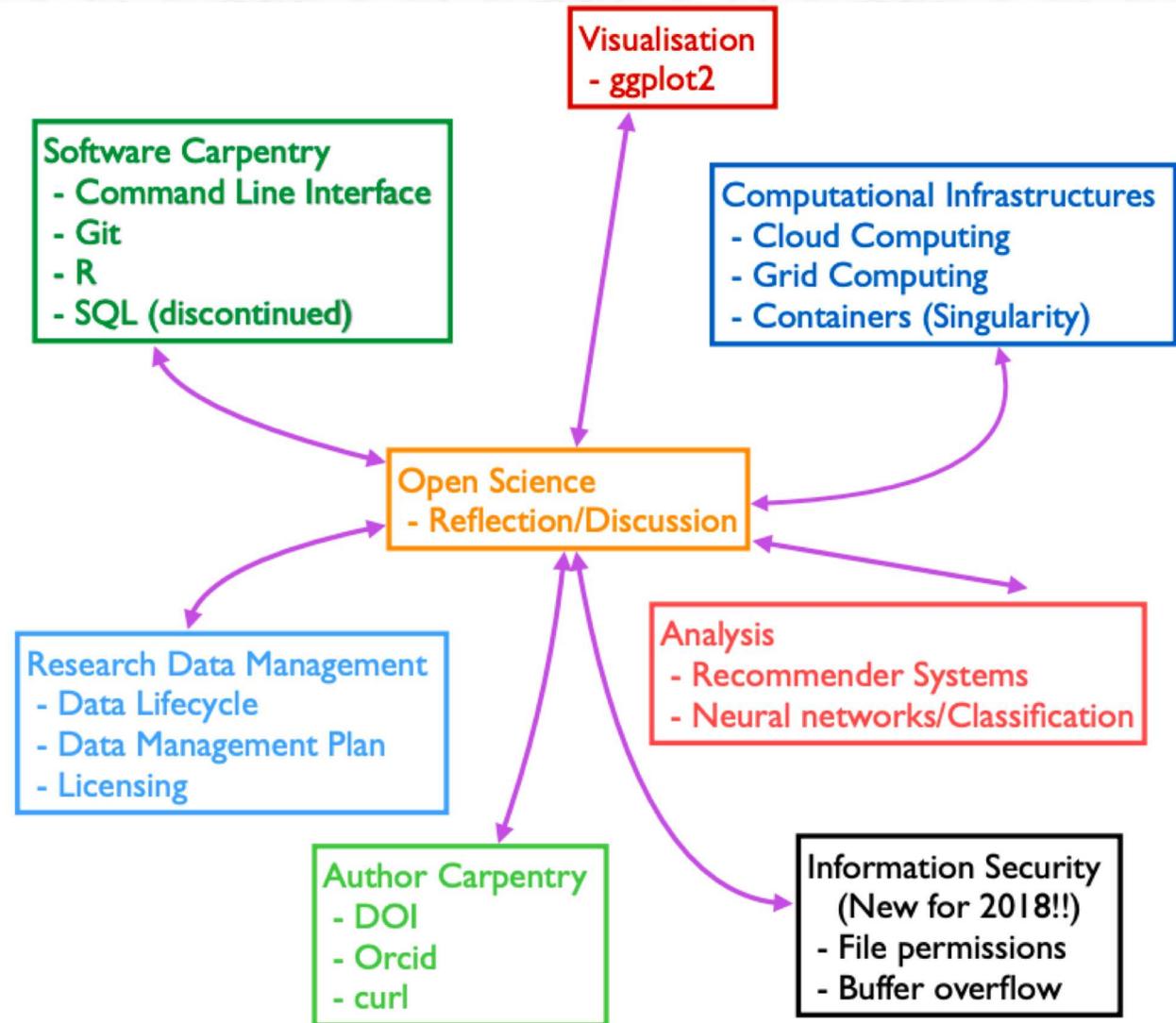# Open and Responsible Research 1
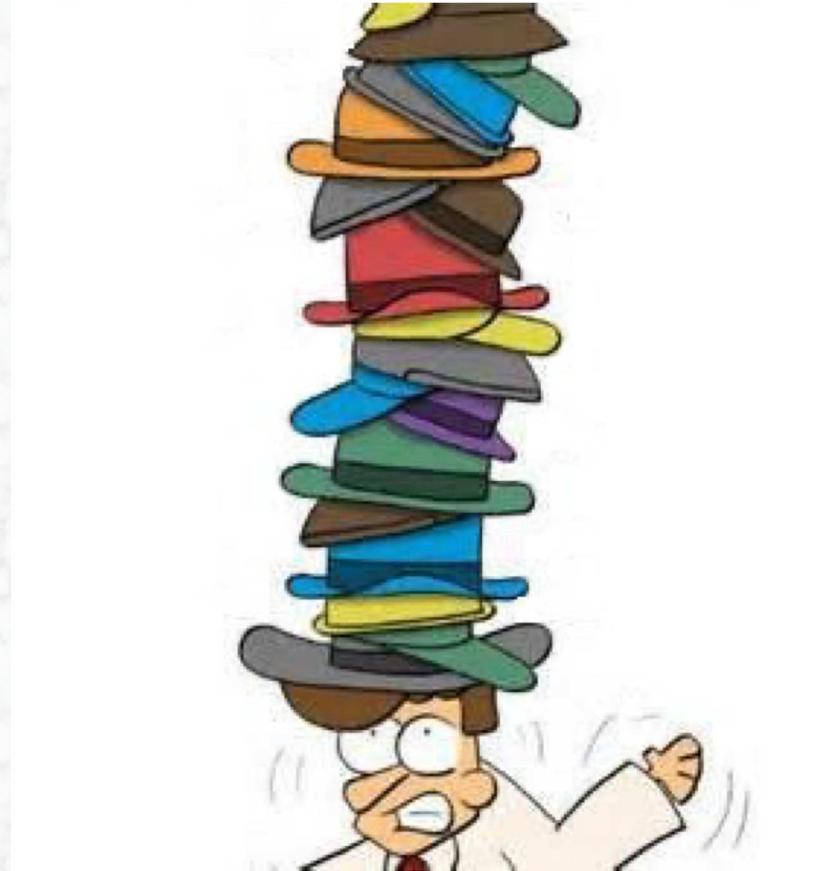## *Responsible Conduct of Research 1*

