

Platforms, privacy and dis/empowerment by design

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Contents

- 1. Media and communication studies | digital media
- 2. Online platforms | sharing economy
- 3. Dis/empowerment | privacy
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Introduction: media & comm. studies

- Media and Communication Studies (MCS)
 - Separate field in social sciences since 1930s
 - Investigating human and social communication on different levels (society-wide, in organisations, etc.) and which can happen through media as well as from person to person without tangible media
- Two main streams
 - Communication sciences
 - Origin: social sciences and information science; US; 1930s
 - Media studies
 - Origin: humanities and linguistics; UK; 1970s
- People and society increasingly rely on (digital) media, computers and ICT systems for communication and information sharing
 - Vital to investigate new forms of mediated communication from interdisciplinary perspective e.g. computer-mediated communication





Introduction: media & comm. studies

- In transitional digital media ecosystem people can become simultaneously empowered as well as disempowered by socio-technical systems
 - With people instead of about people
- Lievrouw & Livingstone (2002): dependent on interrelationship between:
 - Technology (artefact)= how media systems are being designed (i.e. what they enable)
 - People (practices) = how people within their context design and use media and technologies (i.e. are able to do)
 - **3. Society** (social arrangements) = how mediated communication is organised socially, economically, politically and legally (i.e. understanding contingency)





Technology People

Society

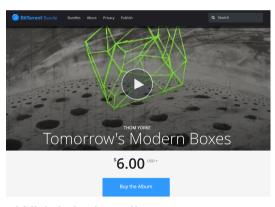




Compression technique MPEG-4 Part 14 (standardisation) Torrent Protocol
BitTorrent...
that happened to be
handy for sharing
large movie/audio files...

The Pirate Bay shutdown: the whole story (so far)



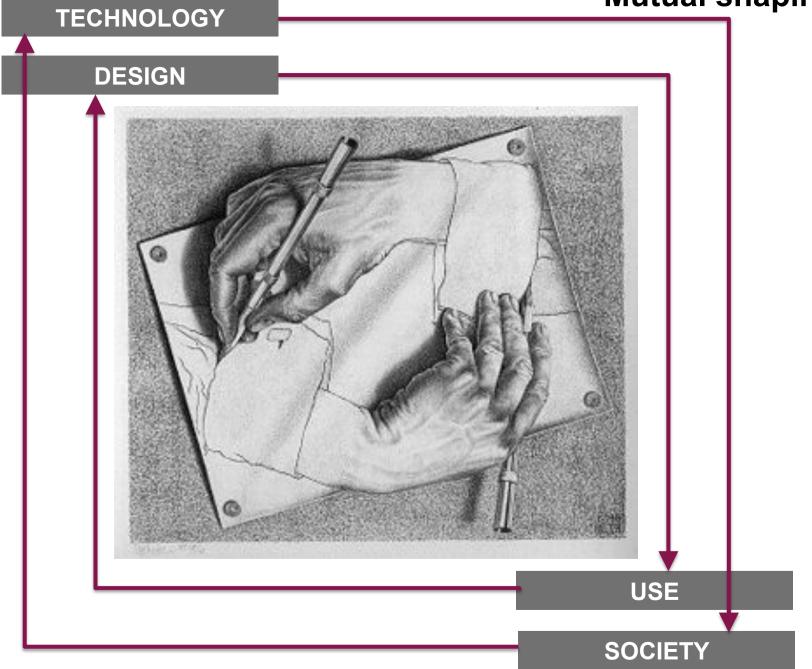


Which led to diverse arrangements in relation to legal and social environment





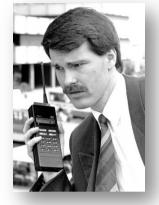
Mutual shaping





Mass media as **curator** (broadcasting)





Interpersonal media as **facilitator** (telecom)





Mass self-communication = folding of curator & facilitator (online platforms e.g. social media, sharing economy apps)



Online platforms: proliferation

Industry

- General purpose platforms
 - E.g. Facebook, Twitter, Apple iOS, Google Android
- Specific apps/platforms in different sectors in society
 - Transportation (e.g. Uber, Lyft)
 - Hospitality (e.g. AirBnB, HomeAway)
 - Education (e.g. MOOCs Coursera, edX)
 - News (e.g. The Huffington Post, Buzzfeed)
 - Health (e.g. PatientsLikeMe, 23andMe)
 - Labour (e.g. Taskrabbit, Gigwalk)
 - ...

