



Join at
slido.com
#ucla

Connecting the dots of technology and ethics

Albert S. Kochaphum

Week 5 | April 25th, 2022

Today's Agenda

Logistics

Lecture



Logistics

- Survey Due Wednesday 4/27
- Memo Revision due Friday 4/29
- Office Hours open this week
 - Next required group check-in is week 6/week 7!
 - Thinking Caps and Labs resume!

Upcoming Lectures

Week	Date		Topic
5	4/25	Mon	Science, Technology, Ethics
6	5/2	Mon	Design Justice
	5/4	Wed	Spatial Ethnography
7	5/9	Mon	Human Centered Design
	5/11	Wed	Data Justice*
8	5/16	Mon	Mentorship and Collaboration
9	5/23	Mon	Connecting Activism and Technology
10	6/1	Wed	Beyond Web Development

= Visiting Voice



Week 5 check-in, how is everyone?

Join at
slido.com
#ucla

Midterms r killing me
alright but the amount of looming work is worrying
why is it so hot cold
tired and too busy
losing it
screaming crying throwing up
tired
busy
o((
good Sad
MUY BIEN
too much work
awesome



Join at
slido.com
#ucla

Was the progress report email helpful?

Yes

No

Did not look at it

No opinion



100%





How are you feeling about the group project feedback?

Helpful



89%

WE ARE BRINGING PITCHFORKS TO OFFICE HOURS!!



11%

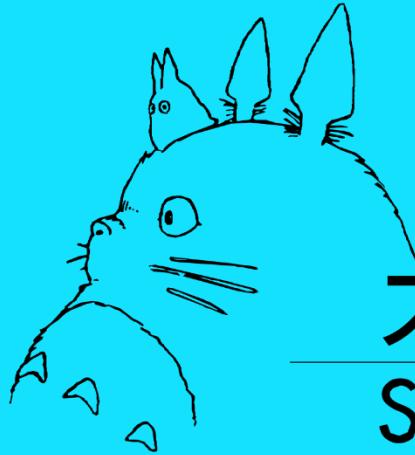
Not helpful



0%

Join at
slido.com
#ucla

Week 4 ALwards



スタジオアンジブリアブル STUDIO UNGHIBLI-VABLE ALWARDS

1. <https://willakurland.github.io/aa191-labs/Week-3/part1.html> +
2. <https://nishukrish.github.io/AsianAm191A-Nish/week3/index.html>
3. <https://codingdianat.github.io/aa191-assignments/week1/>
4. <https://bittertang.github.io/22s-asiaam-191a-labs/week%203/part1.html>
5. <https://hajovel.github.io/211S-191A-Assessments/week3/map.html>
6. https://angelineeow.github.io/22s-asiaam-191a-labs/week3/more_about_me.html
7. <https://ashley-lu.github.io/s22-asiaam-191a-assessments/week3lab/index.html>

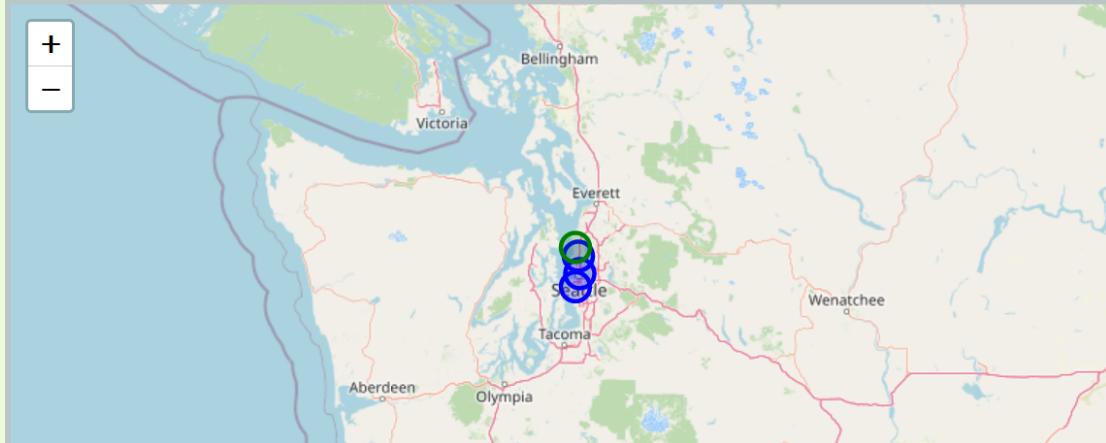
GOOD POMPO-CONTEXT

Willa Kurland

These are Seattle Area institutions that are funded Asian American and Native American Pacific Islander-Serving Institutions under Title III Part F, in 2021

This program provides grants and related assistance to Asian American and Native American Pacific Islander-serving institutions to enable such institutions to improve and expand their capacity to serve Asian Americans and Native American Pacific Islanders and low-income individuals.

You can learn more here, <https://www2.ed.gov/programs/aanapi/index.html>



<https://willakurland.github.io/aa191-labs/Week-3/part1.html>

NICE AND BASEMAP CHOSEN UPONYO SITE!

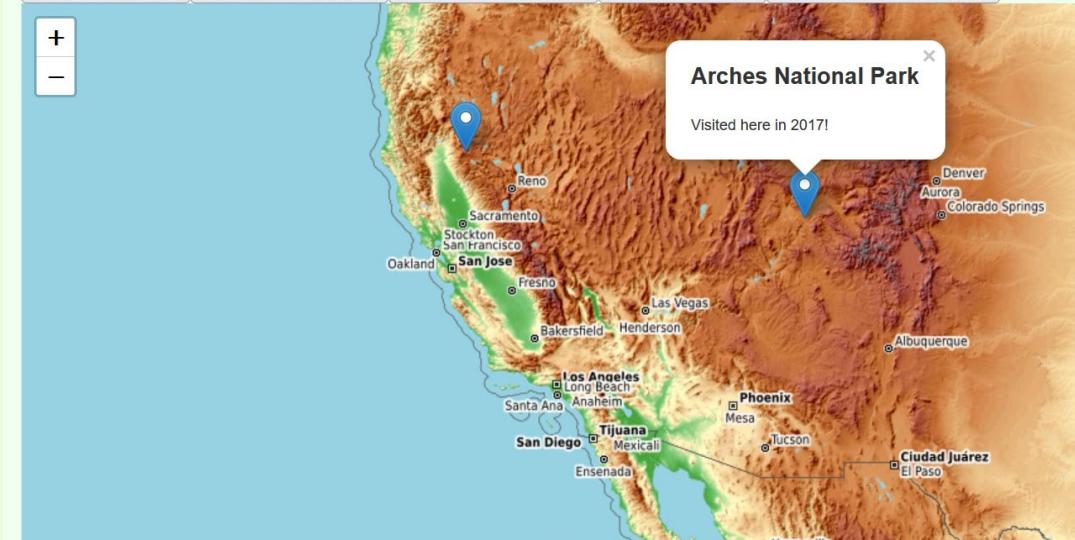
Nishaanth Krishnan



My Travels!

Here are some of my favorite national parks!

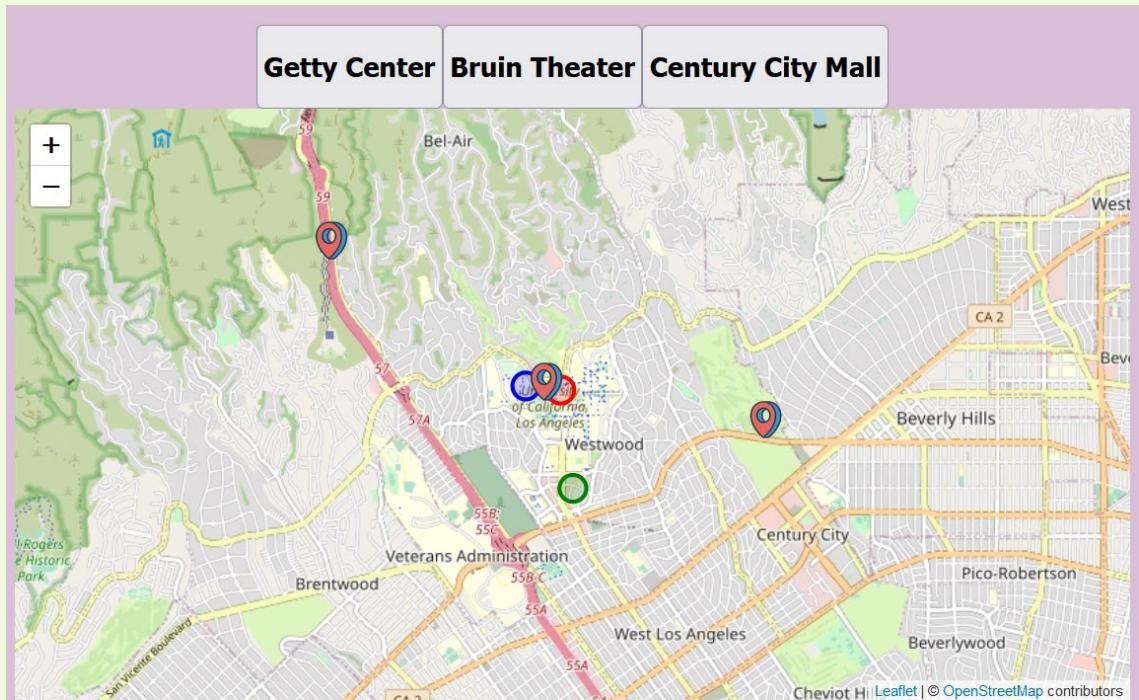
Glacier National Park | Everglades National Park | Shenandoah National Park | Arches National Park | Lassen Volcanic National Park



<https://nishukrish.github.io/AsianAm191A-Nish/week3/index.html>

PORCO ROSSO NICE CHANGES

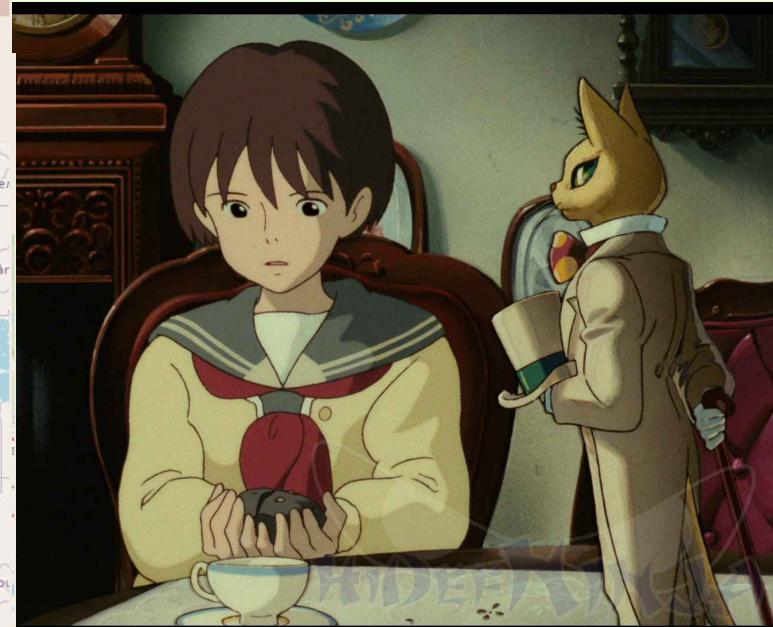
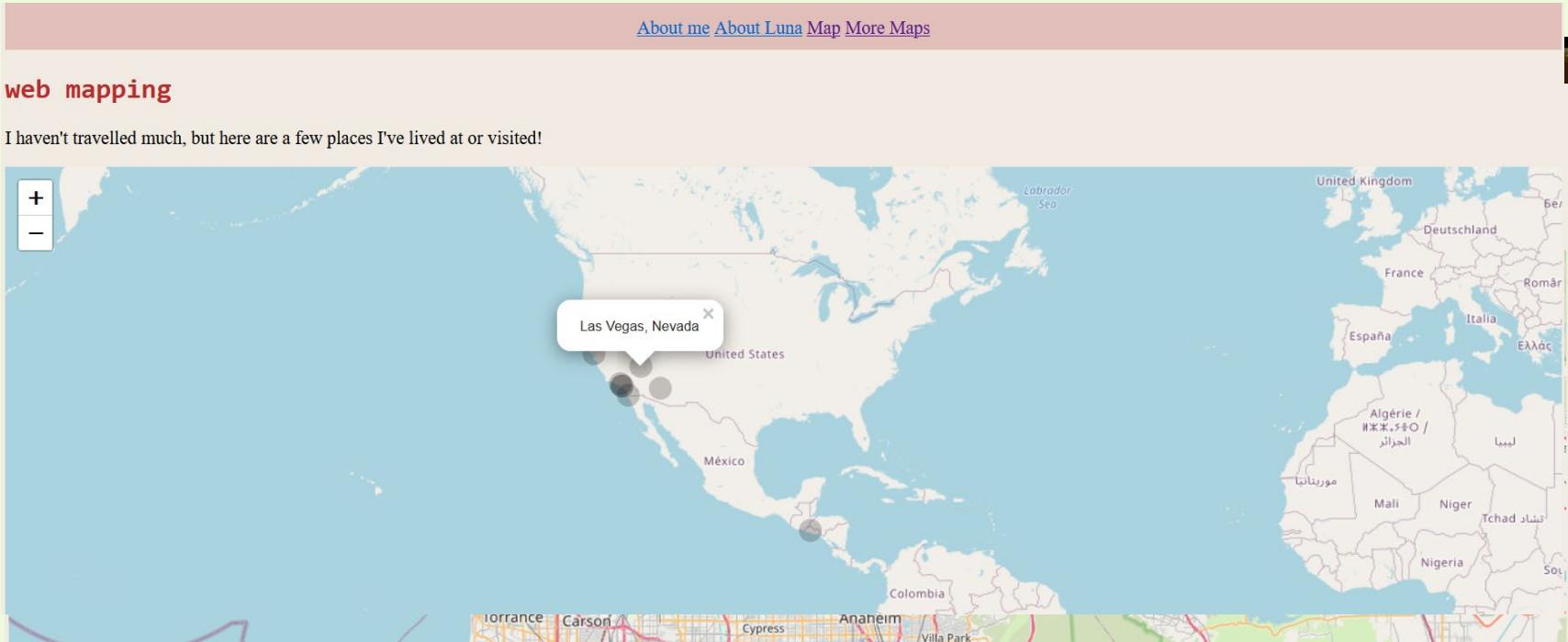
Diana Tran



