ODRAST
& (Mrežne) Technologije
& Internet Governance

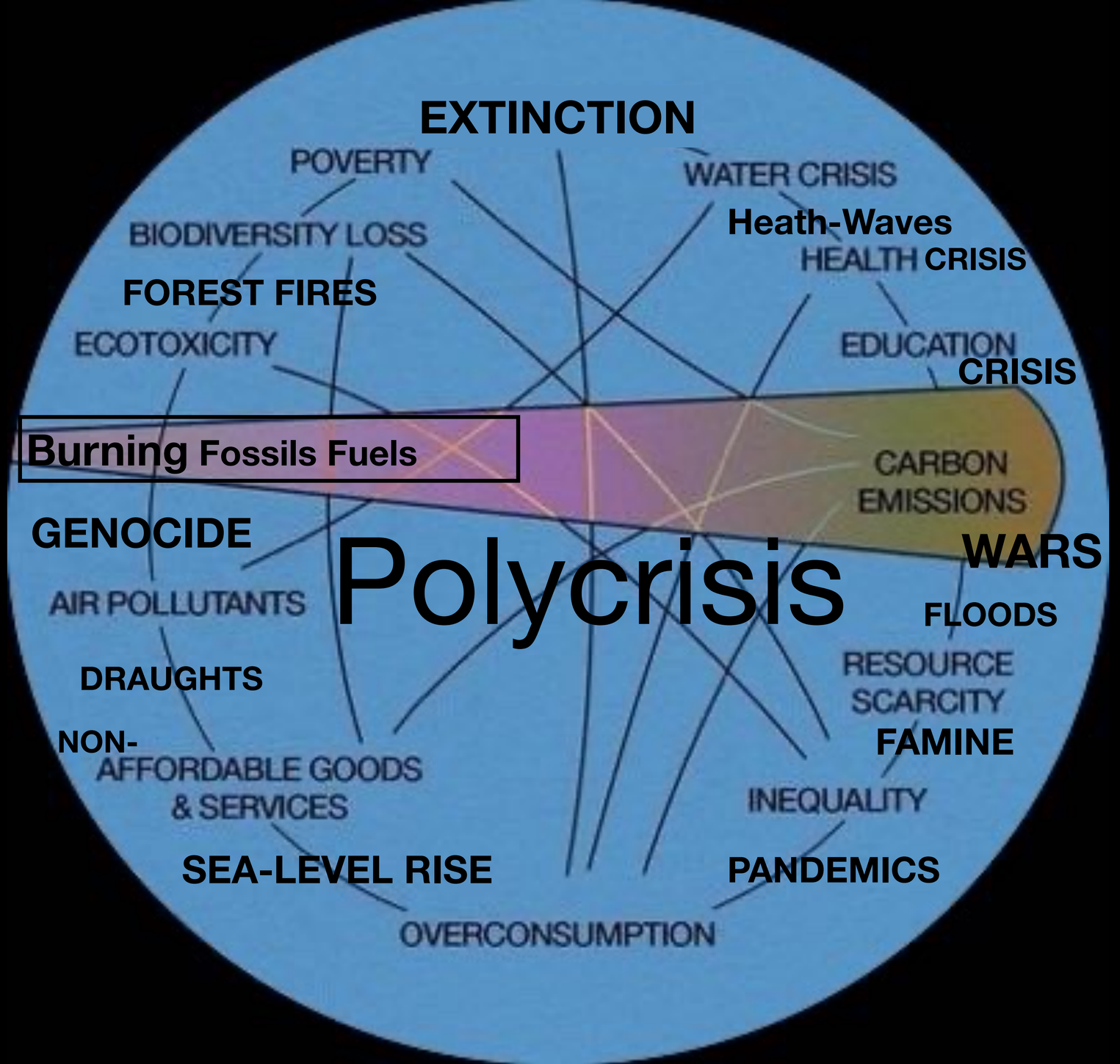
DeGrowth / Limitarianism / Enough-ness
SolarPunk / PermaComputing / Doughnut

Vesna Manojlović

BECHA@UnCiv.NL

https://becha.unciv.nl/

October 2024
https://www.unin.hr/
https://mmiim.miraheze.org/wiki/ObliciOdRASTA



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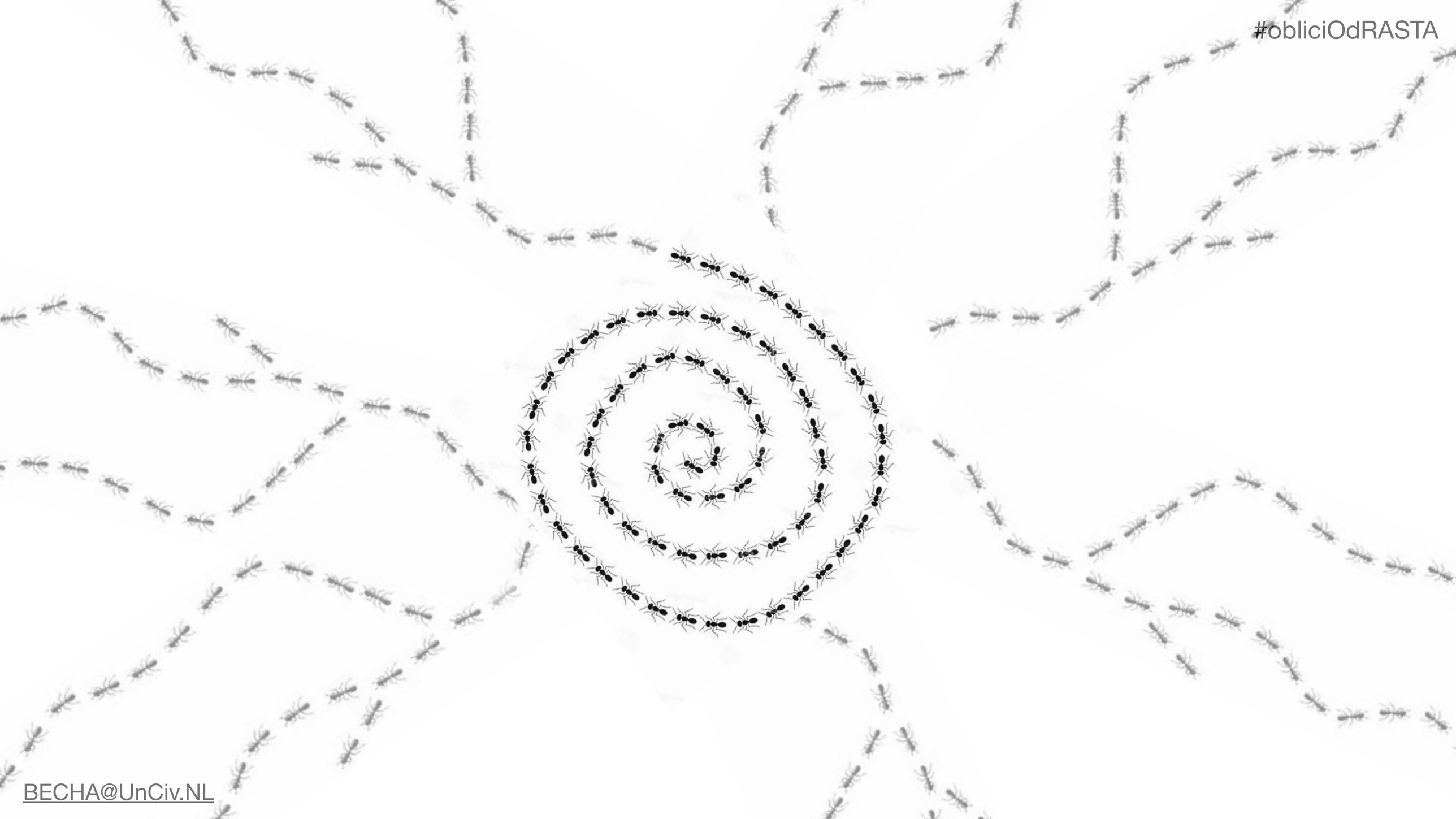

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Death spiral of…

- anthropocentrism, extractivism, individualism, consumerism…
- supremacies, oppressions, hierarchies, dominations, inequalities…
- control, surveillance, exploitation, addictions, extremisms…
- privatising, profits, conquests, imperialism, colonialism, corruptions…
- fallacy of progress, fallacy of (infinite) growth, fallacy of saviours…
- body-mind division, violence, private property, slavery…

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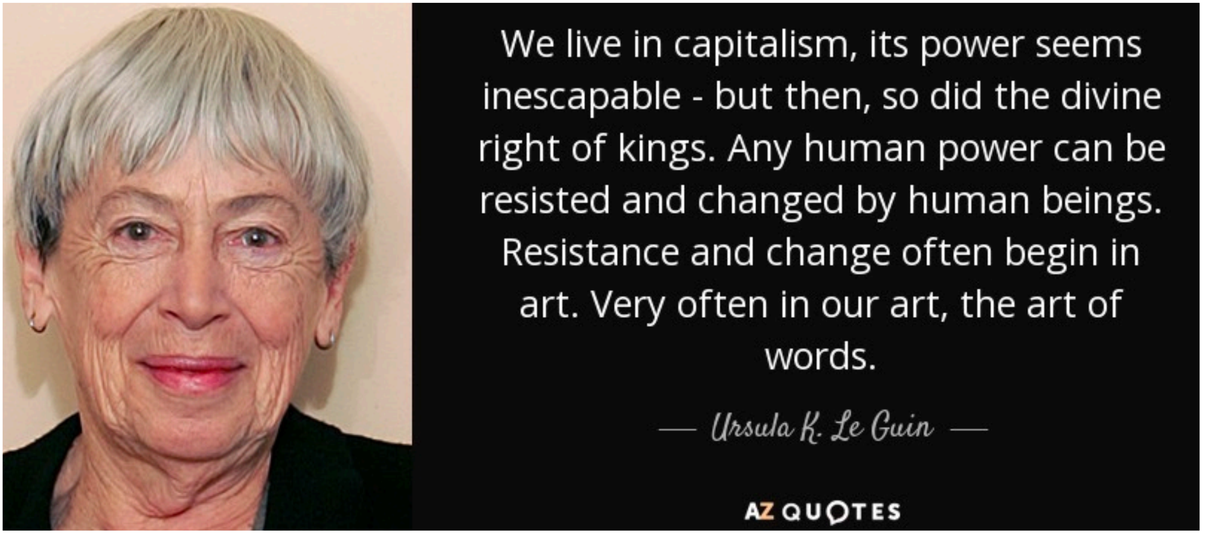

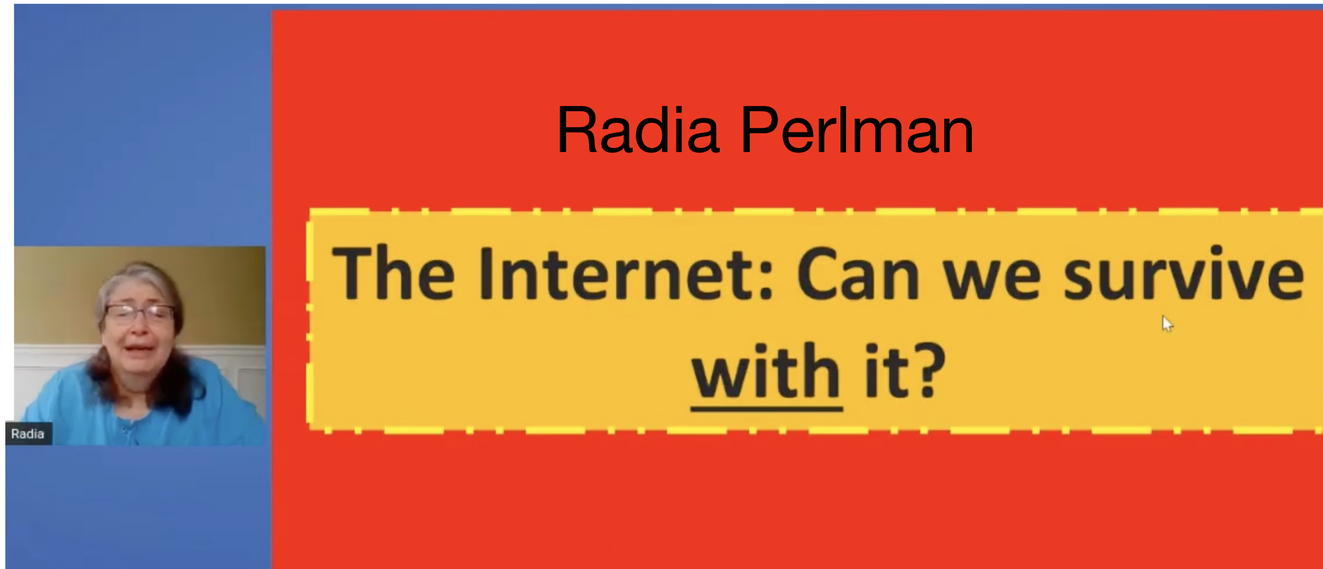

https://archive.org/details/governingthecommons

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Principles of Degrowth

Sustainability

Never deteriorate supporting ecosystems

Circularity

Waste not, want not

Cooperation

People and planet, not profit

Useful Production

What is not needed should not be made

Sharing

Sufficiency for all, excess for none

Local Production

Produce local, consume local

Work-Life Balance

Work less, play more

Relational Goods

Less stuff, more relationships

Joie De Vivre

If I can't dance, I don't want to be part of your economy!

