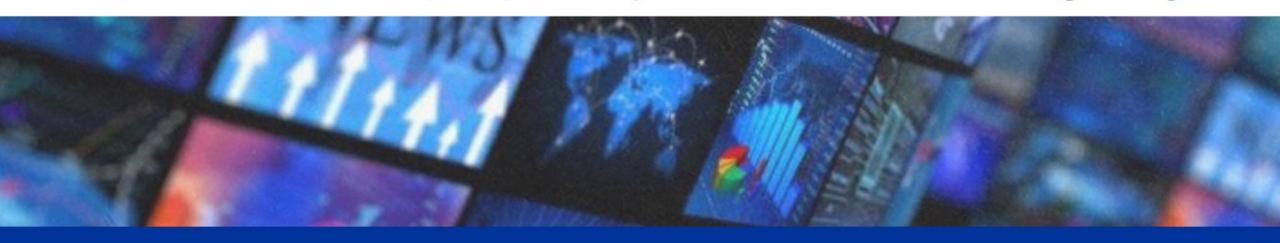


## Societal Implications of Media Platformisation

Opportunities and Pitfalls for Policy and Governance in the Digital Age







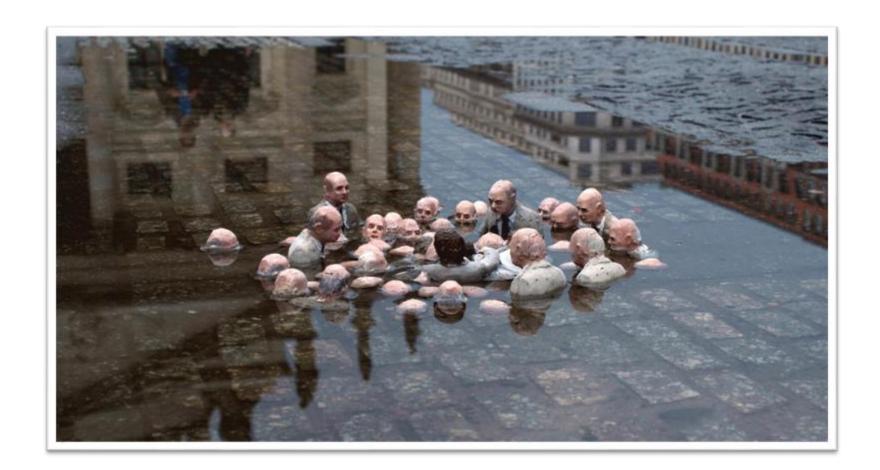


Global challenges, green challenges: it is time to place to place the climate emergency at centre stage in Communication policy

Benedetta Brevini, University of Sydney and London School of Economics and Political Science

















## **European Commission**

## Strategic Foresight Report 2022

- Crucial Role of the green and digital transitions, at the top of the EU's political agenda (June 2022)
- EU leaders agreed on a €1 074.3 billion long-term EU budget for 2021-2027. Among others, the budget will support investment in the digital and green transitions and resilience (2020 and 2021)









