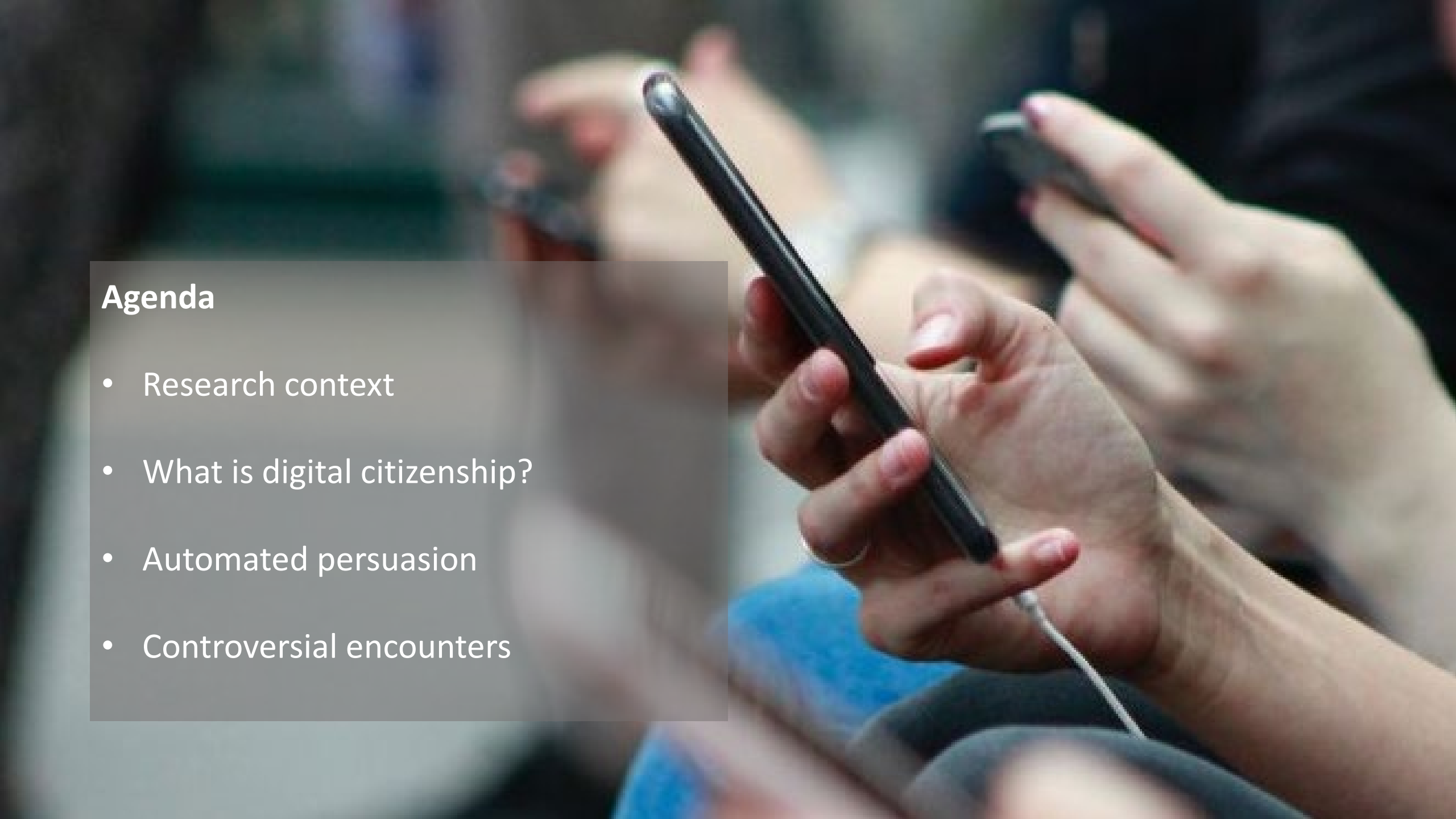
ADD | Algorithms, Data & Democracy
The ADD-project

Digital citizenship
– Opportunities and challenges for democracy

Sine N. Just
Department of Communication and Arts
Roskilde University

THE VELUX FOUNDATIONS
VILLUM FONDEN ✕ VELUX FONDEN



Agenda

- Research context
- What is digital citizenship?
- Automated persuasion
- Controversial encounters

Research Centre

Centre for Digital Citizenship

The Centre for Digital Citizenship investigates the social and political consequences of current developments in digital media technologies – smartphones, social media, algorithms, data, and beyond – and asks how these technologies shape individuals, citizens, collectives, and publics. While digital technologies offer progress in terms of political mobilization and public conversation, they also hold the potential to enhance old inequalities and divides, countering trust in society. The Centre for Digital Citizenship seeks interdisciplinary explanations to these complex digital developments and their societal effects.