Louise Bezuidenhout
Emanuele Ratti

Why <u>ethics</u> in this summer school?

One researcher, many roles

- Data producer

- Data user and/or collaborator

- Author

- Employee

- Teacher/mentor

- Recipient of public funds

- Recipient of public trust

- Citizen/legally-obligated individual

Many roles means multiple responsibilities

- Data producer

- Data user and/or collaborator

- Author

- Employee

- Teacher/mentor

- Recipient of public funds

- Recipient of public trust

- Citizen/legally-obligated individual

Each of these roles implies responsibilities towards different communities

Responsibilities in a community of researchers

- Science is a **community of professionals** with **special responsibilities**

- What is a community of professionals?

- What is the **connection** between ethics, morality, and communities of professionals?

What is a (professional) community?

- "A community is a group of individuals united by a set of <u>commitments</u>, <u>values</u>, and <u>practices</u> that are institutionalized" (Kelly 2018, p 63)

- The **goals** of the community **shape** what the community **does**, and what the community **values**

- Ethics and professional communities are **intertwined**

- Example: <u>medical doctors</u>

What is a (professional) community?

- "A community is a group of individuals united by a set of commitments, values, and practices that are <u>institutionalized</u>" (Kelly 2018, p 63)

- Discussions on how goals should be **understood**, and which roles and responsibilities **derive** from them

- Example: <u>medical doctors</u>

What is a (professional) community?

