Research Ethics for Computational Social Science

Summer Institute for Computational Social Science

SICSS

June 10th, 2025, Norrköping

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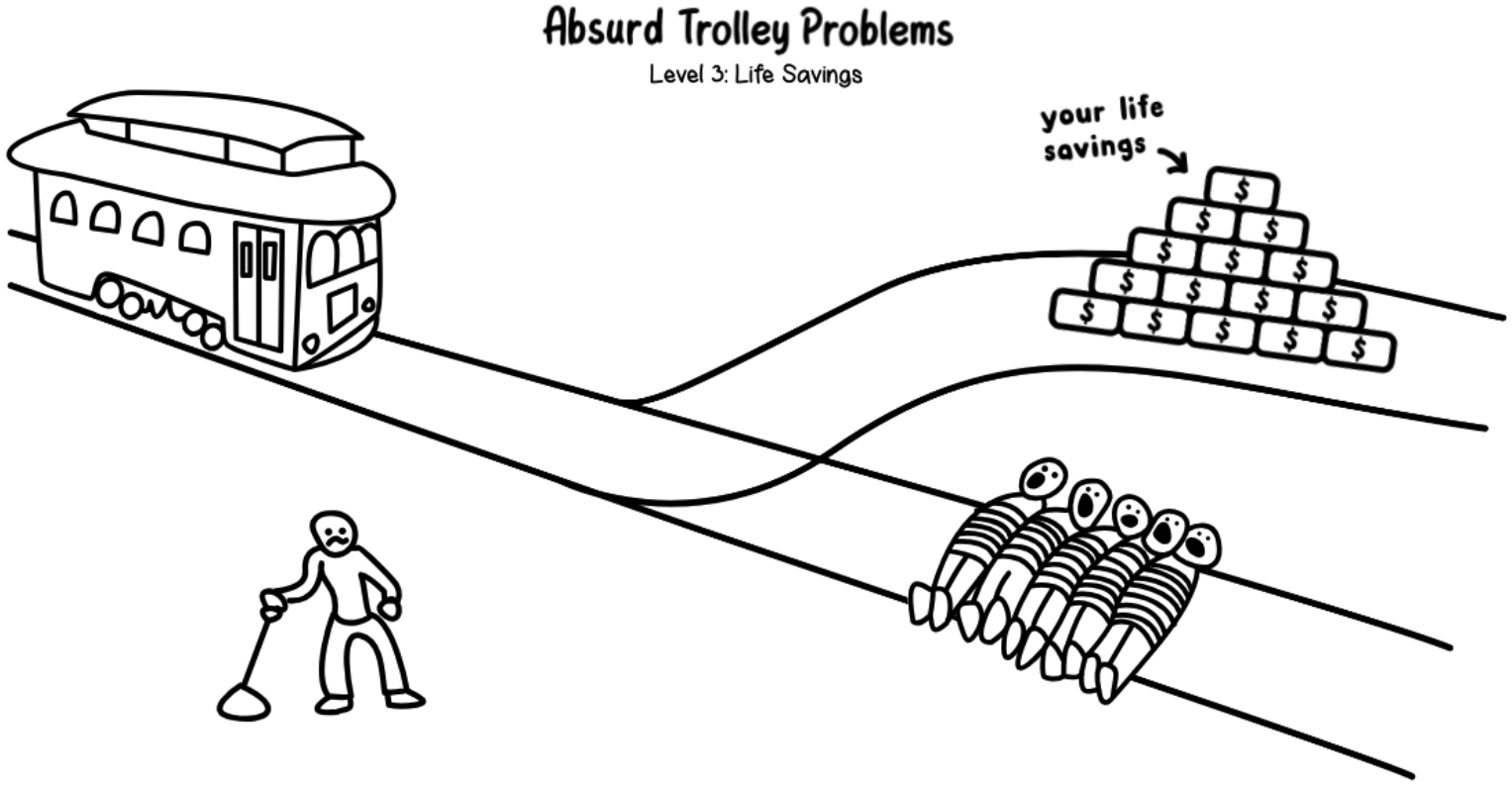

