

# Ethical Issues in Network Measurement

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**Shehar Bano**  
Postdoc, InfoSec group  
University College London

**s.bano@ucl.ac.uk**  
**@thatBano**



Compass by Emmanuel Gamonez

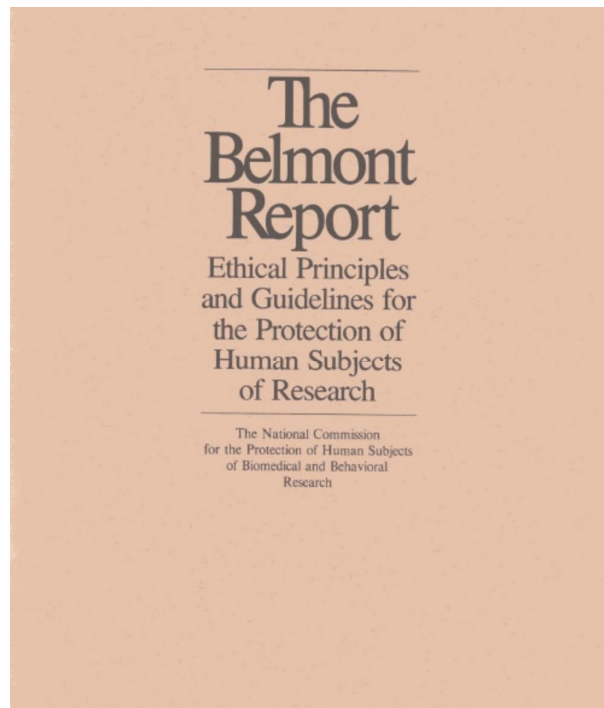
# Network Measurement

- Aka: Information and Communication Technology Research (ICTR)
- Measurements involving subjects connected via a network (e.g., human behaviour studies, malware analysis, censorship). See (\*) for example.
- Measurements can be
  - active or passive
  - user-side, server-side, or between them

(\*) <https://conferences.sigcomm.org/imc/2018/cfp/>

# The Belmont Report

- (1979) A seminal guide for ethical research in the biomedical and behavioral sciences



# The Menlo Report

- (2012) Ethics for ICTR research that has the potential to harm humans (directly or indirectly)



# Ethical Challenges

- Scale
- Speed
- Tight-coupling
- Decentralisation
- Spatial Distribution
- Opacity

# Ethical Guidelines:

## Respect for Persons

Principle	Application
Respect for Persons	Participation as a research subject is voluntary, and follows from informed consent; Treat individuals as autonomous agents and respect their right to determine their own best interests; Respect individuals who are not targets of research yet are impacted; Individuals with diminished autonomy, who are incapable of deciding for themselves, are entitled to protection.
Beneficence	Do not harm; Maximize probable benefits and minimize probable harms; Systematically assess both risk of harm and benefit.
Justice	Each person deserves equal consideration in how to be treated, and the benefits of research should be fairly distributed according to individual need, effort, societal contribution, and merit; Selection of subjects should be fair, and burdens should be allocated equitably across impacted subjects.
Respect for Law and Public Interest	Engage in legal due diligence; Be transparent in methods and results; Be accountable for actions.

# Ethical Guidelines:

## Beneficence

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# Ethical Guidelines: Justice

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Beneficence	Do not harm; Maximize probable benefits and minimize probable harms; Systematically assess both risk of harm and benefit.
Justice	Each person deserves equal consideration in how to be treated, and the benefits of research should be fairly distributed according to individual need, effort, societal contribution, and merit; Selection of subjects should be fair, and burdens should be allocated equitably across impacted subjects.
Respect for Law and Public Interest	Engage in legal due diligence; Be transparent in methods and results; Be accountable for actions.



# Ethical Guidelines:

## Respect for Law and Public Interest

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