Policy

- EU Commission communication: COM(2016) 288 'Online Platforms and the Digital Single Market: Opportunities and Challenges for Europe'
 - Based on public consultation on regulatory environment for platforms, online intermediaries, data and cloud computing and collaborative economy: 1,036 replies (+ 10,599 individual contributions) (Sep 2015 – Jan 2016)
- National consultations on platforms, e.g. UK



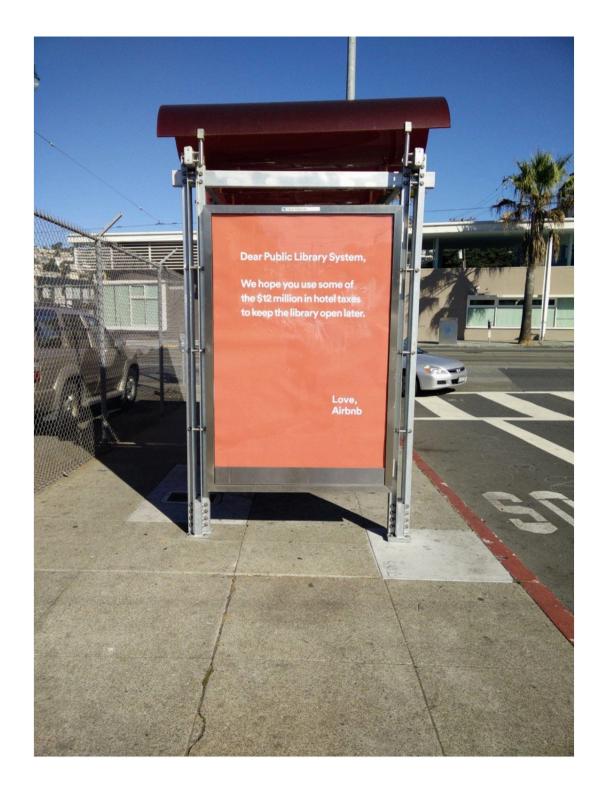


Online platforms: mutual shaping

- Politics of platforms (Gillespie)
 - Platforms position themselves carefully to users, clients, advertisers and policy makers, making strategic claims for what they do and do not do, and how their place in society should be understood
 - Use of tropes (related to public benefit) that elide possible tensions between constituencies
 - social (cohesion) | sharing | collaborative | co-creation | participation | transparency | neutrality | employment | environment | collectivity | ...
 - Platforms becoming curators of public discourse and values
 - Research on the roles they aim to play, and the terms by which they hope to be judged









"Dear Airbnb, I'm happy to hear that you paid your taxes this year. I did too! Isn't it awesome? (However) I've crunched some numbers and I have some bad news for you. (...) I doubt that your hotel tax can keep the libraries open more than a minute or two later."

Martha Kenney (Facebook post) Slate.com, 22 Oct 2015

Online platforms: underpinnig mechanisms (Poell & van Dijck)

- Datafication (Mayer-Schonberger & Cukier, 2013)
 - Platforms enable the transformation of social action into online quantified data, thus allowing for tracking and predictive analysis
 - E.g. Google books, Internet-of-Things
 - Acquisitions
 - Microsoft: € 5.5 billion Nokia vs € 23 billion LinkedIn (€53/ user) = is about data
 - Many others (Facebook, Google etc.)





Online platforms: health











Live better, together.™





- Fuzzy borders
- Double-edged logic as bait for max. data input
- Open input vs proprietary processing/ output (Strava)
 - Mixing for-profit & not-for-profit
- Part of larger ecosystem (integrating services)













Online platforms: underpinnig mechanisms (Poell & van Dijck)

- Commodification (Marxist perspective)
 - Transformation of objects, activities, and ideas into tradable commodities on online platforms
 - Political economy: use value becomes exchange value

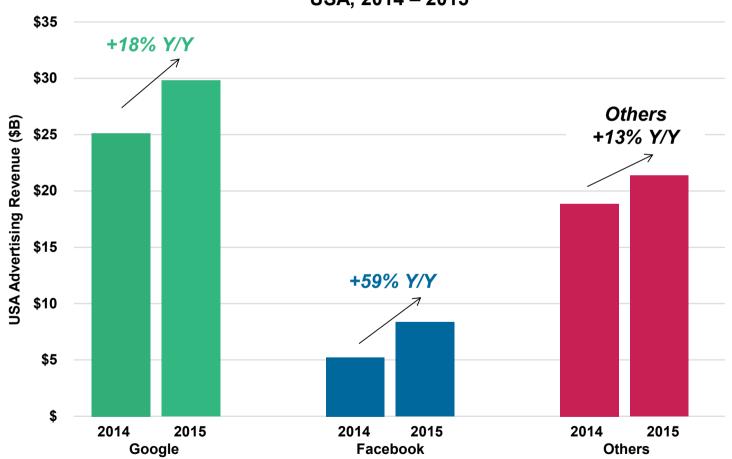




Advertising online platforms

Google + Facebook = 76% (& Rising) Share of Internet Advertising Growth, USA

Advertising Revenue and Growth Rates (%) of Google vs. Facebook vs. Other, USA, 2014 – 2015





Online platforms: underpinnig mechanisms (Poell & van Dijck)

