


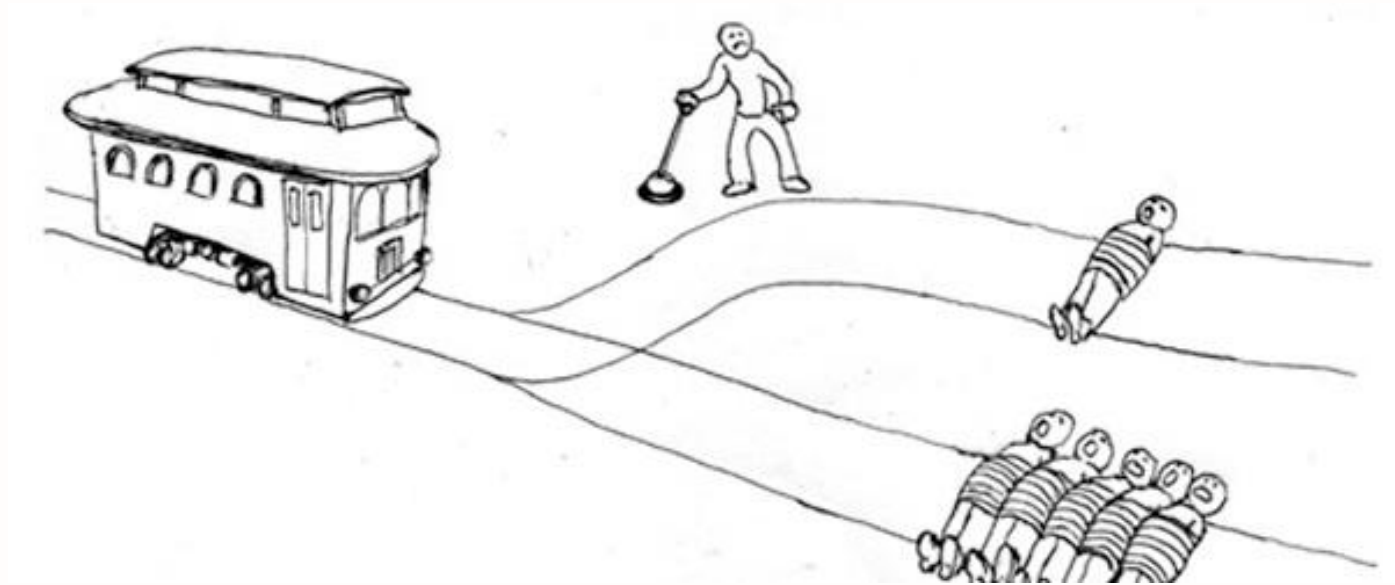
Ethics in STEM

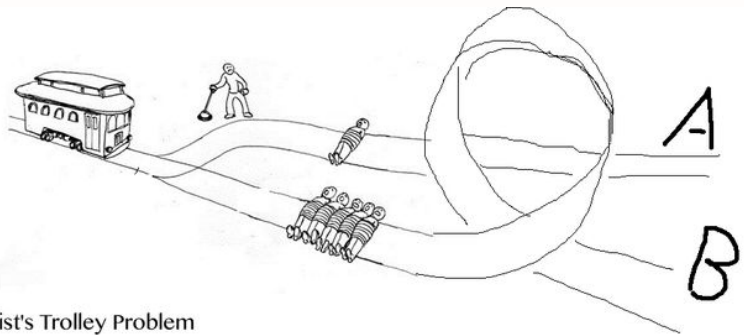




What does “ethics”
mean to you?