Reseach themes

- Algorithmic societies and justice
- Mediated publics and engagement
- Organizational data and governance
- (Dis)information and trust

ADD | Algorithms, Data & Democracy
The ADD-project

Algorithms, data & democracy

Controversies regarding the digitalization and datafication of democracy currently develop along two interrelated axes; algorithmic infrastructures intensify and polarize issues of public concern while algorithmic decision-making is detached from citizen scrutiny and deliberation. The ADD-project focuses on these sociotechnical dynamics in an effort to reconfigure the algorithmic organization of data and strengthen digital democracy.

THE VELUX FOUNDATIONS
VILLUM FONDEN × VELUX FONDEN

Research

Knowledge Broker

Outreach

Sine Nørholm Just,
Principal investigator

David Budtz Pedersen,
Knowledge Broker

Lisbeth Knudsen,
Leader of outreach component

Samfundsfokus

Teknologisk fokus

Innovation

Syddansk Universitet
Hovedansvarlig: Alf Rehn

Infrastruktur og cybersikkerhed
Aalborg universitet
Hovedansvarlig: Torben Elgaard Jensen

Prædiktive algoritmer i den offentlige forvaltning
Aarhus Universitet
Hovedansvarlig: Helene Friis Ratner

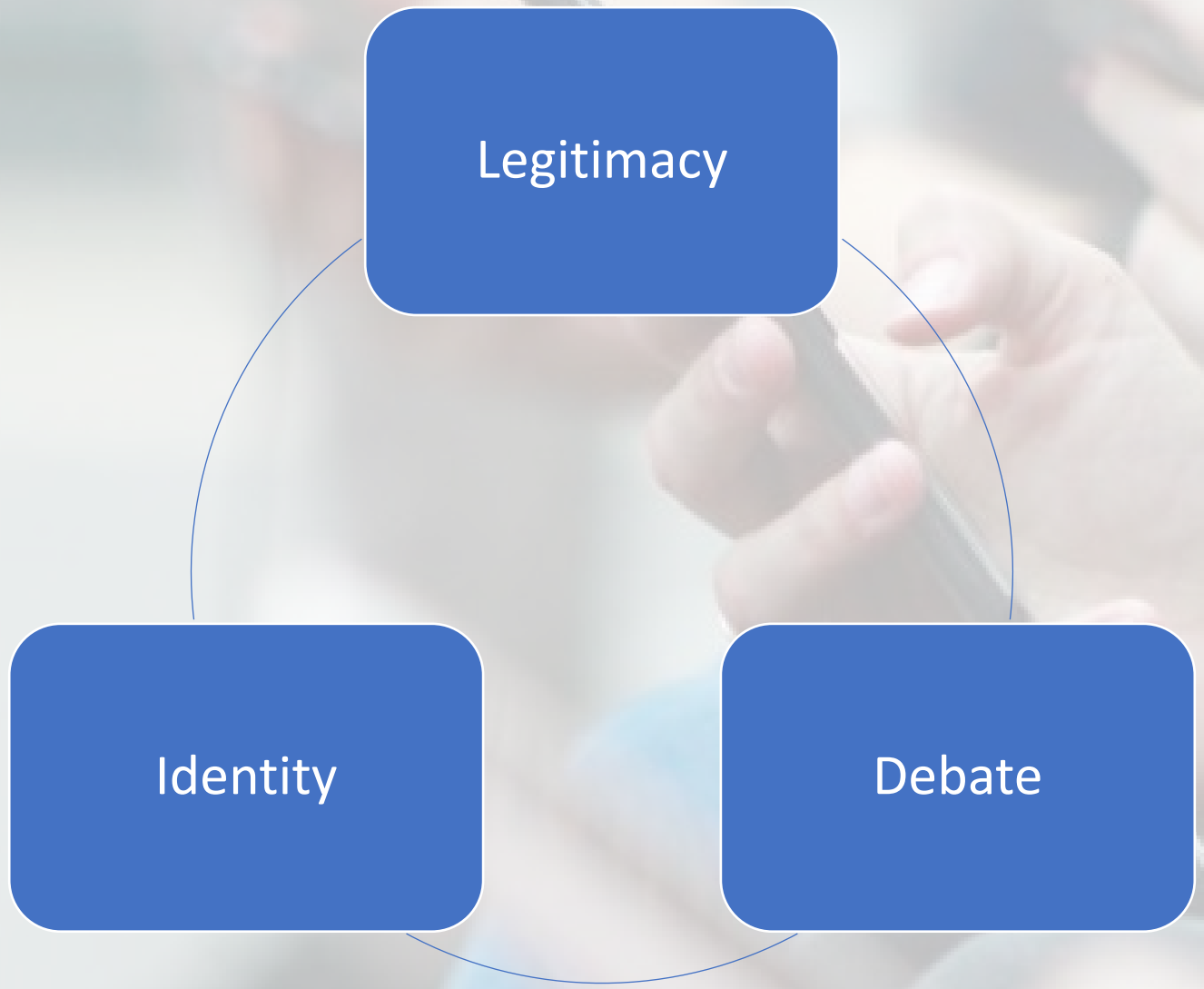
Sundhed

Roskilde Universitet
Hovedansvarlig: Sine N. Just

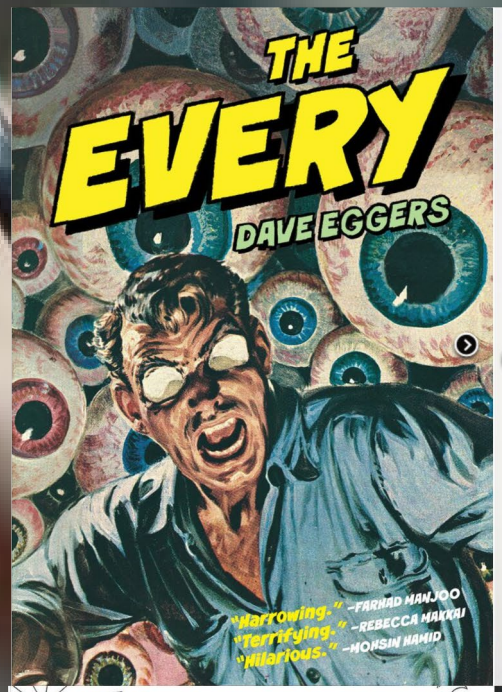
Finans

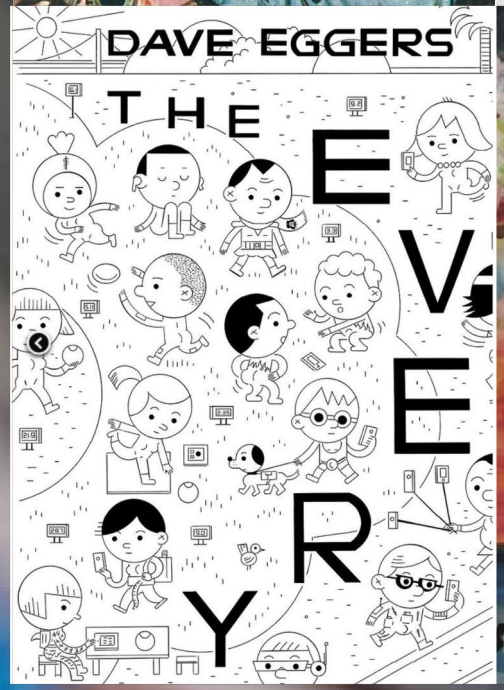
Copenhagen Business School
Hovedansvarlig: Leonard Seabroke