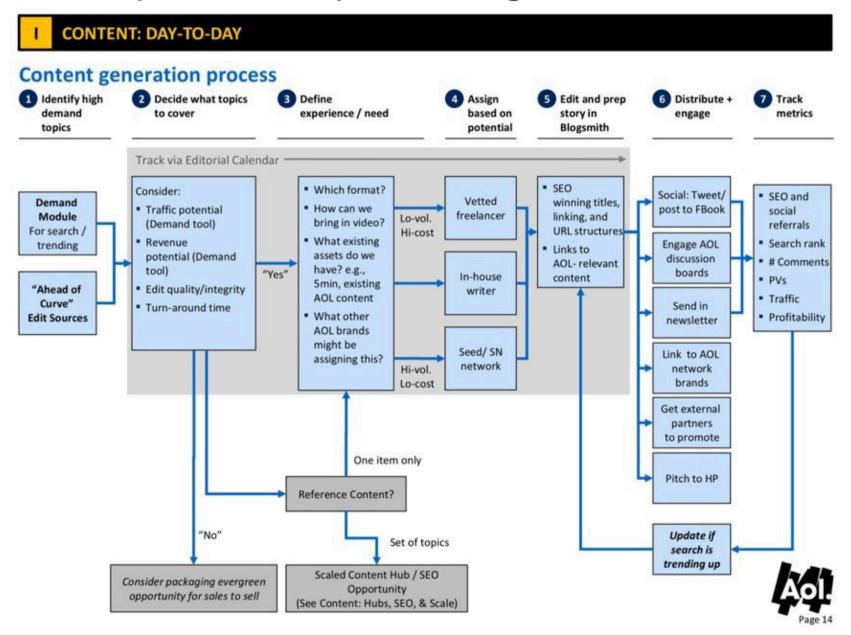
Selection

- Ability of platforms to trigger and filter users' creative and communicative contributions through algorithms, while users, through their interaction with these coded environments, may in turn influence flow of communication and information activated by these platforms
- Expert-based, human-driven selection is replaced by user-based, algorithm-driven selection
 - Cf. Filter bubble (Eli Pariser)





Online platforms: publishing



Online platforms: underpinnig mechanisms (Poell & van Dijck)

Connection

- Online platforms enable users to build their own networks around specific (personal) interests, as well as automatically pursue connections between users, information, advertisements, and services, by systematically gathering and continuously analysing user data
- From 'social media' to 'connective media' (van Dijck)
 - Human connectedness is gradually replaced by automated connectivity
 - E.g. birthday notifications in Facebook News Feed coerces interactivity and erodes value
 - The 'social' in 'social media' encompasses connectedness and connectivity
 - Commercial online platforms tend to stress the first and minimise the second meaning





Online platforms: general purpose

Sports: baseball, basketball, cricket, extreme sports, fantasy sports, football (American), golf, ice hockey, motor sports/NASCAR, soccer/European football, tennis

Mobile users (Android): HTC, LG, Motorola, Samsung, Sony, other

Events: has birthday in 1 week, new job, new serious relationship, recently moved

Ethnic: Hispanic (US)

Mobile users: feature phone users, new smartphone owners, smartphone/tablet users

Retail/shopping: beauty products, consumer electronics, fashion, luxury goods

Broad categories

Mobile users (iOS): iPad 1, iPad 2, iPad 3, iPhone 4, iPhone 4S, iPhone 5, iPod Touch

Family status: away from family, away from home town, baby boomers, engaged (1 year), engaged (6 months), expecting parents, long distance relationship, newlywed (1 year), newlywed (6 months), parents (all), parents (0-3 years or 4-12, 13-15, 16-19)

Activities: console gamers, cooking, dancing, DIY/crafts, event planning, food & dining, gaming (social/online), gardening, literature/reading, outdoor fitness activities, photo uploading, photography, travelers

Business/technology: computer programming, owners of old computers, personal finance, real estate, science/technology, small business owners, technology early adopters

Interests: autos, beer/wine/spirits, charity/ causes, education/teaching, entertainment (TV), environment, health & wellbeing, home & garden, news, pets (cats, dogs), pop culture

Mobile users (Other OS): RIM/Blackberry, Windows

Heyman, Rob & Pierson, Jo (2013) Blending mass selfcommunication with advertising in Facebook and LinkedIn: challenges for social media and user empowerment, in International Journal of Media and Cultural Politics, 9 (3), 229-245.

User (dis)empowerment

Internet age

• 'In the critical tradition [as opposed to the administrative-instrumental tradition] attention is drawn to the potential of innovations in technologies to be associated with people's empowerment and their disempowerment, depending on the extent to which they are able to master or control the innovation process' (Mansell, 2012: 37)

Empowerment

- Concept charged with meaning (and often misused), with long tradition in social welfare and civil society literature, but also in science, business and policy fields
- User empowerment = The process of strengthening individuals, by which they get a grip on their situation and environment, through the acquisition of more control, sharpening their critical awareness and the stimulation of participation (Zimmerman and Rappaport, 1988)





User (dis)empowerment

- Disempowerment ~ vulnerability?
 - External side: exposure
 - Technological characteristics of online platforms require/prescribe curation of (social) interactions via four mechanisms, supported by discourse of public values
 - Internal side: coping
 - 'User empowerment is dependent on knowledge of how mechanisms operate and from what premise, as well as on the skills to change them.' (José van Dijck, 2013: 171)
- User dis/empowerment related to values:
 - Privacy/ surveillance/ data protection
 - Safety/security
 - Accuracy/validity
 - Publicness/public values: inclusion & literacy; freedom of speech; equality (non-discrimination); (cultural) diversity; transparency; fairness; labour rights; pluralism; accountability;...







October 16, 2015 7 a.m.



f SHARE







When companies like Ancestry.com and 23andMe first invited people to send in their DNA for genealogy tracing and medical diagnostic tests, privacy advocates warned about the creation of giant genetic databases that might one day be used against participants by law enforcement. DNA, after all, can be a key to solving crimes. It "has serious information about you and your family," genetic privacy advocate Jeremy Gruber told me back in 2010 when such services were just getting popular.