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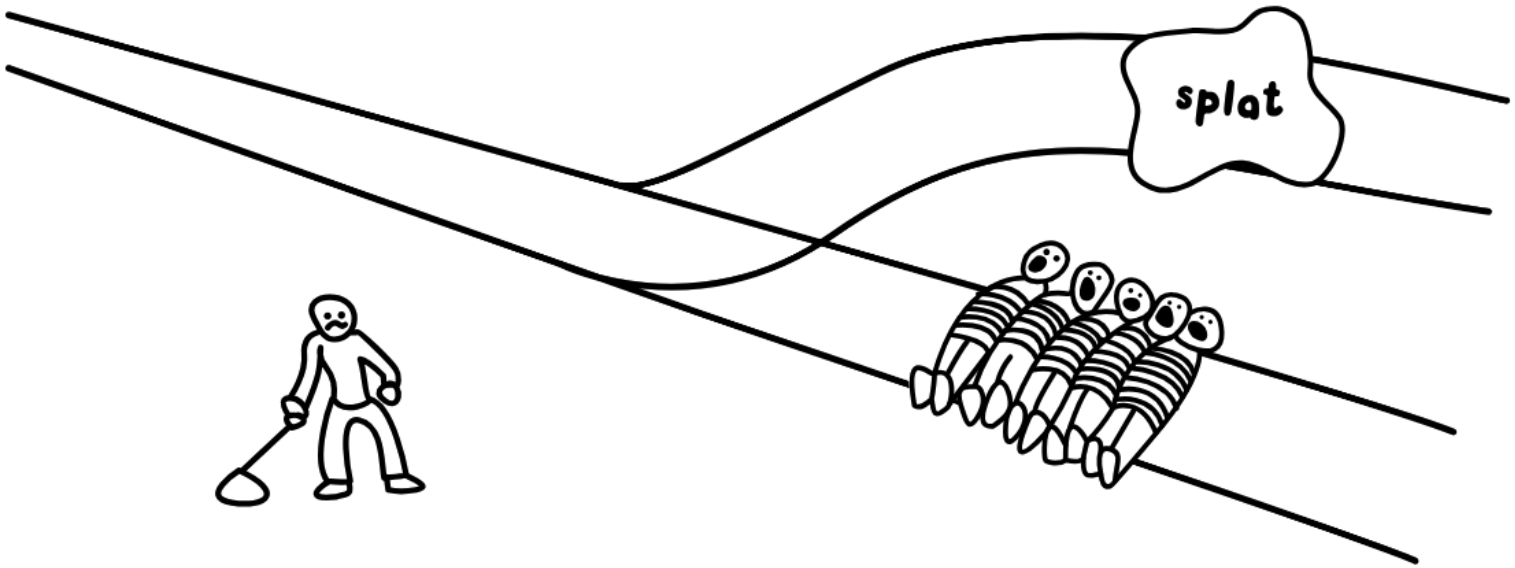
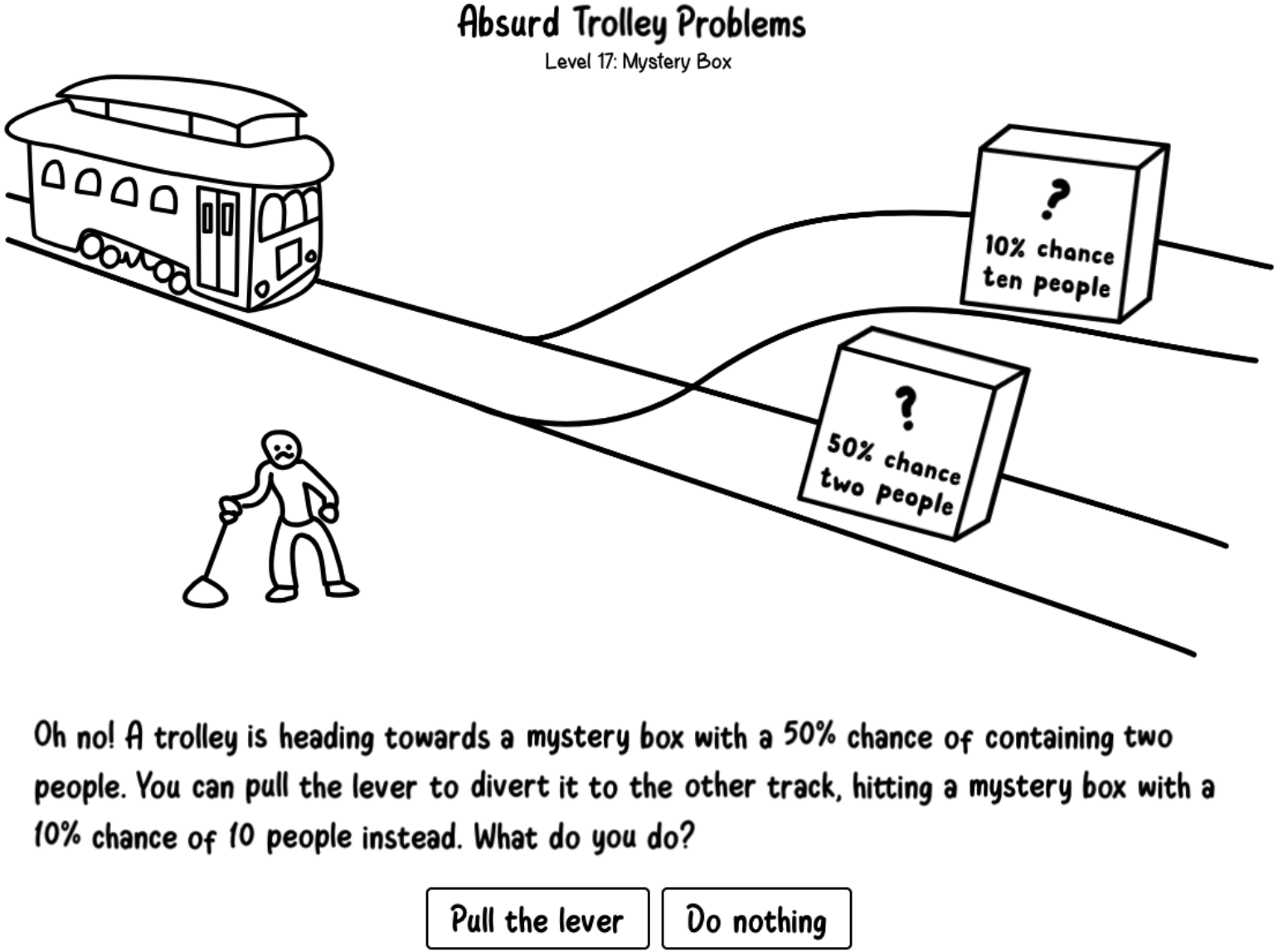