<https://codingdianat.github.io/aa191-assignments/week1/>

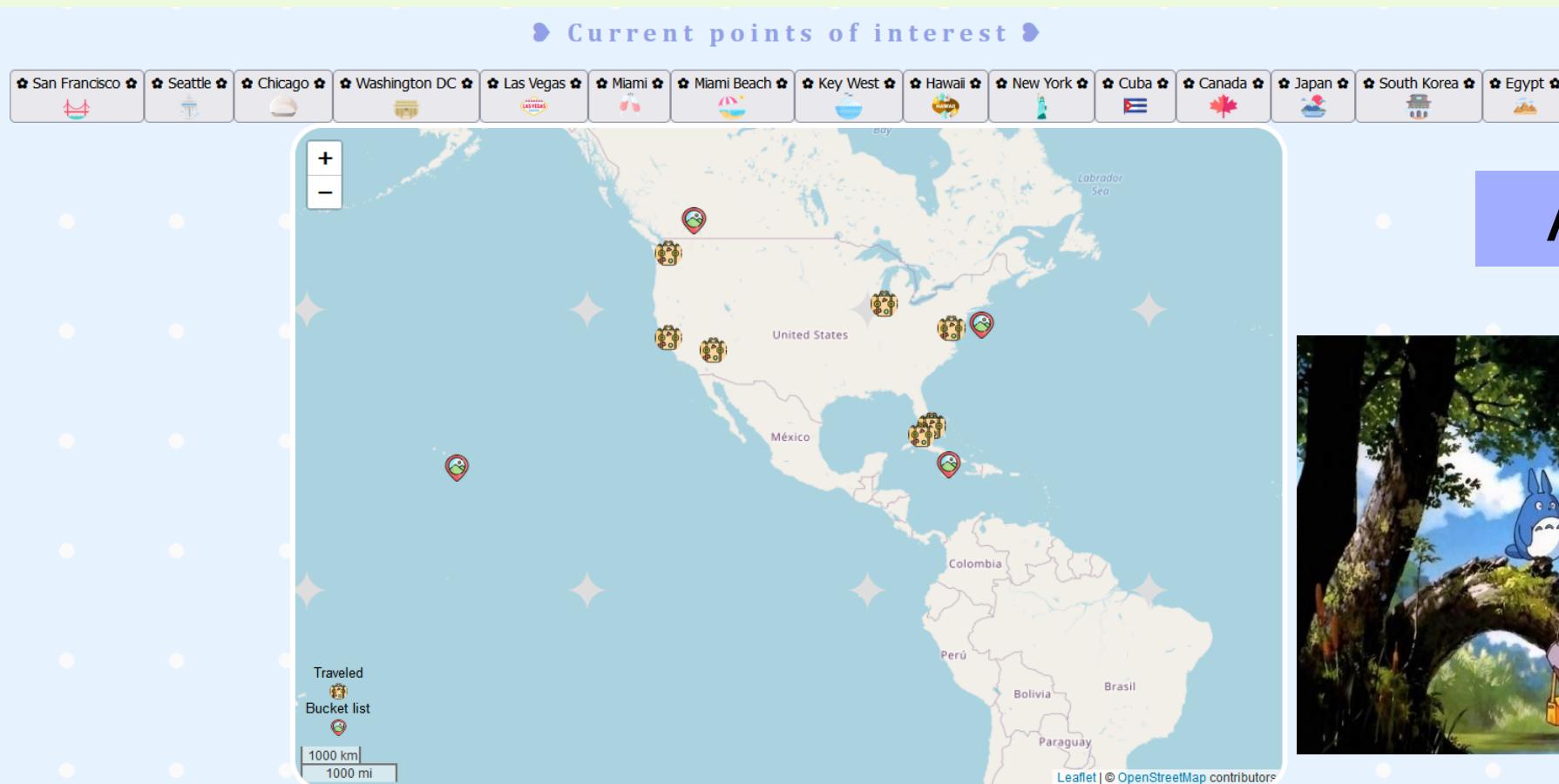
WHISPER OF THE HEARTISTIC CUSTOMIZATIONS

Haven Morales



<https://hajovel.github.io/211S-191A-Assessments/week3/map.html>

IM TELLING ALL MY NEIGHBORS ABOUT THIS TOTOROBUST AND LEGENDARY MAP DESIGN



Angeline Eow



https://angelineeow.github.io/22s-asiaam-191a-labs/week3/more_about_me.html

```
fetch("travelmap.geojson")
  .then(response => {
    return response.json()
  })
  .then(data =>{
    createButtons(data.features[0].geometry.coordinates[1], data.features[0].geometry.coordinates[0], `✿
      ${data.features[0].properties.attraction} ✿`, "upload/hawaii.png")
    createButtons(data.features[1].geometry.coordinates[1], data.features[1].geometry.coordinates[0], `✿
      ${data.features[1].properties.attraction} ✿`, "upload/statue-of-liberty.png")

    L.geoJSON(data, {
      pointToLayer: (feature, latlng) => {
        return L.marker(latlng, {icon: listIcon})
      }
    }).bindPopup(layer => {
      return `<h2 class="spacing2">✿ ${layer.feature.properties.attraction} ✿</h2>
        <h3>${layer.feature.properties.description}</h3>
        <img class="addcenter" src=${layer.feature.properties.img}>`;
    }).addTo(map);
  })
}
```

NAUSICÄÄWESOME TEACHER'S SITE OF THE WEEK!

Ashley Lu



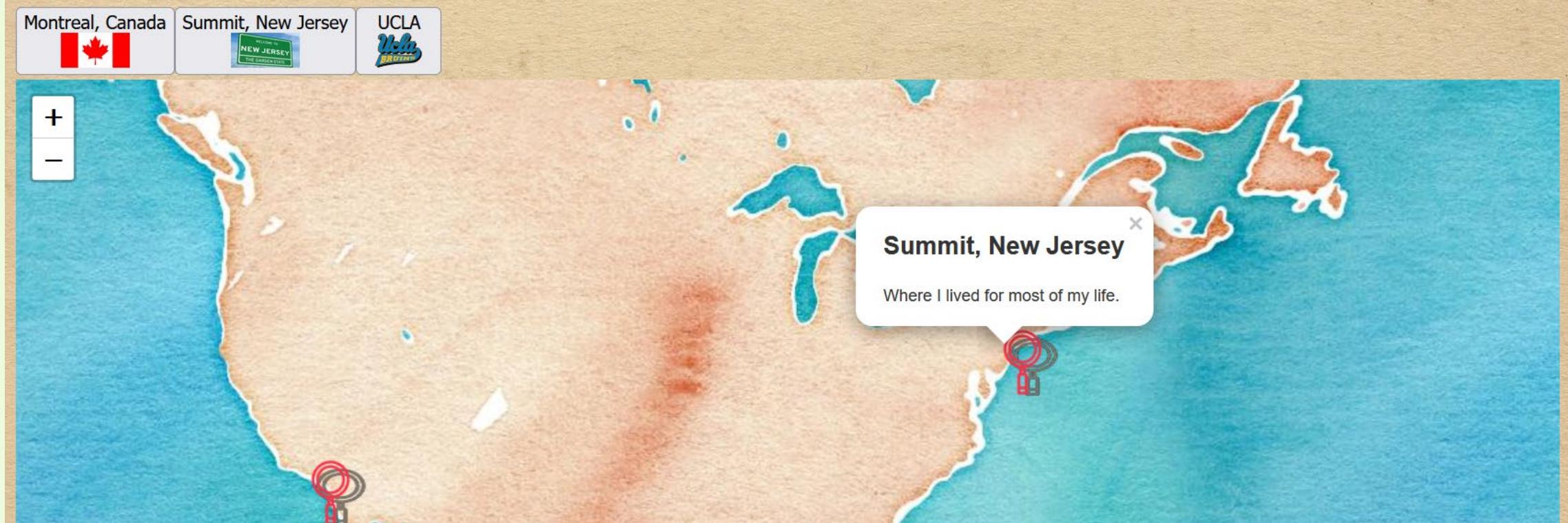
Home About Maps

The screenshot shows a website with a light beige background. At the top right are three links: "Home" (in red), "About", and "Maps". In the center-left is a small, dark oval icon containing a silhouette of a person. To its right is a red, handwritten-style letter "T". Below these elements is a circular inset showing a character in a brown trench coat and hat, holding a pipe, standing next to a door.

<https://ashley-lu.github.io/s22-asiaam-191a-assignments/week3lab/index.html>

Places I've Lived In

I chose this tile layer for the map not only because it looks pretty but also because it reminded me of my Middle Eastern Studies class. The fact that no boundaries are drawn means we are seeing the land from a mostly geographical perspective, hopefully limiting power imbalances created by politics and eurocentric ideals.



<https://ashley-lu.github.io/s22-asiaam-191a-assignments/week3lab/index.html>

```
fetch("map.geojson")
  .then(response => {
    return response.json()
  })
  .then(data =>{
    // Basic Leaflet method to add GeoJSON data
    createButtons(data.features[0].geometry.coordinates[1], data.features[0].geometry.coordinates[0],
                  data.features[0].properties.place, "images/canada-flag.png")
    createButtons(data.features[1].geometry.coordinates[1], data.features[1].geometry.coordinates[0],
                  data.features[1].properties.place, "images/nj.jpg")
    createButtons(data.features[2].geometry.coordinates[1], data.features[2].geometry.coordinates[0],
                  data.features[2].properties.place, "images/ucla-logo.svg")

    L.geoJSON(data, {
      pointToLayer: (feature, latlng) => {
        return L.marker(latlng, {icon: MyIcon, color: feature.properties.color})
      }
    }).bindPopup(layer => {
      return `<h2>${layer.feature.properties.place}</h2>` + layer.feature.properties.description;
    }).addTo(map);
  })
}
```

<https://ashley-lu.github.io/s22-asiaam-191a-assignments/week3lab/index.html>

YOUR FEEDBACK WAS A GREAT (KIKI'S DELIVERY) SERVICE TO YOUR CLASSMATES!

Group 7 – Daiki Saito, Angeline Eow, Lindsey Mardona

Group	Empowered Community	Why do you think so?	Improvements to questions
N	Japanese American Community	Because it allows Japanese Americans to connect with each other, even outside of Little Tokyo. Language barrier won't be an issue for First Generation Japanese American who may not be comfortable with English.	
S	Workers	Because it allows anyone with a job to know how much they pay for taxes, which prevents the government from corruption. More transparency = more opportunities to promote equality	



Next up:

Theme of the week

The societal impacts of technology

**What is the relationship between
society and technology?**



Join at
slido.com
#ucla

What do you think is the relationship between technology and society?

Technology shapes society

easier to connect with everyone

intertwined perceptions data function

technology can affect communication and collaboration in society

(especially

normal

societies

society

validation result

dependent

integrated

(ex utilizes

necessities

relies

technology

tool social person

different

media)

realize

influences

tasks power

benefit

helps

society shapes the utilization of technology

digital

Tools to make the society better

impactful

entertainment

day

a lot! both depend on the other

Inside a European push to outlaw creepy ads

Natasha Lomas @riptari / 9:30 AM PDT • October 21, 2021



Comment

<https://techcrunch.com/2021/10/21/inside-a-european-push-to-outlaw-creepy-ads/>

Featured Article



How Europe has expanded its bid to disrupt Big Tech

Digital Market Act gets new interoperability requirements, more choice screens, wider FRAND and limits on data for ad tracking...

