

Ethics is Easy ... Right?

EDP 612 Week 3

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Preface

This

- may not a comfortable topic
- is heavy so we will take breaks
- will have sources and resources may make you feel sick or uncomfortable

please feel free to get up and leave the room if you feel any discomfort



Active Links Can Be Found by Clicking On Any

term with the color blue

or

screenshot



What are ethics?

The set of values, standards, and principles used to determine appropriate and acceptable conduct at all stages of the research process



What do ethics not “care about”?

- Being first to a discovery
- Good or bad people
- Keeping pace with peers
- Maintaining publish or perish
- Professional pressures
- Securing grants
- Getting or keeping Tenure¹/retaining a job

¹ As opposed to political rhetoric, this absolutely does NOT imply faculty are immune from being fired.



Ethics are imperfect

- Accident
- Missing something, especially with new methods or technology
- One can become involved in research ethics violations + through the wrongs of others
- Socially acceptable practice later deem wrong
- Sometimes the right thing to do just isn't clear
- Self-deception and other psychological tendencies
- Taking shortcuts



The Easier Cases (to identify)



Example: Human Radiation Experiments

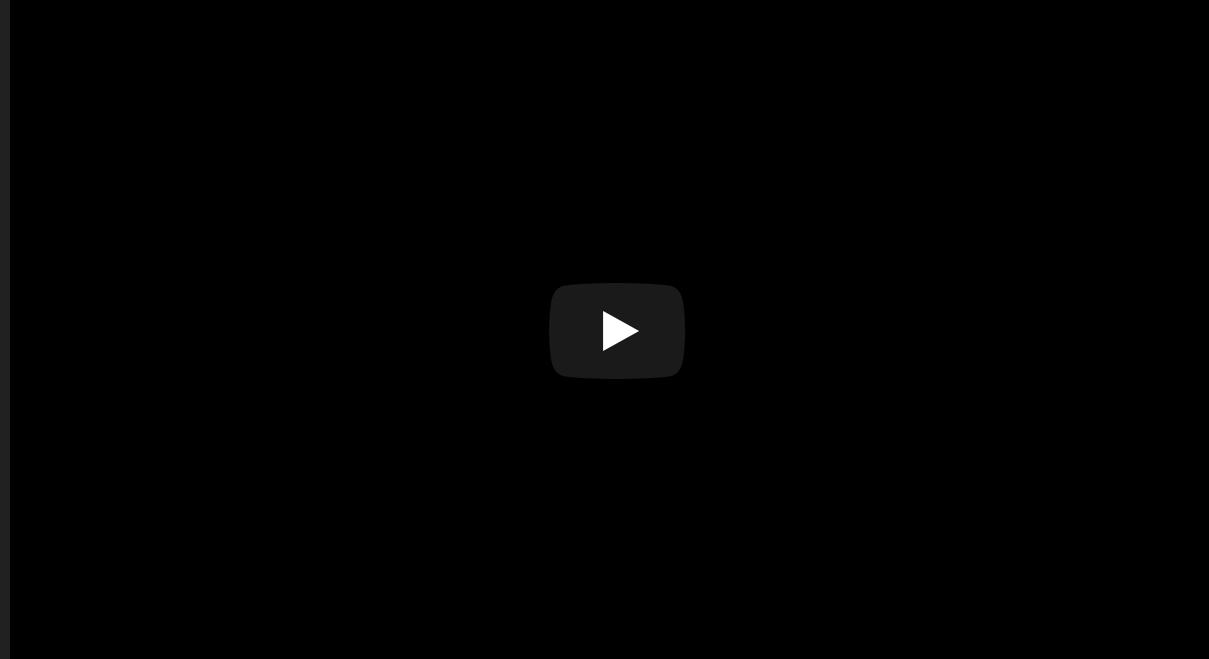
- Commissioned by the United States Department of Defense and the Atomic Energy Commission
 - feeding radioactive material to mentally disabled children
 - conducting research on the effects of radiation on human subjects, including medical research on using radioisotopes to diagnose or cure disease
 - injections of plutonium given to semi-comatose cancer patients to determine how much uranium was needed to produce kidney damage
 - irradiating the testicles of prisoners
 - exposing U.S. soldiers to high levels of radiation without informing them
- Many more examples exist!