- A community of professional is **necessarily ethical**, in the sense that it is internally shaped by **values**

- But communities of professionals should **not be** self-referential

- Professions can **either** contribute to **or** impair the **flourishing** of society **as a whole**

- Responsibilities of members of the community are shaped **both** by internal and external constraints
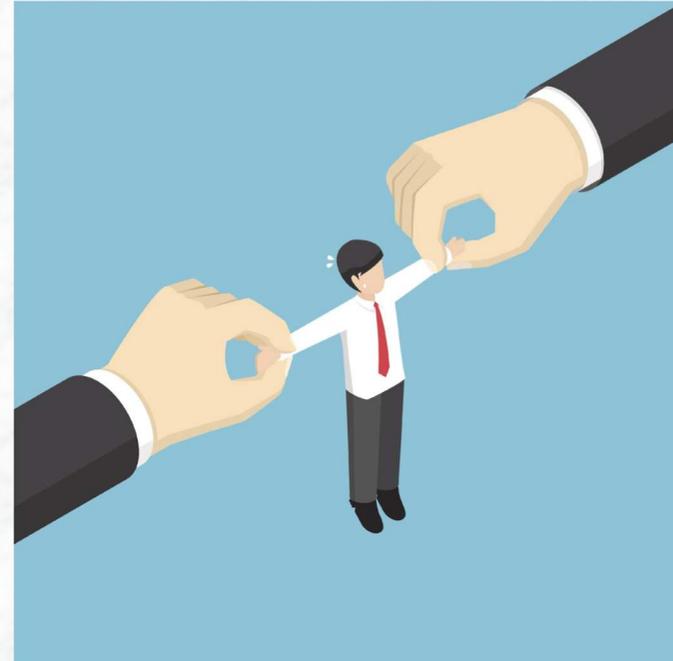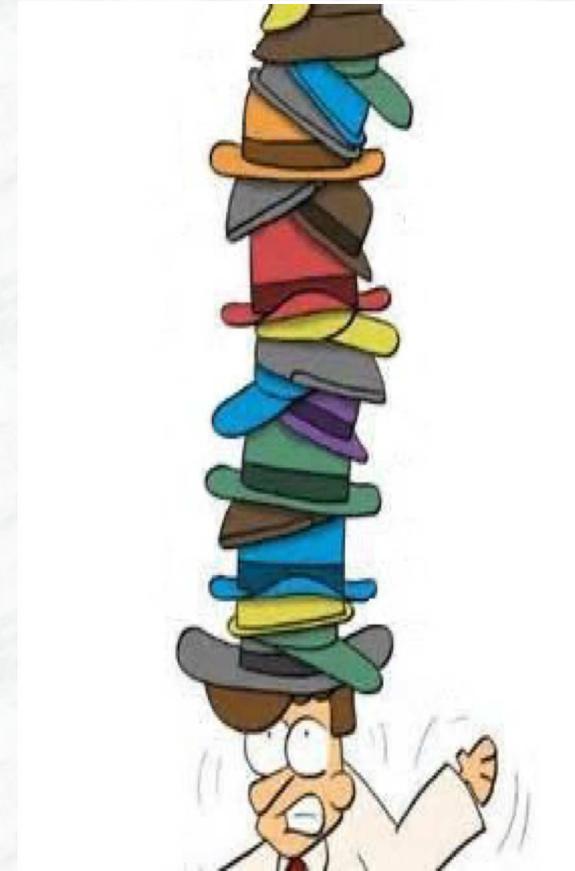
Many responsibilities

- Data user and/or collaborator

- Author

- Teacher/mentor

- Data producer

- Employee

- Recipient of public funds

- Recipient of public trust

- Citizen/legally-obligated individual

Values internal to the community

Societal values

Open and Responsible Research 1
Responsible Conduct of Research 2

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CODATA-RDA Data Science School

Responsible Conduct of Research

Responsible Conduct of Research (RCR)

- The discourse of RCR is often expressed in terms of **principles** (Shamoo and Resnik 2015)

- Honesty, objectivity, carefulness, credit, openness, confidentiality, protection of human dignity, professional responsibility, etc

- Beneficence, non-maleficence, respect for autonomy, justice, transparency, etc

Responsible Conduct of Research (RCR)

ACM Code of Ethics and Professional Conduct

- Principles are organized by specific communities into **codes of conduct** (e.g. ACM code of conduct)

1. GENERAL ETHICAL PRINCIPLES.

1.1 Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing.

1.2 Avoid harm.

1.3 Be honest and trustworthy.

1.4 Be fair and take action not to discriminate.

1.5 Respect the work required to produce new ideas, inventions, creative works, and computing artifacts.

1.6 Respect privacy.

1.7 Honor confidentiality.

2. PROFESSIONAL RESPONSIBILITIES.

2.1 Strive to achieve high quality in both the processes and products of professional work.

2.2 Maintain high standards of professional competence, conduct, and ethical practice.

2.3 Know and respect existing rules pertaining to professional work.

2.4 Accept and provide appropriate professional review.

evaluations of computer systems and their impacts, including analysis of possible risks.