The Trolley Problem

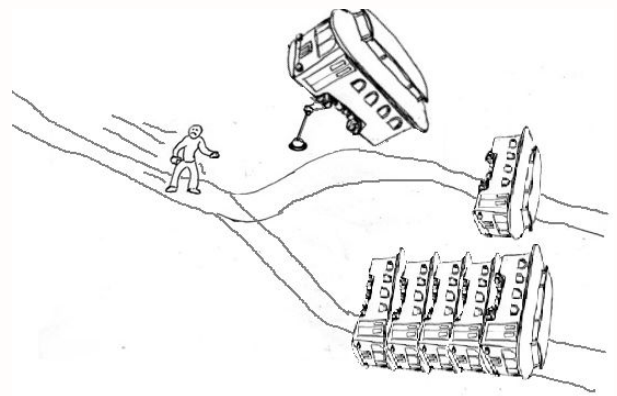
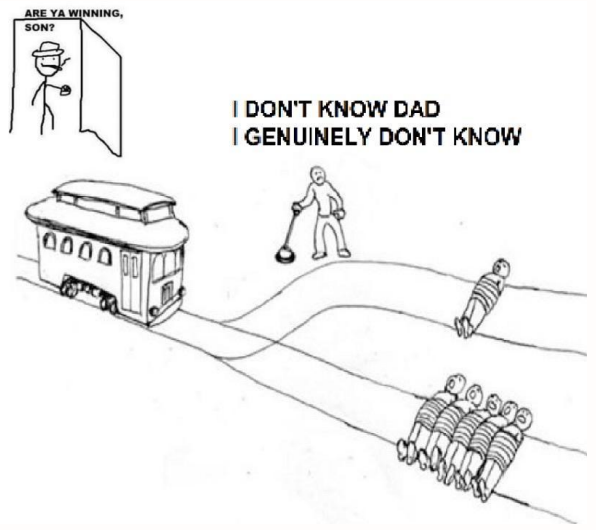
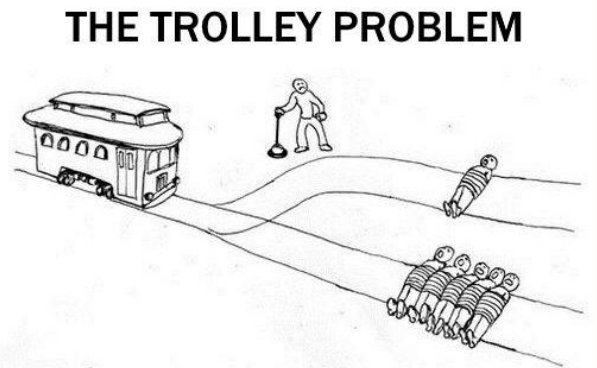




Hedonist's Trolley Problem

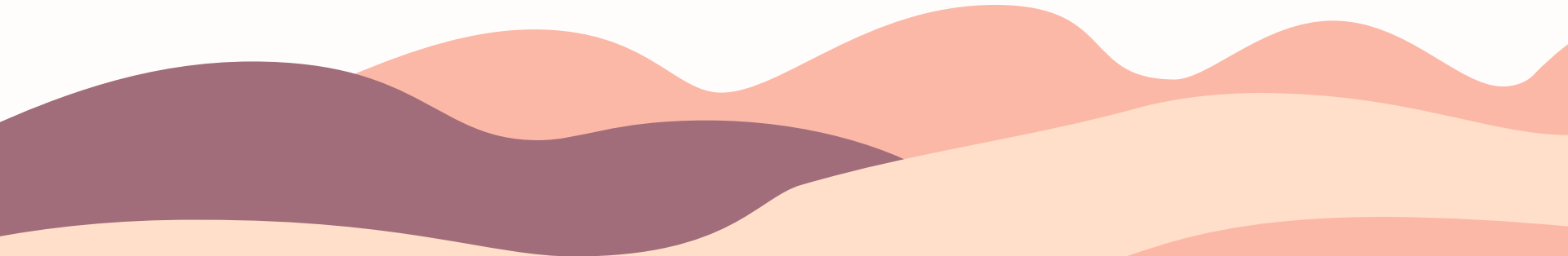
The track is heading towards B.

If you pull the lever, it will switch to A but it won't do the totally sick loop-da-loop.