Example: Tuskegee Syphilis Study

- Conducted by the United States Public Health Service - now the CDC - to study the effect of untreated syphilis to determine the natural history of the disease
- **Began in 1932** with **399 poor African American men** with *late-stage syphilis*.
- **Ended in 1972** with a total of **600 poor African American men**.
- *Participants* were offered "free medical care" in exchange for their medical data.
- More than 400 individuals were not
 - told that they had syphilis *OR*
 - offered the standard treatment for syphilis *OR*
 - provided penicillin when it became available as a cure!
- At least 28 of the men died of the disease and some unknowingly transmitted the disease to their wives and children.

For more information, take a look at the following¹



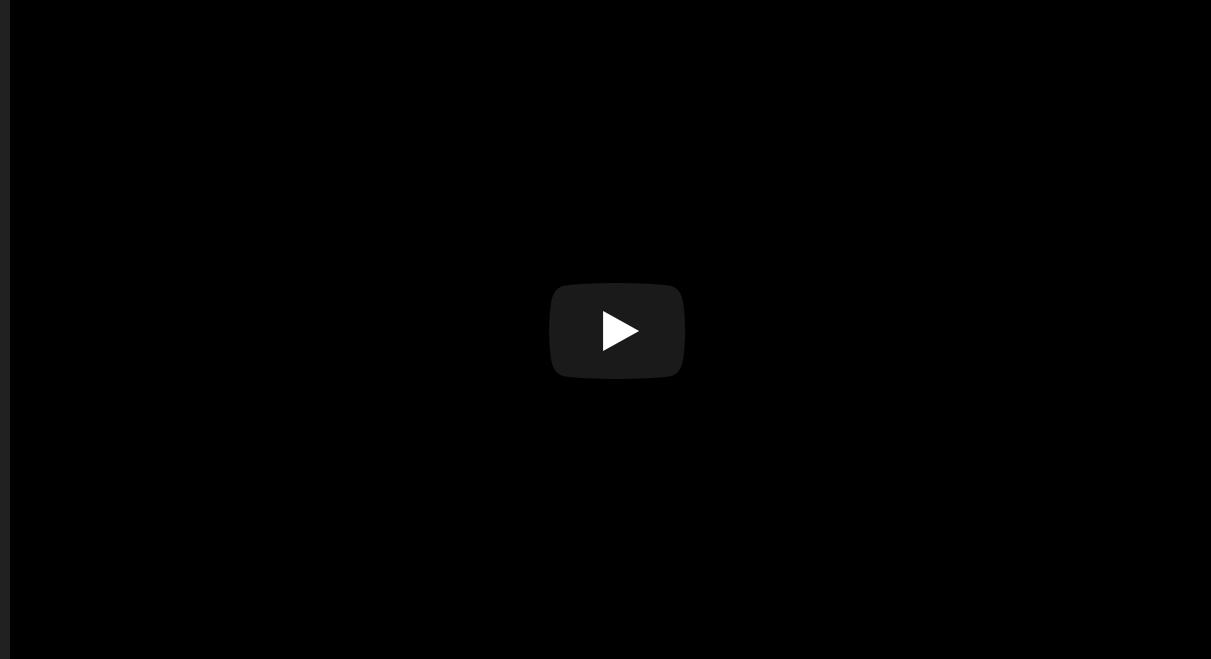
¹ Source: TED-Ed.



Example: Stanford Prison Experiment (SPE)

- Initiated to study roles of prisoners and guards
- Students cast as prisoners and guards were curated from 70 applicants
- Those with psychological problems, disabilities, prior records and a history of drug use were excluded leaving a sample of 24 individuals
- A coin toss decided who would be a guard or prisoner
- Initially a two-week experiment but lasted only six days
- “Actors” blindly assumed and identified with their roles and brutality commences beginning Day 2.