THE KIDS ARE NOT ALRIGHT

Video: 70 percent of children behind bars in America have mental health issues

"(...) it means that people who submitted genetic samples for reasons of health, curiosity, or to advance science could now end up in a genetic line-up of criminal suspects. (...) the fact that your signing up for 23andMe or Ancestry.com means that you and all of your current and future family members could become genetic criminal suspects is not something most users probably have in mind when trying to find out where their ancestors came from."

Kashmir Hill, Fusion.net, 16 Oct 2015





Technology: digital media



https://www.youtube.com/watch?v=hGagbyOu79I





Dis/empowerment: privacy

- Project findings
 - Exposure
 - Belgian DPA Commission for Protection of Privacy & Facebook
 Bilateral contract CPP; Belgium; 2015
 - Coping
 - USEMP: User empowerment for Enhanced Online Management
 - FP7-STREP; EU; 2013-2016
 - EMSOC: User Empowerment in a Social Media Culture IWT-SBO; Flanders/Belgium; 2010-2014 EMSOC





USEMP

Privacy: exposure | CPP

You're in charge.

We're here to help you get the experience you want. Learn about ways to protect your privacy on Facebook.

- > What Others See About You
- > How Others Interact With You
- > What You See
- > How to Keep Your Account Secure
- > Read our Data Policy



- Dec 2014:
 Facebook
 announces
 revisions (Jan
 30th 2015)
 - Statement of Rights and Responsibilities (SRR)
 - Data Use Policy (DUP)
- Jan 2015: CPP (Belgian DPA) requests study
- Feb 2015: first public draft
- Mar 2015: technical update
- Aug 2015: final version





Outcome

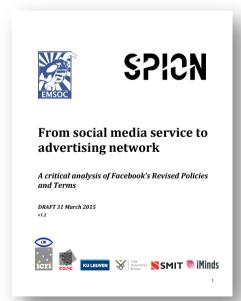
- Report: 'From social media service to advertising network: a critical analysis of Facebook's revised Policies and Terms'
 - Social, legal and technical research on Facebook's new Data Use Policy (2015)
 - iMinds: Vrije Universiteit Brussel (SMIT) + KULeuven (CITIP & COSIC)
 - Version 1.3 (August 25, 2015): http://bit.ly/1HD3mwr
- Structure
 - Horizontal and vertical expansion of data ecosystem
 - How FB 'combines' and 'shares' data about its users.
- Unfair contract terms
 - Excessive linking; 'free' service; warranty; liability; indemnity; unilateral change; forum clause; applicable law; termination
 - Further use of user-generated content
 - IP license; 'sponsored stories' and 'social ads'
 - Privacy settings and terms of use
 - Consent; location data; fingerprinting; data subject rights
 - Tracking through social plug-ins







disempowerment



German court Fines Facebook \$109,000 Over Intellectual Property Clause



Information received

- URLs of visited webpages
- Other information (IP, browser, OS, ...)
- List of uniquely identifying cookies sent to FB

Cookie	Contains ¹	Logged-in	Logged-out	Deactivated ²	Non-user
datr	Browser ID	Sent	Sent	Sent	Sent ³
c_user	Facebook ID	Sent	Not sent	Not sent	N/A ⁵
fr	Encrypted Facebook ID and Browser ID	Sent	Sent	Sent	N/A

Facebook's tracking through social plug-ins: technical report prepared for the Belgian Privacy Commission
Günes Acar, etal. (25 March 2015)





'Opt-out'

If you don't want Facebook or other participating companies to collect or use information based on your activity on websites, devices, or apps off Facebook for the purpose of showing you ads, you can opt out through the Digital Advertising Alliance in the USA, Digital Advertising Alliance of Canada in Canada or the European Digital Advertising Alliance in Europe. You can also opt out using your mobile device settings.





persists.

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Your ad choices

The companies listed below are some of the providers who work with website providers to collect and use information to provide online behavioural advertising.

Please use the buttons below to control your online behavioural advertising preferences. You can turn off or turn on all companies or alternatively set your preferences for individual ones. By clicking on the expand button you can find out more about the company itself as well as its behavioural advertising status on the web browser that you are using. If you are having any problems please visit our help page.

Please note: this does not turn off all internet advertising only advertise ments that are

Collecting your status from 102 companies. This may take a while...