Oh no! A trolley is heading towards 5 people. You can pull the lever to divert it to the other track, but then your life savings will be destroyed. What do you do?

57% of people agree with you, 43% disagree (13,500,333 votes) Next →

They also come in statistician-flavor!



Agenda

1. What Even Is Ethics?!
2. The Scope of Research Ethics in CSS
3. Three Approaches to Ethics
4. Four Ethical Principles
5. Research Ethics in Practice
6. Tips and Tricks, or: an “Ethics Mindset”

Other Resources

- Bit By Bit, ch. 6
- Salganik's Ethics Intro
  - https://sicss.io/overview/ethics-part-1
  - https://sicss.io/overview/ethics-part-2
  - https://sicss.io/overview/ethics-additions-and-extensions
- Vetenskapsrådet, "Good Research Practice"
  - https://www.vr.se/download/18.5639980c162791bbfe697882/1555334908942/Good-Research-Practice_VR_2017.pdf

What Even is Ethics?!

On ethics, research ethics, and research ethics for CSS

Ethics

- In simple terms, ethics is about **deciding** what is **right** and **wrong**, and *why*
- Decisively **normative**, impossible to deduce an objectively valid standpoint
  - → Requires a different type of thinking than scientists are used to (value-driven approach; “Werturteil” in the terms of Max Weber)

Ethics

- Two general frameworks
  - **Deontological** Ethics: The **means** to reach an end must be ethical
  - **Consequentialist** Ethics: The **ends** of your actions must be ethical
  - **Virtue Ethics**: You shall be a "good" **character**
- However: "The road to hell is paved with good intentions"
  → both means *and* ends are important considerations

Ethics

- Democracy
- Effective Altruism
- → **Deontological or consequentialist?**

Ethics

- Democracy
  - **Deontological** ethics: We ensure equal treatment (rule of law), but may end up with sometimes detrimental results (discrimination; difficult deliberation; fascism)
- Effective Altruism
  - **Consequentialist** ethics: Follows a good goal (reduce poverty), but in the process ignores that the means (earn more and more money) is partially a cause of poverty

Research Ethics in CSS

Why you don’t have to end world hunger with your research

Research Ethics in CSS

- Research ethics is a form of **applied** ethics
  - We do not have to solve trolley problems, or world hunger
- Research ethics involves reflecting upon the impact of all parts of your research, e.g.,
  - Study Design/Hypothesis formation/Initial planning or ideas
  - Data collection
  - Methods/Analysis
  - Write up and dissemination
- Research ethics **evaluates research** based on the state of the art, and **provide guidance** on how to improve it
- Research ethics **varies by country, institution, and field**

Research Ethics in CSS

- Ethics in different fields:
  - **Medicine**: Highly institutionalized, tons of rules and regulations around that (clinical trials)
  - **Computer Science/Engineering**: Little institutionalization, which leads to many ethical debates (ex., hypocrite commits paper)
  - **Social Science**: Ethics is regarded as an important dimension, but often connoted with fear as it lacks institutionalization

Research Ethics in CSS

- Specifics of research ethics in the realm of CSS:
  - Unique Selling Point: Lots and lots of data (→ large power imbalance)
    - Readymade vs. custom made data require different ethical considerations (Salganik 2018)
    - The human can remain invisible in your data (cf. “hypocrite commits” paper; Dirksen et al. 2025)
    - You cannot make data truly anonymous (cf. Differential Privacy; Dwork and Roth, 2013)
    - Should you use data that has been collected using unethical means?
  - However, research design is also important
    - Do your methods treat all study populations fairly?
    - Do your methods have inherent biases?
    - What if your methods come with ethical caveats, too? (cf. LLMs/GPT; Bender et al. 2021)

Approaches to ethics

Ad-hoc, rule-based, and principles-based

Ad-Hoc Approach

- You can approach ethics on an ad-hoc basis
  - Adjust data collection, experiment, or methods as ethical issues arise
- Benefit: Very flexible, you can adapt everything at every time, depending on needs
- Drawback: High chance of missing crucial ethical aspects before the fact, increasing the likelihood for retraction after the fact

Rules-Based Approach

- You can approach ethics using a rules-based approach
  - Follow guides and keep checklists
- Benefit: High likelihood that you cover the basics, reduces your risk of retraction/lawsuits
- Drawback: Doesn't give you autonomy over your research → Difficult to establish what ethical considerations your research idea actually merits

Principles-Based Approach

- You should approach ethics based on principles
  - Involves developing an “ethics mindset”
- Benefit: Once developed, this is applicable to any research you do anywhere on earth; gives you the broadest possible coverage of potential ethics dilemmas; gives you agency over your research design
- Drawback: Requires you to take a “leap of faith” and leave your comfort zone; takes time to develop; requires practical experience, some courses, readings, and self-reflection

Ethical Principles

for Research Ethics (in Computational Social Science)

Ethical Principles

- Primary Ethical Principles:
  1. Respect for Persons
  2. Beneficience
  3. Justice
  4. Respect for Law and Public Interest
- → Belmont Report (Ryan et al. 1978) & Menlo Report (Kenneally and Dittrich 2012)
- There are **additional principles**, e.g., for using AI “explicability” (Floridi and Cowls, 2019)

Ethical Principles

- Respect for Persons
  - Main factor: “Informed Consent”
  - Ethically, this involves to take your research subjects seriously
  - Sometimes, you cannot get informed consent. This is fine, *if* you can argue for why that is.
  - Example 1: Political speech is usually public domain, even though it strictly falls under personal data
  - Example 2: You cannot ask anonymous reddit users for their consent