Natasha Lomas @riptari / 12:02 PM PDT • March 25, 2022



Comment



<https://techcrunch.com/2022/03/25/how-europe-has-expanded-its-bid-to-disrupt-big-tech/>

Report reveals Big Tech's last minute lobbying to weaken EU rules

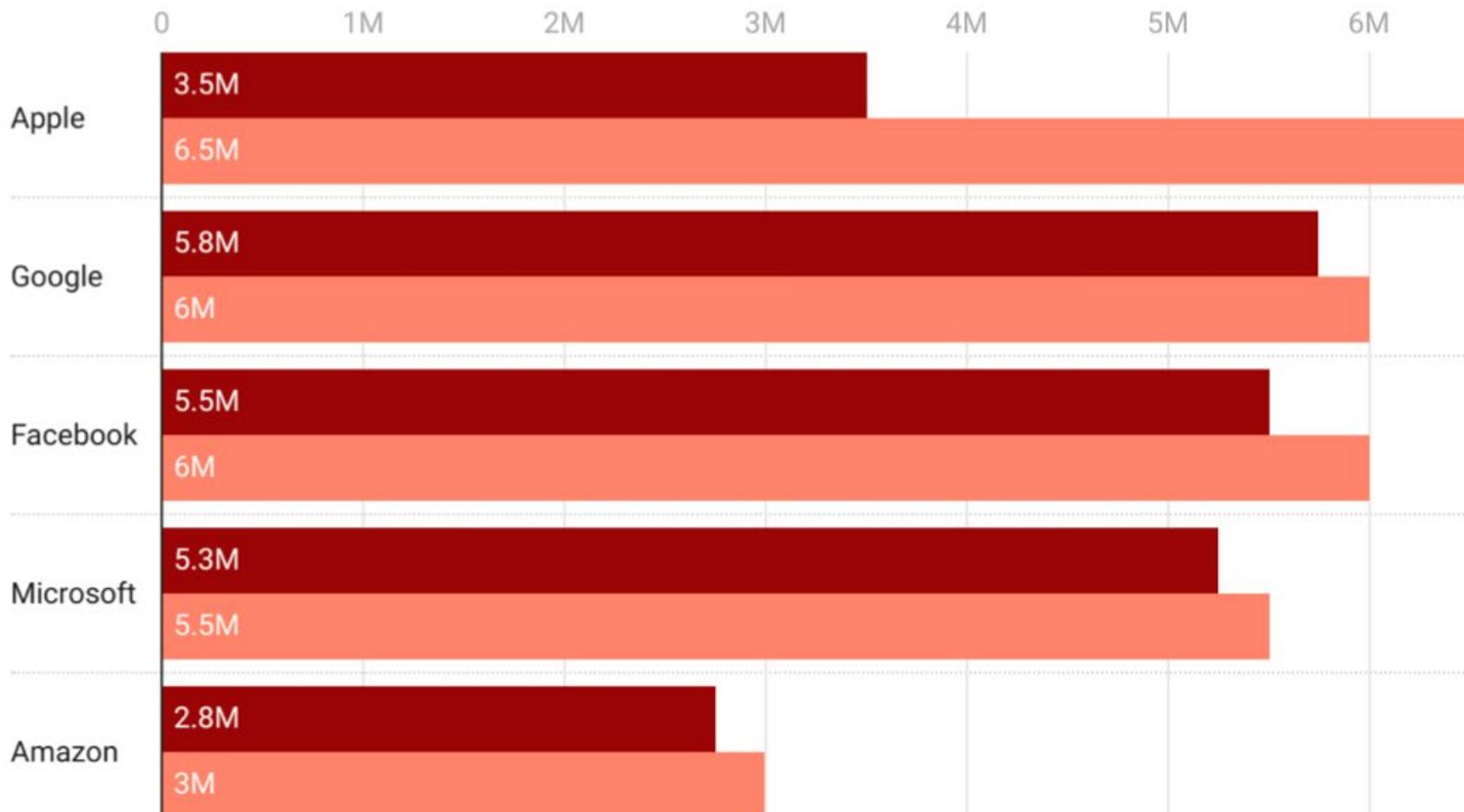
Natasha Lomas @riptari / 3:01 PM PDT • April 22, 2022



Big Tech boosts EU lobbying

New EU Transparency Register update show that Big Tech firms boosted their EU lobbying in 2021. Their combined lobby spending exceeded 27 million euros.

■ 2020 ■ 2021



04.21.2022

UNITED STATES

WAR AND IMPERIALISM / RICH PEOPLE



Lockheed Martin and Friends Don't Want You to Know What They're Up To

BY

DANAKA KATOVICH

The boards of defense companies like Lockheed Martin and Boeing are encouraging their shareholders to vote against transparency measures. Maybe the US government shouldn't fund companies whose profits would be harmed by the collection of human rights data?



A US soldier fires an FGM-148 Javelin missile during a combined arms live fire exercise in Jordan on August 27, 2019. (Sgt. Liane Hatch / US Army via Wikimedia Commons)

<https://www.jacobinmag.com/2022/04/defense-contractors-human-rights-transparency-lockheed-raytheon>

02.17.2021

GERMANY

CAPITAL / SCIENCE AND TECHNOLOGY

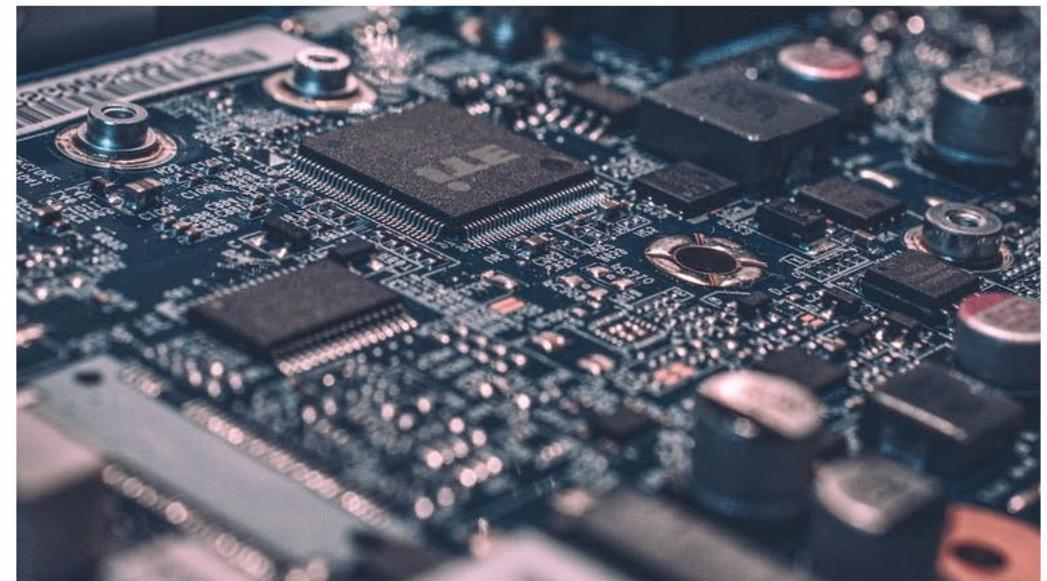


Under Capitalism, “Labor-Saving” Technology Only Adds to Our Workload

BY

PETER SCHADT / HANS ZOBEL

Upon its launch ten years ago, Germany's Industry 4.0 program promised a fourth industrial revolution changing the way we work. Yet for all the talk of novelty, it followed age-old capitalist imperatives: using labor-saving technology not to lessen our workload but subject us to even tighter workplace discipline.



In many parts of the world, working conditions are deteriorating and digitalization is being blamed for this. (Unsplash)

<https://www.jacobinmag.com/2022/04/defense-contractors-human-rights-transparency-lockheed-raytheon>



Thoughts about all this?

society is to an extent controlled by technology...

controlled

technology is easily weaponized

detrimental in some aspects

Ew

knife

tech

use



very sad

oops

capitalist thinking

Join at
slido.com
#ucla

technology is not going away lol

technology can be easily abused 😞

we're trapped in a capitalistic society

good bad

depend

there need to be more measurements

fishy

technology is dangerous if used for unethical purposes

society weaponizes technology ;-;

Human keep exploiting technology in a bad way

Community + Technology + Ethics = Necessary



PHOTO-ILLUSTRATION: SAM WHITNEY; GETTY IMAGES

CRYSTAL PONTI IDEAS APR 22, 2022 7:00 AM

'Vampire Energy' Is Sucking the Life Out of Our Planet

This Earth Day, it's time to tackle a sneaky source of waste that drains wallets and accelerates climate change.

First off.. Why is this relevant?



SFGATE

[Newsletters](#)[Sign In](#)

Business

Exxon Bans Outside Flags, Like the Pride Banner, From Company Flagpoles

Ivan Penn, New York Times

April 23, 2022



<https://www.sfgate.com/business/article/Exxon-Bans-Outside-Flags-Like-the-Pride-Banner-17121869.php>

Disturbing?



JASON FRIED

April 26, 2021

Changes at Basecamp

At Basecamp, we treat our company as a product. It's not a rigid thing that exists, it's a flexible, malleable idea that evolves. We aren't stuck with what we have, we can create what we want. Just as we improve products through iteration, we iterate on our company too.

Recently, we've made some internal company changes, which, taken in total, collectively feel like a full version change. It deserves an announcement.

<https://world.hey.com/jason/changes-at-basecamp-7f32afc5>

1. No more societal and political discussions on our company Basecamp account. Today's social and political waters are especially choppy. Sensitivities are at 11, and every discussion remotely related to politics, advocacy, or society at large quickly spins away from pleasant. You shouldn't have to wonder if staying out of it means you're complicit, or wading into it means you're a target. These are difficult enough waters to navigate in life, but significantly more so at work. It's become too much. **It's a major distraction.** It saps our energy, and redirects our dialog towards dark places. It's not healthy, it hasn't served us well. And we're done with it on our company Basecamp account where the work happens. People can take the conversations with willing co-workers to Signal, Whatsapp, or even a personal Basecamp account, but it can't happen where the work happens anymore. *Update: David has shared some more details and more of the internal announcement on his HEY World blog.*

6. No forgetting what we do here. We make project management, team communication, and email software. **We are not a social impact company.** Our impact is contained to what we do and how we do it. We write business books, blog a ton, speak regularly, we open source software, we give back an inordinate amount to our industry given our size. And we're damn proud of it. Our work, plus that kind of giving, should occupy our full attention. **We don't have to solve deep social problems,** chime in publicly whenever the world requests our opinion on the major issues of the day, or get behind one movement or another with time or treasure. These are all important topics, but they're not our topics at work — they're not what we collectively do here. Employees are free to take up whatever cause they want, support whatever movements they'd like, and speak out on whatever horrible injustices are being perpetrated on this group or that (and, unfortunately, there are far too many to choose from). But that's their business, not ours. We're in the business of making software, and a few tangential things that touch that edge. **We're responsible for ourselves.** That's more than enough for us.



Thoughts about "basecamp"? Is it right? Wrong?

bad because what even is the purpose of the efficiency

how many companies think this by won't publish it

wrong - great power comes with great responsibility

wrong, banning political discussion is not "efficient"

sus

What a cop out



Wrong

very bad

Weird

tomato tomato



boo stinky

i think i understand the intentions but everything is political

companies, especially need to be aware of their influence and be aware as such

Wrong because they have a voice and do not want to use it

Join at
slido.com
#ucla

April 26, 2021

Changes at Basecamp

At Basecamp, we treat our company as a product. It's not a rigid thing that exists, it's a flexible, malleable idea that evolves. We aren't stuck with what we have, we can create what we want. Just as we improve products through iteration, we iterate on our company too. Recently, we've made some internal company changes, which, taken i...

[Read more](#)

April 24, 2021

I bought a sauna

I bought a sauna. Which one doesn't matter. I barely know. I don't even care. Model number? I couldn't tell you. Maker? I'd pronounce it wrong. I just know it goes up to about 184 degrees Fahrenheit. I bought a sauna on a second-hand recommendation from someone I don't know, but do respect. I bought a sauna sight unseen, heat unfelt. I...