Source: https://tel.archives-ouvertes.fr/tel-02499463/document

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DeGrowth Links

- A Degrowth Perspective on Artificial Intelligence - Analysing the Appropriateness of Machine Learning to a Degrowth Contex https://www.research-collection.ethz.ch/handle/20.500.11850/622669
- Degrowth can work — here's how science can help: https://www.nature.com/articles/d41586-022-04412-x
- Digital Degrowth https://zagreb.degrowth.net/en/9_int_dg_conf/public/events/184
- Academic Journal on Degrowth (May 2023) : feminist, anarchist, decolonial views https://www.degrowthjournal.org/issues/2023-volume-1/
- Combatting climate change & #Polycrisis means embracing degrowth https://climateactionaustralia.wordpress.com/2023/01/22/why-combatting-climate-change-means-embracing-degrowth-polycrisis/
- https://www.noemamag.com/degrowth-in-japan
- https://jornbettin.com/2023/07/04/enough/

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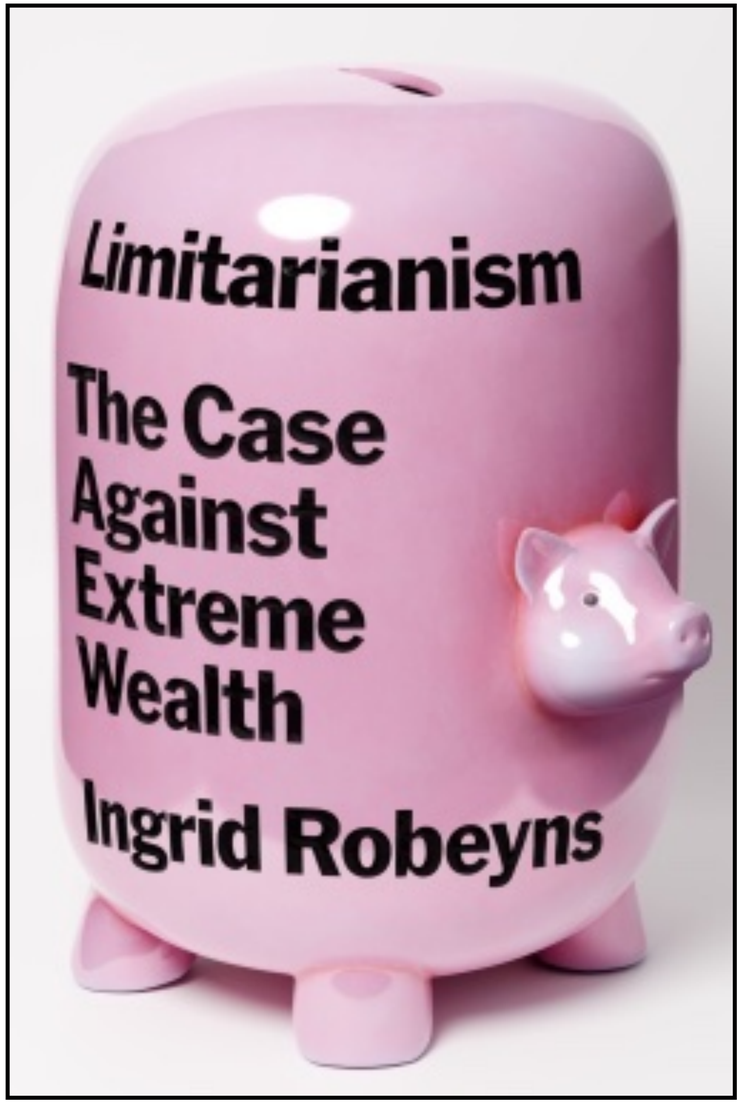
My Top 10 21st-Century Alternative Economic Theory Books:

- Giving Economy, Heather Marsh (in "Binding Chaos", 2013)
- Post-carbon Economy, Naomi Klein (in "On Fire", 2021)
- Caring Economy, Riane Eisler (2007) : http://caringeconomy.org/
- Decolonising Economics, Nonhlanhla Makuyana (2021) https://decolonisingeconomics.org/
- Ecofeminism, Maria Mies and Vandana Shiva (2014) https://www.environmentandurbanization.org/ecofeminism
- Mutualism, Sara Horowitz (2021)
- Doughnut Economics, Kate Raworth (2017) https://doughnuteconomics.org/
- Mission Economy, Mariana Mazzucato (2021)
- The Support Economy: Shoshana Zuboff (2002) http://www.thesupporteconomy.com/
- Enlightenment Economics, Diane Coyle (in "The Economics of Enough", 2011)

What all of these have in common is criticism of neoliberal capitalism and a focus on sustainability, care, equity, and co-empowerment.



Decolonizing Internet, Economy, Ecology…

VANDANA SHIVA

"I think the combination of feminism and ecology creates two potentials. First, I have seen feminism that is not ecological become a new oppressor. I have seen environmentalism that is not feminist enough also become a new elitism. Ecofeminism prevents those two new forms of elitism by saying, No, it's about society and nature. It's about other ways of thinking"

Nonhlanhla Makuyana

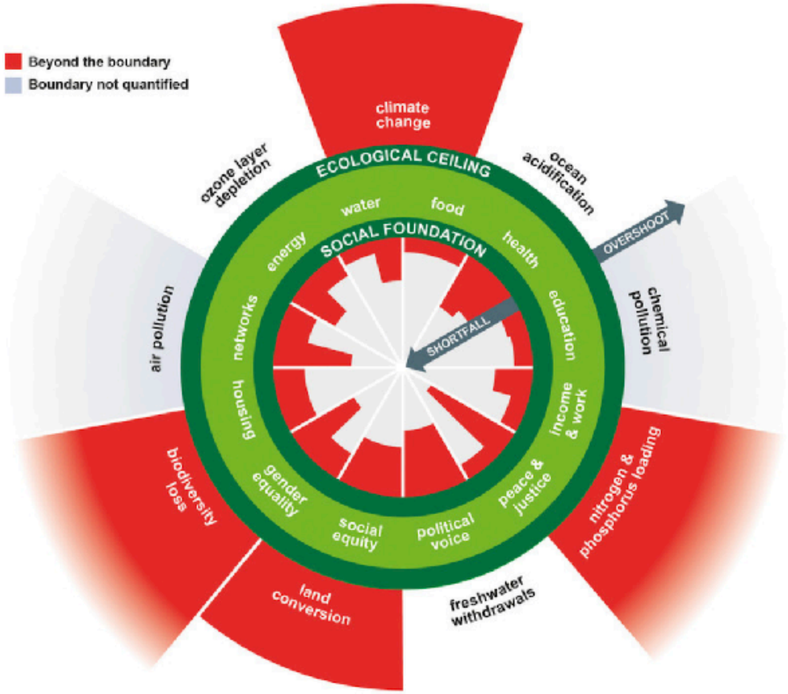


Image: Kate Raworth and Christian Guthier/The Lancet Planetary Health

Data Feminism, Data Justice

Table 2.1: From data ethics to data justice	
Concepts That Secure Power Because they locate the source of the problem in individuals or technical systems	**Concepts That Challenge Power** Because they acknowledge structural power differentials and work toward dismantling them
Ethics	Justice
Bias	Oppression
Fairness	Equity
Accountability	Co-liberation
Transparency	Reflexivity
Understanding algorithms	Understanding history, culture, and context

https://datafeminism.io/

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Re-topia

Rebellion

Renewable Energy

Redirecting

Reciprocity

Reparations

Restorative Justice

Reusing

Repairing

Recycling

RetroFitting

ReWilding

Regeneration

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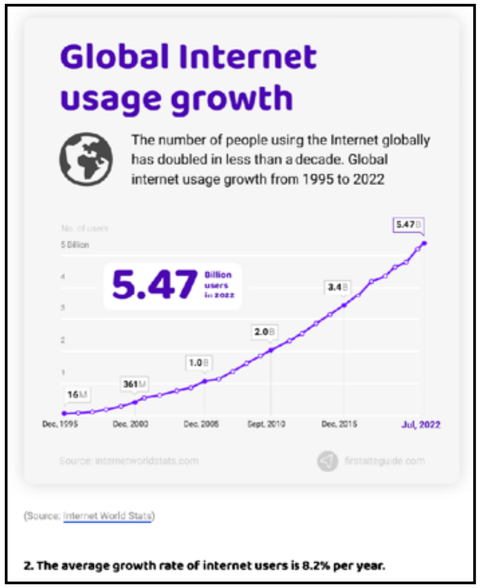
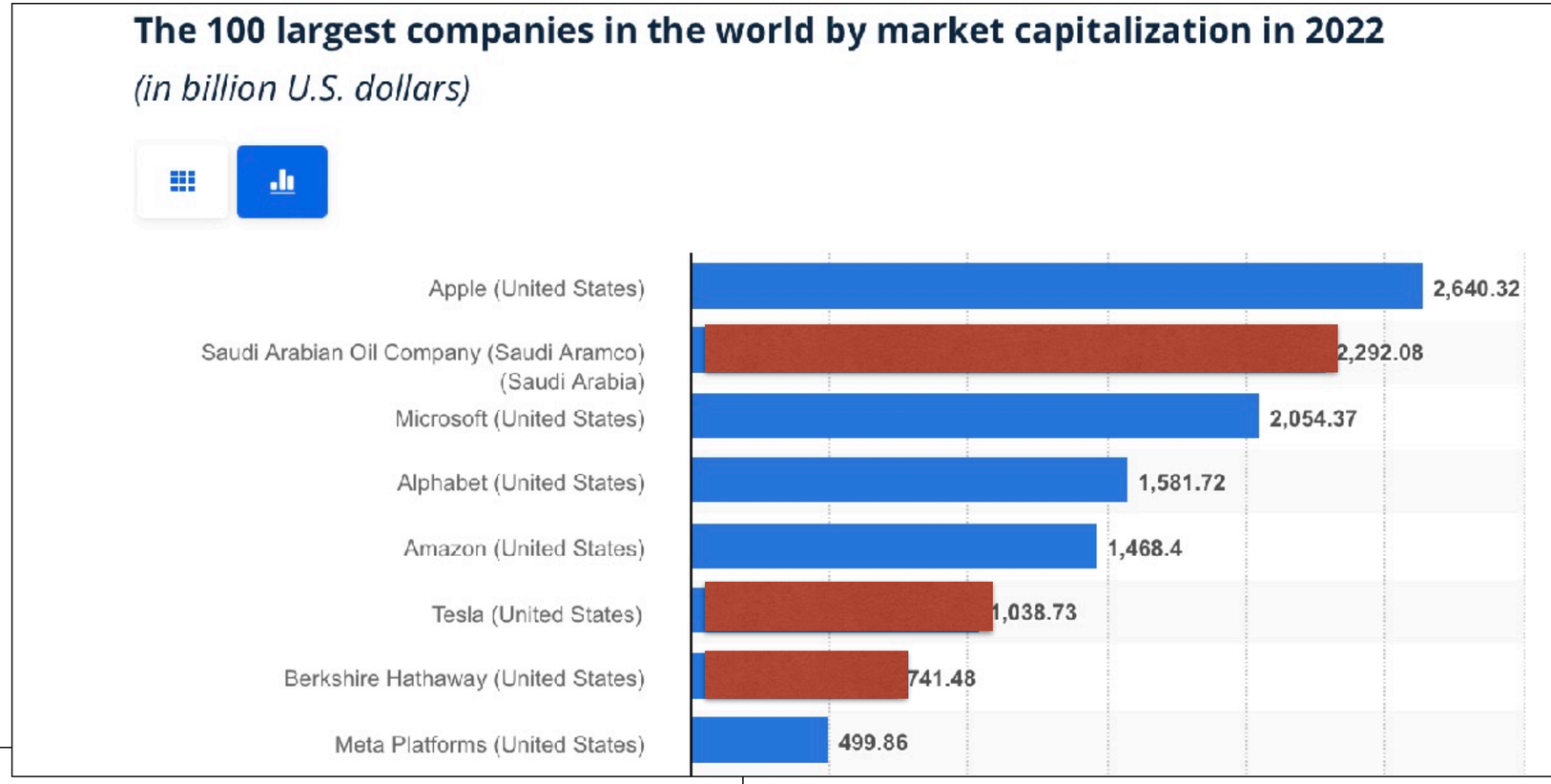
ICT & DeGrowth

