Your privacy

- where has it gone?

... and will it be back?

Talk by Dr. Andrzej NOWAK – April 2022
CERN Academic Training Programme

Part 1 of 3 – how did we get here?

Part 2 of 3– where is "here", actually?

"Dictators always dreamt about eliminating privacy, monitoring everyone, knowing everything you do, think, and feel...It is now possible."
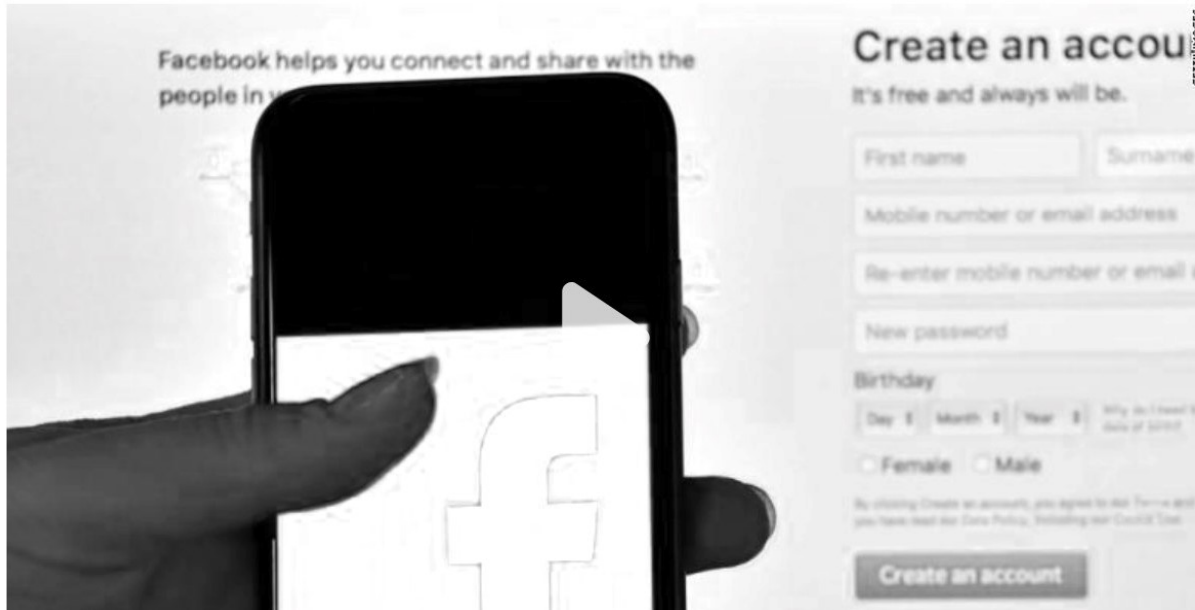
Yuval Noah Harari

Half a billion Facebook users' information posted on hacking website, cyber experts say

By Donie O'Sullivan, CNN Business
Updated 1101 GMT (1901 HKT) April 5, 2021

GETTY IMAGES

Search jobs   Sign in   Search

International edition ⌄

The Guardian

News | Opinion | Sport | Culture | Lifestyle | More ⌄

The Cambridge Analytica Files

A year-long investigation into Facebook, data, and influencing elections in the digital age

Key stories

Hide

Revealed / 50 million Facebook profiles harvested for Cambridge Analytica in major data breach

💬 484

'I made Steve Bannon's psychological warfare tool': meet the data war whistleblower

Christopher Wylie goes on the record to discuss his role in hijacking the profiles of millions of Facebook users in order to target the US electorate

Revealed: Brexit insider claims Vote Leave team may have breached spending limits

Whistleblower alleges that electoral spending rules could have been manipulated over controversial donation and that Vote Leave 'tried to delete key evidence'

The Brexit whistleblower   Revealed: the ties that   Facebook's week of   Politicians can't control