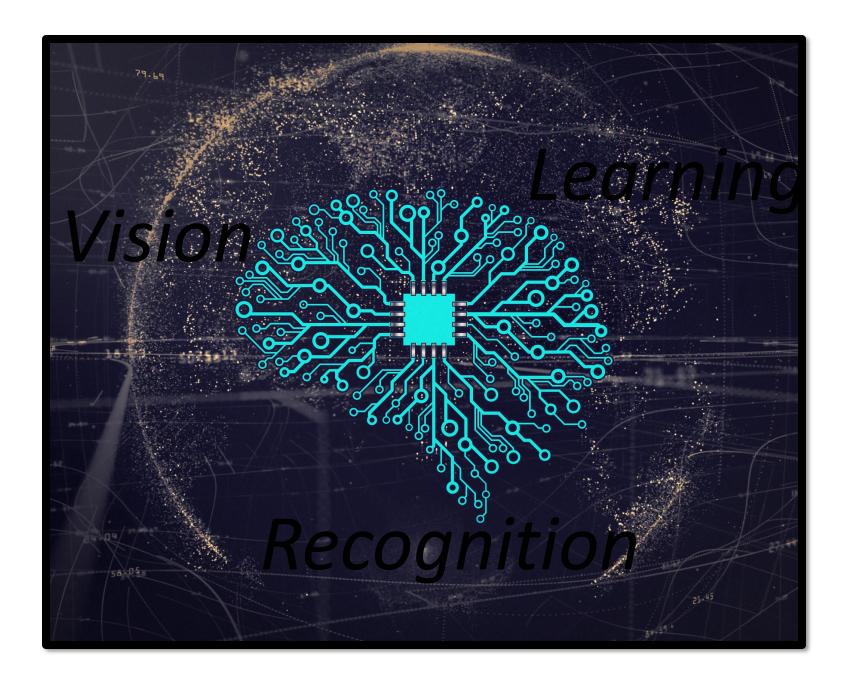
## **IMMATERIAL**



**POWERFUL** 

**BENIGN** 





## ERICSCHMIDT, FORMER EXECUTIVE CHAIRMAN OF ALPHABET

"Technology is now on the cusp of taking us into a



executive chairman of

Alphabet (Google's parent company)



# The portrayal of Data driven communication technology as immaterial, and magic, has two effects on us

- First, it obfuscates the materiality of the infrastructures on which technology is based that are central to the environmental question.
- Secondly, it renders almost impossible to imagine alternative ways of thinking about the Climate Emergency: green capitalism, based on technology "fixes" seems the only possible way.

## Strategic Foresight

### Report 2022

Unless digital technologies are made more energy-efficient, their widespread use will increase energy consumption. Information and communications technology (ICT) are responsible for 5-9% of global electricity use and around 3% of greenhouse gas emissions. (...) However, studies show that ICT power consumption will continue to grow, driven by increasing use and production of consumer devices, demand from networks, data centres, and crypto assets (European Commission,2022).







### DSA

• The Digital Services Act

(DSA) regulates the obligations of digital services that act as intermediaries in their role of connecting consumers with goods, services, and content.

• Why neglecting the environmental risks?

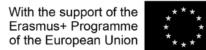


# Fostering a research agenda that places the climate crisis at centre stage in policy making

What are environmental costs and damages of the current data driven communication systems?

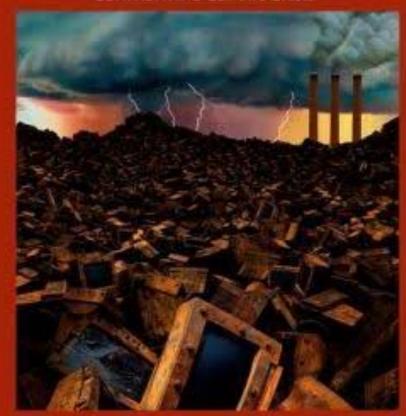






## CARBON CAPITALISM AND COMMUNICATION

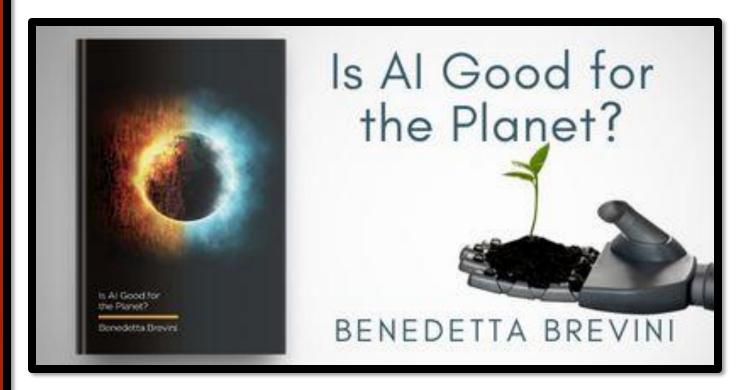
CONFRONTING CLIMATE CRISIS



EDITED BY BENEDETTA BREVINI AND GRAHAM MURDOCK

PAGENE STUDIES IN MEDIA AND ENVIRONMENTAL COMMUNICATION SERIES EDITORS A: HANSEN: S. DUYGE





# How do we understand the environmental costs of communication technologies?

Communication technologies have to be understood as machines, infrastructures that demand and use huge amounts of energy to compute, analyse or categorise and deplete scarce resources in their production, consumption and disposal, thus increasing the amounts of energy in their use, and exacerbating the climate crisis (Brevini, 2021, 2023)



# How do we understand the environmental costs of communication technologies?

We need to start with an analysis of the global production/ supply chain and life cycle of Communication Technologies, grounded in technocolonialism.

