A very brief primer on ethics in science.

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This material is derived from a unit on scientific ethics developed for the Dalhousie Science Scholars & Leaders Program by **Letitia Meynell** (Department of Philosophy, Dalhousie University).

Applied Ethics Primer – Simpl × +

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Applied Ethics Primer

A print version of this book is available from Broadview Press.

Letitia Meynell and Clarisse Paron

READ BOOK

Every applied ethics course requires some brief introduction, survey, or primer on ethical theory and moral decision-making. At the same time, spending too much time on argumentation and normative ethical theory can take precious course time away from the applied issues that are the focus of the course. This Applied Ethics Primer offers a concise introduction to both basic argumentation and normative ethical theory. The concepts discussed reflect the ethical theories that currently ground most professional ethics codes and debates in applied ethics. Somewhat more inclusive than many similar resources, this primer offers students a taste of the truly global history of ethics, while still being squarely focussed on providing practical tools for ethical decision-making. It is appropriate for any introductory applied ethics course.

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1. First ethical question

2. Second ethical question

3. Normalization of Deviance

1. First ethical question

What **should** I (or we) do?



when we focus on what others should do and not ourselves.

Not... 'What do I want to do?'

Not... 'What's easiest to do?'

Not... 'What do others want me to do?'

Not... 'What will I do?'

Not... 'What does the law require me to do?'



1. First ethical question: approaches

Focus on...

- Good (not bad) consequences
- Right action (duties)
- Right character (virtues)
- Relationships

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Focus on...

- Good (not bad) consequences
- Right action (duties)
- Right character (virtues)
- Relationships
 - Thinking about personal relationships required to function well.
 - Recognizing institutional/social power constraints.
 - Thinking about what a community needs to thrive.
 - Thinking about relationships to non-human life.

1. First ethical question: different "lenses"



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1. First ethical question: my "lenses"

My lens tends to focus on...

- Good (not bad) consequences
- Right action (duties)
- Right character (virtues)
- Relationships
 - personal relationships required to function well
 - Recognizing institutional/social power constraints
 - Thinking about what a community needs to thrive
 - Thinking about relationships to non-human life

1. First ethical question: Dave's "lenses"



My lens tends to focus on...

- Good (not bad) consequences
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 - Thinking about what a community needs to thrive
 - Thinking about relationships to non-human life

2. Second ethical question

To whom am I accountable?

- Myself?
- My lab?
- My community (or communities)?
- My profession?
- The community I affect?
- Future generations?
- All humans?
- All life?

Not... 'Who has the power to hold me accountable?'

Ethics goes wrong when we replace

personal accountability with a decision-making process

3. Normalization of Deviance

Normalization of deviance is a concept developed by Dianne Vaughan to help explain the Challenger shuttle disaster and other massive institutional failures. (Vaughan, D. 1996. The Challenger launch decision : risky technology, culture, and deviance at NASA. Chicago: University of Chicago Press).

Concept: Catastrophic failures can happen because *deviant behaviour has been normalized*.



3. Normalization of Deviance





Mike Mullane (NASA astronaut)

"The natural human tendency, particularly in pressure circumstances, is to want to take short cuts to accept a lower standard of performance [until] the short cut becomes the norm [, which] leads to predictable surprises."

3. Normalization of Deviance





Mike Mullane (NASA astronaut)

- You rationalize the deviant practice.
- You become so insensitive to the deviant practice that *it no longer feels wrong*, it becomes your normal practice.

Science, Society & Normalization of Deviance

1. Science



1. Science

WHISTLEBLOWERS FLAG 300 SCIENTIFIC PAPERS FOR RETRACTION, ENCOUNTER SILENCE FROM JOURNALS

Published: 24 January 2024Created: 24 January 2024



A decade-long investigation by a team of scientific sleuths has uncovered a vast body of faked research, with nearly 300 papers flagged for retraction due to signs of fabrication and ethical lapses. The papers in question, authored by Japanese physicians Yoshihiro Sato and Jun Iwamoto, have seen almost half retracted, earning the authors notable positions on Retraction Watch's list of authors with the most retractions. However, efforts to encourage reviews of the remaining papers have largely been met with silence from journal editors, highlighting systemic issues in scientific publishing.

Retractions...

- record high
- +180% BioMed

Falsification...

• 32% (estimated)

Plagiarism...

• 24% (estimated)

1. Science

'The situation has become appalling': fake scientific papers push research credibility to crisis point

Last year, 10,000 sham papers had to be retracted by academic journals, but experts think this is just the tip of the iceberg



Fake research papers could jeopardise drug development, warn academics. Photograph: Westend61/Getty Images

Robin McKie

Sat 3 Feb 2024 11.00 EST

Tens of thousands of bogus research papers are being published in journals in an international scandal that is worsening every year, scientists have warned. Medical research is being compromised, drug development hindered and promising academic research jeopardised thanks to a global wave of sham science that is sweeping laboratories and universities.

Broader consequences:

- loss of funds for research
- waste finite resources
- reduce research capacity
- mislead policy
- damage reputation

The negative consequences of *"publish or perish"* has the largest impact is on *developing countries*.

2. Society



Andrew Wakefield:

 1998: paper **falsely** claims that measles, mumps and rubella (MMR) vaccine causes autism in children.

birth of anti-vax movement:

- scientific disinformation
- vaccine fear
- before COVID 19

2. Society



vaccine conspiracy theories:



weaken your immune system



designed to control you



(•••)

"Big Pharma" wants you unwell

2. Society

> 378 CASES OF MEASLES ACROSS THE US > AS OF MARCH 20, 2025 | CDC



Current stats...

- 607 cases (481 TX)
- children/teens
- 12% hospitalized
- 2 deaths
- 97% unvaccinated

RFK Jr.'s focus on vitamin A for measles worries health experts

The measles outbreak in Texas has sparked debate over the use of vitamin A, with some health experts warning it may not be effective. March 4, 2025 at 6:00 a.m. EST

Vaccince gap responsible for measles outbreaks:

- WHO: vaccine gap due to affect of **poverty** on vaccination
- CDC: vaccine gap due to parental concerns about vaccine safety

Situating science ethics in society...

1. What should I (or we) do?

2. To whom am I accountable?

3. Normalization of Deviance