Ethical Principles

- Beneficience
  - ”Minimize risks, maximize benefits”
  - There is neither zero-risk research nor pure-benefit research
    - → “There is no free lunch”
  - Example 1: “Encore” paper: Puts unknowing users at risk, delicate balancing of risks and benefits

Ethical Principles

- Justice
  - You should ensure that the benefits from your research are equally distributed (between rich and poor, advantaged and disadvantaged)
  - → A social group that carries more potential risk from your research should also benefit more from your research than others
  - Examples here might fall into the field of “area studies”

Ethical Principles

- Respect for Law and Public Interest (new in Menlo report)
  - **Legal due diligence**: only conduct legal research, respect *all* various legislation that is relevant to your research (where you are & where your research subjects are)
  - **Transparency**: Make your thought process, methods, and data collection efforts transparent
  - **Accountability**: Be accountable for your research; this involves standing up for potential errors and ethical issues that appear ex post

Research Ethics in Practice

How to perform ethical research

Research Ethics in Practice

1. Develop a research idea/stumble upon a data set
2. Reflect on ethical issues based on the four ethical principles
3. Identify the legal and institutional scope of your formal ethical review
4. Apply for ethical review
5. Receive green light and commence the research

Research Ethics in Practice

1. Develop a research idea/stumble upon a data set
2. Reflect on ethical conundrums based on the four ethical principles
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Research Ethics in Practice

- Legal scope of research, or: ethics vs. law
  - Both are normative frameworks that set certain values (“Setzung”)
  - Law is usually slower than ethics
  - Law “fixes” certain ethical viewpoints
  - This can lead to situations in which some actions are illegal, but ethical, and others are legal, but highly unethical
- **You can argue about ethics, but not about law**
- The law decides what you cannot do, ethics decides what you ought not do → The law forms the necessary requirement, ethics forms the sufficient requirement

Research Ethics in Practice

- Identifying the institutional rules around ethics
  1. Does your **country** have an institution to perform ethical review?
  2. Does your **university** have an institution to perform ethical review?
  3. Does your **field** have an institution to perform ethical review?
- Look up the required formal process, read through documentation and prepare any material to submit in advance
  - Sweden: Always Etikprövningsmyndigheten
  - USA: Always an IRB at the corresponding university
  - Germany: N/A

Research Ethics in Practice

- Pro-Top: Try to always get a formal ethics waiver, even if you are not (legally) required to
  - Other people *will* vet your design (your colleagues or your research subjects)
  - This gives you (a) peace of mind, and (b) material to use in (unlikely) lawsuits

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***However*, even an ethics waiver won't protect you against angry study subjects!**

Introduction

On April 20, 2021, in response to the perception that a group of University of Minnesota (UMN) researchers had resumed sending compromised code submissions to the Linux kernel, Greg Kroah-Hartman asked the community to stop accepting patches from UMN and began a re-review of all submissions previously accepted from the University. This report summarizes the events that led to this point, reviews the "Hypocrite Commits" paper that had been submitted for publication, and reviews all known prior kernel commits from UMN paper authors that had been accepted into our source repository. It concludes with a few suggestions about how the community, with UMN included, can move forward. Contributors to this paper include members of the Linux Foundation's Technical Advisory Board (TAB), with patch review help from many other members of the Linux kernel developer community.

UMN worked well within the kernel community for many years, submitting numerous bug-fixes that were merged into past kernel releases. Last year (2020), one member of the UMN community chose to do a research project that involved submitting patches that attempted to intentionally introduce flaws in the kernel. The trust between the kernel community and UMN was broken when this project was made public. The UMN developers went quiet for seven months and then started submitting a new handful of poor quality patches to the community. Many assumed that trickery was afoot, engendering a reaction that caused a halt to acceptance of UMN kernel contributions and forced us to re-review all prior submissions.