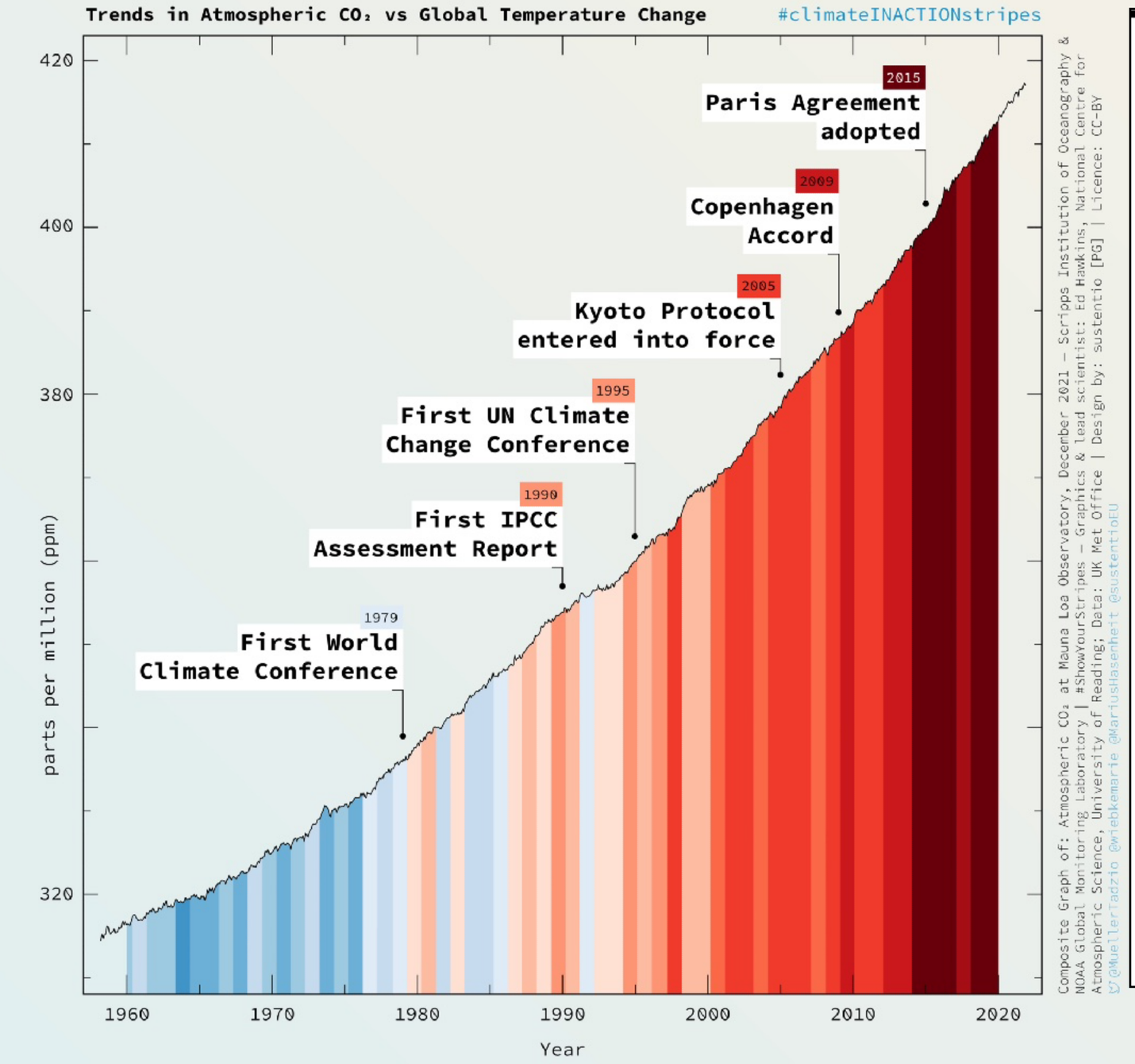


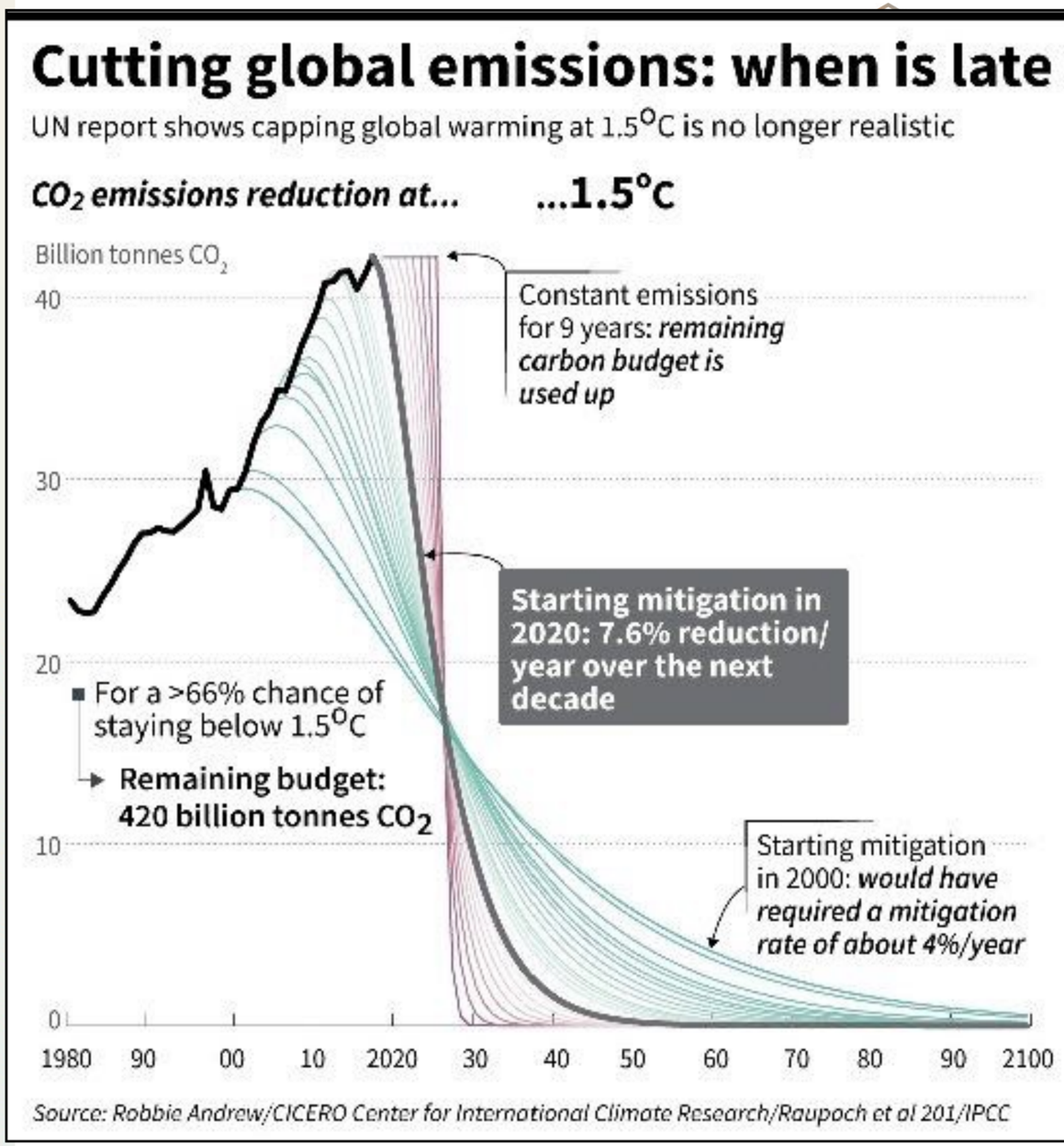


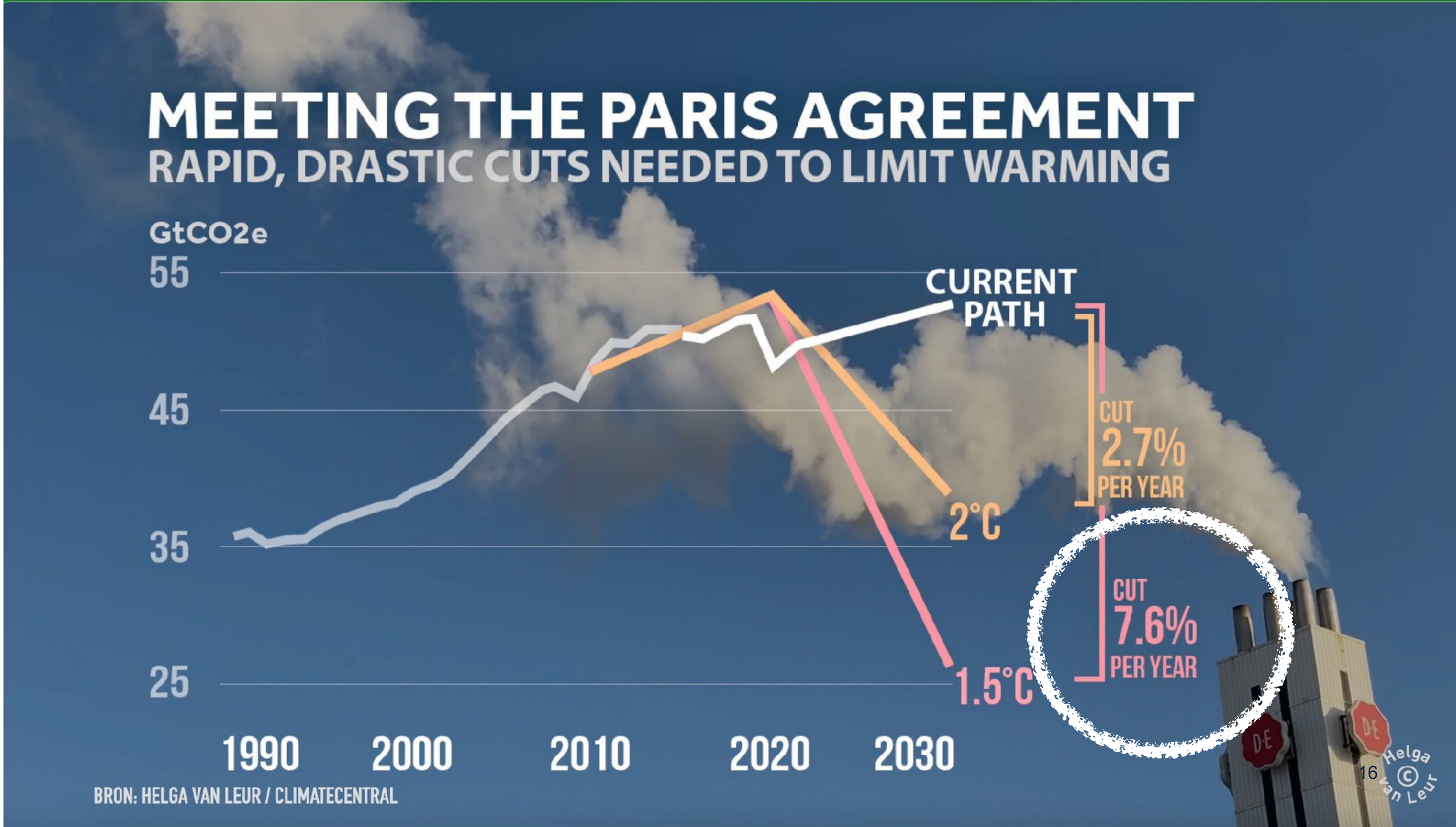
Global trends in digital and energy indicators, 2015-2021

	2015	2021	Change
Internet users	3 billion	4.9 billion	+60%
Internet traffic	0.6 ZB	3.4 ZB	+440%
Data centre workloads	180 million	650 million	+260%
Data centre energy use (excluding crypto)	200 TWh	220-320 TWh	+10-60%
Crypto mining energy use	4 TWh	100-140 TWh	+2 300-3 300%
Data transmission network energy use	220 TWh	260-340 TWh	+20-60%