For more information, take a look at the following¹



¹ Source: Khan Academy.



Interpretations and Results Stemming from the SPE

- *Bystander Effect*: Individuals are less likely to help a victim when others are present.
 - *Cognitive dissonance*: Conflicting attitudes, behaviors, and/or beliefs produce a feeling of discomfort leading to an alteration of one, if not all of the three items listed above to restore comfort.
 - *Conformity*: Changes in attitudes, behaviors, and/or beliefs in order to satisfy group norms and to fit in.
 - *Interpretation*: Ordinary people are likely to follow orders given by an authority figure, even to the extent of killing an innocent human being.
- *Note*: Outcomes are disputed



Example: Famous Retraction

THE LANCET

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EARLY REPORT | VOLUME 351, ISSUE 9103, P637-641, FEBRUARY 28, 1998

RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

Dr AJ Wakefield, FRCS • SH Murch, MB • A Anthony, MB • J Linnell, PhD • DM Casson, MRCP • M Malik, MRCP • et al.
Show all authors

Published: February 28, 1998 • DOI: [https://doi.org/10.1016/S0140-6736\(97\)11096-0](https://doi.org/10.1016/S0140-6736(97)11096-0)

PDF [942 KB] Figures Save Share Reprints Request

RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

Summary

Background

We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Methods

12 children (mean age 6 years [range 3–10], 11 boys) were referred to a paediatric gastroenterology unit with a history of normal development followed by loss of acquired skills, including language, together with diarrhoea and abdominal pain. Children underwent gastroenterological, neurological, and developmental assessment and review of developmental records. Ileocolonoscopy and biopsy sampling, magnetic-resonance imaging (MRI), electroencephalography (EEG), and lumbar puncture were done under sedation. Barium follow-through radiography was done where possible. Biochemical, haematological, and immunological profiles were examined.

RETRACTED

Paper was retracted **12 years** after publication



Fallout

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Volume 33, Issue 9
September 2002

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RETRACTED: Vaccines and Autism FREE
Bernard Rimland, Woody McGinnis

Laboratory Medicine, Volume 33, Issue 9, September 2002, Pages 708–717, <https://doi.org/10.1093/labmed/33.9.708>
Published: 01 September 2002

A retraction has been published: *Laboratory Medicine*, Volume 49, Issue 4, November 2018, Page 297, <https://doi.org/10.1093/labmed/lmy060>

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«your lab focus»

Paper was retracted **16 years** after publication



So what?

- Damage has been done
- We are observing the effects right now



Gallup Poll

Uncertainty Among Americans on Vaccines and Autism

From what you have read or heard, do you personally think certain vaccines do -- or do not -- cause autism in children, or are you unsure?

	Yes, do cause autism %	No, do not %	Unsure %
All Americans	10	45	46
Age			
18-29	11	55	34
30-49	13	44	43
50-64	8	37	55
65+	5	46	49
Education			
Postgrad	5	73	22
College grad only	6	61	32
Some college	11	42	47
HS grad or less	12	28	60
Political affiliation			
Republican	10	37	53
Independent	12	43	44
Democrat	5	55	40
Parental status			
Americans with children under 18	15	42	43
Americans with no children under 18	7	46	46

GALLUP, DEC. 2-15, 2019

As of November 2021, unvaccinated people aged 18 years or older are four (4) times more at risk of (1) testing positive and (2) 15 times of dying¹ from COVID-19 than those who are vaccinated.

¹ CDC



Example: Not so Famous Retraction

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REPORT

f t in g m e

When contact changes minds: An experiment on transmission of support for gay equality

MICHAEL J. LACOUR AND DONALD P. GREEN

SCIENCE • 12 Dec 2014 • Vol 346, Issue 6215 • pp. 1366-1369 • DOI:10.1126/science.1256151

323 55 GET ACCESS

This article has been retracted.
Please see: Editorial retraction - 28 April 2021

Dialogue opens the door to attitude change

Dialogue opens the door to attitude change
Abstract
Supplementary Material
References and Notes

Personal contact between in-group and out-group individuals of equivalent status can reduce perceived differences and thus improve intergroup relations. LaCour and Green demonstrate that simply a 20-minute conversation with a gay canvasser produced a large and sustained shift in attitudes toward same-sex marriage for Los Angeles County residents. Surveys showed persistent change up to 9 months after the initial conversation. Indeed, the magnitude of the shift for the person who answered the door was as large as the difference between attitudes in Georgia and Massachusetts.

