firm, if unregulated, will curtail production in order to raise prices. By setting prices at levels other than the competitive level, the firm distorts resource allocation.

Source: NTNU Lecture: Serious breaches and questionable research practices by Rune Nydal

Regress of reviews ….

2004

Scientific Ph.d committee review:
Worthy Ph.D degree.

2010 -

Local committee investigating possible fraud:
Majority: Not misconduct – this is how it is done in our field

2012

The National Commission for the Investigation of Research Misconduct:
Majority: Misconduct & definitely plagiarism

2013

Appeal: Ministry established an (ad hoc) committee
Majority: Not misconduct but definitely plagiarism

Source: NTNU Lecture: Serious breaches and questionable research practices by Rune Nydal

Go to **www.menti.com** and use the code **8266 3964**

What actions should be taken?

1. Nothing. Nothing wrong was done
2. PH.D candidate should be punished for misconduct
3. Institution is to blame for bad training

Design and Creation projects & Ethics

- The result of the research brings its own ethical problems
- The researcher should ensure that the system is being used in ethical ways
- IT systems offer temptations for unethical (or unlawful acts)
  - Ease of access and copying: data collected for one reason can easily be used for another reason without permission from the user. Copyright or patent right can be copied without permission.
  - Privacy and anonymity: software that can guarantee the anonymity of perpetrators make it less likely that a wrongdoer will be caught.
  - New means of data gathering: Covertly observing using tiny digital cameras, keystroke monitors, website cookies and RFID tags without informed consent could be seen as unethical.

It is not solely up to the client or sponsor how a system is used!

Internet & Research

- New possibilities: email, blogs, Facebook groups, forums, comments sections, Twitter
- One thing is consent that their postings can be used by a researcher, the other thing is confidentiality – easy to search for the quote or the name in a forum
- GDPR – Genral Data Protection Regulation: enhance individuals' control and rights over their personal data.

As far as possible – treat people and your data in the same way as you would in offline research

Gebyr til Grindr

Datatilsynet har vedtatt et overtredelsesgebyr på 65 millioner kroner til datingappen Grindr for brudd på samtykkekravene i *personvernforordningen* (*GDPR*).

- Vår konklusjon er at Grindr har utlevert personopplysninger om brukerne til tredjeparter for adferdsbasert markedsføring uten rettslig grunnlag, sier Bjørn Erik Thon, direktør i Datatilsynet.

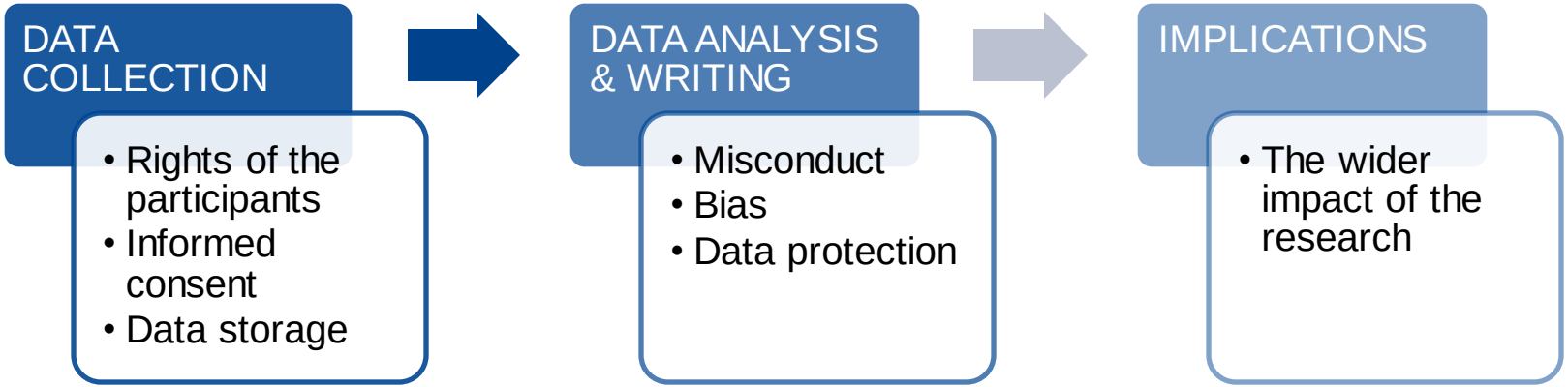
Grindr er en lokasjonsbasert datingapp som retter seg mot homofile og bifile menn, transpersoner og skeive. I 2020 klagde Forbrukerrådet Grindr inn til Datatilsynet. Bakgrunnen var at Grindr utleverte opplysninger om GPS-lokasjon, *IP-adresse*, mobiltelefonens annonserings-ID, alder og kjønn, i tillegg til at vedkommende er Grindr-bruker, til flere tredjeparter for markedsføringsformål. Med disse opplysningene kunne brukerne identifiseres, og tredjepartene kunne potensielt dele disse dataene videre. Forbrukerrådet mente utleveringen av personopplysningene var i strid med personvernforordningen.

https://www.datatilsynet.no/aktuelt/aktuelle-nyheter-2021/gebyr-til-grindr/

Qualitative VS Quantitative

- Datasets are not without ethical issues
  - Location based data
  - Bias
- Easier to be more aware of the rights of the participants when you are interviewing someone

Research Ethics



NTNU

THANK YOU

for participating in this lecture and good luck on your research projects !!