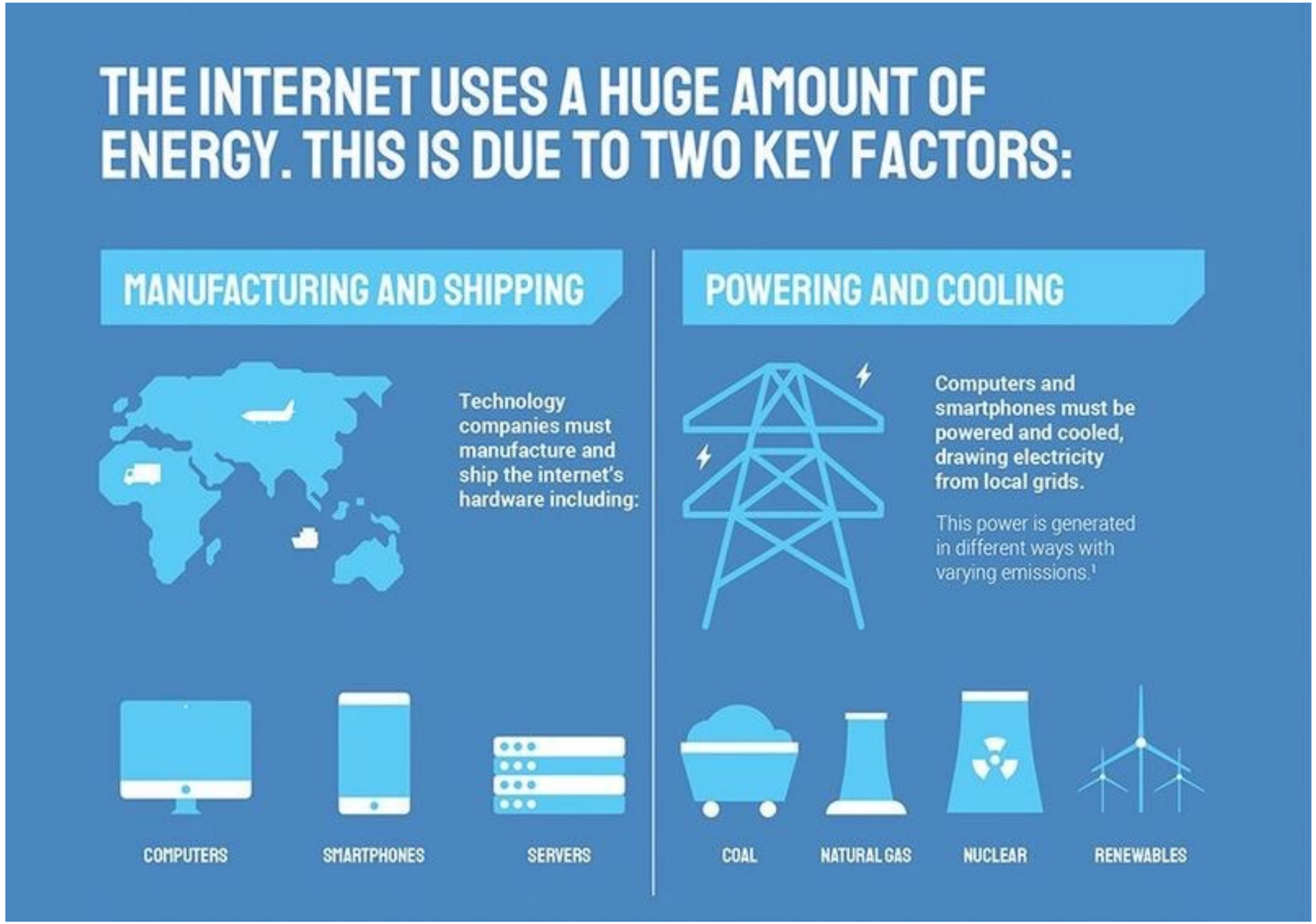
- Source: https://www.iea.org/reports/data-centres-and-data-transmission-networks


Trends in Atmospheric CO₂ vs Global Temperature Change
#climateINACTIONstripes
parts per million (ppm)
420
400
380
320
1960
1970
1980
1990
2000
2010
2020
Year
1979
First World Climate Conference
1990
First IPCC Assessment Report
1995
First UN Climate Change Conference
2005
Kyoto Protocol entered into force
2009
Copenhagen Accord
2015
Paris Agreement adopted
Composite Graph of: Atmospheric CO₂ at Mauna Loa Observatory, December 2021 – Scripps Institution of Oceanography & NOAA Global Monitoring Laboratory | #ShowYourStripes – Graphics & lead scientist: Ed Hawkins, National Centre for Atmospheric Science, University of Reading; Data: UK Met Office | Design by: sustentio [PG] | Licence: CC-BY
@MuellerTadzio @wiebkemarie @MartinHasenheit @sustentioEU


Cutting global emissions: when is late
UN report shows capping global warming at 1.5°C is no longer realistic
CO₂ emissions reduction at... ...1.5°C
Billion tonnes CO₂
40
30
20
10
0
Constant emissions for 9 years: remaining carbon budget is used up
Starting mitigation in 2020: 7.6% reduction/ year over the next decade
For a >66% chance of staying below 1.5°C
Remaining budget: 420 billion tonnes CO₂
Starting mitigation in 2000: would have required a mitigation rate of about 4%/year
1980
90
00
10
2020
30
40
50
60
70
80
90
2100
Source: Robbie Andrew/CICERO Center for International Climate Research/Raupoch et al 201/IPCC


MEETING THE PARIS AGREEMENT
RAPID, DRASTIC CUTS NEEDED TO LIMIT WARMING
GtCO2e
55
45
35
25
1990
2000
2010
2020
2030
CURRENT PATH
2°C
1.5°C
CUT 2.7% PER YEAR
CUT 7.6% PER YEAR
BRON: HELGA VAN LEUR / CLIMATECENTRAL
Helga van Leur ©

“Data is the New Oil”



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Problems Statements: **ICT's** Death Cycle

1. **Materials are extracted in violent & polluting ways**
2. **Shipping (of materials & equipment) uses fossil fuels**
3. **Equipment is produced by using fossil fuel energy (& exploitative) conditions)**

Extinction is forever. - Laura Uselis

4. **Operating networks & data storage uses electricity sourced by burning fossil fuels**
5. **Disposing old equipment is wasteful & polluting & unjust**

Minimal Solutions: The Opposite of Death-Cycle!

1. Re-Use existing materials
    1. Or **re-source** materials in sustainable & just ways
2. Use renewable energy sources
    1. (R**efuse** fossil fuels)
3. Produce locally (reduce shipping)
4. Decrease energy usage

-7.6% */year*

5. Reduce new equipment needs: Repair, Repurpose, Recycle

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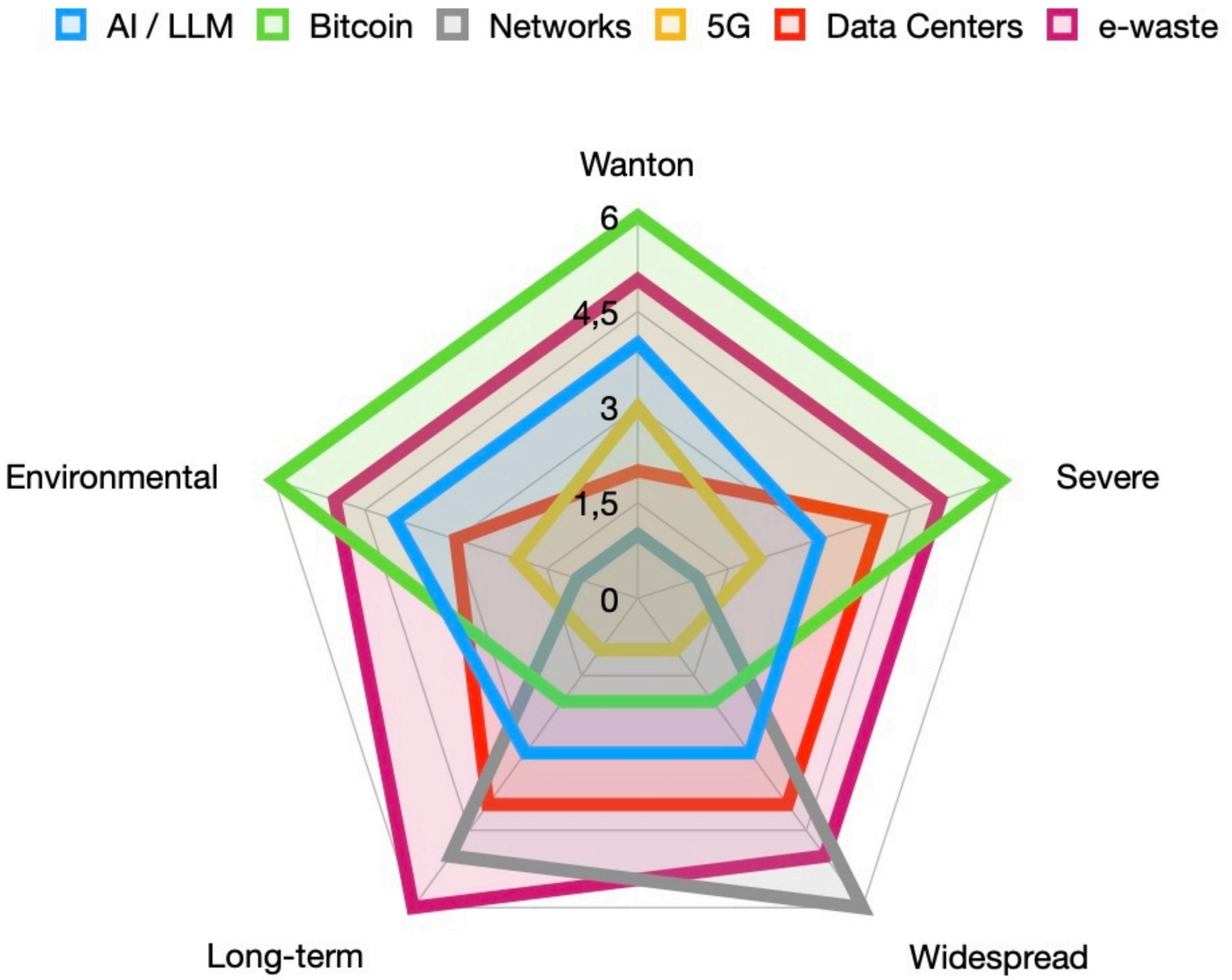
Internet **is Ecocide**



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Against Ecocide

- ^^^ based on: “Computing as Ecocide”, by Rob Comber and Elina Eriksson: https://limits.pubpub.org/pub/a8h46wqy/release/1
- My article: https://www.project-syndicate.org/magazine/ai-climate-change-what-role-paris-targets-2023-09
- My collection of links: https://wiki.techinc.nl/User:Becha/AI_is_ecocide
- Newest article by Reynard Loki https://www.counterpunch.org/2024/05/02/should-harming-the-planet-be-a-crime-the-case-for-ecocide-laws/

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“Green Tech”

- Green Tech Hackathon: 10-11.12.2024, Online / Local Hubs / Amsterdam https://labs.ripe.net/author/becha/announcing-the-green-tech-hackathon/
- 2024: https://wiki.techinc.nl/Sustainability
- 2023: https://labs.ripe.net/author/becha/environmental-impact-of-internet-urgency-de-growth-rebellion
  - & slides: https://wiki.techinc.nl/File:Xs-vesna-e_impact-ripe86-short-and-long.pdf
- 2021: Resilience in Tech Communities: Nature is Healing https://labs.ripe.net/author/becha/ripe-community-resilience-nature-is-healing/
- 2014: Nature will have the last word https://wiki.techinc.nl/index.php/File:Nature-speaking-on-future_of_the_internet-RIPE69.pdf

Inspiring Examples

- Reduce, Repair, Repurpose, Recycle (equipment)
- Community Networks, Mesh, Low-power networking, disaster-recovery net
- Decolonising the Internet, Feminist Internet, Solar Internet
- Low-tech, Slow tech, Retro-tech, Green Tech, Appropriate Technology
- Counter Computings: Frugal-, Convivial-, Benign-, Permacomputing
- Self-hosting, federation, decentralised networks
- ZaMir https://wiki.techinc.nl/TacticalMediaRoom#ZaMir

Join Activist Communities

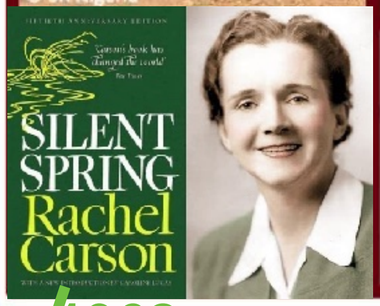
- APC.org & https://feministinternet.org/
- RightsCon.org
- Bits und Bäume : https://bits-und-baeume.org/en/
- Scientists Rebellion : https://ScientistsRebellion.com
- digital-rights-climate-justice@groups.io
- Rebellion.Global
- Counter Cloud Action Day https://diagram.institute/12o/
- Digital Depletion Strike https://multiplace.org/8m

https://linktr.ee/orcamsterdam

1860s - 1910s, England
Statistician Florence Nightingale & physician Elizabeth Garrett Anderson, women's suffrage movement

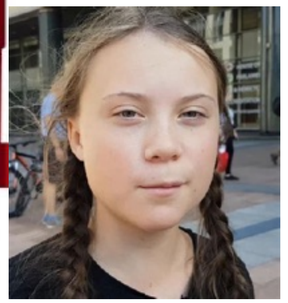
1920s, Brazil
Biologists from National Museum, environmental protection

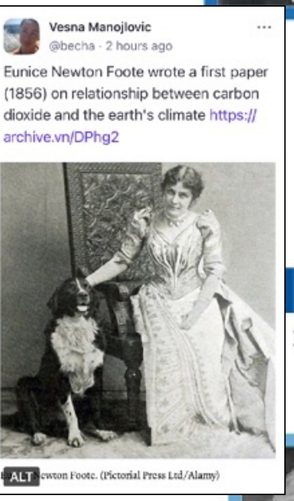
1960 - present, USA
Science for the People collective, anti-war and social justice



1962

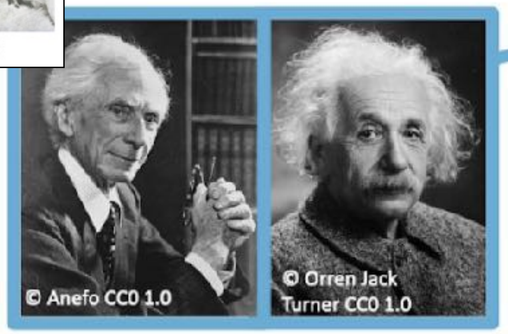
2020s, Worldwide
Scientist Rebellion, climate and ecological breakdown





1856!