Small Group Discussion

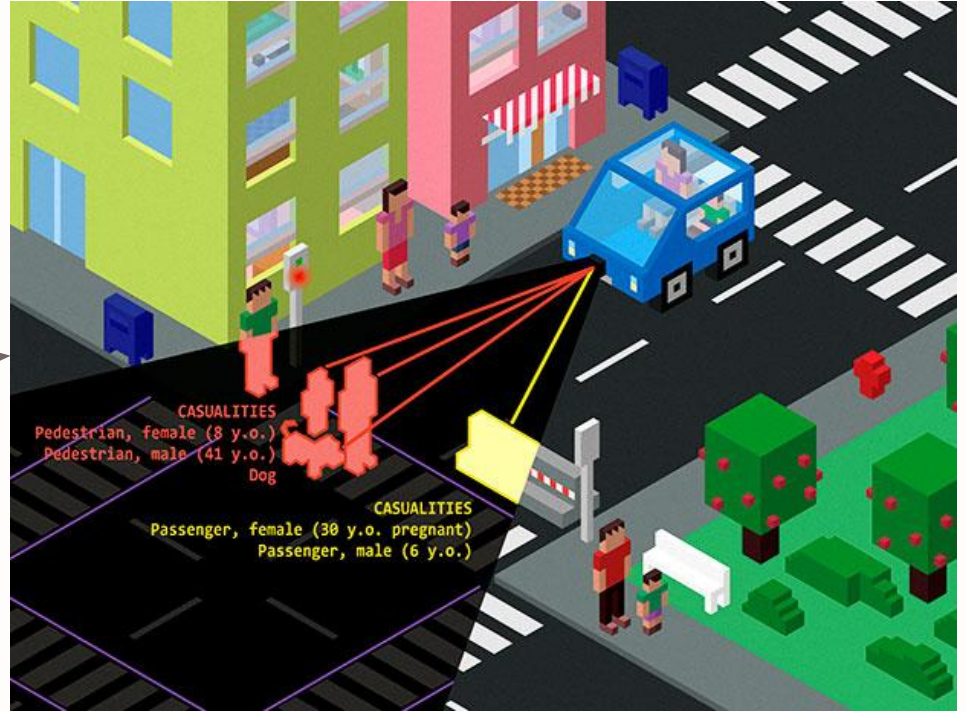
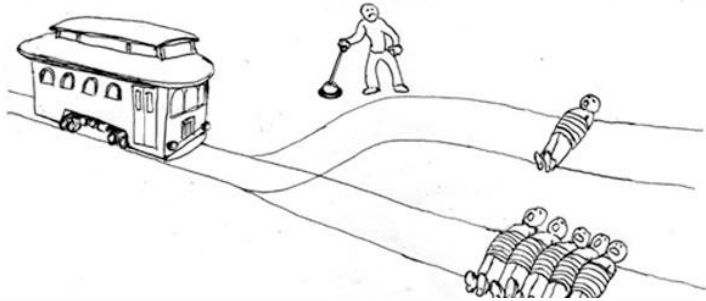
What would you do? What factors play into your decision?



The Good Place: The Trolley Problem in Action



The Trolley Problem In Real Life??





1.16 MB PNG

The shopping cart is the ultimate litmus test for whether a person is capable of self-governing.

To return the shopping cart is an easy, convenient task and one which we all recognize as the correct, appropriate thing to do.

To return the shopping cart is objectively right. There are no situations other than dire emergencies in which a person is not able to return their cart. Simultaneously, it is not illegal to abandon your shopping cart. Therefore the shopping cart presents itself as the apex example of whether a person will do what is right without being forced to do it. No one will punish you for not returning the shopping cart, no one will fine you or kill you for not returning the shopping cart, you gain nothing by returning the shopping cart. You must return the shopping cart out of the goodness of your own heart. You must return the shopping cart because it is the right thing to do. Because it is correct.

A person who is unable to do this is no better than an animal, an absolute savage who can only be made to do what is right by threatening them with a law and the force that stands behind it.

The Shopping Cart is what determines whether a person is a good or bad member of society.