(Brevini, 2021, 2023)

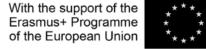




### Placing the Climate emergency at centre stage

• We have to begin with the extractivism and disregard for environmental justice (NRDC,2022) that communication technologies currently require to produce, transport, train and dispose of the infrastructures and machines on which they run





## Comparing carbon footprint: carbon-intensive activities versus Al language models

CONSUMPTION	CO <sub>2</sub> (Kg)
Travel London–Rome (1 passenger)	234 Kg CO <sub>2</sub>
Travel London–New York City (1 passenger)	986 Kg CO <sub>2</sub>
American car average including fuel 1 lifetime	57152 Kg CO₂
TRAINING ONE MODEL	
Natural language processing Development plus tuning	35592 Kg CO₂
Natural language processing Transformer with neural architecture search*	284019 Kg CO <sub>2</sub>

<sup>\*</sup>Transformer is a common type of deep-learning model introduced in 2017

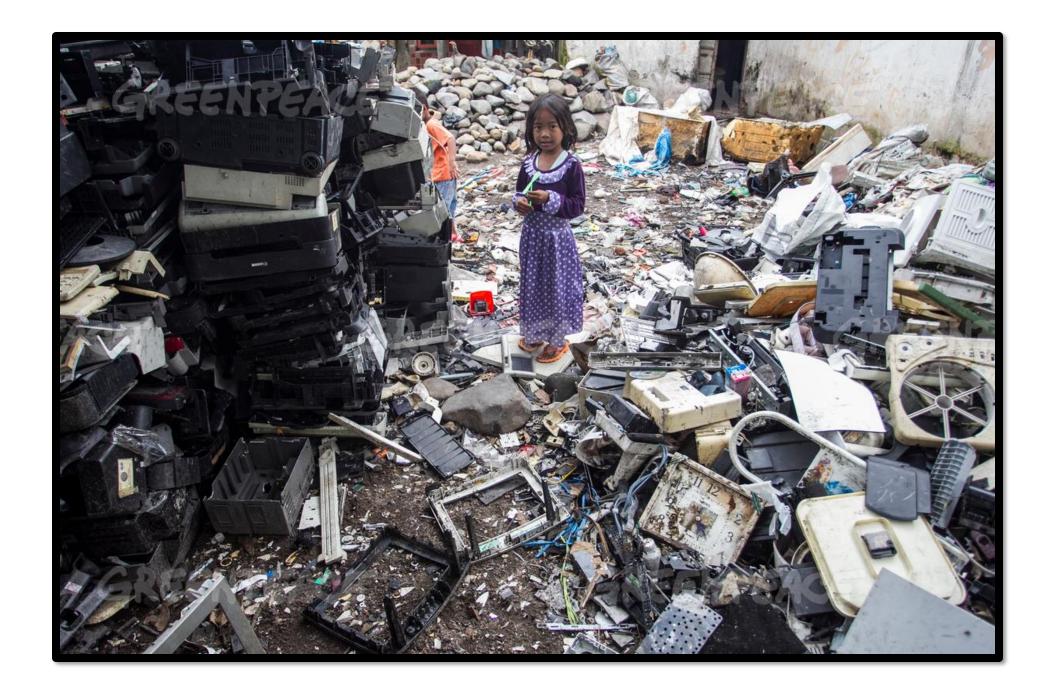
Figure 3.1: Comparing carbon footprints: Carbon-intensive activities versus AI language models

Source: Created by the author from data calculations in Strubell, Ganesh and McCallum (2019) and Kommenda (2019)

## Placing the Climate emergency at centre stage

- Data centres' energy usage averages 200 terawatt hours (TWh) each year (Nature, 2018; International Energy Agency, 2017) more than the national energy consumption of some countries, including Iran
- Huge problems with water supply





• What values should guide communication technologies development if we want to address the Climate Emergency?



#### Solutions....

## Thank you

Benedetta Brevini

If you are interested in Joining our Global University Network for Greentech Literacy contact me at:

<u>@grnsurveillance</u>

b.brevini@lse.ac.uk

benedetta.brevini@sydney.edu.au







# Thank you for your attention