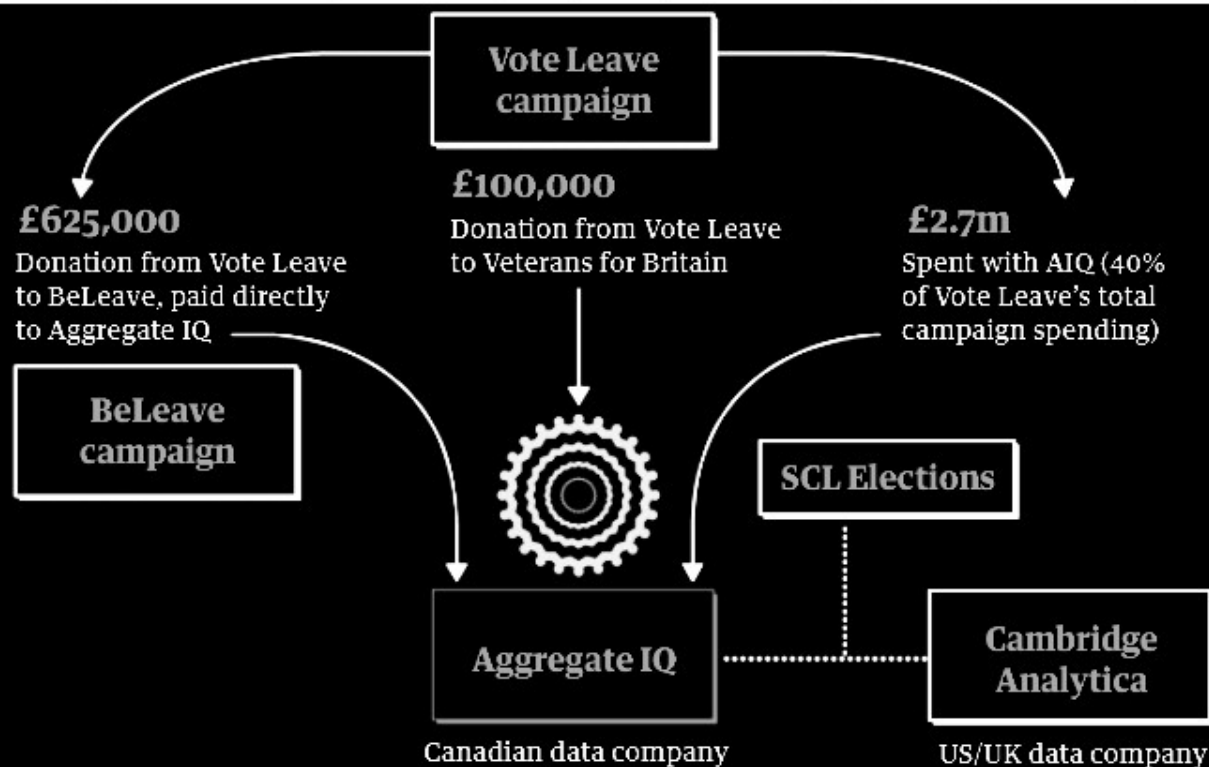## Vote Leave figureheads

Michael Gove

Boris Johnson

Vote Leave campaign bosses

Dominic Cummings

Matthew Elliott

Vote Leave campaign

£625,000
Donation from Vote Leave to BeLeave, paid directly to Aggregate IQ

£100,000
Donation from Vote Leave to Veterans for Britain

£2.7m
Spent with AIQ (40% of Vote Leave's total campaign spending)

BeLeave campaign

Aggregate IQ
Canadian data company

SCL Elections

Cambridge Analytica
US/UK data company

The Guardian

AGGREGATEiQ

PURE - DATA - INTELLIGENCE

INVOICE

DATE: 08/06/2016
INVOICE:

AggregateIQ Data Services Limited

For:
UK Referendum - Leave Campaign:
AggregateIQ (June)

Bill To:
Vote Leave

DESCRIPTION	HOURS	RATES	AMOUNT
			$1,155,000.00 USD
Digital Media Spend -			
		TOTAL	$1,155,000.00 USD

Evan Mitsui, CBC

"This is Britain in 2017. A Britain that increasingly looks like a "managed" democracy. Paid for by a US billionaire. Using military-style technology. Delivered by Facebook. And enabled by us."