A FEW
DAYS LATER

INSIDE THE ALL-HANDS MEETING THAT LED TO A THIRD OF BASECAMP EMPLOYEES QUITTING

The company's senior leadership wanted to quell employees' concerns, and only made things much, much worse

By Casey Newton | [@CaseyNewton](#) | May 3, 2021, 8:00pm EDT

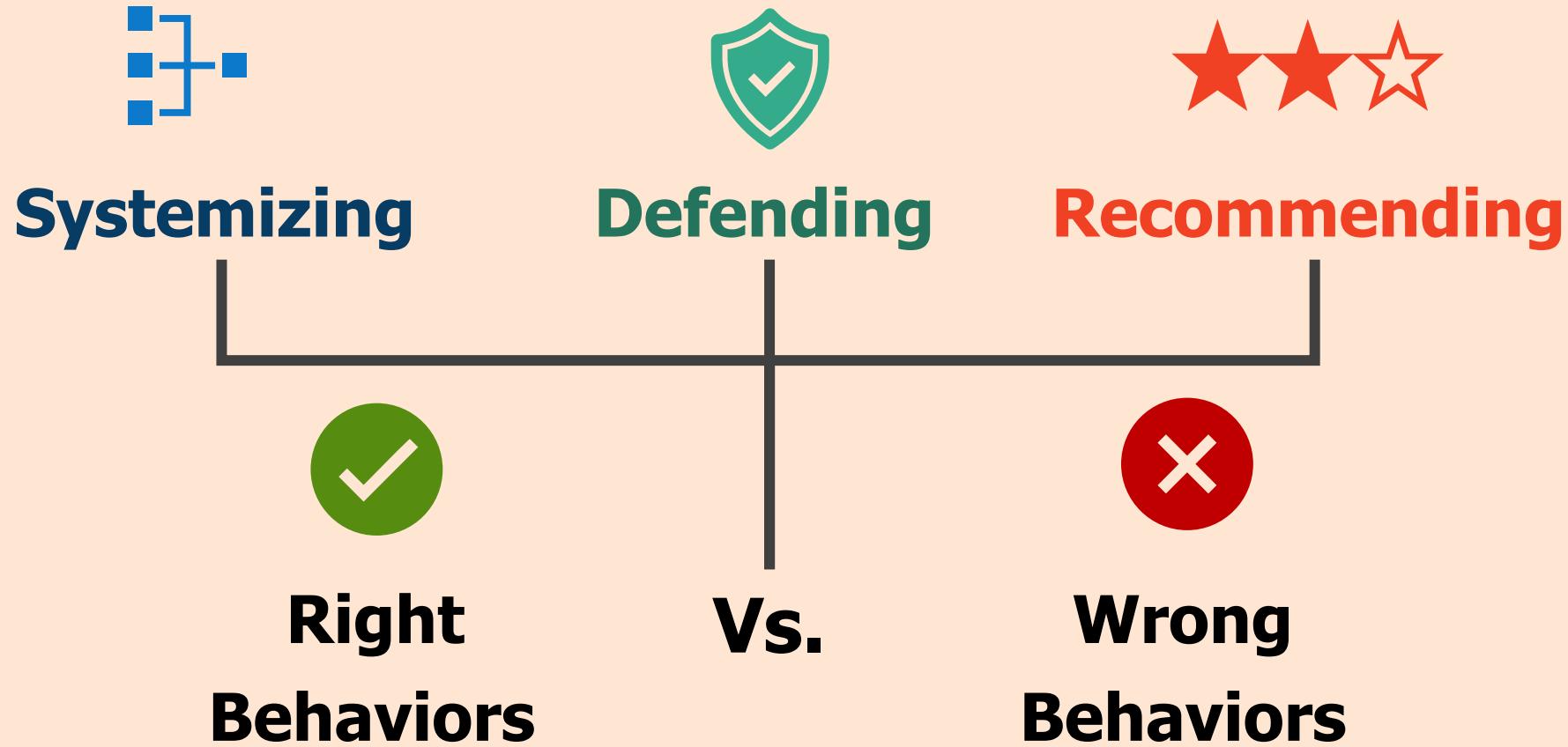
But it was an [all-hands meeting last Friday](#), Newton reported, that apparently pushed some employees who were on the fence to actually take the severance offer. Basecamp's longtime head of strategy, Ryan Singer, questioned the existence of white supremacy at the company to the dismay of other employees. Singer, who had been with the company 18 years, eventually resigned.

Analyzing this looks like a job for...

Ethic



Reminder, ethics is about:



Reminder, ethics is about:

Understanding why we should be doing a certain action.

There are no “right” answers...

BUT!!!!!!

**We should be able to *systemize*, *defend*, and
recommend what is *right* or *wrong* for ourselves.**

Three ethical terms to walk away with:



Technological Determinism



Techno-facism

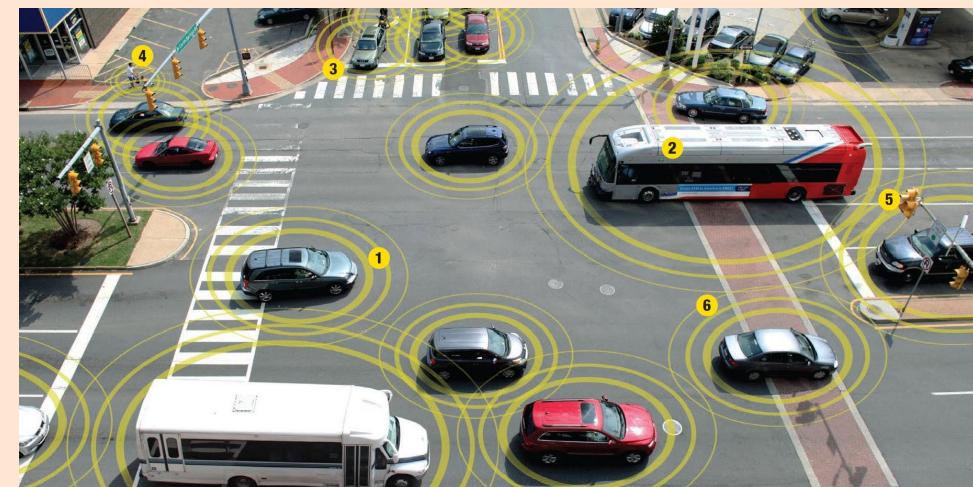


Holism

Society, Ethics, and Technology

Technology

- 1. Objects that provide a “solution” to a problem**
- 2. Technique of knowledge**
- 3. Set of objects that exist only within certain social relations.**



Technology

When we think about technology as an “object” we cut it out of the social context that it exists in.

This causes:

- **Commodification of technology**
- **Fetishizing technology**

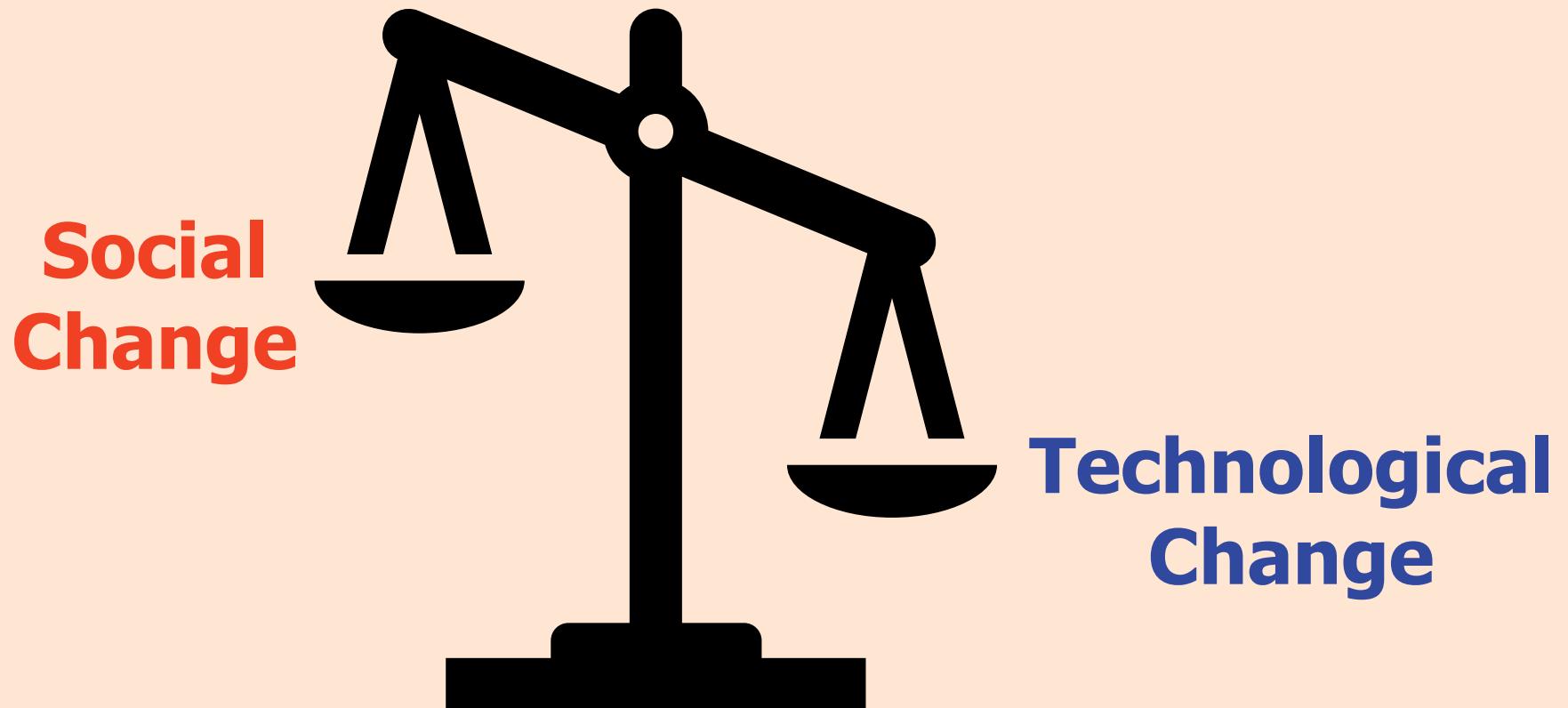


Society

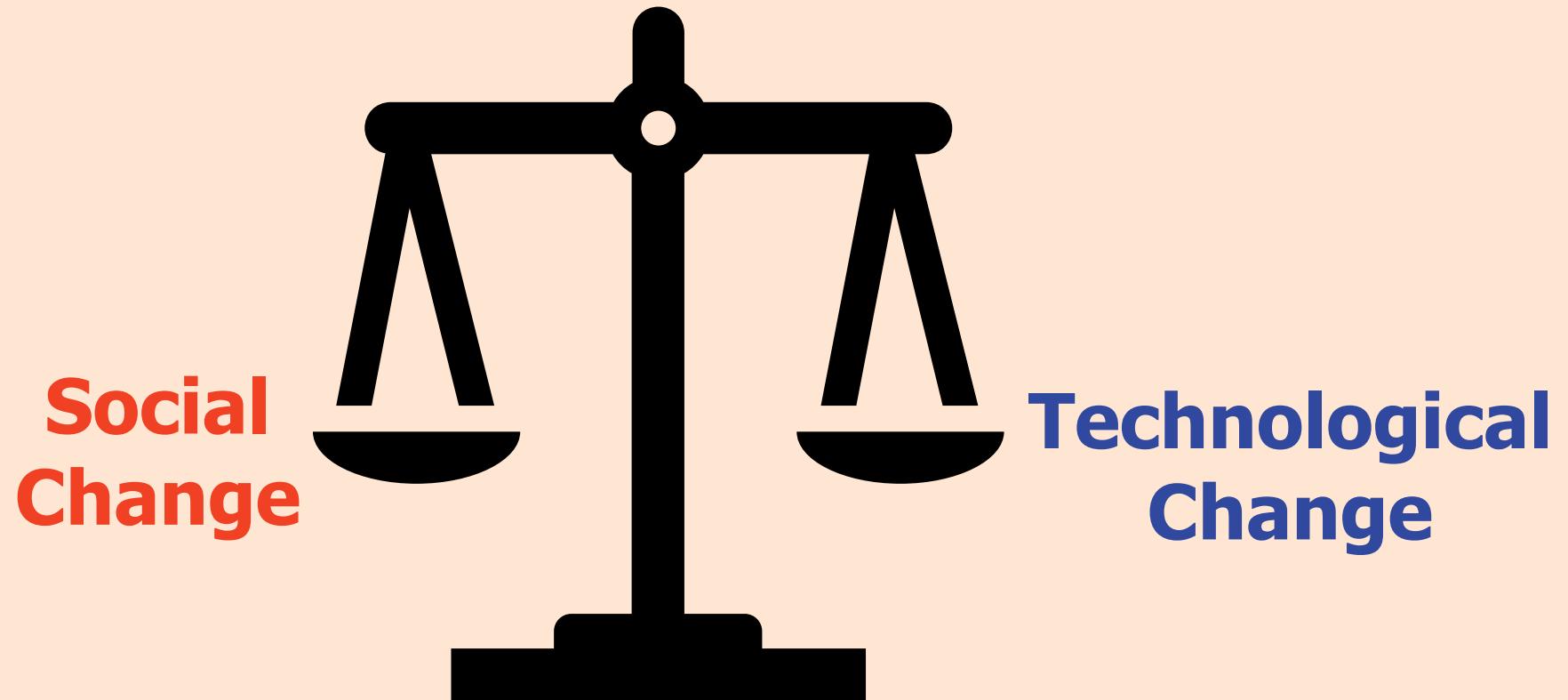


“We live in a society”

As a society where we are at:



Where we need to be:



Why?

We have tools to solve social issues like:

- Hunger
- Climate change
- Police brutality
- Houselessness

But....