The Shopping Cart Theory





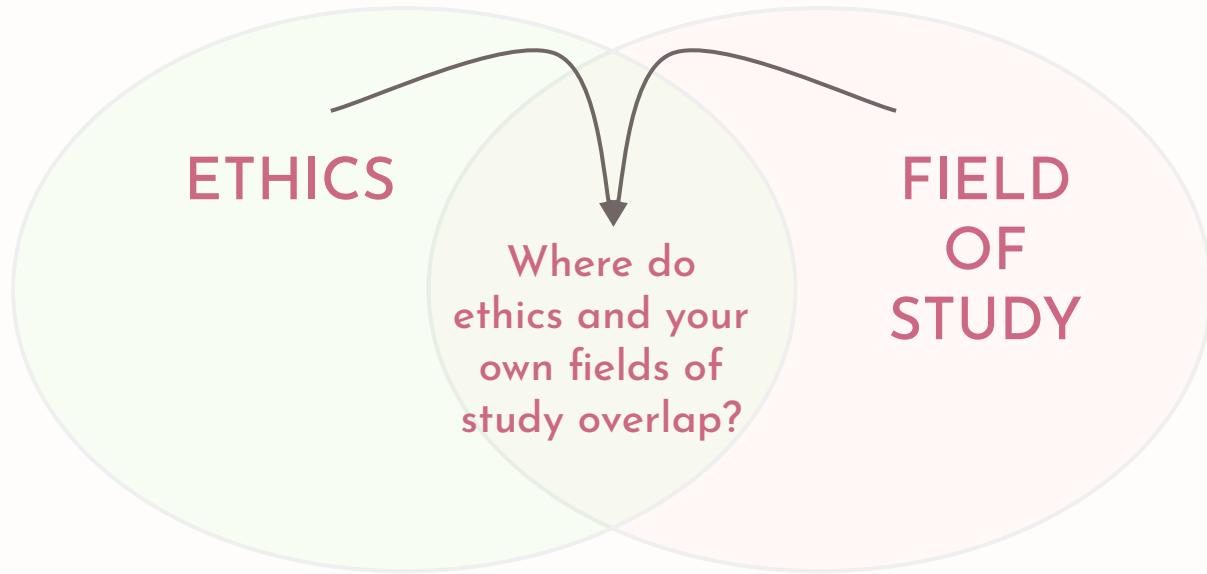


Ethics in Real Life

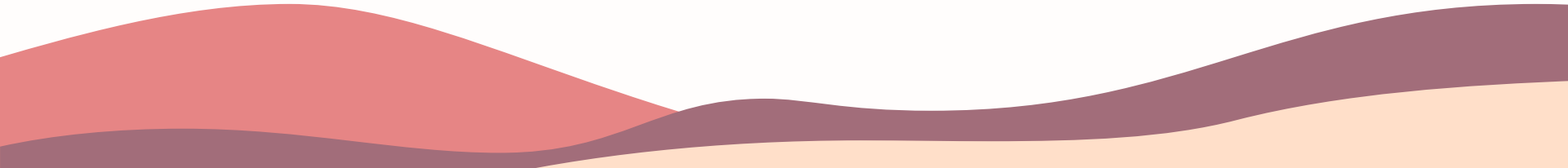
How can we be ethical in our daily lives? In our careers?




What makes an ethical scientist/scholar?



What kind of questions should we be asking?

- What prior knowledge is it based on?
 - What is the cultural context of this knowledge?
 - Who is conducting the research?
 - Who is funding the research?
 - Who does this benefit? Who does this harm?
 - How is this science communicated?
- 

Requirements at U.C. Berkeley

- College of Engineering – 1 required course with “ethics content”
 - College of L&S – 1 philosophy and values breadth
 - Physics, Maths, EPS – no ethics in STEM requirements
 - College of Chemistry – possibly 1 philosophy and values breadth
 - College of Natural Resources – possibly 1 ethics in STEM course
- 

Courses with ethics content

See course descriptions at the [Berkeley Academic Guide – Bioengineering](#)