1860 1890 1920 1950 1980 2010



1957, USA & Europe
Nobel winners' Russell-Einstein Manifesto, abolition of atomic weapons and war

1988 - present, USA
Climatologist James Hansen, climate change

2018 - present, Argentina
Biologist Esteban Servat, social struggles and environmental abuse

FRIDAYS FOR FUTURE

extinction rebellion

scientist rebellion_

POWER TOGETHER
XR 2020

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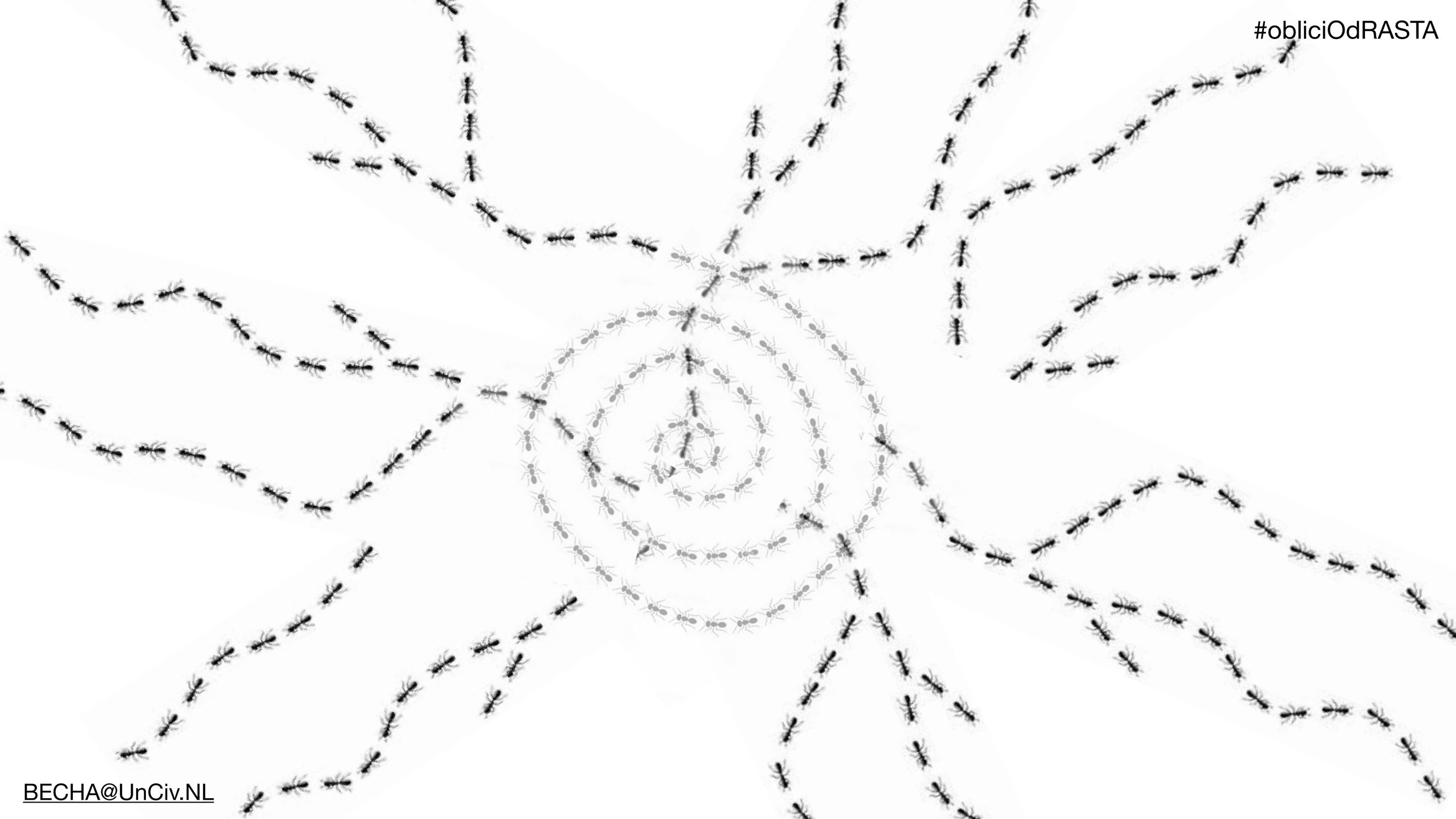

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Alternatives to Tech-Dystopia

- Climate Justice
- Counter-Computings
- DeGrowth
- Aware Academics
- (science) / Climate Fiction
- SolarPunk / LunarPunk
- Re-Topia
- Rebellion
- Art
- Activism
- Anarchism
- Animism

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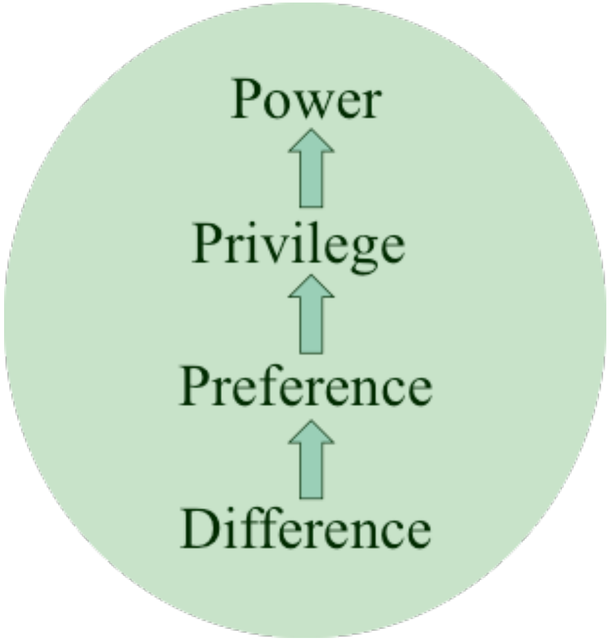
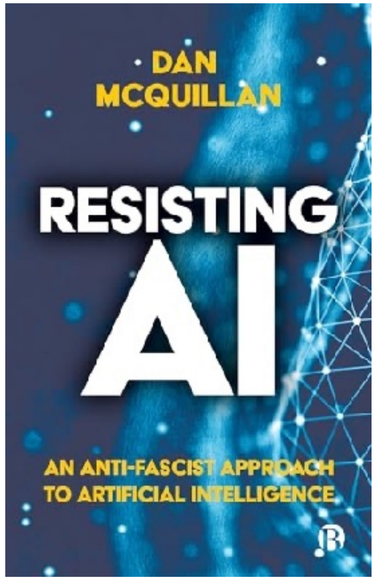
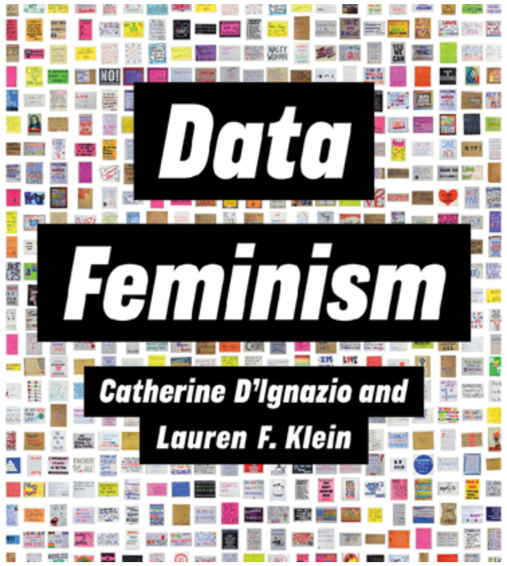
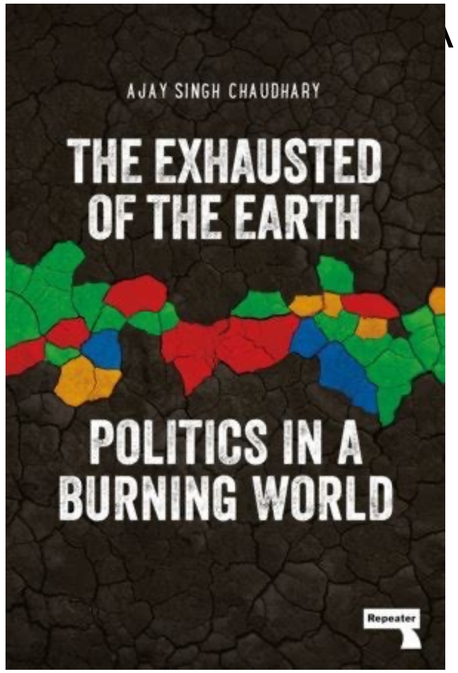
Technical Is Political

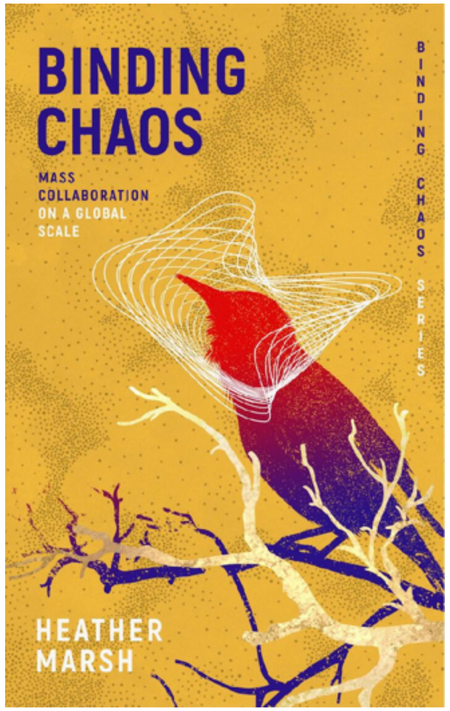


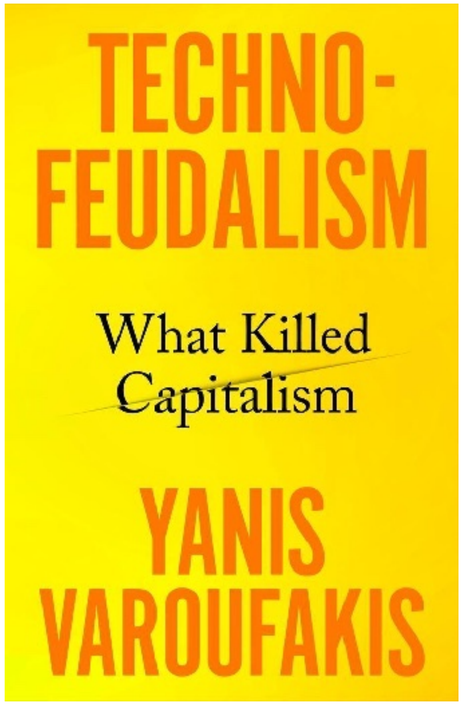
- “No research on a dead planet” https://www.frontiersin.org/articles/10.3389/feduc.2023.1237076