2.6 Perform work only in areas of competence.

2.7 Foster public awareness and understanding of computing, related technologies, and their consequences.

2.8 Access computing and communication resources only when authorized or when compelled by the public good.

2.9 Design and implement systems that are robustly and usably secure.

3. PROFESSIONAL LEADERSHIP PRINCIPLES.

3.1 Ensure that the public good is the central concern during all professional computing work.

3.2 Articulate, encourage acceptance of, and evaluate fulfillment of social responsibilities by members of the organization or group.

3.3 Manage personnel and resources to enhance the quality of working life.

3.5 Create opportunities for members of the organization or group to grow as professionals.

3.6 Use care when modifying or retiring systems.

3.7 Recognize and take special care of systems that become integrated into the infrastructure of society.

4. COMPLIANCE WITH THE CODE.

4.1 Uphold, promote, and respect the principles of the Code.

4.2 Treat violations of the Code as

https://www.acm.org/code-of-ethics

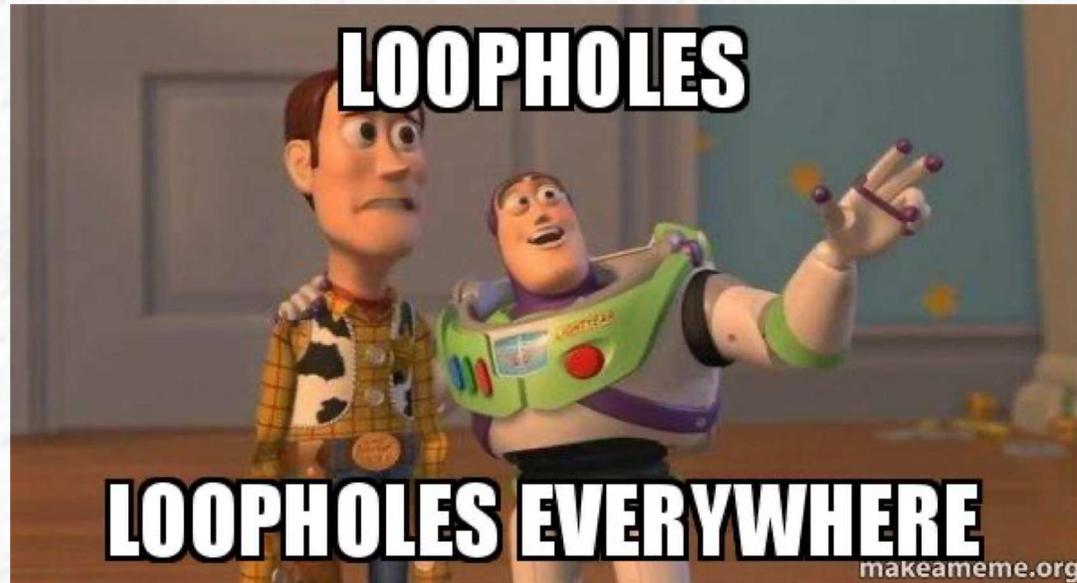# Responsible Conduct of Research (RCR)

- Codes of conduct must be **handled carefully**

- They can work as **external constraints** for minimal ethical standards

- This is the **compliance paradigm** of professional ethics

Responsible Conduct of Research (RCR)

- The compliance paradigm comes with **costs**:

1. It ignores the **character** of professionals

1. It promotes an idea of 'ethics' as **external** and **alienating** element

1. It encourages **loophole reasoning**

Responsible Conduct of Research (RCR)

- Principles and codes of conduct should be seen as aspirational

- They are **blueprints** for thinking about the connections between everyday practice and ethics

- They are **concrete products** of the discourse internal to the community to **define and develop** its goals, values, and commitments

- Codes of conduct are "statements of **communal self-understanding**" (Kelly 2018 p 71)

Responsible Conduct of Research (RCR)