**We spend resources on trying to find “new”
bigger and better technical solutions instead of
addressing root causes.**

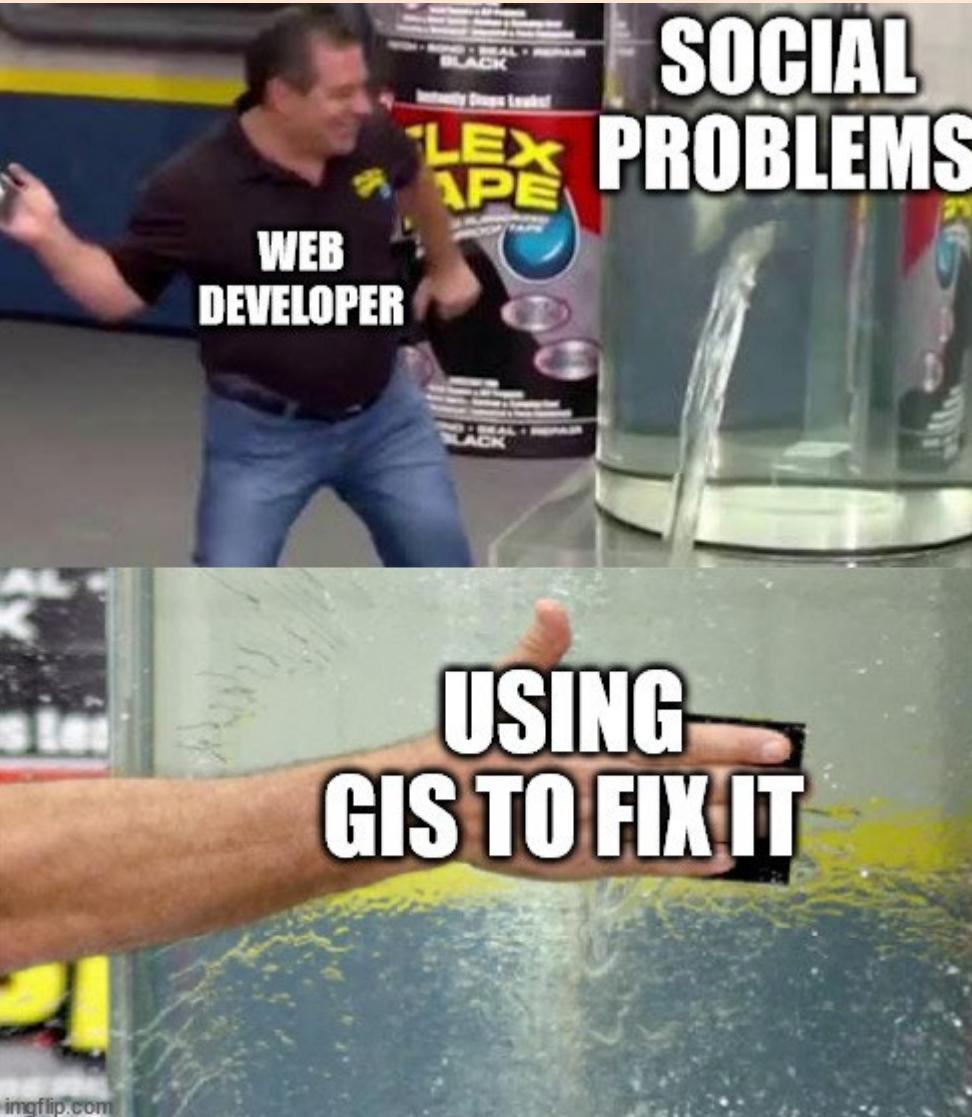
Why?

It's easier to invest in new technology than to face the causes of social problems.

Today's main point:

You cannot solve **social problems with just technology.**

Don't be this type of mapper:



Even “scientific” problems are more effected by society than technology.

Any examples?



**BASED ON
TRULY
POSSIBLE
EVENTS**

A FILM BY ADAM MCKAY
DON'T LOOK UP

NETFLIX PRESENTS A HYPEROBJECT INDUSTRIES PRODUCTION A FILM BY ADAM MCKAY LEONARDO DiCAPRIO JENNIFER LAWRENCE "DON'T LOOK UP" ROB MORGAN JONAH HILL MARK RYLANC TYLER PERRY TIMOTHEE CHALAMET RON PERLMAN ARIANA GRANDE SCOTT MESCUDI WITH CATE BLANCHETT AND MERYL STREEP CASTING BY FRANCINE MAISLER MUSIC GABE HILFER MUSIC BY NICHOLAS BRITELL COSTUME DESIGN SUSAN MATHESON EDITED BY HANK CORWIN, ACE PRODUCTION DESIGNER CLAYTON HARTLEY DIRECTOR OF PHOTOGRAPHY LINUS SANDGREN, ASC, FSF PRODUCED BY RON SUSKIND EXECUTIVE PRODUCER JEFF WAYMAN PRODUCED BY ADAM MCKAY, p.g.a & KEVIN MESSICK, p.g.a. STORY BY ADAM MCKAY & DAVID SIROTA SCREENPLAY BY ADAM MCKAY DIRECTED BY ADAM MCKAY



IN SELECT THEATERS DECEMBER AND ON

NETFLIX | DECEMBER 24

NETFLIX



Health Topics ▾

Countries ▾

Newsroom ▾

Emergencies ▾

Data ▾

About WHO ▾



02.16.2022

SARAH LAZARE



Pharmaceutical Monopolies Are Still Preventing Full Access to COVID Vaccines Around the World

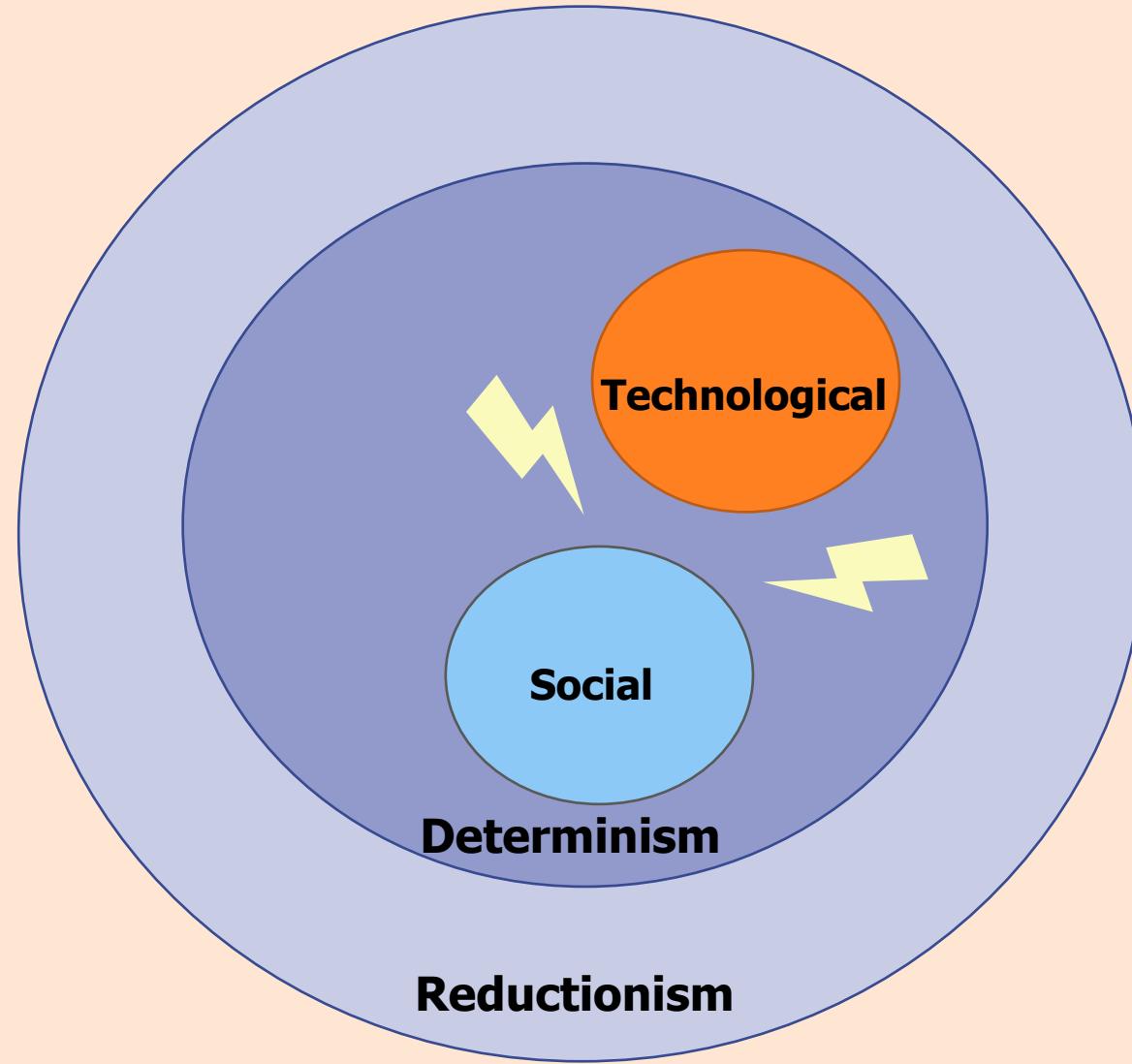
South African scientists are nearly finished reverse engineering Moderna's COVID-19 vaccine. They are forced to waste precious time and resources recreating a vaccine that already exists, because for-profit science protects industry profits over human life.

<https://www.jacobinmag.com/2022/02/pharmaceutical-monopolies-access-covid-19-vaccine-global-south-moderna-patents>

Time to SET the stage with some philosophy

**What do you call the idea reducing
something into simpler components?**

Reductionism



Reductionism

**In the social sciences:
Reduces qualitative data into
quantitative.**

- For example... this map can be reduced to:
 - Places where I lived ->
 - 4 points in Asia
 - 2 points in North America

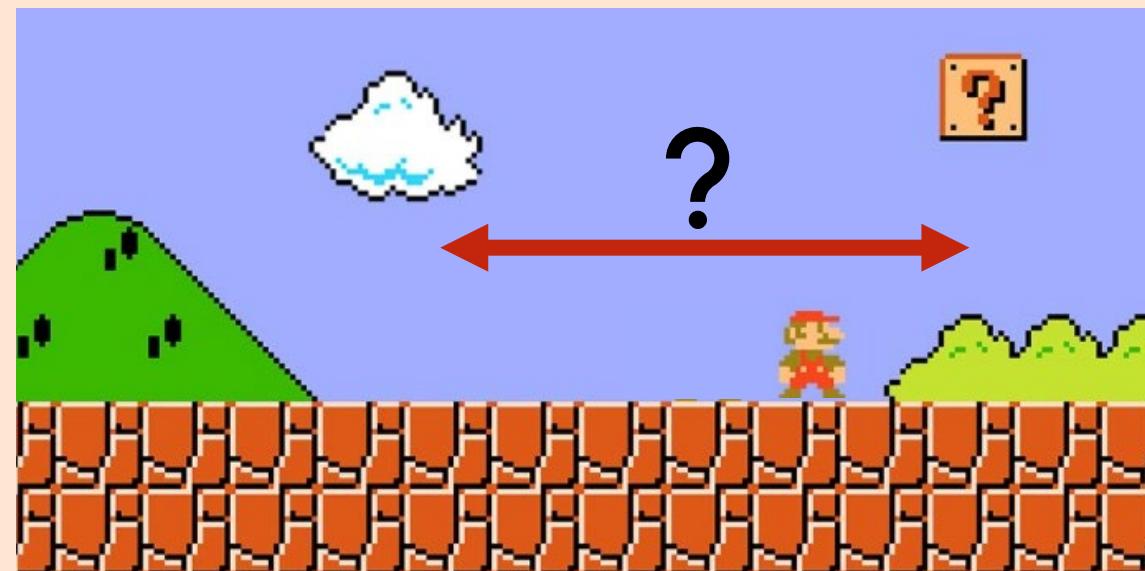
Reducing my experiences to numbers on a continent.



Introduces loss of information.