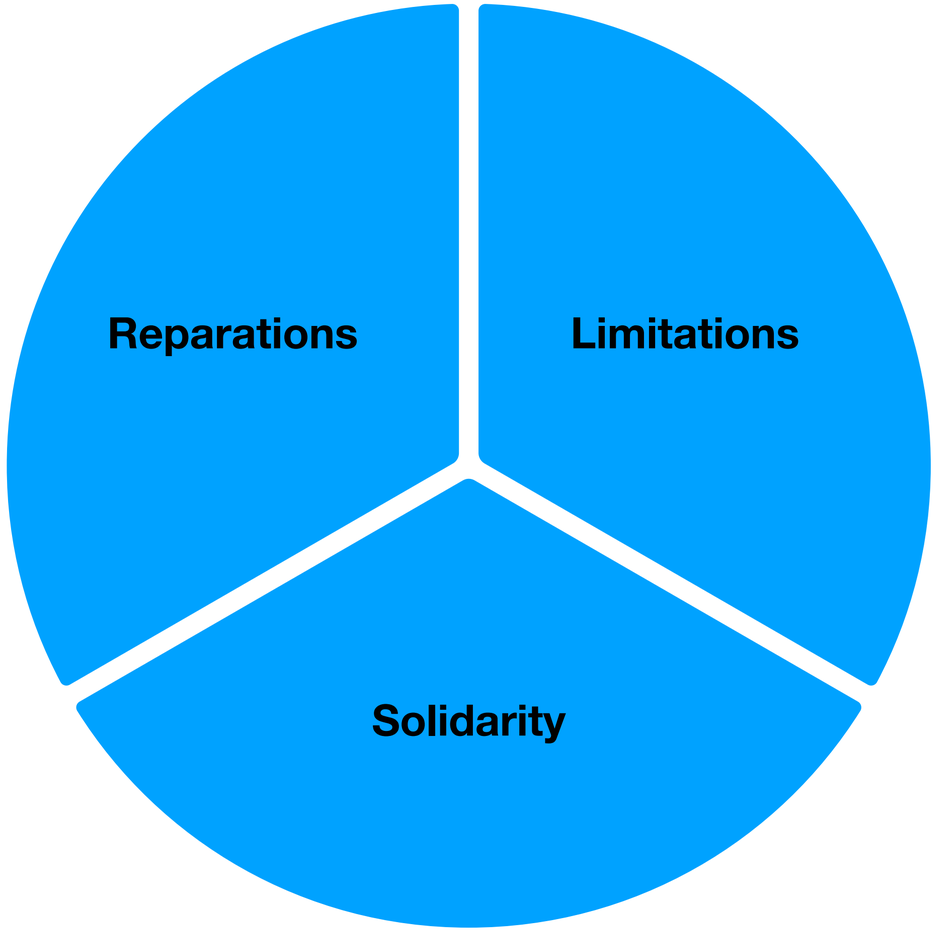






Climate Justice in Tech

- https://labs.ripe.net/author/becha/towards-climate-justice-in-tech/
- Limiting extractivism & decreasing growth
- Reparations: giving back to the most affected communities
- Acting in solidarity with the frontline communities & centering marginalised groups; mutual aid



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COUNTER COMPUTING: https://counter-n.net/

- → decolonial computing, Stefanie Wuschitz,
- → insurgent computing, Anna Engelhardt
- → minimal computing, Andrew Lison
- → permacomputing, Marloes de Valk, Ville-Matias Heikkilä
- → more-than-binary computing, Juan Pablo García Sossa
- + frugal computing, Wim van der Bauwhede
- + junkard computing, Jennifer Switzer
- + off-the-grid / SolarPunk & https://doingthedoughnut.tech/
- + low-tech, “green tech”, slow tech, durable tech, circular tech
- + https://art-meets.radical-openness.org/2024/program/reorganizing-the-internet/

Against Big Tech

- Digital Disobedience https://wiki.techinc.nl/User:Becha/DigitalDisobedience
- Against Cloud: https://wiki.techinc.nl/MeshNet#Cloud_Problems
- Against Data Centers: https://wiki.techinc.nl/Sustainability#Data_Centers
- Against Techno-Colonialism https://wiki.techinc.nl/Hackers_tribes#Decolonising_Internet
- Against Centralisation / Consolidation: https://wiki.techinc.nl/MeshNet#Email_Problems

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Academia, (h)Activists, NGOs…

- Computing Within Limits https://computingwithinlimits.org
  - https://labs.ripe.net/author/becha/computing-within-limits-2023/
- Communities for climate action in tech
  - https://wiki.mozilla.org/Projects/Sustainability/Research
  - https://www.sigplan.org/Resources/Climate/
  - https://climateaction.tech/community/
- https://www.apc.org/en/news/mobilising-collective-action-environmental-justice-and-sustainability-2020
- https://www.apc.org/en/project/technology-environmental-justice-and-sustainability
- ACM SIGCAS: Computers and Society https://www.sigcas.org/events/sigcas-showcase-2022/
- Theoretical Computer Scientists for Future (tcs4f.org) made a pledge to “reducing our emissions by at least 50% before 2030 relative to pre-2020 levels.”
- https://www.nsuweb.org/circle-g-sustainability-ethics-environment-call-for-papers/

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“Algorithmic Sabotage Research Group”

- https://tldr.nettime.org/@asrg/112240241594621190

- “While the whole of society is being subsumed by algorithmically ordered relations and enrolled in machinic optimization, the history continues to show that liberation from the imposition of these power relations is a process brought about by collective organizing, mutual care and #solidarity ..

- Given the urgent need to provide some kind of balance as the “algorithmic empire” becomes a multiplier of epistemic injustices, administrative violence and algorithmic states of exception, the Algorithmic Sabotage Research Group (ASRG) proposes “algorithmic sabotage” as a form of constituent counter-power and the basis for an alternative radical political tactic that resists necropolitical authoritarianism and militantly refuses reductive optimisations and statistical segregation through a perspective of care and mutuality, while pushing for structural alternatives .”

Internet of Empathy

- “To Our Friends” by The Invisible Committee https://mitpress.mit.edu/books/our-friends
  - Positive freedom of connectivity, interaction and involvement
  - Instead of libertarian “freedom” as independence and self reliance
  - This freedom comes at the price of greater responsibility
  - “ the intrinsic value of a network does not lie in the sovereignty and independence of its nodes, but in their connectedness,”
  - Empathy is willingness to engage with the Other, and willingness to enrich network with our contributions

- “Guide to Empathetic Technical Leadership" https://empathetictechnicalleader.com
  - FREE to read online: https://leanpub.com/littleguide/read

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Internet of Squirrels

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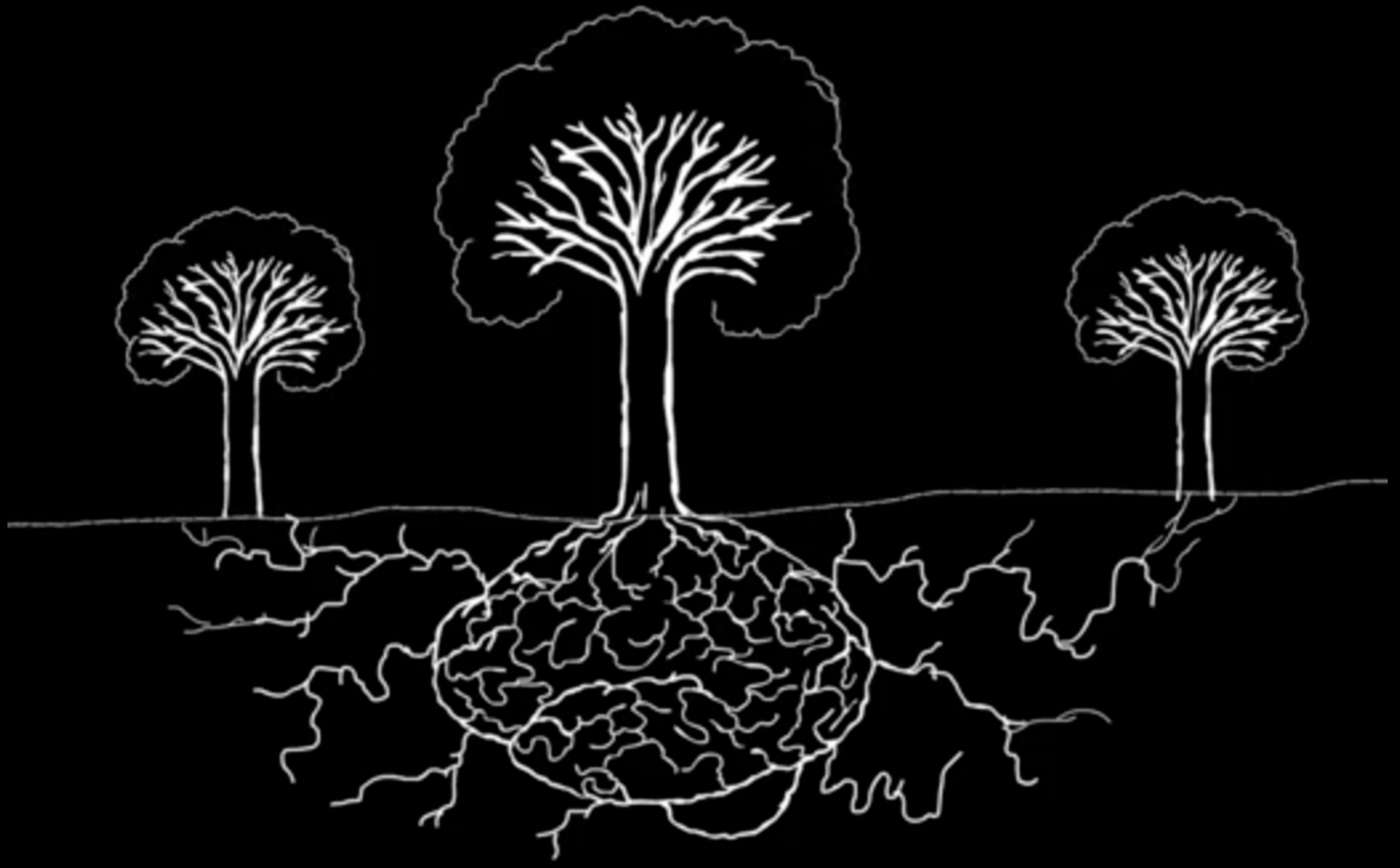

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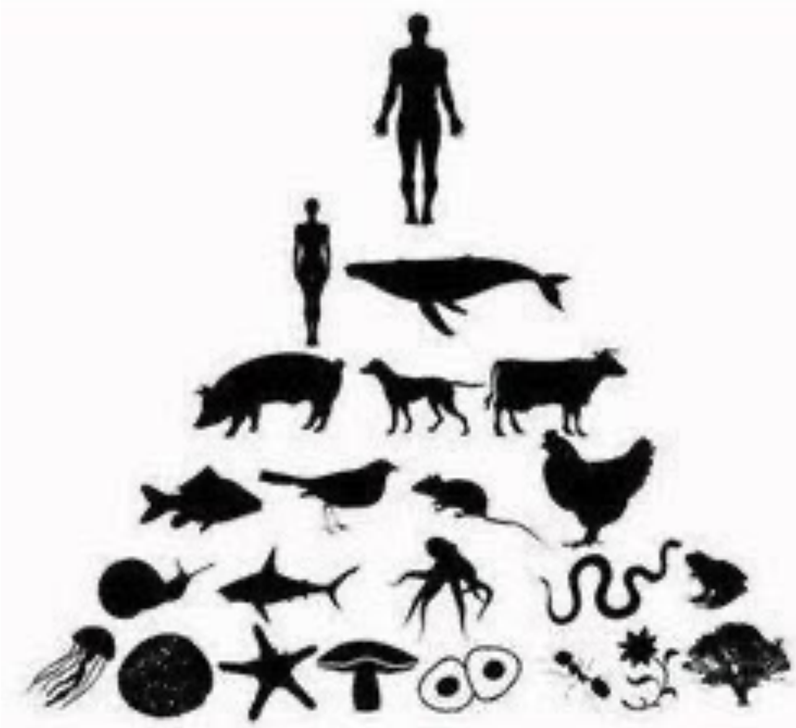
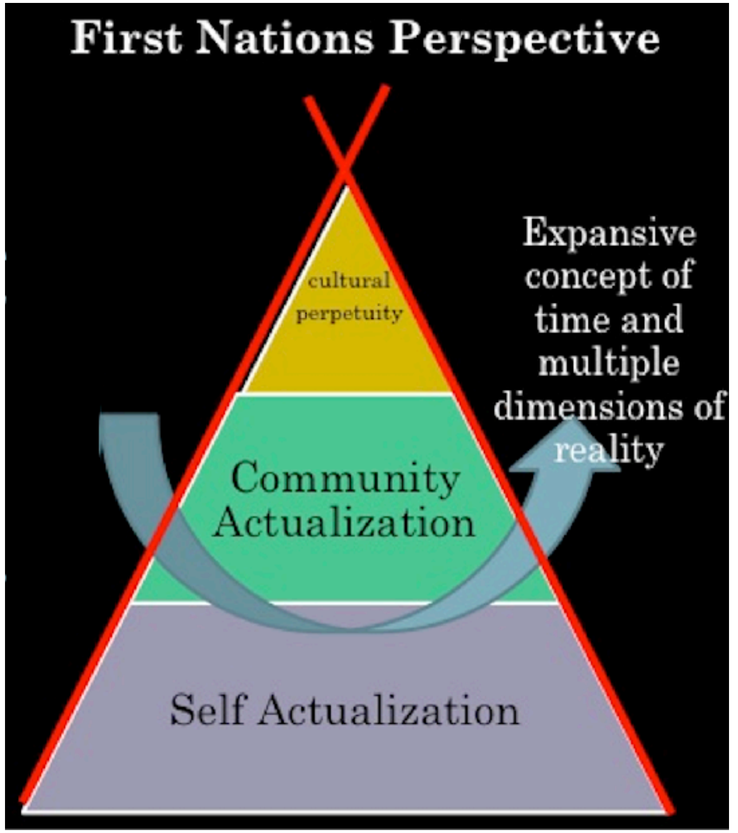


EGO

NATURE



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Sacred InterDependences

- *spiritual debt must be paid for the creation of technology (e.g. knife)*

- *hollowness has been carved out of the universe by human ingenuity, and so must be refilled with human ingenuity. A ritual gift equal to the amount that was removed from the other world has to be put back to make up for the wound caused to the divine.*

  - *https://www.thesunmagazine.org/issues/304/saving-the-indigenous-soul , Martín Prechtel, Tzutujil shaman*

- "...a society predominantly concerned with preserving its existence (but not endlessly expanding), a society with a modest standard of living, conservative of natural resources, with a low constant fertility rate and a political life based upon consent; a society that has made a successful adaptation to its environment and has learned to live without destroying itself or the people next door...that is the society I want to be able to imagine — I must be able to imagine, for one does not get on without hope."