- Principles and codes of conduct should be seen as aspirational

- Principled statements point to **general obligations**

- Most important, they enable the identification of **character traits (virtues)** which cultivation should be promoted by the community

Example: The ACM Code of Conduct

- From the Preamble:

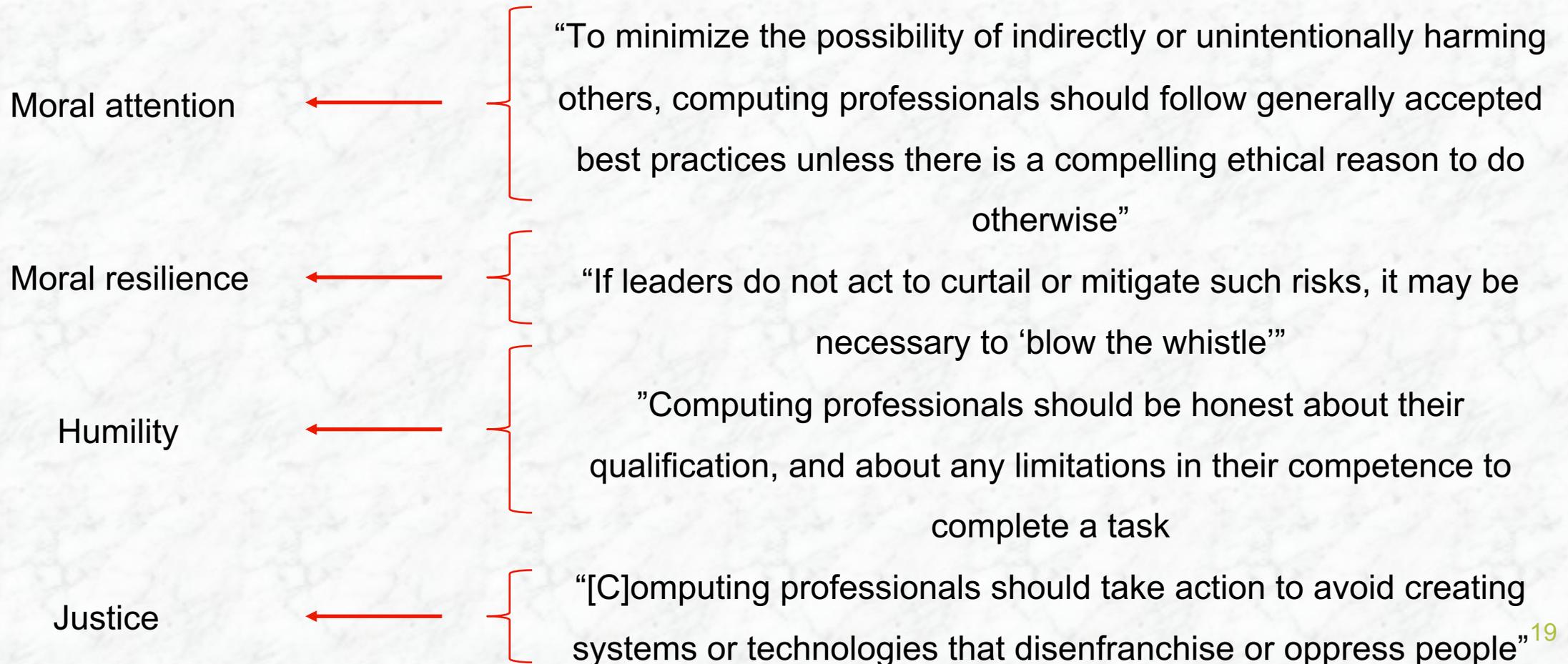"The ACM Code of Ethics and Professional Conduct (…) expresses the conscience of the profession" → The Code is aspirational

"The Code is not an algorithm for solving ethical problem; rather, it serves as a basis for ethical decision-making" → General obligations

"Open discussions about ethical issues promote this accountability and transparency" → Communal self-understanding