Course #	Course title (units)	Notes
<u>BioE</u> 100 (recommended)	Ethics in Science and Engineering (3)	Fulfills Humanities/Social Studies Requirement and Ethics Content
Eng 125	Ethics, Engineering, and Society	Fulfills <u>Humanities/Social Studies</u> Requirement and Ethics Content
Eng 157AC (IAS 157AC)	Engineering, The Environment, and Society	Fulfills Humanities/Social Studies Requirement and Ethics Content and American Cultures
ESPM 161	Environmental Philosophy and Ethics (3)	Fulfills Humanities/Social Studies Requirement and Ethics Content
ESPM 162	<u>Bioethics</u> and Society (4)	Fulfills Humanities/Social Studies Requirement and Ethics Content
Hist C182C	Introduction to Science, Technology, and Society (4)	
L&S 160B	Effective Personal Ethics for the 21st Century (3/4)	Fulfills Humanities/Social Studies Requirement and Ethics Content
Philos 104 (formerly C104)	Ethical Theories (4)	Fulfills Humanities/Social Studies Requirement and Ethics Content
Philos 107	Moral <u>Psychology</u> (4)	Fulfills Humanities/Social Studies Requirement and Ethics Content

Observations?

Notice any patterns?

What seems good?

What seems bad?

DeCal Courses:

Genetics and Ethics
DeCal

Health

1

[M]

6:00PM-
7:30PM

Open

Jan 4,
2021

A Critical
Understanding of
Public Health

Health

1

6:00PM

Social Medicine -
Who Lives, Who Dies

Health

2

[M]

4:00PM-
5:30PM

Open

Jan 5,
2021

One Health:
Education for Action

H

Renewable Energy
and Environmental
Justice

Environment

1

[Th]

5:00PM-
6:00PM

Open

Dec 5,
2020

Traditional
Ecological
Knowledge:
Theoretical, Practical,
and Policy
Applications

En

Understanding
Healthcare DeCal

H

Energy &
Sustainability

E

Debunking Climate
Denialism

[W]

Environment

1

1

Environmentalists of
Color Mentorship

E

Technology and
Social Impact

Political

Save the Bees:
Pollinator
Conservation
through
Environmental

E

Solutions for a
Sustainable Future

Environment

1

Meditation,
Neuroscience, and
Social Responsibility

Decolonizing Bodies
in Public Health

Health

2

[W]

6:00P
8:00P

Exploring
Intersections within
Climate Justice for
Resilience

Environment

1



Confessions from UC Berkeley

23h · 🌐



8821.

As a STEM major, I really love a lot of my humanities classes and am glad I took them. But so many of the arguments people use defend them as mandatory breadth courses are ridiculous. The main argument seems to be that without humanities classes, STEM majors will just end up becoming sociopathic robots incapable of critical thought who only want to make money. I'm not offended as a STEM major but this attitude is really just elitist as hell. Do you know who else doesn't take humanities classes? People who don't go to college in the first place. People who can't afford to spend extra time and tuition on classes that won't help them in their careers. I feel very privileged to be able to take and enjoy the breadth classes I took; if I had to take on student debt I don't think I would be so happy to take these classes and delay my graduation by a year.

STEM elitists are annoying, but the tendency to over push back and claim that humanities classes are needed to make you into a functional adult is also ridiculous.



Esteban Rodas

Alex Jones The salient question is whether humanities classes actually do much to help raise awareness as needed within these professions--or whether classes in general would be the way to truly reach people. Can you really teach a class on racial bias in a way that helps? Maybe. Would it be more or less effective than real world experience where you have to talk to people affected and engage with the shortcomings of current medical practice? Is the problem really that STEM majors aren't forced to take more humanities classes? I think OP has a reasonable take that people overestimate how much these classes would actually help produce more well rounded STEM students.

Like · Reply · 21h



Jazz Mackey

I think both STEM and humanities should have a symbiotic relationship, because they are equally important and mutually improve each other. There's often a lot of overlap, like how phenomenology is equally relevant to neurology and philosophy. So it's difficult to even compartmentalize the line that defines them. I've read SO many scientific articles that come to really poor, causative conclusions that are clearly based on personal bias or former research that's mostly debunked. And obviously the humanities needs STEM in order to determine the scope of the material universe. Material versus immaterial doesn't really work; they are melded together.

Like · Reply · 22h



10

Upcoming Topics

1. Relationship between war + science
 2. Algorithms and Militarization of police
 3. TMT on Mauna Kea
 4. Power structures in academia (labor rights, authorship, etc.)
- 