Turn off all companies

Turn on all companies

Some Companies Failed: The tool was unable to connect to some companies. This may be because there are technical problems with the service or your

have automatically logged this failure and will contact the company if the problem

internet connection is very busy. We

Retry all failed

Project CPP

CPP actions

- Recommendation 04/2015
 - Facebook
 - Website operators
 - Internet users
- Litigation
 - Trib. Brussels 9 Nov 2015 (injunction)
 - Ordinary procedure (users & non-users)
- Common Statement (by EU DPAs)
- Blocking by Facebook
- Next steps: appeal by FB
 - Debates 1 June 2016
 - Judgement 29 June 2016: Facebook wins
- Ordinary procedure
 - Court case still ongoing
 - Judgement: 2017

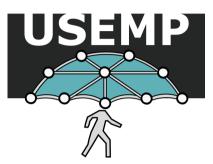






Privacy: coping | USEMP





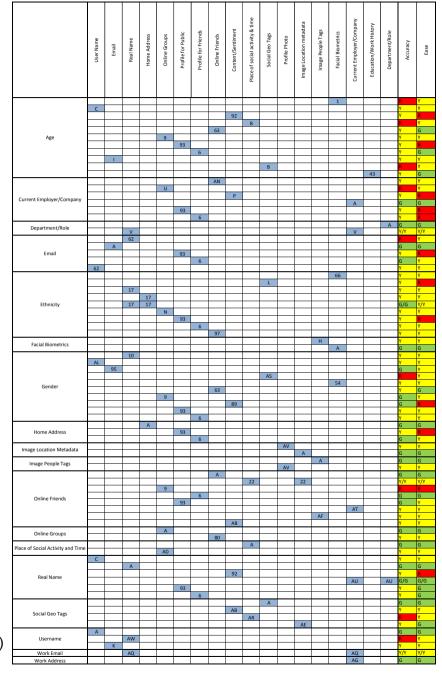
- User Empowerment for Enhanced Online Management
 - European project
 - FP7-STREP (CAPS) 2013-2016
 - http://www.usemp-project.eu
- Goal = reducing apparent power unbalance between social network's data processing and means of control, and those made available to users

FIGURE 4: THE PERSONAL DATA ECOSYSTEM: A COMPLEX WEB FROM DATA CREATION TO DATA CONSUMPTION

Regulatory environment												
Communication standards												
Personal data	Personal da	ita creation	Storage,	Analysis,	Concumption							
reisonal data	Devices	Software	aggregation	productisation	Consumption							
Volunteered	Mobile phones/ smart phones	Apps, OS for PCs	Web retailers	Market research	End users							
Declared interests		жирь, ОЗ IOI FOS	Internet tracking	data exchanges								
Preferences	Desktop PCs, laptops	Apps, OS for	companies	Ad exchanges	Government agencies and public organisations							
	Communication	mobile phones	Internet search engines									
Observed	networks	Apps for medical	Electronic medical	Medical records exchanges								
Browser history	Electronic notepads, readers	devices	records providers	Business intelligence		Small						
Location	Smart appliances	Apps for consumer	Identity providers	systems		enterprises						
	Smart appliances	devices/ appliances	Mobile operators, Internet service providers	Credit bureaus	ses							
Inferred	Sensors	Network	Financial institutions	Orodii Darodao	Businesses	Medium enterprises						
Credit score	Smart grids	management software	1 1000	Public administration	Bu							
Future consumption			Utility companies			Large						
						enterprises						

(World Economic Forum, 2011)

Project USEMP



(Creese, Goldsmith, Nurse & Phillips, 2012)



Figure 1. The Data-Reachability Matrix



	User Name	Email	Real Name	Home Address	Online Groups	Profile for Public	Profile for Friends	Online Friends	Content/Sentiment	Place of social activity & time	Social Geo Tags	Profile Photo	Image Location metadata	Image People Tags	Facial Biometrics	Current Employer/Company	Education/Work History	Department/Role	Accuracy	Ease
	С														1				R Y	Y
									92										Υ	R
										В									R	Υ
_								63												G
Age					9	02													Y	Y R
						93	6												•	G
		I					U												Y	Y
											В								R	Υ
																	43		Υ	G
								AN											Υ	Υ
					U														R	Υ
Current Employer/Company									Р										Υ	R
, , , , , , , , , , , , , , , , , , , ,																Α				G
						93													Υ	R
							6											۸	Y	R
Department/Role			V													V		Α		G Y/Y
			62													•			R	Υ
		Α																	G	G
Email						93													Υ	R
							6												G	Υ
	62																		Υ	Υ
															66				Υ	Υ
											L								Υ	R
			17	4-															Υ	Υ
Ethpioitu			17	17															Y G/G	Y Y/Y
Ethnicity			17	17	N														G/G Y	Υ/Υ
					IN	93														R
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Privacy: coping

- To give users more insights in data inferences?
 - How can we develop systems that prescribes social and legal requirements of more profile transparency (data protection by design)?