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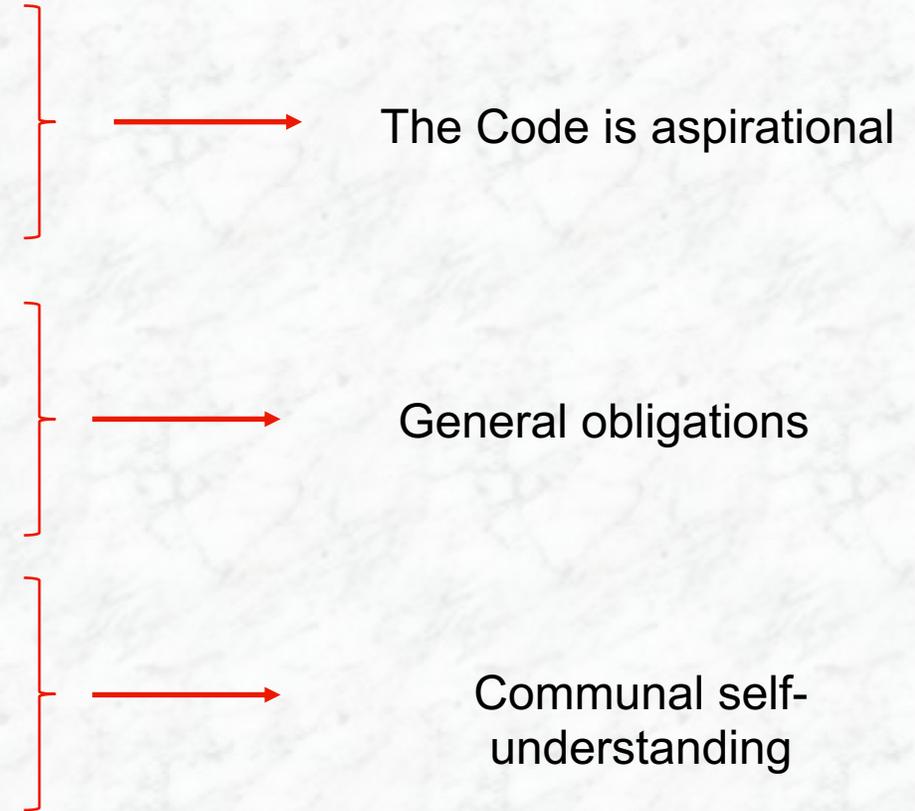
Example: The ACM Code of Conduct

- From General Ethical Principles:

Moral attention ← "To minimize the possibility of indirectly or unintentionally harming others, computing professionals should follow generally accepted best practices unless there is a compelling ethical reason to do otherwise"

Moral resilience ← "If leaders do not act to curtail or mitigate such risks, it may be necessary to 'blow the whistle'"

Humility ← "Computing professionals should be honest about their qualification, and about any limitations in their competence to complete a task

Justice ← "[C]omputing professionals should take action to avoid creating systems or technologies that disenfranchise or oppress people"

Example: The ACM Code of Conduct

- From Professional Responsibilities"

"As appropriate to the context and one's abilities, computing professionals should share technical knowledge with the public, foster awareness of computing, and encourage understanding of computing" → Inclusiveness and transparency

- From the Professional Leadership Principles:

"Technical organizations and groups affect broader society, and their leaders should accept the associated responsibilities" → Ethics is unavoidable

"Leader should ensure that opportunities are available to computing professionals to help improve their knowledge and skills in professionalism, in the practice of ethics, and in their technical specialties"" → Fostering the cultivation of virtues

RCR as a Collaborative Endeavour

Institutional Responsibilities

- Education

- Infrastructures that **support** responsible research

- Capacity for **dealing with** concerns/whistleblowing/misconduct

- Engagement and compliance with **inter/national regulation**

RCR: Changing Practices and Environments

- Understanding of responsible research, researchers and research contexts **is changing**

- Individual responsibility – expect compliance with regulations, **active engagement** with RCR behaviours

- Institutions/National/International systems – expect i**nvestment** in RCR-supporting infrastructures, develop **systems of educating**, monitoring and mediating

- **International science community** – expect monitoring, support and capacity building

RCR as an Extended Form of Research Ethics

Is what I'm doing living up to these ideals?