Digital citizenship v. the ideal of deliberative democracy



Automated persuasion



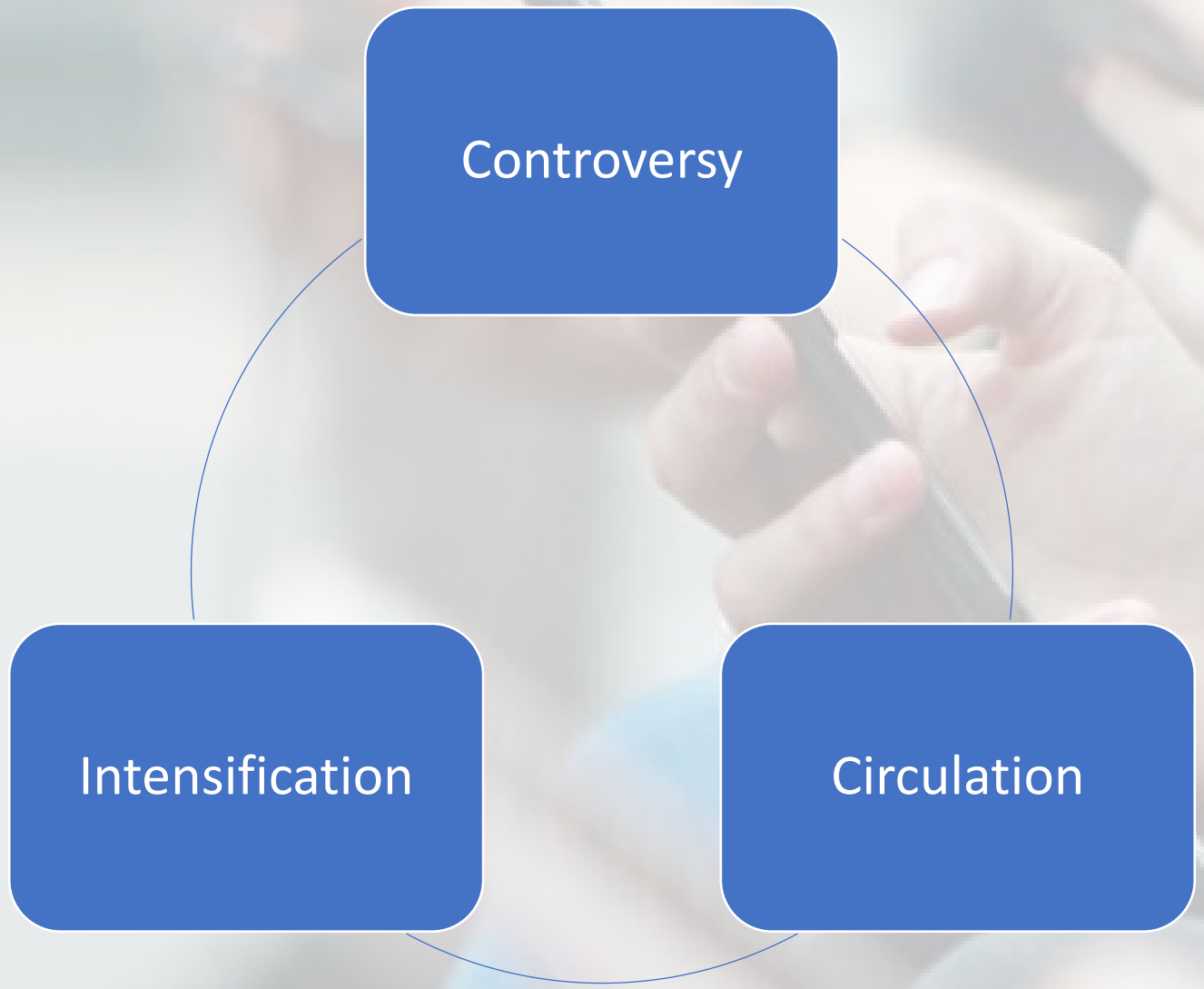


The trouble with automated persuasion

- Automated decisions: Displacement of responsibility
- Personalized targeting: Reduction of diversity
- Opaque procedures: Limitation to reflexivity

- The transmission paradigm comes back with a vengeance - fear of overt persuasion whilst constantly subject to covert persuasion
- ‘The closing of the rhetorical mind’

Re-charging deliberation with controversy?