Carole Cadwalladr, The Observer

Simulmatics (1960) – U.S. company. Voter simulation – "The People Machine"

    (1) Collect data

    (2) Detect patterns

    (3) Target & predict

    (4) Influence, direct action

Can we understand – how is this happening?

technology

&

incentives

Sur-veil-lance Cap-i-tal-ism, n.

def 1: *"A new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction and sales"*

Shoshana Zuboff, "The Age of Surveillance Capitalism" (2019)

"If you have something that you don't want anyone to know, maybe you shouldn't be doing it in the first place."

Eric Schmid, Google CEO, in 2009

"People have really gotten comfortable not only sharing more information and different kinds, but more openly and with more people. That social norm is just something that has evolved over time."

Mark Zuckerberg, Facebook CEO, in 2009

The Dark Web price list

(from "Privacy affairs")

	2021	2022
1'000 likes or followers	2$ - 5$	1-5
Millions of emails	10$	100$
DDoS, per hour	15$	10$
Hacked FB, Insta, Twitter, gmail	45-80	45-65
Cloned credit card with PIN	25$	20$
US selfie with ID	100$	120$
Russian passport scan	100$	100$
Credit card details with up to 5'000$	240$	120$
Verified crypto accounts	300-800	90-400
Polish passport	4'000$	3'800$

information you shared is
considered "fair game"

the purpose and your consent
are made to change over time

"...our privacy policy"

postgraduate degree required to comprehend
can change any time
continued use of service constitutes acceptance

→ no awareness, no control

Web tracking today

(1) associate the subject with a unique tag, in context

(2) store, correlate, annotate and enrich information offline

(3) retrieve tags in another context and profit

cookies, 3rd party cookies, browser storage, browser cache

supercookies, ISP logging, fingerprinting, your IP, your URL, unique URL ID, cross-device tracking, DNS lookups, tracking pixels, javascript

turn off features...?

block cookies yourself, please

...finally, download this add-on we made

Chrome exempts Google sites from user site data settings

October 7 2020 by Jeff Johnson
Support this blog: **Link Unshortener**, **StopTheMadness**, **Underpass**, **PayPal.Me**

In Google Chrome's "Cookies and site data" settings, accessible via the Preferences menu item or directly with `chrome://settings/cookies` in the address bar, you can enable the setting "Clear cookies and site data when you quit Chrome". However, I've discovered that Chrome exempts Google's own sites, such as Search and YouTube, from this setting.
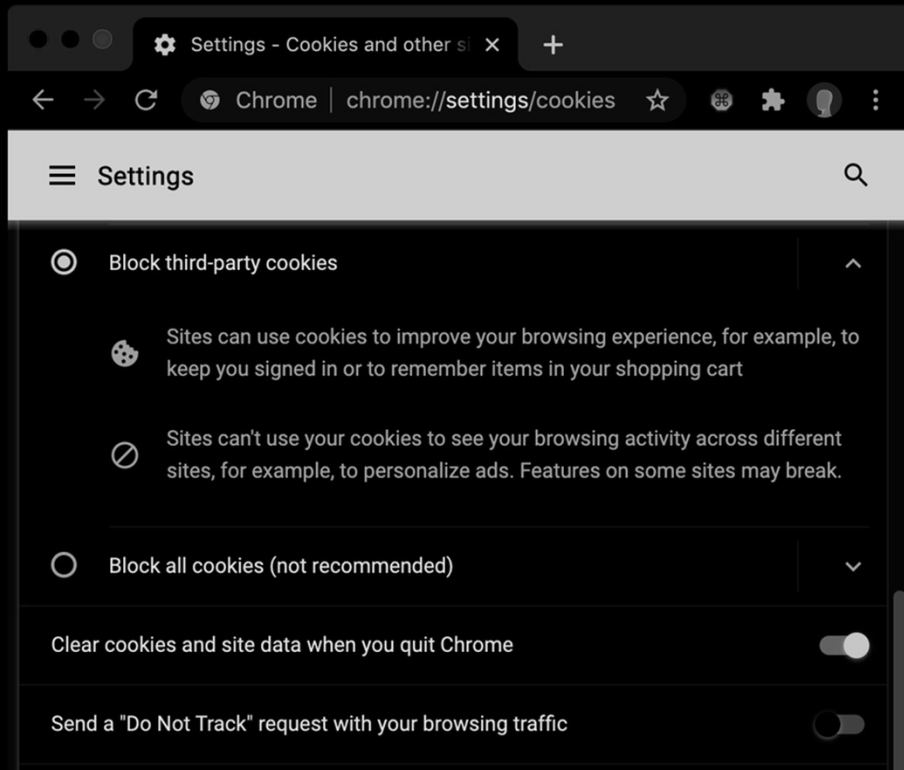
Dear DNS Server, what is the IP address of "wikipedia.org"?