Can I make things better?
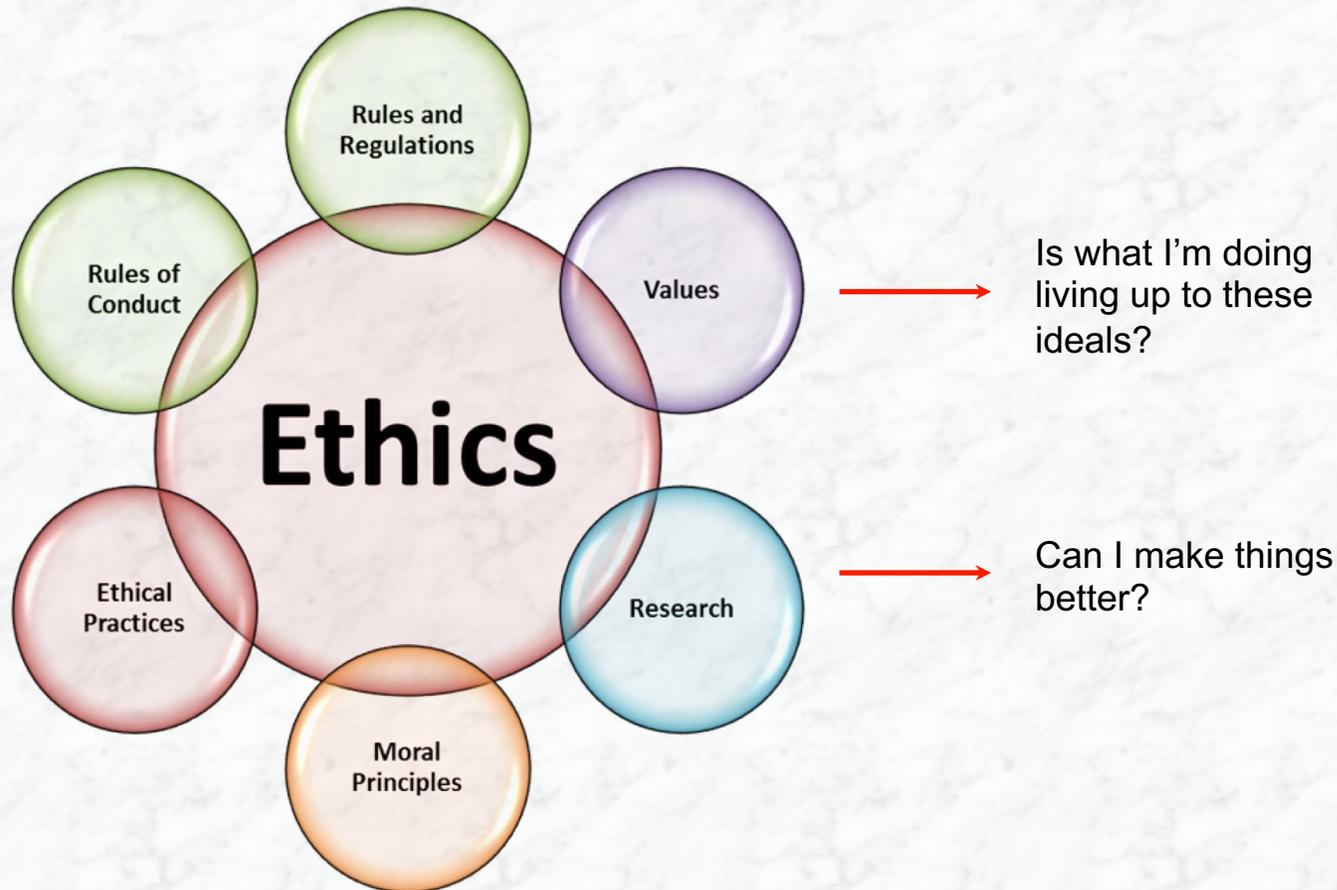
Extending the Reach of Ethics in Research

- Produce verifiable and re-usable data

- Protect scientists and societies from harm

- Enable collaboration

- Embeds science within cultural/social priorities

Responsible Conduct of Research (RCR)

- Researchers belong to (scientific) communities

- Communities are shaped by values, which come from:

    a) An internal discourse on the goals of the community itself

    b) Society at large, that the community must serve

- RCR is a discourse integrating both kinds of values

- RCR is usually synthesized in codes of conduct

- RCR is a collaborative endeavour, and it requires both individual and institutional efforts