Controversy mapping

- What is the concern being raised? And who articulates it?
- Who articulates what positions?
- How does the controversy unfold?
- (How) is the issue resolved?

HOW DO ALGORITHMS MAKE THE NEWS?

6K named entities extracted from 34K Danish news media articles about algorithms, machine learning, and artificial intelligence.

The entities are mapped as a co-word network where each node is an entity (a word or expression) and an edge signifies co-occurrence in the same articles. Only the 100K edges with highest Pointwise Mutual Information are kept in the visualization.

DANISH POLITICS

Data, algorithms, digitalization, and big tech have become matters of concern for a range of actors in the domestic political arena. Frequently named entities in this space includes names of politicians, political parties, interest organisations, and government agencies. They write opinion pieces or make statements on everything from data leaks and predictive monitoring to online debate culture and Silicon Valley disrupting the labour market.

THE CHINESE DILEMMA

Tech collaboration with China in areas like AI and mobile networks becomes a problem when Denmark wants to take a clear stance on human rights. Frequently named entities in this space include issues like the Uighurs, Tibet, or Hong Kong, as well as Chinese politicians and tech companies.

EUROPEAN POLITICS

Issues involving data and algorithms in neighbouring countries make the Danish news, from talks about EU's new AI strategy to national regulation against hate speech on social media. Frequently named entities in this space include names of European and in particular German and British politicians, media outlets, and political movements.

INTERNATIONAL CONFLICT

The mix of autocratic regimes, geopolitical conflict zones, and AI produces a broad variety of newsworthy stories. These range from intelligence services operating on social media during the Arab spring or a village of Macedonian trolls meddling in the American election, to Mohammed bin Salman allowing a female AI in Saudi Arabia or images of Kim Jong-Un and other controversial figures being banned on Tik-Tok.

AMERICAN POLITICS

The leak of Hillary Clinton's emails, the Cambridge Analytica scandal, the Crowdstrike conspiracy, or the role of Julian Assange: American presidential politics have become mired in data controversies. This also includes the responsibility of tech giants like Google or Meta in the events leading up to the January 6th insurrection and other examples of disinformation.

RESEARCH & EDUCATION

National Danish initiatives in research and education have been focusing on competence development and capacity building in the field of AI and machine learning. Frequently named entities in this space include universities, research groups, and their public and private partners.

CLIMATE & DEVELOPMENT

The online blog universe of the trade journal Ingeniøren (The Engineer) hosts debates about algorithms in climate modelling or the future of augmented reality - often with a focus on, or in the same context as stories from, developing countries.

SOCCER

AI is newsworthy when, trained on the past performance of players, it replaces the manager and sets the team. Or at least, that is a frequently talked about idea in the world of soccer.

MUSIC INDUSTRY

How are streaming platforms like Spotify changing business models in the music industry? How do you produce to grab the attention of the TikTok algorithm? Frequently named entities in this space mainly include famous artists.

DANISH BUSINESS

As a commercial opportunity and an innovation agenda, AI makes the business news when companies invest in it. Frequently named entities in this space include Danish companies, their R&D initiatives and partners, as well as the public institutions supporting them.

ART & ENTERTAINMENT

One of the most common ways in which machine learning and AI hit the news is through the world of fiction. Be it cinema, books, exhibitions, or video games, this is where we can speculate about our future lives with algorithms. Frequently named entities in this space include a lot of sci-fi authors, characters, and stories.