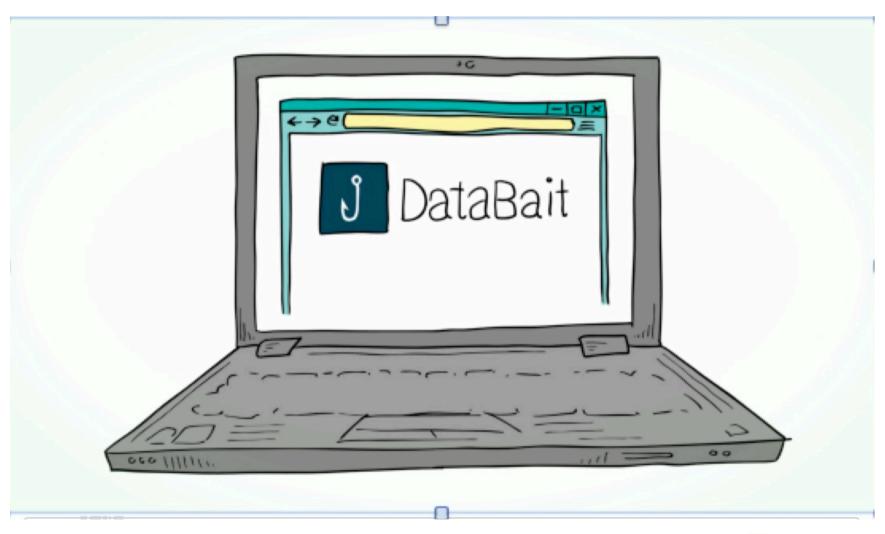


- Raising awareness about and act on disclosure of (personal) data => disclosure scores in different privacy dimensions
- User research: Dec 2015 Sep 2016
 - Two living lab panels
 - 100 households in Belgium (iMinds)
 - 100 households in Sweden (LTU)





Databait





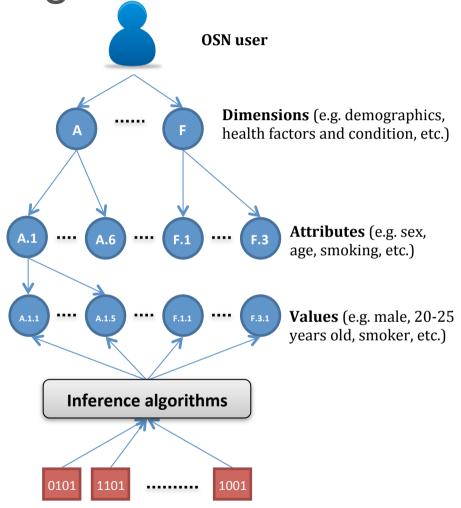


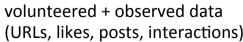
Vrije

Universiteit Brussel

Databait privacy scoring framework

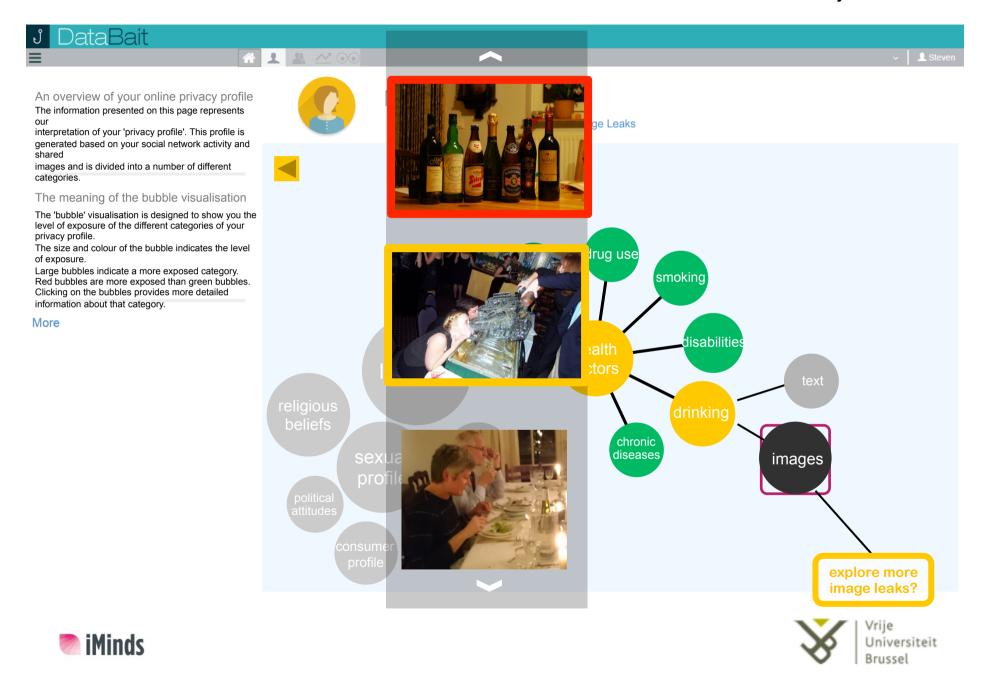
#	Name	Description	Threats-Sensitivity	Value (for advertisers)
Α	Demographics	Personal data, such as Gender, Age, Nationality, Ethnic background, etc. Discrimination in a variety of settings. The most frequently used type of information.		High
В	Psychological Traits	Defined by psychologists (extraversion, openness, etc.)	Discrimination, e.g. in personnel selection	Low
С	Sexual Profile	Relationship status, preferences, habits	Discrimination, e.g. in workplace, education, housing	High
D	Political Attitudes	Supported politicians, parties and stance	Discrimination, e.g. in workplace or personnel selection	High
Е	Religious Beliefs	Religion (if any) and beliefs	Discrimination, e.g. in the sale or rental of housing, job selection, workplace.	Moderate
F	Health Factors & Condition	Habits (e.g. smoking, drinking), medical conditions, disabilities, health factors (exercise)	Discrimination, e.g. health insurance denial or discriminatory pricing.	High
G	Location	Characteristic locations of the individual and history of previous locations	dual and history insurance, stalking	
Н	Consumer Profile	Preferred products and brands	Ad targeting and discrimination in online price-setting	High