...   > 91.198.174.192

Your DNS is configured by your Internet Service Provider
→ don't use their DNS, change the configuration

Other DNS servers may listen too
→ use your own server

Most DNS requests aren't encrypted! Someone is listening!
→ use so-called "DoH/DoT" – DNS over https/tls
... more problems

browser fingerprints

"user agent" string, timezone, screen size, plugins, add-ons, canvas test, webGL, fonts, # cores…

Beyond the Web. Logged out?

	IMEI	Hardware serial number	SIM serial number	Phone number	Device IDs	Location	Tele-metry	Cookies	Local IP Address	Device Wifi MAC address	Nearby Wifi MAC addresses
Apple iOS	✓	✓	✓	✓	UDID, Ad ID	✓	✓	✓	✓	✗	✓
Google Android	✓	✓	✓	✓	Android ID, RDID/Ad ID, Droidguard key	✗	✓	✓	✗	✓	✗

Douglas Leith, Trinity College

Data collection on Apple

your files and settings - iCloud
which software you run and when
mail
location
unique identifiers shared
recordings of your surroundings

Tech

Facebook v Apple: The ad tracking row heats up

By Jane Wakefield
Technology reporter

🕐 12 hours ago

Google data collection

search engine and crawler
ad network
Android devices
other products (mail, etc.)
affiliates
3rd party records (research, etc.)

(2010) Google Streetview cars perform electronic surveillance

(2017) Google admits Android collects the nearest cell tower, even when you switch off location and remove your SIM card.

(2018) "Location History" is off, Google still tracks it. Use an unrelated setting called "Web and App activity" to disable it.

(2020) Data collection continues in "Private mode" browsing.

Web & App Activity

Saves your activity on Google sites and apps to give you faster searches, better recommendations, and more personalized experiences in Maps, Search, and other Google services. Learn more

☑ Include Chrome history and activity from sites, apps, and devices that use Google services

MANAGE ACTIVITY

ⓘ Activity may be saved from another account if you use a shared device or sign in with multiple accounts. Learn more at support.google.com.

Summary of official notice

The email from Google to Workspace admins included information that

1. If Google Workspace admins disabled tracking via the "Web & App Activity" setting, this decision will be ignored by Gmail, Drive, Docs, Calendar, Chat, and several other services, starting March 29th.