CURRENT ISSUE

When surgery opens a way to study the brain | Salary sharing indicates close relationships in 2014 U.S. | Creating quantum dots

Science AAAS

QUICK PICKS

Sorting cells by high-throughput imaging & ...

Synthetic multistability in mammalian cells
BY RONGHUI ZHU, JESUS M. DEL RIO-SALGADO, ET AL.

Sexual selection and the ascent of women: Mate choice research since Darwin
BY GIL G. ROSENTHAL, MICHAEL J. RYAN, ET AL.

The Harder Cases (to justify)





What is an ethical dilemma?

- Activity An ethical paradox in decision making between
- Go over to Psychology Today and take a look at some everyday ethical dilemmas.
- Get in your group and provide a few examples of ethical dilemmas



Things to Consider

- Do you consider yourself to be ethical?
- Do you have be an ethical person to perform ethical research?



Moral Foundations of Research

- Doing good for humans, animals, the planet, future generations, etc.
- Duty to respect to all animals
- Obligations to society
- Pursuit of truth and knowledge



Moralism is Defined by a Society or Culture at Moment

Example: Nazi Germany Human Subjects Research

- United States Holocaust Museum
- PBS

Example: United States Human Subjects Research

- Historical Timeline
- Controversies



Activity: How Do we Address These?

- Read over Caplan (2021)
- Get into your groups and discuss. We'll discuss ideas.
- What if it was your own study?



Don't do any of these

- Be dishonest about your research
- Omit parts of findings
- Embellish outcomes



Areas of Ethical Interest

- Access and Ownership of Data
- Research misconduct
- Collaboration issues
- Conflicts of interest or obligation
- Complicity and funding sources
- Peer review
- Subjects Research



Research Misconduct

National Science Foundation : fabrication, falsification, or plagiarism in proposing or performing research ...

- *Fabrication* means making up data or results and recording or reporting them.
- *Falsification* means manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
- *Plagiarism* means the appropriation of another person's ideas, processes, results or words without giving appropriate credit.

Note : None of the above are due to a difference of opinion or honest errors



Examples

- Fabrication or falsification
- Omission/suppression
- Image manipulation
- Plagiarism from the work of another
 - Even your own!
- Sabotage



(Some) Collaboration Issues

- Accurate Calculations
- Analysis
- Authorship
- Experimental Rigor
- Intellectual Property Rights
- Methodology
- Record Keeping
- Sampling



Activity: Authorship Order

The individuals listed on the next slide contributed in some way to the work reported in a manuscript to be submitted for publication. You have absolute control over who can be on the submission. Who should

- be listed as an author, and
- in what order?

- *Colleague at another university* – Shared with the lab chief a unique reagent that they (the colleague) had developed, was commercially available, and was central to the experiments.
- *Data Scientist* – Trained graduate student in the techniques used for their research; assisted with all statistical analysis.
- *Departmental colleague* – Read a complete draft of the manuscript and provided extensive comments on both the organization and style.
- *Graduate student* – Contributed to the design of the experiments; conducted the experiments; responsible for most of the analysis and the interpretation of the data; wrote the first draft of the manuscript and edited several subsequent versions.
- *Materials expert* – Employed special procedures for maintaining experimental items.
- *Program director* – Obtained the funding for the research project, including the salaries, supplies and equipment necessary for the research.
- *Project coordinator* – Contributed to the design of the experiments, and analysis and interpretation of the data; edited several drafts of the manuscript.
- *Postdoctoral fellow* – Questions arising from their research spurred the project coordinator to examine this research topic. Contributed to discussions regarding the design of the experiments and the analysis and interpretation of the data.
- *Undergraduate research assistant* – Performed some of the sample analysis.
- *Faculty member* - Owns the data.