Project USEMP



Privacy vulnerability: coping | EMSOC

- 'User Empowerment in a Social Media Culture' (EMSOC) focus group interviews
 - Privacy management, attitudes and awareness of Facebook users
 - Secondary school (age 16-18) in Flanders/Belgium and Facebook account used > once a week
 - 6 FG, total 77 respondents (5 schools); 4 FG different ex ante situations





Privacy vulnerability: coping

- FB omnipresent and efficient for entertainment,
 communication, planning and schoolwork in everyday life
 reluctance to leave + possible deletion work
 - "And I am like 'wow, I have so much ridiculous stuff' so I started removing it all. I thought 'oh no, you really have to open each page and than click that you no longer like something.' I really spend a whole weekend, a Saturday, three hours on it to dislike stuff. This must be the most ridiculous thing ever." (Stan, 19, smartphone, F5.3)
- Aware of privacy risks: FB (and the internet) perceived as privacy invasive by default (fatalistic)
 - "I feel quite suspicious about internet in general. I am perfectly aware that people, if they want to, can find information about me. That is why I try to take care, not that it will matter much but at least you get that feeling a little." (Bart, 18, PC, F5.2)
- tradeoff fallacy (Turow, Hennessy & Draper, 2015)





THE TRADEOFF FALLACY **How Marketers Are Misrepresenting American Consumers And Opening Them Up to Exploitation** "Our findings... support a new explanation: a majority of Americans are resigned to giving up their data—and that is why many appear to be engaged in tradeoffs." (See page 3) **Joseph Turow** Annenberg School for Communication University of Pennsylvania Michael Hennessy Annenberg Public Policy Center University of Pennsylvania **Nora Draper** Department of Communication University of New Hampshire

June 2015

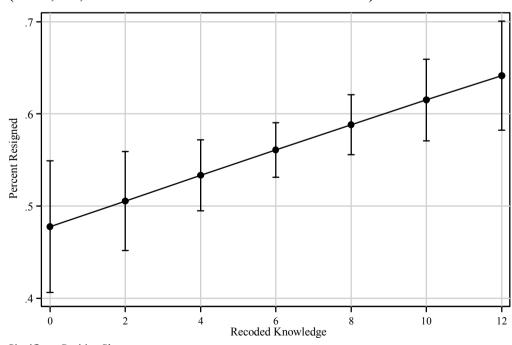
A Report from the Annenberg School for Communication

Table 4: Americans' Responses to the Resignation Attitude Statements (N=1,506)

	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Neither*	DK (%)
I want to have control over what marketers can learn about me online. (84% agree)	61	23	8	7	1	1
I've come to accept that I have little control over what marketers can learn about me online. (65% agree)	31	34	16	18	1	1

^{*&}quot;Neither" was a volunteered answer.

Figure 2: Resignation and Knowledge (N = 1,506; brackets define 95% confidence intervals)



Significant Positive Slope









Privacy vulnerability: coping

- Advertising necessary nuisance (better than paid services)
 - Deemed more irritating if it obstructed their experience (e.g. NewsFeed), with little critical consideration towards underlying targeting mechanisms
 - Sponsored stories: little reflection about stories on their friends' feeds, more concerned of possible annoyance of their friends than misuse of their likes
- Advertisers (and 'trackers') seen as strangers seemed to be able to access their information which felt creepy
 - Only 36% able to discern advertising from other elements
 - Unable to think about usage of this information, even after receiving course about Facebook advertising
 - Difficulty of locating particular settings and most respondents would never visit institutional privacy settings during a routine Facebook visit
 - Need for easier to find and easier to use tools to protect privacy and to increase transparency