2. A new user setting, "Google Workspace search history", will be introduced that the users will control individually.

3. By default, tracking is enabled, regardless of the previous admin setting of the organization.

4. The ability of Google Workspace organizations to turn off "Web & App Activity" for all users is no longer available.
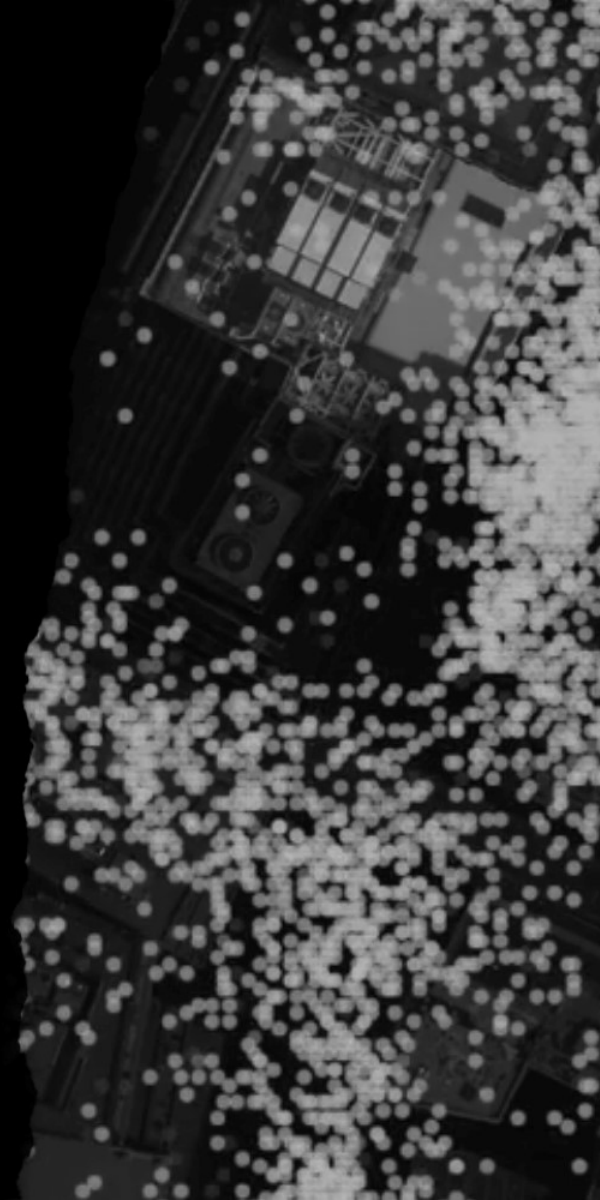
(2019) Software Development Kits used in apps systematically capture location and other data, which is later put up for sale.

12 million people

50 billion pings

One dataset out of a multitude

consent? anonymity? security?

"The seduction of these consumer products is so powerful that it blinds us to the possibility that there is another way to get the benefits of the technology without the invasion of privacy. But there is [...]"

William Staples, Surveillance Studies Research Center, Kansas Uni

dark patterns

"Dark Patterns are tricks used in websites and apps that make you do things that you didn't mean to, like buying or signing up for something."
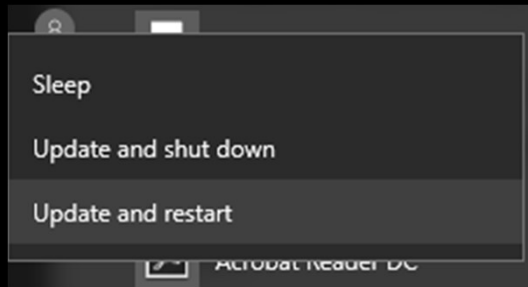
Harry Brignull, darkpatterns.org
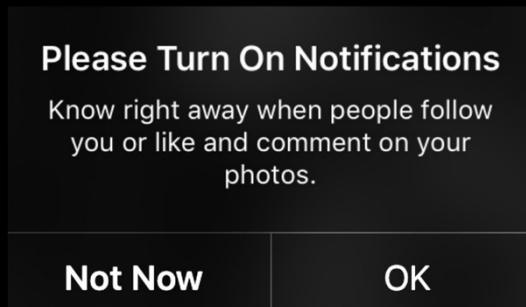
Roach Motel (Verizon)

No link, must ask an automated agent, who advises to call a hotline, then transfer and then convince a real agent

Confirmshaming (Amazon)

"Join Amazon Prime" vs. "No, thanks, I don't want unlimited one-day delivery"

Forced action

Nagging

Trick questions

Condé Nast has offers and information that we can only send you by email. We do not want you to miss out, but if you would prefer not to hear from us please tick here. ☑

Our partners sometimes have relevant offers. If you would like these sent by email please tick here. ☐

Condé Nast would like to contact you with offers and opportunities. But if you prefer not to receive them, please tick here:
by post ☑ by phone ☑

Please tick here if you would like to receive relevant messages by SMS: from us ☐ from our partners ☐

Sometimes our partners have special offers that we think you will find relevant, but if you do not want to hear from them please tick here: by post ☑ by phone ☑

nest

COOLING

75

78

regulation – a blessing and a curse

DPD and GDPR

EU-US "Safe harbor" → Schrems I
EU-US "Privacy Shield" → Schrems II
EU-US "Privacy Shield 2.0"?