TECH

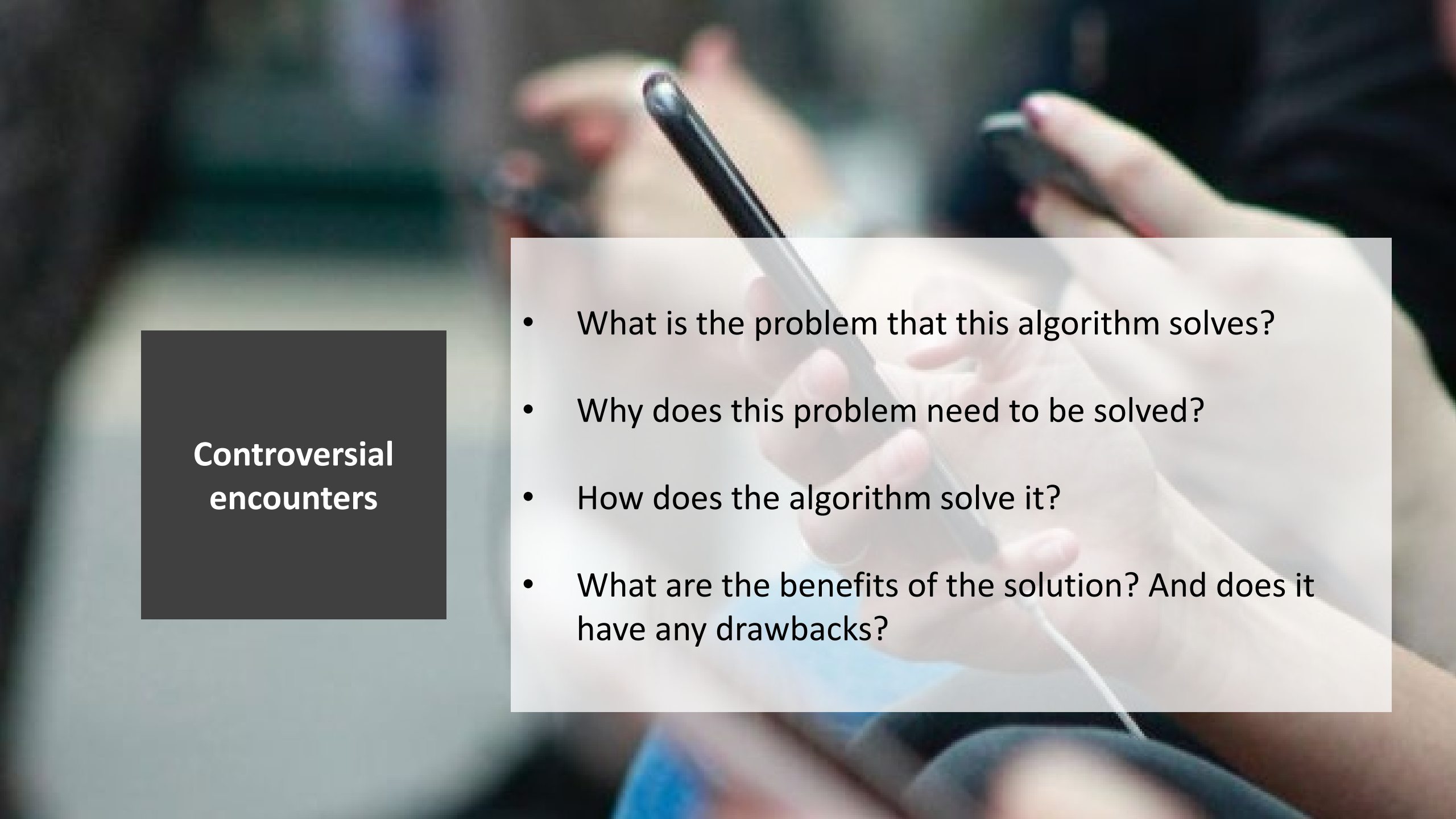
New inventions make the news, particularly when it involves consumer goods like smart phones or voice-controlled virtual assistants. This is one of the few areas where named entities include technical jargon like tensor flow, JavaScript, Python, or Fortran, which seems to stem from articles in specialized trade journals.

tantlab

AALBORG UNIVERSITY DENMARK

ADD

Made in the TANT Lab for the Algorithms, Data & Democracy project by Mathieu Jacomy, Torben Elgaard Jensen, Anders Kristian Munk, and Snorre Ralund. Data provided by Infomedia.



Controversial encounters

- What is the problem that this algorithm solves?
- Why does this problem need to be solved?
- How does the algorithm solve it?
- What are the benefits of the solution? And does it have any drawbacks?

ADD | Algorithms, Data & Democracy
The ADD-project

Thank you!

And stay in touch:

https://ruc.dk/en/research-centre/centre-digital-citizenship

www.algoritmer.org/www.algorithms.dk

sinenjust@ruc.dk

THE VELUX FOUNDATIONS
VILLUM FONDEN ✕ VELUX FONDEN