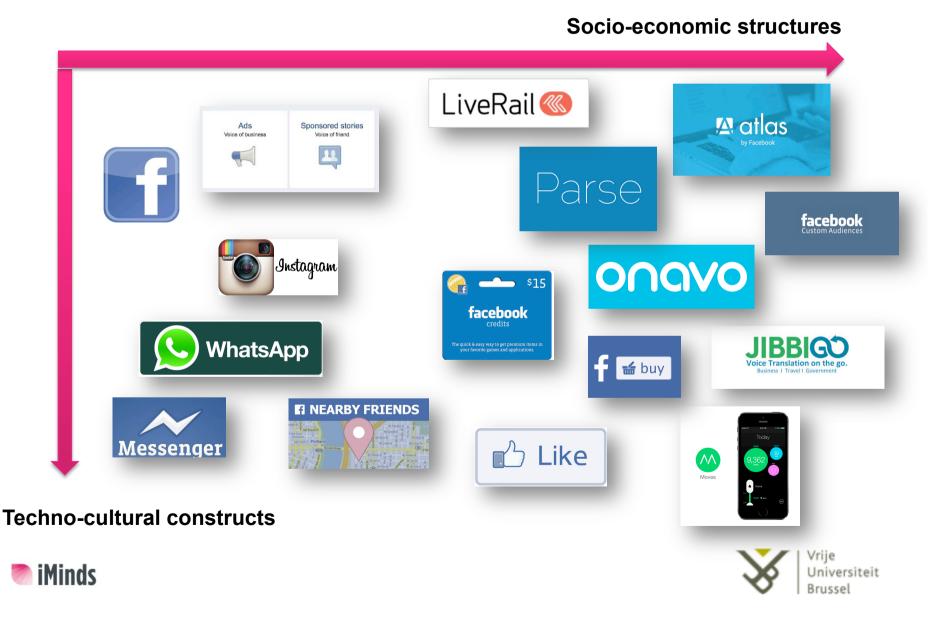
Disempowerment by design

- Online platforms ~ disempowerment and privacy
- Disempowerment: linked to two-dimensional process
 - Two interacting (mutually reinforcing) axes
 - Vertical penetration = increasing reliance on online platforms and data in everyday social life (~ domestication)
 - Horizontal expansion = extends when data of vertical penetration are harnessed and re-used for secondary purposes (eg. increase revenue, surveillance)
 - => Disempowerment ~ organisation's vertical penetration sufficiently powerful to leverage user acceptance for its horizontal expansion
 - E.g. Facebook's new DUP: integration of data from 'family' of apps, operation across all access devices, (lack of) settings for sponsored stories, and deep integration of location information
 - E.g. rise of messaging platforms (FB Whatsapp, FB Instagram, FB Messenger, Snapchat, WeChat, LINE, KaKaoTalk,...)





Data seepage: Facebook



Outlook

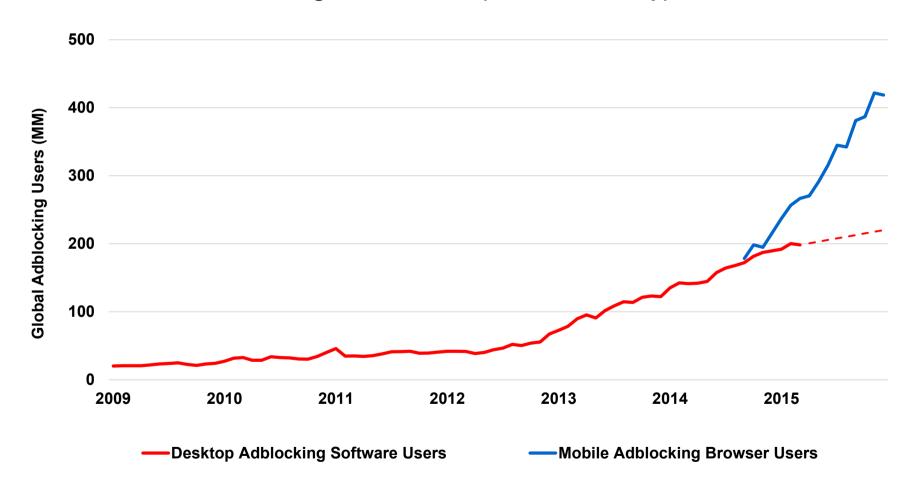
- Mutual articulation ~ interdisciplinary (MCS) perspective
 - Technology artefact
 - Privacy Enhancing Technologies / Privacy engineering / Locating in value network
 - Society social arrangements
 - Governance (e.g. internet governance) / regulation & enforcement (e.g. GDPR)
 - People practices
 - Collective action: civil society; activists
 - Users: awareness / attitudes / behaviour / data literacy
- Aim
 - Safeguarding the balance between strengthening the empowerment - or mitigating disempowerment - of users while at the same time unburdening the users with respect to their responsibility (responsibilisation) (~ accountability)





Adblocking @ ~220MM Desktop Users (+16% Y/Y)...~420MM+ Mobile (+94%)... Majority in China / India / Indonesia = Call-to-Arms to Create Better Ads, per PageFair

Global Adblocking Users on Web (Mobile + Desktop), 4/09 – 3/16





Books: reading list

- van Dijck, José (2013) The culture of connectivity: a critical history of social media. Oxford: Oxford University Press, 228.
- Mansell, Robin (2012) Imagining the Internet: communication, innovation, and governance.
 Oxford: Oxford University Press, 289.
- Feenberg, Andrew (1999) Questioning technology. London: Routledge, 243.
- Gillespie, Tarleton, Boczkowski, Pablo J. & Foot, Kirsten A. (Eds.) (2014) Media technologies: essays on communication, materiality, and society. Cambridge: MIT Press, 325.
- Gillespie, Tarleton (2010) 'The politics of platforms', in New Media & Society, 12(3), 347–364.
- Berker, Thomas, Hartmann, Maren, Punie, Yves & Ward, Katie (2005) Domestication of media and technology. Berkshire: Open University Press, 255.
- Oudshoorn, Nelly & Pinch, T. J. (2003) How users matter: the co-construction of users and technologies. Cambridge, Mass.; London: MIT Press, vii, 340.
- Pasquale, Frank (2015) The Black Box Society: The Secret Algorithms That Control Money and Information, Cambridge, Harvard University Press, 320.
- Hildebrandt, Mireille (2015) Smart Technologies and the End(s) of Law: Novel Entanglements of Law and Technology, Cheltenham: Edward Elgar, 296.
- Verbeek, Peter-Paul (2005) What Things Do: Philosophical Reflections on Technology, Agency, and Design, University Park, Pennsylvania: The Pennsylvania State University Press, 264.
- Couldry, Nick (2012) Media, society, world: social theory and digital media practice.
 Cambridge: Polity Press, 242.
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