CCPA

Google

Personalisierungseinstellungen & Cookies

Wir verwenden Cookies, um Personalisierungseinstellungen zur Verfügung zu stellen. Über diese können Sie festlegen, wie Sie die Dienste von Google nutzen möchten – auch wenn Sie abgemeldet sind. Sie können Ihre Einstellungen jederzeit unter g.co/privacytools ändern. Wenn Sie wissen möchten, wie Google Informationen verwendet, die während Ihrer Nutzung von Google-Diensten generiert werden, dann lesen Sie unsere .

Suchanpassung

Sie erhalten relevantere Ergebnisse und Empfehlungen auf der Grundlage Ihrer Google-Suchanfragen über diesen Browser.

Aus   Ein

YouTube-Verlauf

Sie erhalten z. B. personalisierte Videoempfehlungen und eine angepasste Startseite. Für diese Einstellung werden Ihre Aktivitäten bei YouTube herangezogen, etwa die Videos, die Sie sich ansehen oder nach denen Sie suchen.

Aus   Ein

Personalisierte Werbung

Sie können sich von Google in der Suche, bei YouTube und im gesamten Web personalisierte Werbung anzeigen lassen, die auf Ihren Aktivitäten beruht. Zu diesen Aktivitäten gehören z. B. Ihre Suchanfragen bei Google und die Videos, die Sie sich bei YouTube ansehen.

Aus   Ein

€150M

YouTube A Google company

Before you continue to YouTube

We use cookies **and data to**

🛡 Deliver and maintain Google services

⚠ Track outages and protect against spam, fraud and abuse

Il. Measure audience engagement and site statistics to understand how our services are used and enhance the quality of those services

If you choose to 'Accept all', we will also use cookies and data to

↗ Develop and improve new services

Il. Deliver and measure the effectiveness of ads

✦ Show personalised content, depending on your settings

🏷 Show personalised ads, depending on your settings

If you choose to 'Reject all', we will not use cookies for these additional purposes.

Non-personalised content and ads are influenced by things like the content that you're currently viewing and your location (ad serving is based on general location). Personalised content and ads can also include things like video recommendations, a customised YouTube homepage and tailored ads based on past activity, like the videos that you watch and the things that you search for on YouTube. We also use cookies and data to tailor the experience to be age-appropriate, if relevant.

Select 'More options' to see additional information, including details about managing your privacy settings. You can also visit g.co/privacytools at any time.

MORE OPTIONS   REJECT ALL   ACCEPT ALL

Privacy Policy • Terms of Service

90% accept

3% want

privacy vs. *safety*

↑

"and"?