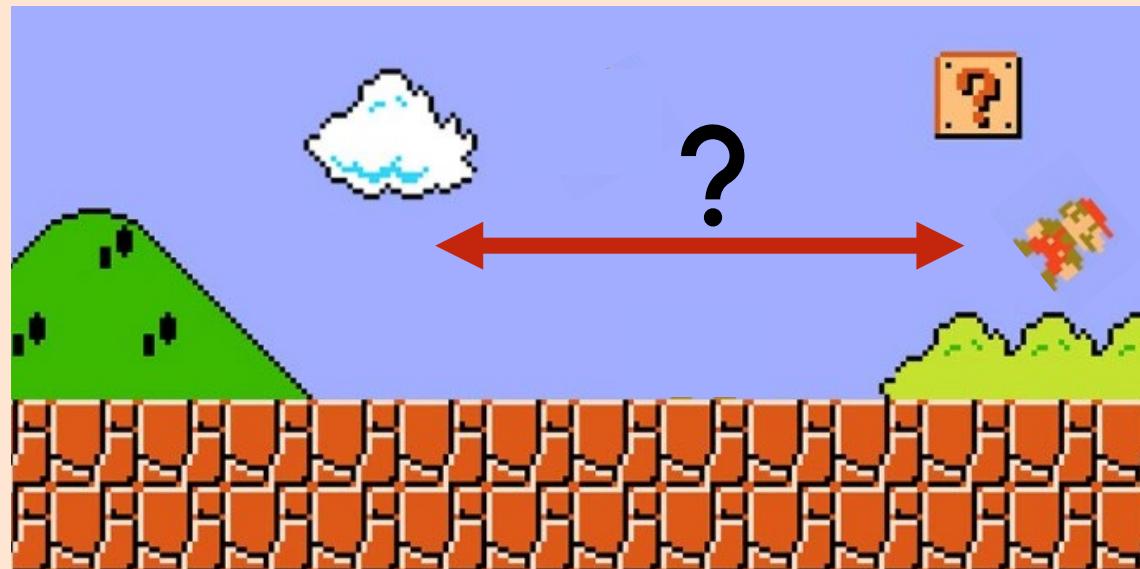
Determinism

All our actions are pre-determined because it is governed by systems



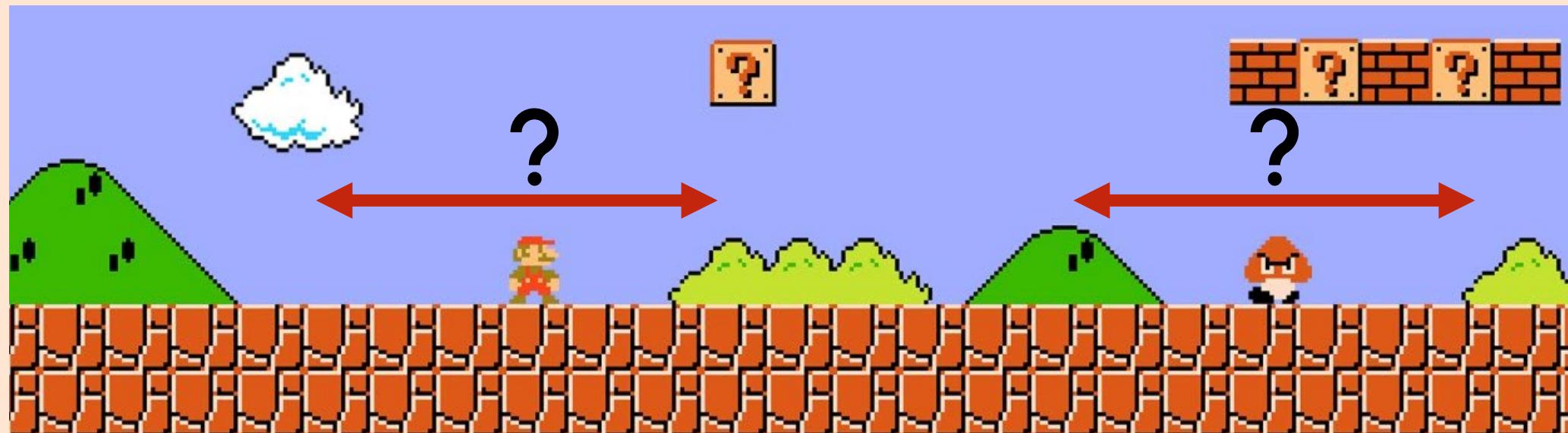
Free-Will

Systems are chaotic so there no pre-determined events can be attributed to them



Compatibilists:

Determinism and free-will can co-exist.



Technological Determinism

The idea that technology will solve all social problems.

Example: We can “invent” our way out of climate change.

Technological Determinism

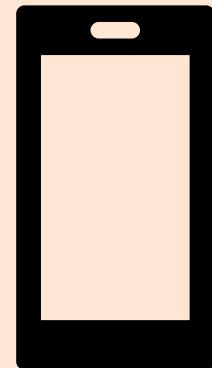


THE WORLD IF...

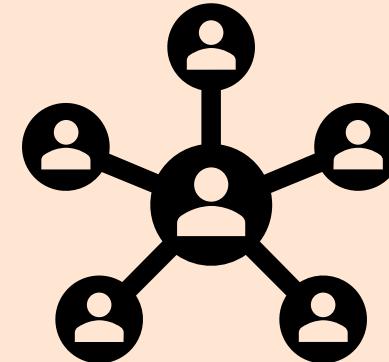
WE ONLY HAD THE RIGHT TECHNOLOGY

Technological Determinism

Technology



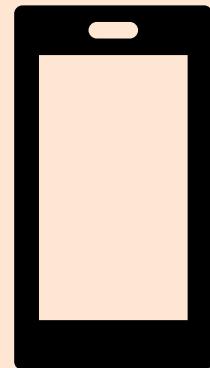
Society



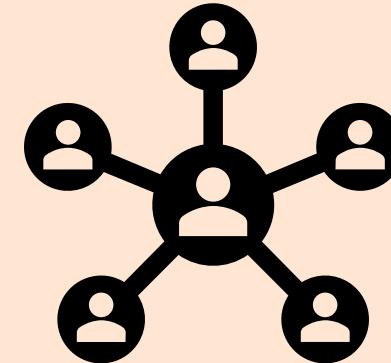
Technology is the force that changes society

Technological Determinism

Technology



Society

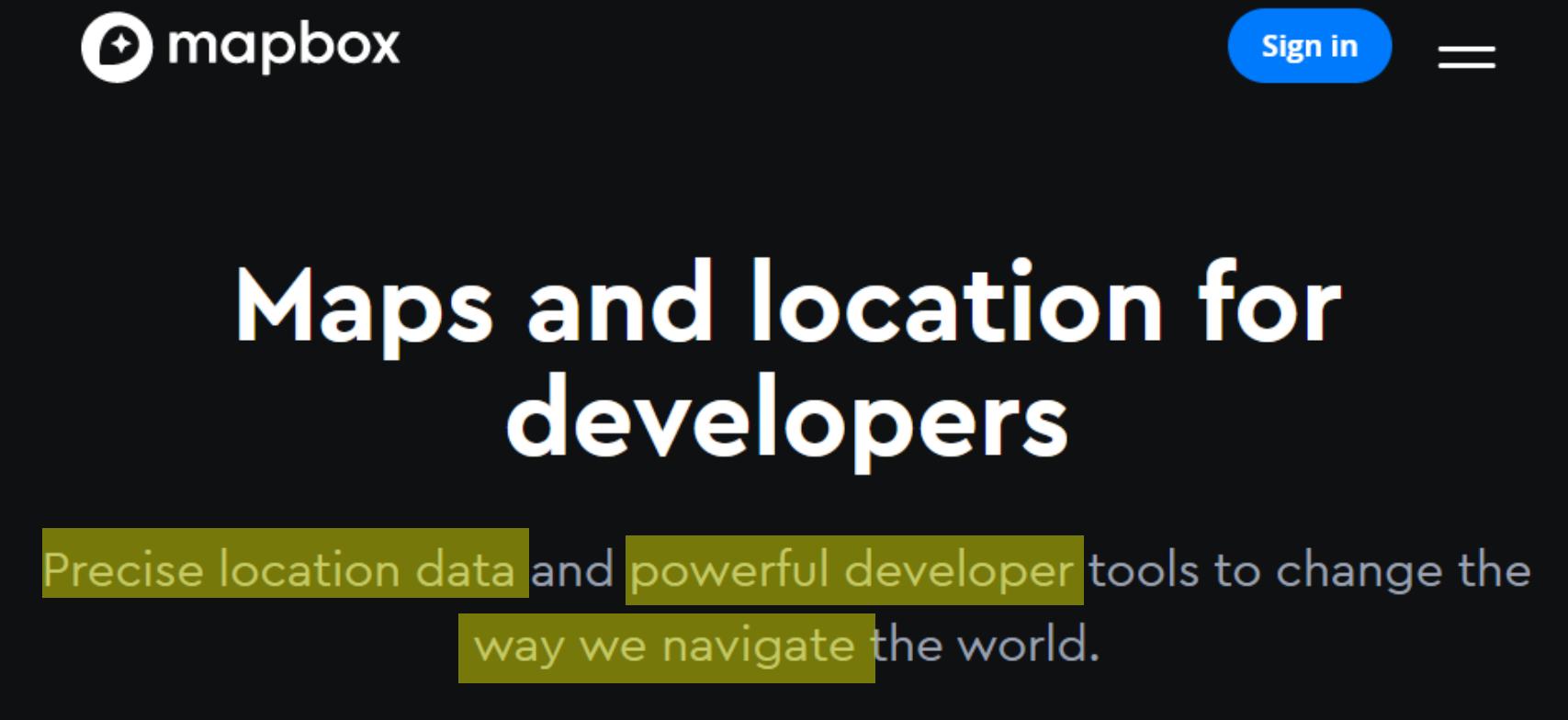


“Phones will improve people’s life.”

Let's apply this to mapping:



Mapping Technologies



The screenshot shows the Mapbox website homepage. At the top left is the Mapbox logo (a white circle with a black star). To its right are a "Sign in" button and a user icon. The main title "Maps and location for developers" is centered in large, bold, white font. Below it is a subtitle in smaller white font: "Precise location data and powerful developer tools to change the way we navigate the world." The background of the page is black.

Maps and location for developers

Precise location data and powerful developer tools to change the way we navigate the world.

Mapping Technologies

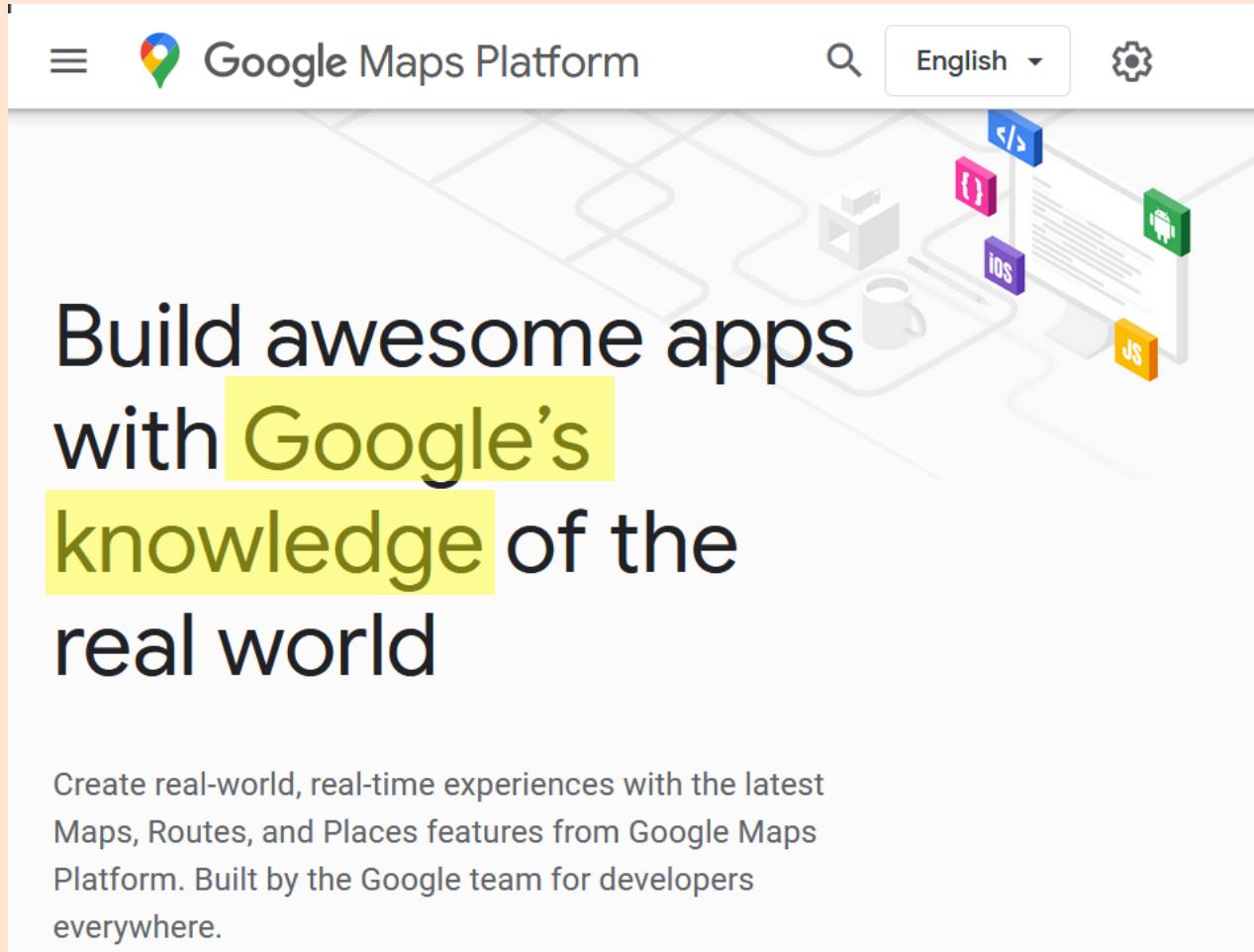
The Carto logo consists of the word "CARTO" in white capital letters next to a red circular icon containing a white dot.

≡

Unlock the **power** of
spatial analysis

The only cloud-native Location Intelligence platform

Mapping Technologies

The image shows a screenshot of the Google Maps Platform website. At the top, there is a navigation bar with a menu icon, the "Google Maps Platform" logo, a search bar, a language dropdown set to "English", and a settings gear icon. Below the navigation bar, there is a large, semi-transparent graphic of a smartphone displaying a map. Overlaid on this graphic is the main headline text: "Build awesome apps with Google's knowledge of the real world". The word "with" and "knowledge" are highlighted with yellow rectangular boxes. At the bottom of the page, there is a descriptive paragraph: "Create real-world, real-time experiences with the latest Maps, Routes, and Places features from Google Maps Platform. Built by the Google team for developers everywhere."

Build awesome apps
with Google's
knowledge of the
real world

Create real-world, real-time experiences with the latest Maps, Routes, and Places features from Google Maps Platform. Built by the Google team for developers everywhere.

Mapping Technologies



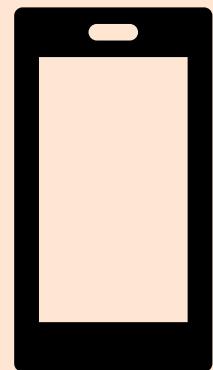
Why are these examples problematic?

Separates society's role in creating the technologies.