  - *"A Non-Euclidean View of California as a Cold Place to Be", Ursula K. Le Guin*

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Alternative Narratives

- Ursula K. LeGuin: "The Dispossessed”
- Octavia Butler: “Parable of the Sower”
- Orson Scott Card: “Speaker for the Dead”
- Cory Doctorow: “WalkAway”
- Daniel Quinn : Beyond Civilisation (series), “The Story of B” http://www.davidsheen.com/b/
- Neal Stephenson : “Diamond Age,
- Timothy Morton: “HumanKind”
- Mitakuye Oyasin; Ubuntu; Dreamtime
- Batja Mesquita, (emotions) “Between Us”
- “Group Empathy” https://wiki.techinc.nl/Hackers_tribes#Group_Empathy
- Starhawk: “Fifth Sacred Thing” https://starhawk.org/writing/books/the-fifth-sacred-thing/
- Philip Shepherd: “Radical Wholeness” : https://embodiedpresent.com/
- Tricia Hersey: Rest is Resistance https://thenapministry.com/
- Neurodiversity: https://autcollab.org/knowledge-repository/ecologies-of-care/

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Internet Governance

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Against Techno-Optimism!

- Internet ***INFRASTRUCTURE*** (as opposed to “web”/applications)
- **Layered** architecture, enabling: “network of networks”
  - end-to-end connectivity, “permission-less innovation”, decentralisation
- Tech/Science/‘Net has ***NOT*** **fulfilled its emancipatory promises**:
  - education, empowerment, equality, liberation, “democracy”, social justice …
- Instead: cat videos & ecocide

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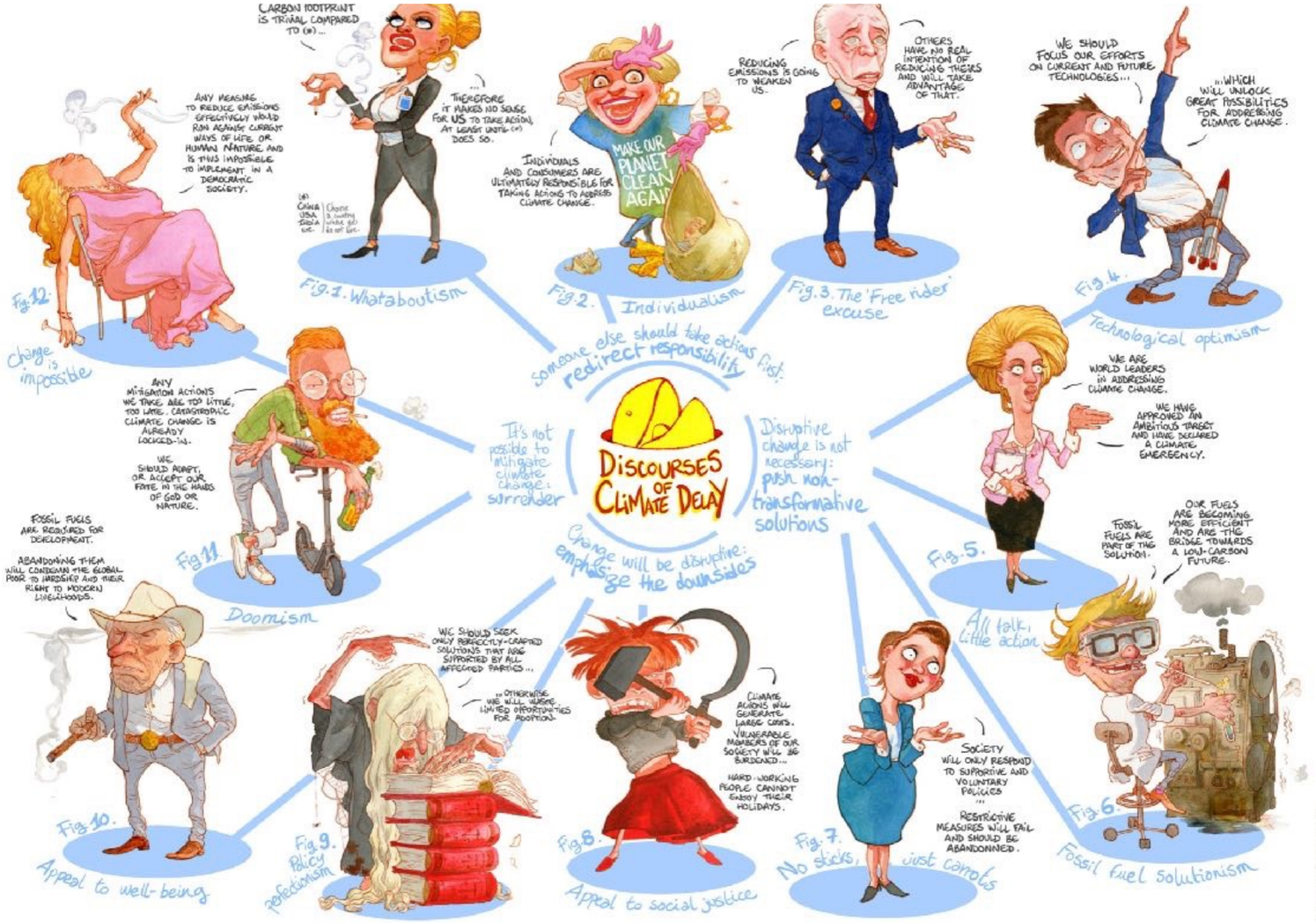
“Delay is the New Denial”



https://www.researchgate.net/publication/342596080_Discourses_of_climate_delay

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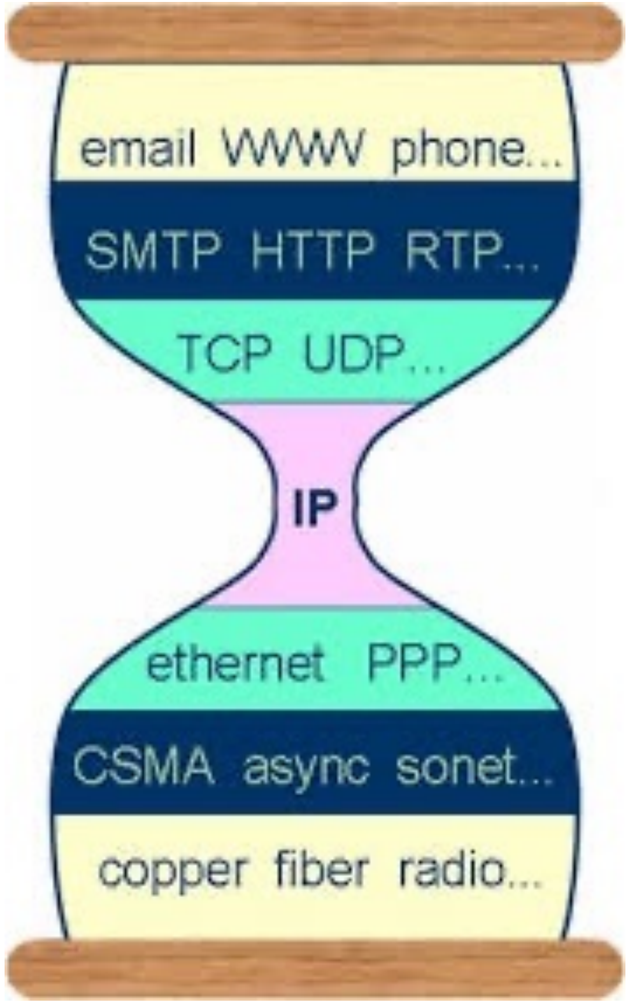
Internet Infrastructure Governance



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https://splinternews.com/who-controls-the-internet-ted-cruzs-fantasy-vs-the-re-1793861684

Ingrid Burrington

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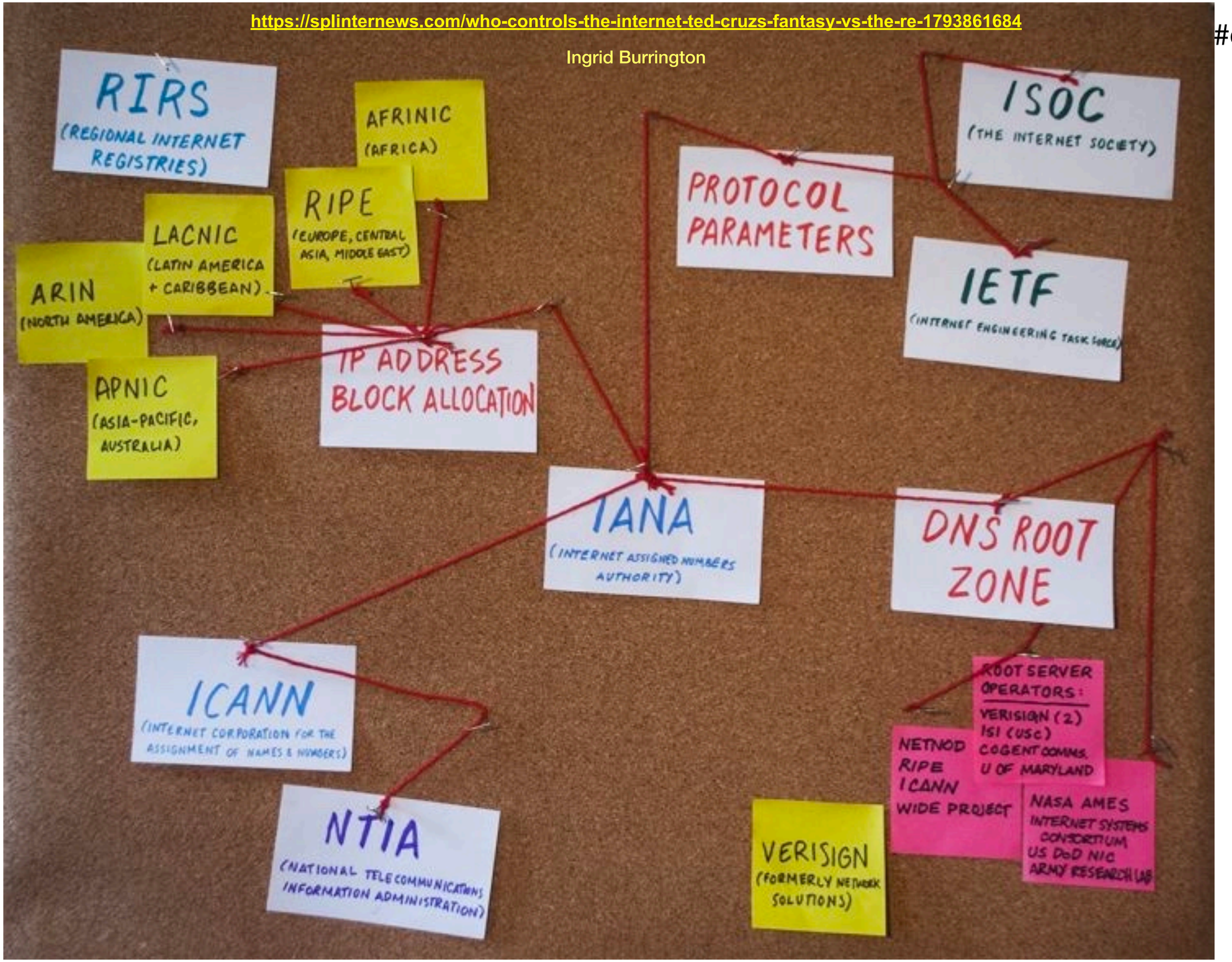