Due diligence required an audit to identify which authors were involved in different UMN research projects, identify the intent of any flawed patches, and remove flawed patches regardless of intent. Reestablishing the community's trust in researcher groups is important as well, since this incident could have a wide-reaching impact on trust in both directions that might chill participation by any researchers in kernel development. The developer community should be able to trust that researchers are sending quality patches meant to improve the kernel, and researchers should trust the developer community will not undermine the researchers' reputations when mistakes are made. The recommendations in this report aim to move beyond this conflict, providing a way to help both communities to work together better.

r/changemyview • 3 days ago
AutoModerator

META: Unauthorized Experiment on CMV Involving AI-generated Comments

META

The CMV Mod Team needs to inform the CMV community about an unauthorized experiment conducted by researchers from the University of Zurich on CMV users. This experiment deployed AI-generated comments to study how AI could be used to change views.

CMV rules do not allow the use of undisclosed AI generated content or bots on our sub. The researchers did not contact us ahead of the study and if they had, we would have declined. We have requested an apology from the researchers and asked that this research not be published, among other complaints. As discussed below, our concerns have not been substantively addressed by the University of Zurich or the researchers.

You have a right to know about this experiment. Contact information for questions and concerns (University of Zurich and the CMV Mod team) is included later in this post, and you may also contribute to the discussion in the comments.

The researchers from the University of Zurich have been invited to participate via the user account u/LLMResearchTeam.

https://www.reddit.com/r/changemyview/comments/1k8b2hj/comment/mp4vgcm/

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How can you say one of your core principles was transparency in the same paragraph as acknowledging you did this with no transparency?

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> After completing data collection, we proactively reached out to the CMV moderators

That's not what "proactively" means.

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That's

Please cite any other studies where researchers use psychological manipulation techniques on participants who did not consent.

You have confirmed that we now no longer know if these posts and comments are just bots or real people, which leads to the inevitable reverse, where real people facing difficult situations are dismissed as bots. It potentially destabilizes an extremely well moderated and effective community. That is real harm.

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UNIVERSITY OF MINNESOTA

Driven to Discover℠

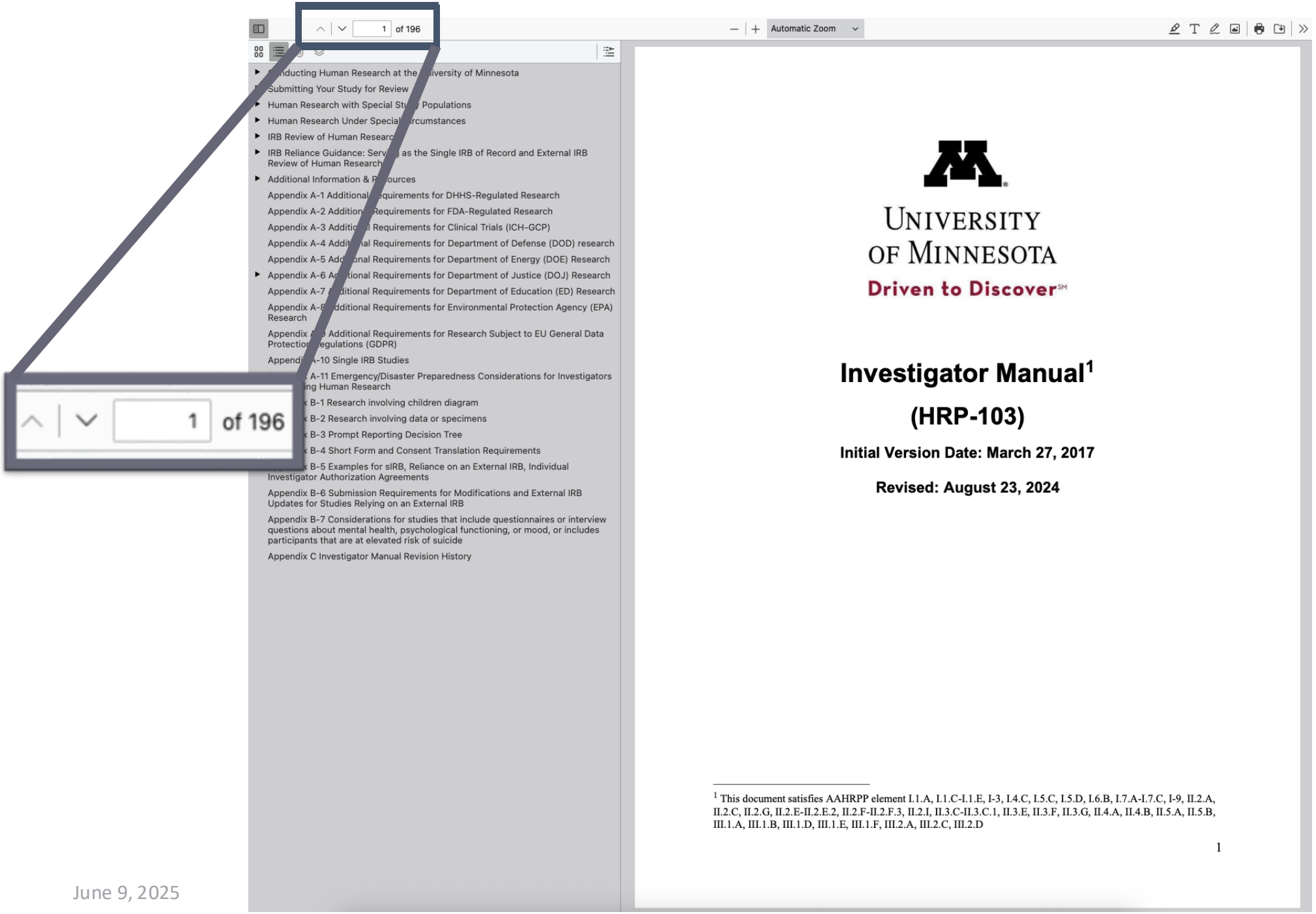
Investigator Manual[1]