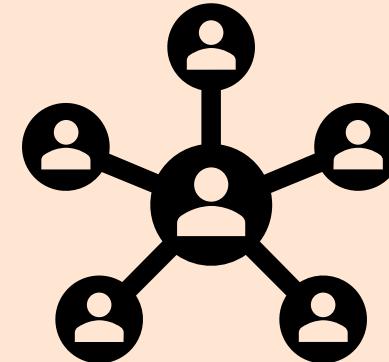
Social Determinism

Social Determinism

Technology



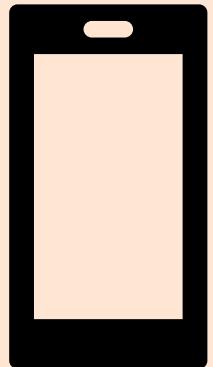
Society



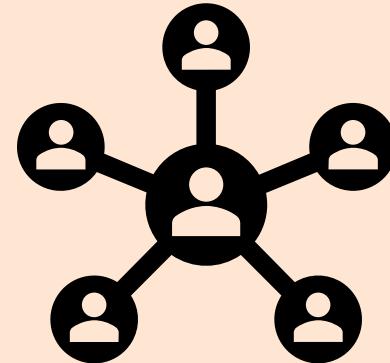
Technology is a result of the society

Social Determinism

Technology



Society

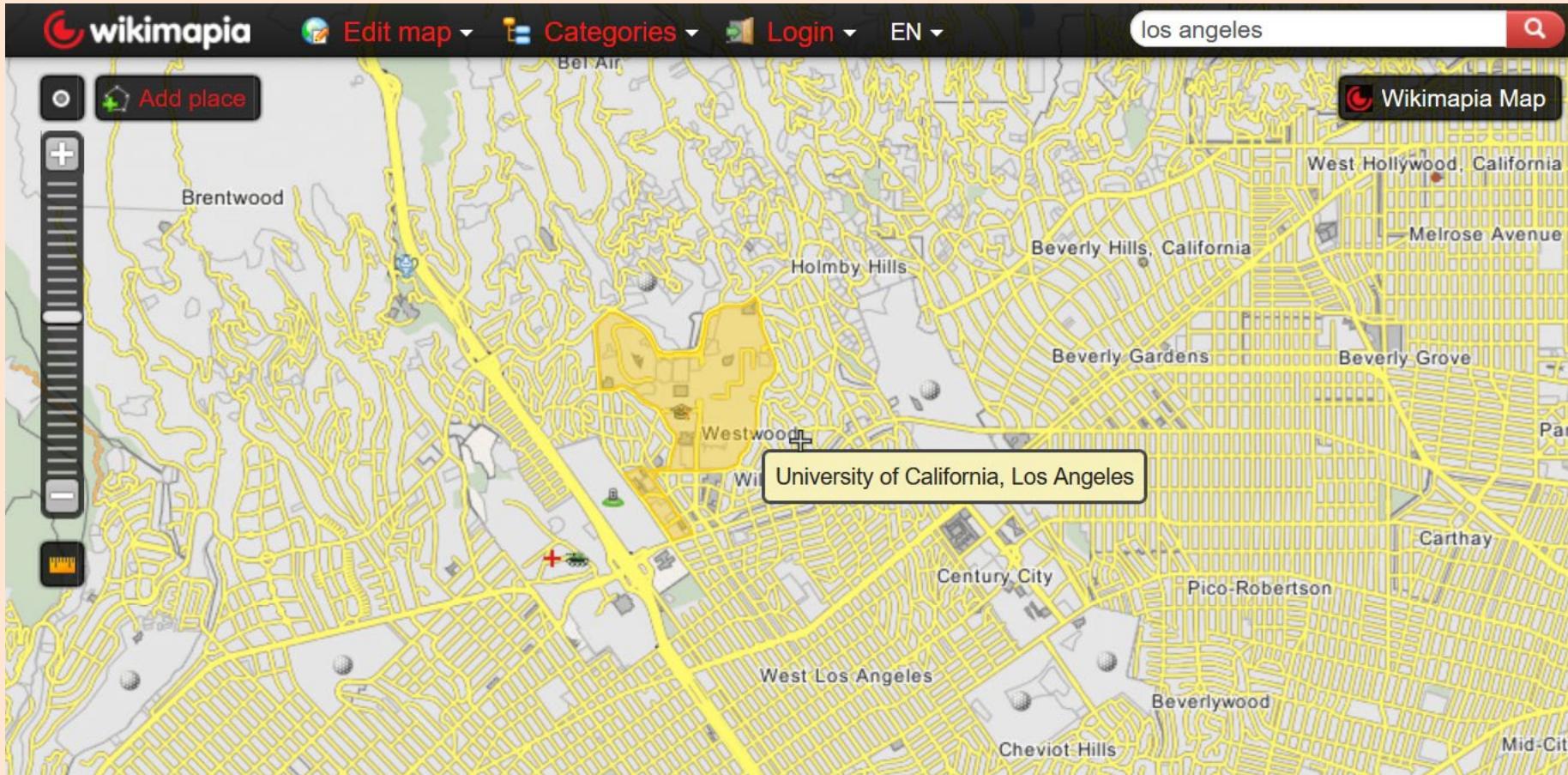


“People created phones to talk easier.”

Examples



Examples



Recapping

**Technological
Determinism**

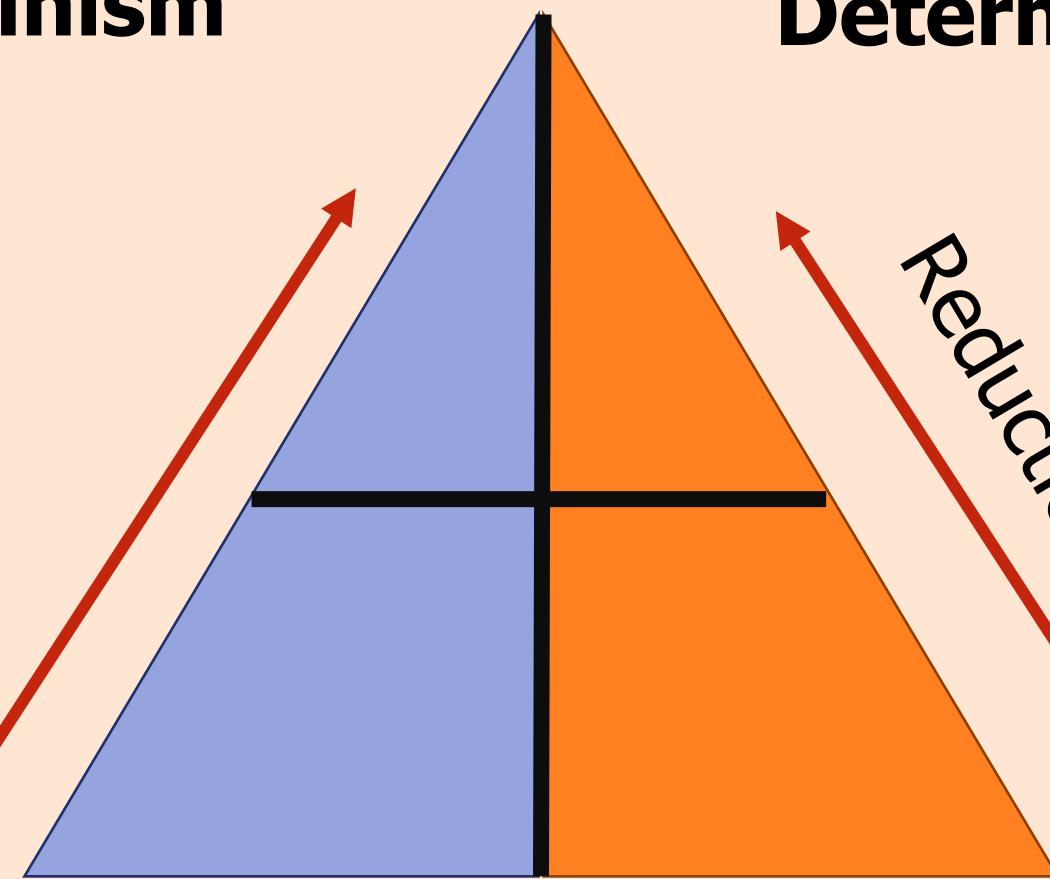
Hard

Soft

vs.

**Social
Determinism**

Reductionism



Main takeaway:

**Reductionism is problematic because it only
re-aligns the balance in one direction.**



**Wait.. This is a technology skills class..
Shouldn't we focus on technology solutions?**

No, because.. It leads to...

Techno-Fascism



Technocracy/Techno-Fascism

Fascism – Oppression of opposing thoughts

Technocracy – Rule by only those with expertise

Techno-Fascism = Fascism + Technocracy

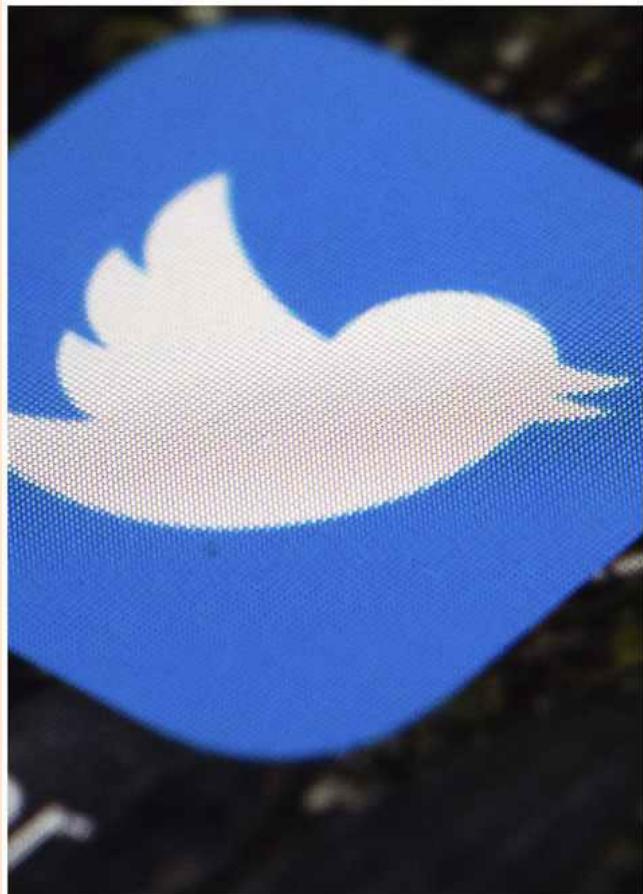
Technocracy/Techno-Fascism

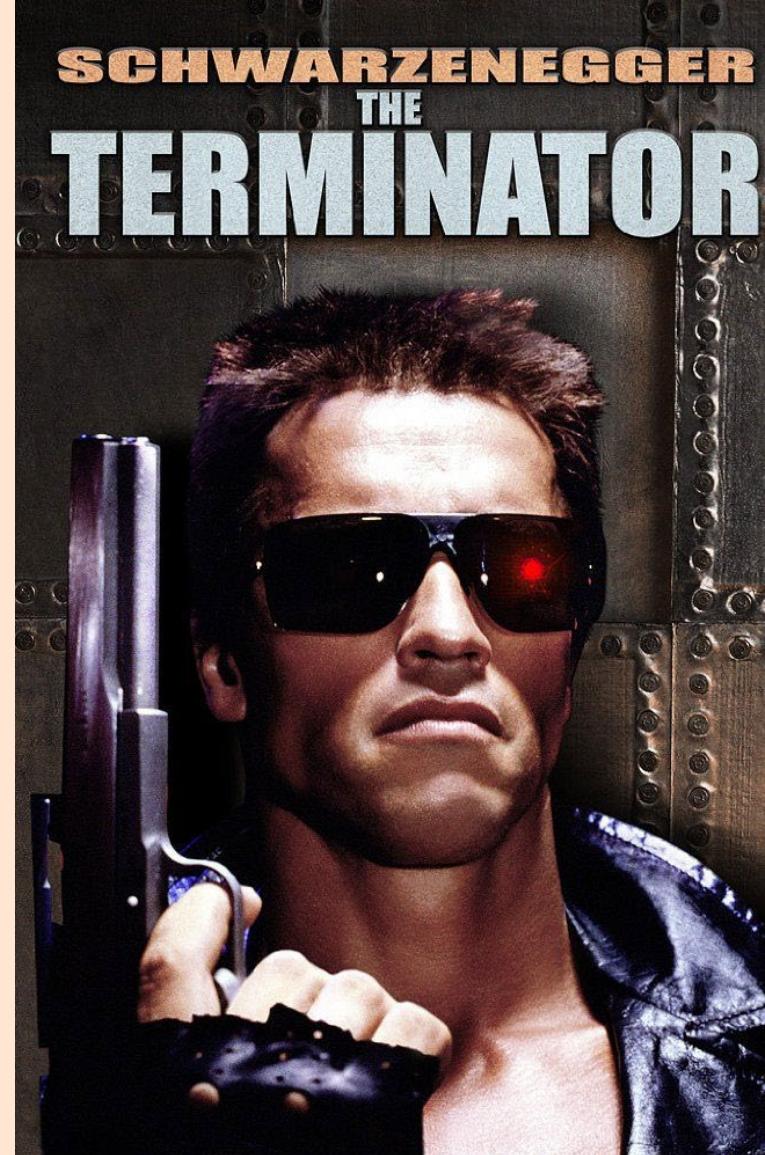
**Techno-Fascism – Rule by those with
expertise that oppresses opposing thoughts**

Techno-Fascism:

**“Big tech, machine learning, AI is too big,
people cannot stand up against it.”**

Techno-Fascism:





Hasta la vista freedom

What it really means is:

“I have more ‘technical’ skills and know more than you, so I am better than you, do not resist.”