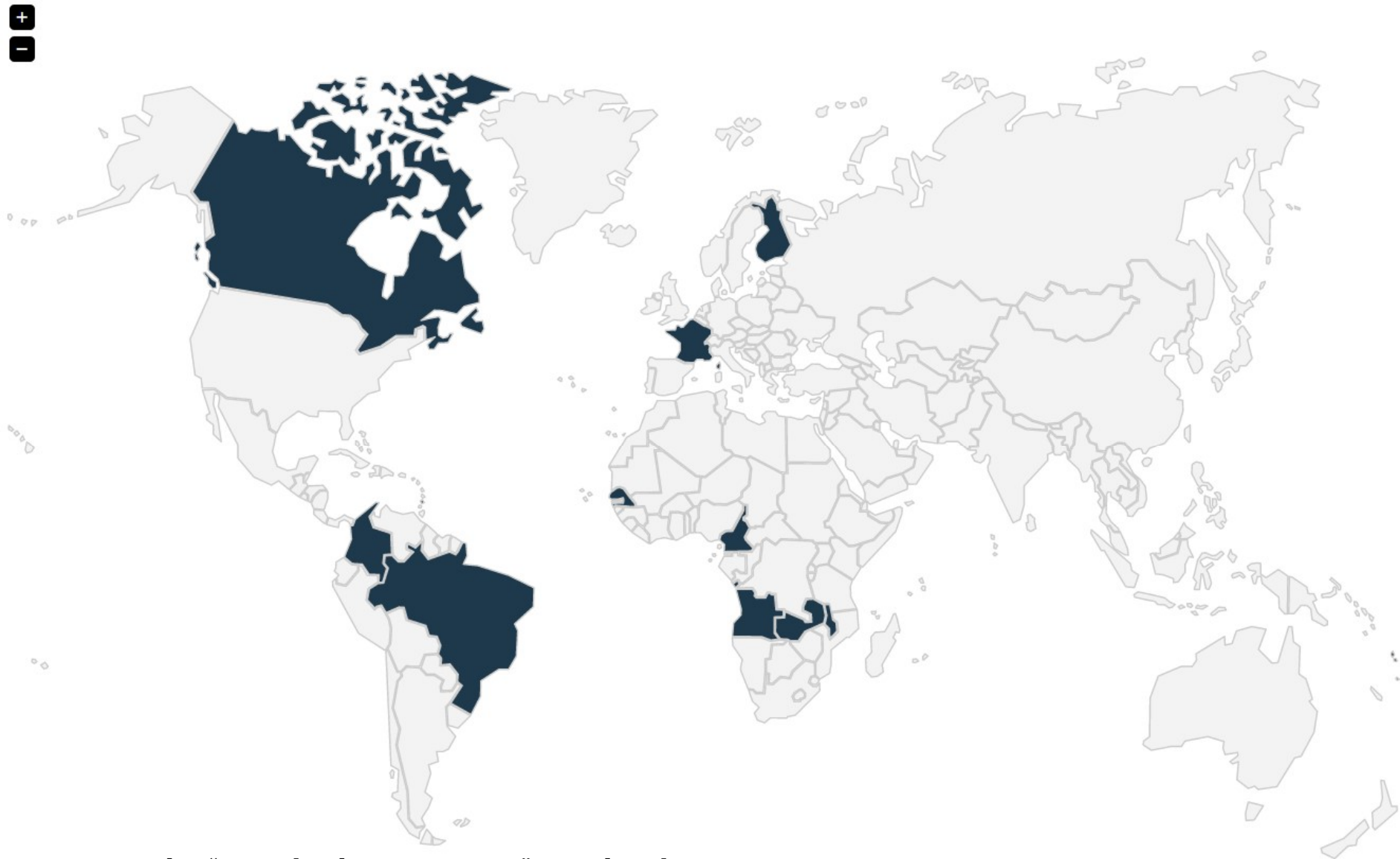increasing algorithmic and AI presence, invasiveness, automation
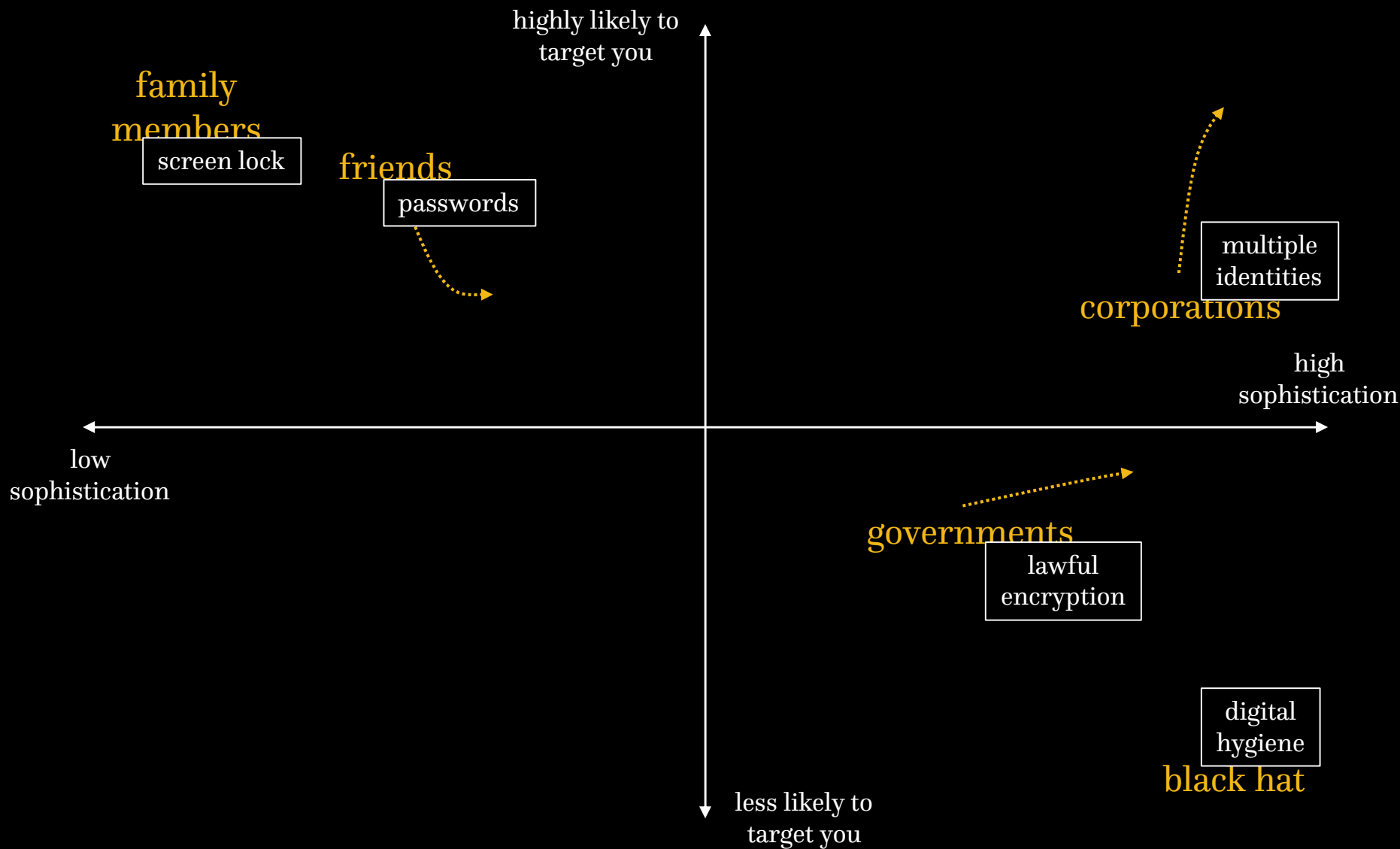
algorithms aren't infallible

bias

garbage in, garbage out

the right to oppose automation?

anonymization, privacy preservation in AI

Countries with a "general right to encryption" – gp-digital

"what should I do"?

     decide what you want

     get help! :-) listen to experts

     pay for privacy with money, or you will pay in other ways

     complain about a lack of respect for privacy

"and technically?"

Firefox (de-googled), Signal, Element
Privacy mail/office services (e.g., tutanota, mailbox.org)
privacyguides.org, privacytools.io; Encrypt files, cloud.
Firewalls for outgoing traffic (simplewall, netguard)
Get Linux. Dump Android, get Calyx / Graphene / Lineage
Pay with Abine Blur or similar
Self-hosting
Going dark with consumer electronics
🌲

level of cray-cray

"here"

no control, no accountability
an adversarial relationship
convenience > privacy
cost > privacy

but you have all the power – divert your attention

to be continued...

CERN resources: Liviu Valsan's seminar
    https://indico.cern.ch/event/921892/