(HRP-103)

Initial Version Date: March 27, 2017

Revised: August 23, 2024

[1] This document satisfies AAHRPP element I.1.A, I.1.C-I.1.E, I-3, I.4.C, I.5.C, I.5.D, I.6.B, I.7.A-I.7.C, I-9, II.2.A, II.2.C, II.2.G, II.2.E-II.2.E.2, II.2.F-II.2.F.3, II.2.I, II.3.C-II.3.C.1, II.3.E, II.3.F, II.3.G, II.4.A, II.4.B, II.5.A, II.5.B, III.1.A, III.1.B, III.1.D, III.1.E, III.1.F, III.2.A, III.2.C, III.2.D


1 of 196
Automatic Zoom
Conducting Human Research at the University of Minnesota
Submitting Your Study for Review
Human Research with Special Study Populations
Human Research Under Special Circumstances
IRB Review of Human Research
IRB Reliance Guidance: Serving as the Single IRB of Record and External IRB Review of Human Research
Additional Information & Resources
Appendix A-1 Additional Requirements for DHHS-Regulated Research
Appendix A-2 Additional Requirements for FDA-Regulated Research
Appendix A-3 Additional Requirements for Clinical Trials (ICH-GCP)
Appendix A-4 Additional Requirements for Department of Defense (DOD) research
Appendix A-5 Additional Requirements for Department of Energy (DOE) Research
Appendix A-6 Additional Requirements for Department of Justice (DOJ) Research
Appendix A-7 Additional Requirements for Department of Education (ED) Research
Appendix A-8 Additional Requirements for Environmental Protection Agency (EPA) Research
Appendix A-9 Additional Requirements for Research Subject to EU General Data Protection Regulations (GDPR)
Appendix A-10 Single IRB Studies
Appendix A-11 Emergency/Disaster Preparedness Considerations for Investigators Conducting Human Research
Appendix B-1 Research involving children diagram
Appendix B-2 Research involving data or specimens
Appendix B-3 Prompt Reporting Decision Tree
Appendix B-4 Short Form and Consent Translation Requirements
Appendix B-5 Examples for sIRB, Reliance on an External IRB, Individual Investigator Authorization Agreements
Appendix B-6 Submission Requirements for Modifications and External IRB Updates for Studies Relying on an External IRB
Appendix B-7 Considerations for studies that include questionnaires or interview questions about mental health, psychological functioning, or mood, or includes participants that are at elevated risk of suicide
Appendix C Investigator Manual Revision History
1 of 196
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Driven to Discover℠
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(HRP-103)
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[1] This document satisfies AAHRPP element I.1.A, I.1.C-I.1.E, I-3, I.4.C, I.5.C, I.5.D, I.6.B, I.7.A-I.7.C, I-9, II.2.A, II.2.C, II.2.G, II.2.E-II.2.E.2, II.2.F-II.2.F.3, II.2.I, II.3.C-II.3.C.1, II.3.E, II.3.F, II.3.G, II.4.A, II.4.B, II.5.A, II.5.B, III.1.A, III.1.B, III.1.D, III.1.E, III.1.F, III.2.A, III.2.C, III.2.D
1