-Every Big Tech CEO



Resistance is futile.

What it really means is:

Commodification of humans as data points.

Fetishism of knowledge and technology.

**Decouples the impacts of society on technology
and vice-versa.**

How to avoid all this?

Holism



“Some process or phenomenon cannot be broken into parts, and can only be understood as a whole”

<https://cseweb.ucsd.edu/~goguen/courses/275f00/s2.html>

Reinforces the direct connection between of technology and society.

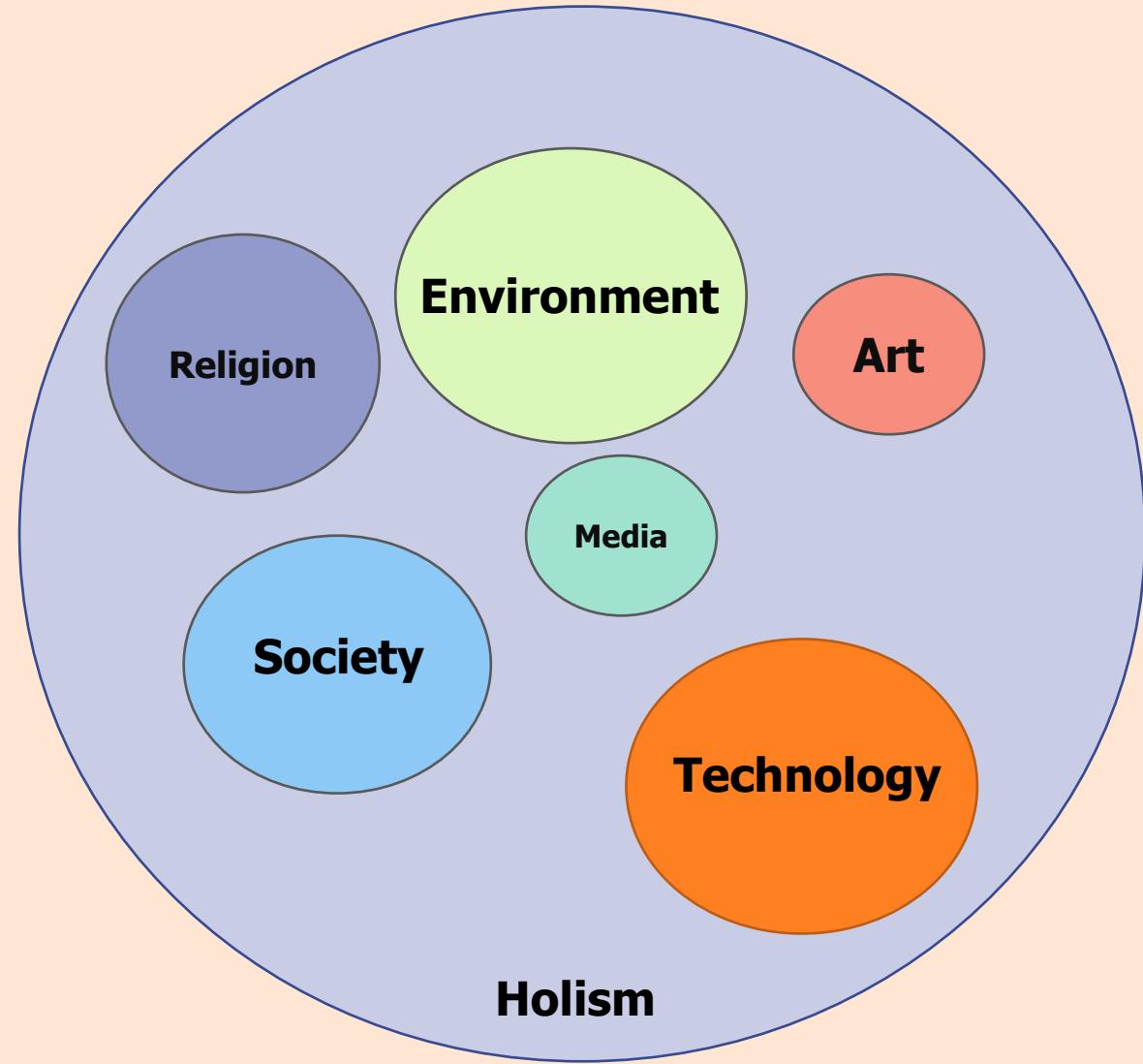
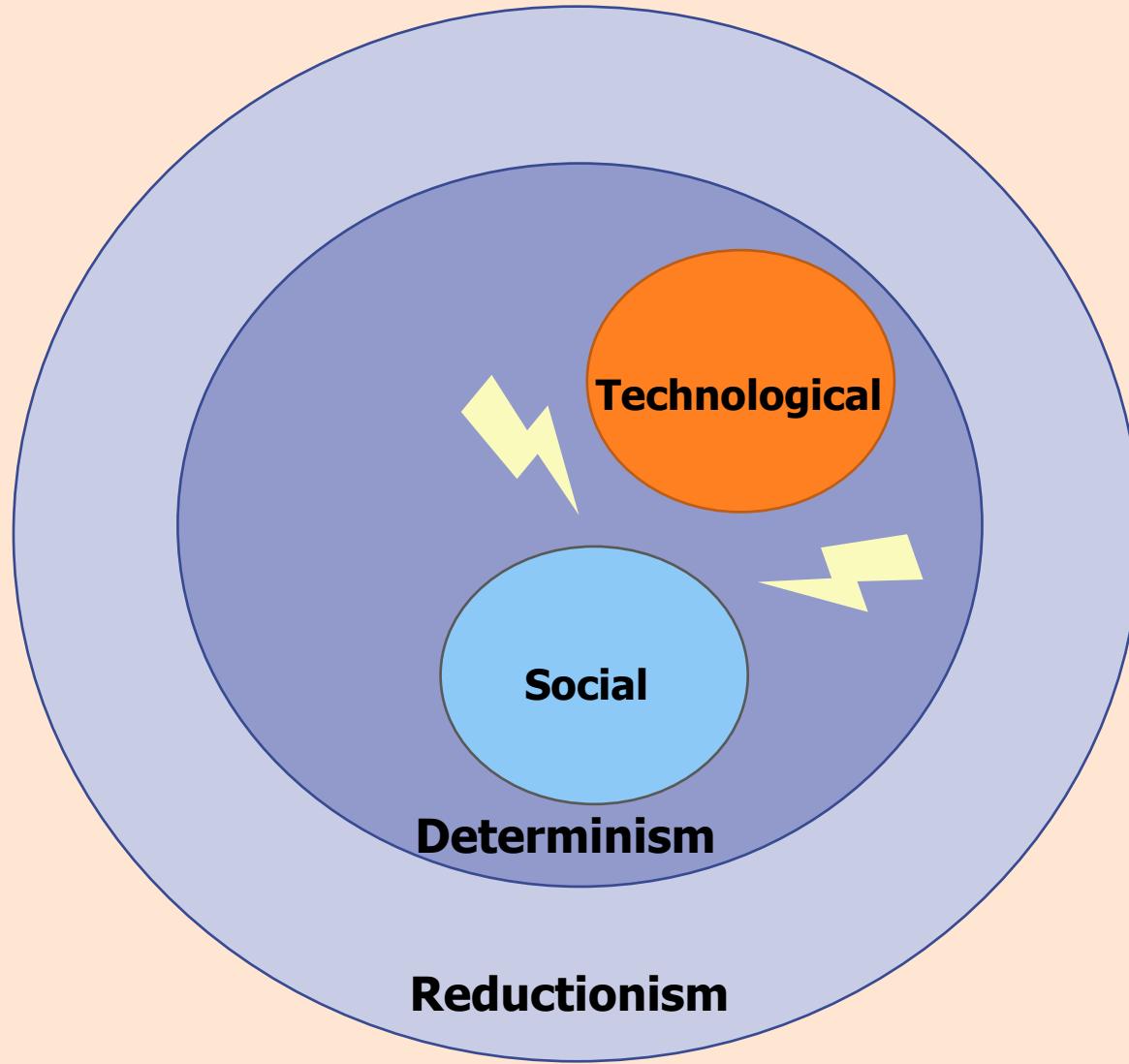
Holism

**Goes against western concepts of knowing...
but slowly being adopted:**

STRING THEORY



Reductionism vs Holism

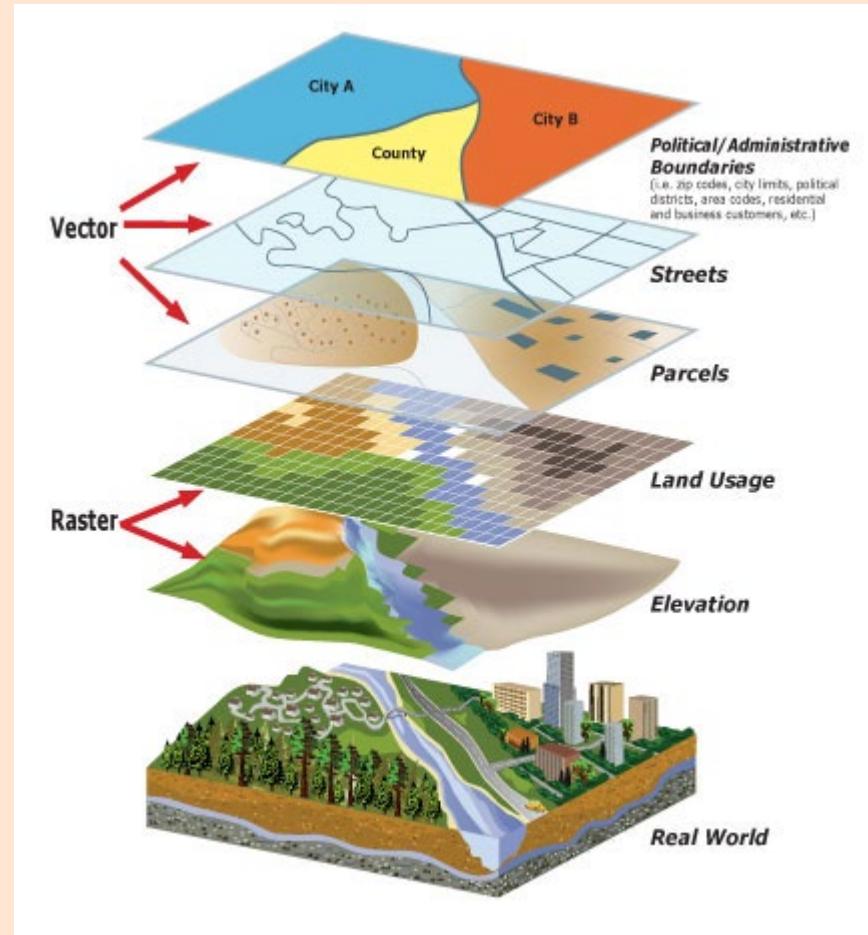


Eastern perspectives

Buddhism and Hinduism believe in a middle path to describing our decision-making by connecting it to consequence of our actions.



Reductionism vs Holism



Reductionism

esri Charging Up: Lifecycle of a Battery

Raw Materials Cobalt A Story Map

Huayou then sells the cobalt to cathode manufacturers. Some of the largest cathode producing companies include Toda Hunan Shanshan, Pulead Technology Industry, Tianjin Bambo Science and Technology, and L&F Material.

Cobalt is processed by CDM

A map of the world showing the flow of cobalt from mining sites in the DRC to various processing and manufacturing companies in China and elsewhere.

Holism

<http://storymaps.esri.com/stories/2017/batteries/index.html>

Considering all we just covered...

**How to apply it to mapping, beyond just
Critical Cartography?**

Focus on Tradition-based GIS

Tradition	Key Ideas	Example Publications
Queer(ing) Cartographies, GIS	<ul style="list-style-type: none"> • Recognize queer labor and lives present in production of knowledge/maps • Interrogate political, economic, and social relations present in software, algorithms, code used to produce maps 	Brown & Knopp (2008); Giesecking (2018)
Marxist Cartography	<ul style="list-style-type: none"> • Visualize and map the contours of capital and state power • Interrogate how mapping serves interests of the state 	Lacoste (1973); Toscano & Kindle (2015)
Indigenous Mapping	<ul style="list-style-type: none"> • Make claims upon ancestral lands to secure tenure and other rights • Simultaneously, potentially make said lands visible for looting and destruction 	Chapin et al. (2005); Hunt (2013); see Figure 3

<https://gistbok.ucgis.org/bok-topics/cartography-and-power>

Thinking Cap for the week:

**Consider what are your ethical views when
it comes to society and technology?
How does it empower civil society?**

Assignments

Due Wednesday 4/27:

1. Group Assignment #3

Due Friday 4/29:

1. Memo Revisions

Due Monday 5/2:

1. Thinking Cap #5
2. Extra Credit Reading