Access and Ownership of Data

- Can data and materials be taken off-site?
- Who retains and controls the data, and who can make use of it in the future?
- How much access should people have?



Peer Review

- Can graduate students read manuscripts on behalf of their professors?
- What can you do to protect your intellectual property during the review process?
- What do you do if you learn something from reviewing a manuscript that could help your own research?



Conflict of interest

A situation in which one experiences conflicting pulls from one's (1) personal interests and (2) professional obligations, respectively.

Direct examples

- Being paid to say something untrue.
- Gaining benefits for scientific misconduct.

Indirect examples

- Saying something positive about a company that gave you a grant in hopes of gaining future funding.
- Funding agency stipulating that they have the authority to decide whether you may publish your findings or delay publication.



Complicity and Funding

Moral issues beyond scientific misconduct can arise depending on one's field of research and funding source.



Subjects Research

- Humans or other animals
 - Can you use them?
 - What are the limits?

Reports and Standards





Belmont Report

- Summarizes ethical principles and guidelines for research involving human subjects.
 - Specifies three principles for conducting research in humans:
 - Respect for persons
 - Beneficence
 - Justice
 - Further information can be found at the Health and Human Services website



Declaration of Helsinki

- A set of ethical principles regarding human experimentation developed for the medical community by the World Medical Association (WMA).
 - Regarded as the seminal narrative on human research ethics.
 - Not legally binding.
 - Encompasses 37 principles over 11 dimensions of ethics and human subjects research.
 - Further information can be found at the World Medical Association website



Nuremberg Code

- Set of 10 principles on the rights of all humans under research.
 - Formed as a response to the unknown number of atrocities committed in the name of research by members of Nazi Germany.
 - Not legally binding.
 - Further information can be found at the United States Holocaust Memorial Museum website



Example: Facebook and “Emotional Contagion”

- Kramer, A.D.I., Guillory, J.E., & Hancock, J.T. 2014. Experimental evidence of massive-scale emotional contagion through social networks . PNAS, 111 , 8788-8790.
- Available via the Proceedings of the National Academy of Sciences



Summary

- Over a one-week period in 2012, researchers manipulated the news feeds for a random sample of close to 700,000 Facebook users.
 - News Feed is the constantly updating list of content from your friends that is shown on the middle of your Facebook page.
 - Because there are typically more stories than can be displayed, Facebook uses an algorithm that tries to show the stories a user would find most engaging or relevant.
 - One group had reduced negative content; one reduced positive
 - Used the Linguistic Inquiry and Word Count software (LIWC2007) to determine sentiment of open text content (*sentiment analysis*)
 - The hypothesis was that subsequent user posts to Facebook would be affected by what they saw in the News Feed
 - People in the *positivity-reduced* group would have less positive posts
 - People in the *negativity-reduced* group would have less negative posts
- Results supported the hypothesis that people's emotions may be affected by what their friends say (*social contagion*)



Controversy

- Facebook users were not asked whether they wanted to participate in this study
 - It was assumed that the Facebook Data Use Policy which is required to use the service had informed users that their data might be used for such research purposes
 - The policy read that Facebook used personal data “for internal operations, including troubleshooting, data analysis, testing, research and service improvement.”



Activity: Facebook Publication Ethics

- Get into your groups
- Discuss the following questions with your partner
 - What ethical issues are raised by this study? (prioritize)
 - Could Facebook have addressed the hypothesis without explicitly manipulating the content of the News Feed?



Possible Ethical Issues

Informed consent¹

Information – were participants provided sufficient information?

Comprehension – did participants fully understand the study and have an opportunity to ask questions?

Voluntariness – were participants free to decline or withdraw?

Vulnerable populations - did the study include children, prisoners, people with impaired cognitive capacity, etc?

Design Issues

Randomized experimental design and manipulation

vs

Observational/Correlational designs and “big data” analyses

¹Not knowing is never a justifiable excuse!



That's it!

Any questions?