Tips and Tricks

An “Ethics Mindset”

Tips and Tricks

- Two simple questions:
  1. Would you defend your research in court?
  2. Would you defend your research before your colleagues and stakeholders?
- If you answer both with “yes,” you’re probably good to go
- If not, ask yourself: What do you need to know and do in order to answer them with “yes”?

Tips and Tricks

- There is no privacy
  - Researchers have in the past claimed that anonymizing data makes it harmless
  - This is not true
  - → Re-identifying data is always possible, especially for actors who have an interest in this
  - Even data you assume is already anonymous is not really
  - Statistical proof: Differential Privacy (DP) → 100% anonymous data is worthless for research. Each percent of “worthiness” for research purposes subtracts from the anonymity.

Tips and Tricks

- Your methods are also part of your research ethics! It is not just about data!
  - Large Language Models are often full of unethical behavior
    - Unlawfully using copyrighted material (see, e.g.: NYT v OpenAI)
    - Exploiting subaltern populations for RLHF/fine tuning (Xiang 2023)
    - Climate-endangering energy usage (Whittaker 2021)
    - Privacy-nightmares
  - If you need them, you must justify this (cf. Stuhler, Ollion, and Ton 2025). “It’s easier” is not an acceptable or ethical argument!

Tips and Tricks

- Focus on actors
  - Your research subjects matter and must be the central focus of your ethical reasoning. (“What would I feel if I were a research subject?”)
  - Unaffiliated Third Parties: Who might be associated with your research, although not appearing in your data? (e.g., the children of parents whose data you collect?)
  - Institutions: Which institutions have a stake in your research? (Could your research on, e.g., poverty harm NGOs who attempt to reduce poverty?)
  - You!: You yourself might also be putting yourself at risk through your research (Could your research lead to you being denied entry to a country?)

Tips and Tricks

- General questions to help you get started:
  1. Who are you? What do you want to achieve with your research?
  2. Who are your research subjects? Are they changing, or always from the same population?
  3. What is your own ethics? What did your upbringing and education teach you about the world? How does this translate to the research you do?
- For a particular study:
  1. What is the worst case that could happen? Could people end up in jail, or get killed? Stay realistic, but assume the worst possible outcome.
  2. What is the best case that could happen?
  3. What might happen if you decided *not* to do your research?

Tips and Tricks

- Other Uncomfortable Truths
  - **Dual-use**: Your research *will* be used by people you don't want to use your research
  - "The road to hell is paved with good intentions": You *will* make mistakes and do unethical things
  - **"Rough consensus"**: You *will never* make everybody and yourself happy with your decisions; a good document to read is RFC 7282 (https://datatracker.ietf.org/doc/html/rfc7282)

Conclusion

Such rules often are inadequate to cover complex situations; at times they come into conflict, and they are frequently difficult to interpret or apply. Broader ethical principles will provide a basis on which specific rules may be formulated, criticized and interpreted.

(Ryan 1978 [Belmont Report], 1)

Thank you!

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Case Study Workshop

Case Study Workshop

- Form Groups of 4-5
- The settings:
  - (a) You are a fresh **Postdoc** in a new project, and your PI has research methodology and data already set up. You are now tasked with **applying for ethics review** at your university's IRB.
  - (b) You are part of a university's **IRB**. A group of researchers has applied for ethical review. You need to **vet the application** and choose how to respond to them. (1) "All good, proceed"; (2) "You need to adjust the following:…"; (3) "Do not proceed"
- First Part: Each group assumes role **A** (ca. 30 min)
- Second part: Each group assumes role **B** (ca. 30 min)
- Third part: Discussion (ca. 30 min)