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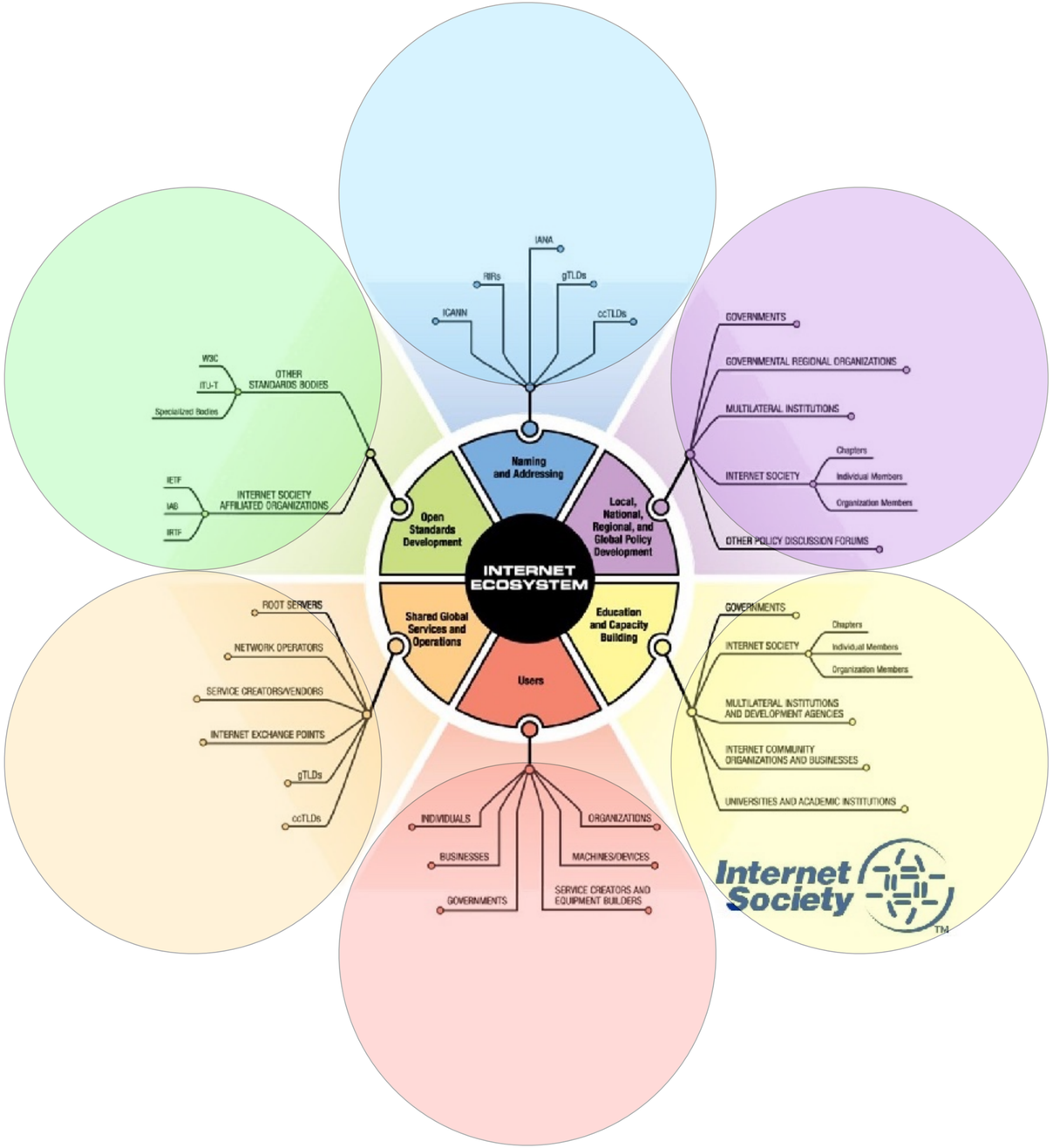
INTERNET ECOSYSTEM
Naming and Addressing
Local, National, Regional, and Global Policy Development
Education and Capacity Building
Users
Shared Global Services and Operations
Open Standards Development
IANA
RIRs
gTLDs
ICANN
ccTLDs
GOVERNMENTS
GOVERNMENTAL REGIONAL ORGANIZATIONS
MULTILATERAL INSTITUTIONS
INTERNET SOCIETY
Chapters
Individual Members
Organization Members
OTHER POLICY DISCUSSION FORUMS
W3C
ITU-T
Specialized Bodies
OTHER STANDARDS BODIES
IETF
IAB
IRTF
INTERNET SOCIETY AFFILIATED ORGANIZATIONS
ROOT SERVERS
NETWORK OPERATORS
SERVICE CREATORS/VENDORS
INTERNET EXCHANGE POINTS
gTLDs
ccTLDs
GOVERNMENTS
INTERNET SOCIETY
Chapters
Individual Members
Organization Members
MULTILATERAL INSTITUTIONS AND DEVELOPMENT AGENCIES
INTERNET COMMUNITY ORGANIZATIONS AND BUSINESSES
UNIVERSITIES AND ACADEMIC INSTITUTIONS
INDIVIDUALS
ORGANIZATIONS
BUSINESSES
MACHINES/DEVICES
GOVERNMENTS
SERVICE CREATORS AND EQUIPMENT BUILDERS
Internet Society
TM

Internet Governance Links

- https://wiki.techinc.nl/Internet_Governance_and_hackers
- https://wiki.techinc.nl/index.php/User:Becha/InternetPlumbing
- https://internet.exchangepoint.tech/internet-governance-roadmap-2024/
- https://datatracker.ietf.org/meeting/interim-2024-iab-07/materials/slides-interim-2024-iab-07-sessa-internet-governance-now-00
- https://www.apc.org/en/news/bringing-gender-justice-lens-uns-global-digital-compact

Misc. Organisations:

- **isoc.org**
- **https://labs.ripe.net/nogs/**
- **https://www.dns-oarc.net/**
- **https://www.centr.org/**
- **https://www.peeringdb.com/**
- **https://www.euro-ix.net/**
- **https://etno.eu/**
- **https://www.gsma.com/**
- **https://www.eudca.org/**

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More Internet Governance Links

- CENTR: https://centr.org/images/CENTR_Why_We_Need_Multistakeholder_Internet_Governance.pdf
- W3C: https://www.w3.org/ (& https://berjon.com/w3c-governance/)
- FLOSS : https://writefreesoftware.org/ & FOSDEM.org
  - https://hamishcampbell.com/some-aspects-of-the-geekproblem/
- “Feudalism" https://newpublic.substack.com/p/the-internet-was-supposed-to-be-democratic
- AI: https://www.dair-institute.org
- Fediverse/Activity Pub: https://socialhub.activitypub.rocks/
- https://www.internetgovernance.org/2024/05/08/the-disappointing-netmundial10/

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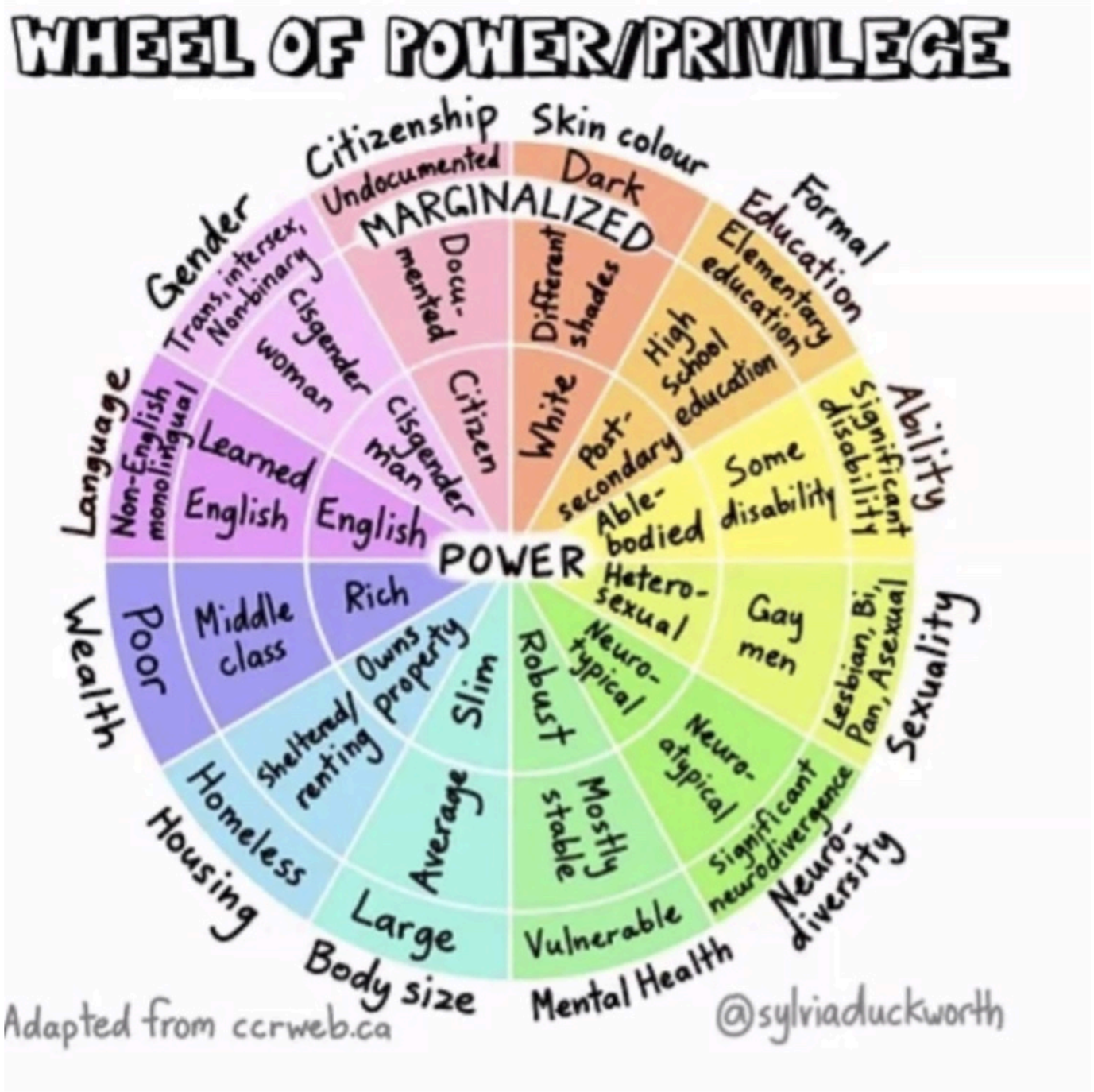

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Fallacy of “Openness”

- https://wiki.techinc.nl/Ladies_Night
  - http://becha.home.xs4all.nl/hackerspaces-patriarchy-equality.html
- Allison Parrish: “Programming is Forgetting: Toward a New Hacker Ethic” (2016) http://opentranscripts.org/transcript/programming-forgetting-new-hacker-ethic/
- Debbie Chachra http://www.theatlantic.com/technology/archive/2015/01/why-i-am-not-a-maker/384767/
- Flavia Dzodan https://artificeofintelligence.org/non-consensual-bots-and-personal-space/

Internet Governance & Technical Standards

- **Needs**:
  - “new energy”, creative ideas, alternative views
  - participants / speakers for events
  - contributions to mailing lists & forums
- **Offers**:
  - travel grants, fellowship & mentoring, interns positions
  - “academic cooperation” programmes
  - training & workshops & education materials
  - hackathons
- **Events**: https://wiki.techinc.nl/User:Becha/climate-justice-in-tech-events-calendar
  - https://wiki.techinc.nl/Sustainability#Events

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RIPE & Diversity

- Diversity https://ripe.net/diversity
- Academic **Grants**: https://ripe.net/raci
- Travel **Grants**: https://ripe.net/fellowship
- Community Projects **Fund**: https://ripe.net/cpf
- Free learning: https://ripe.net/training
- FLOSS Hackathons: https://labs.ripe.net/hackathons/
- https://labs.ripe.net/author/gergana_petrova/diversity-at-ripe-meetings-academics-newcomers-women/

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IETF & “Diversity”

- http://ietf.org/diversity/
  - https://criticalinfralab.net/wp-content/uploads/2023/06/LoudMen-CorinneCath-CriticalInfraLab.pdf
  - https://www.ietf.org/blog/report-experience-of-women-participating-in-the-ietf/
  - Systers: https://www.ietf.org/participate/ietf-systers/
  - https://www.irtf.org/travelgrants/
  - https://www.ietf.org/meeting/hackathons/
- ISOC: https://www.internetsociety.org/fellowships/mid-career
- ICANN: https://www.icann.org/fellowshipprogram

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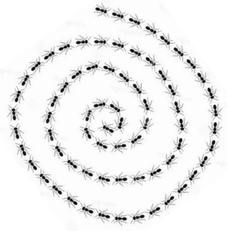

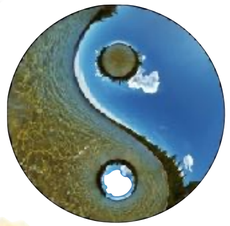

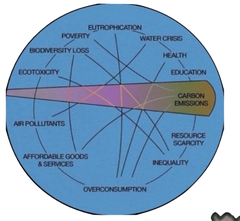

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