

La gouvernance problématique d'Internet

A large, weathered, blue and white 3D Facebook logo mounted on a concrete wall. The letters are thick and show signs of rust and wear, particularly on the 'o's. The background is a clear blue sky. Below the logo, there are windows of a building.



Journée 2

La gouvernance problématique d'Internet

4. De l'intelligence collective...

...à l'intelligence artificielle

Problématique

En l'absence d'auto-régulation, la régulation est de plus en plus déléguée à des algorithmes, sans pour autant être efficiente et explicite.

Enjeu 1

Comprendre qu'une minorité d'individus produit la très grande majorité de l'information.

Enjeu 2

Comprendre qu'en l'absence d'intelligence collective, la gouvernance est de plus en plus déléguée à des algorithmes opaques, peu explicites et souvent peu efficaces.

Tension problématique

Comment déléguer une part croissante des processus d'organisation de l'information à des machines tout en n'explicitant pas les moyens de cette organisation.

Enjeux sociaux et politiques d'Internet

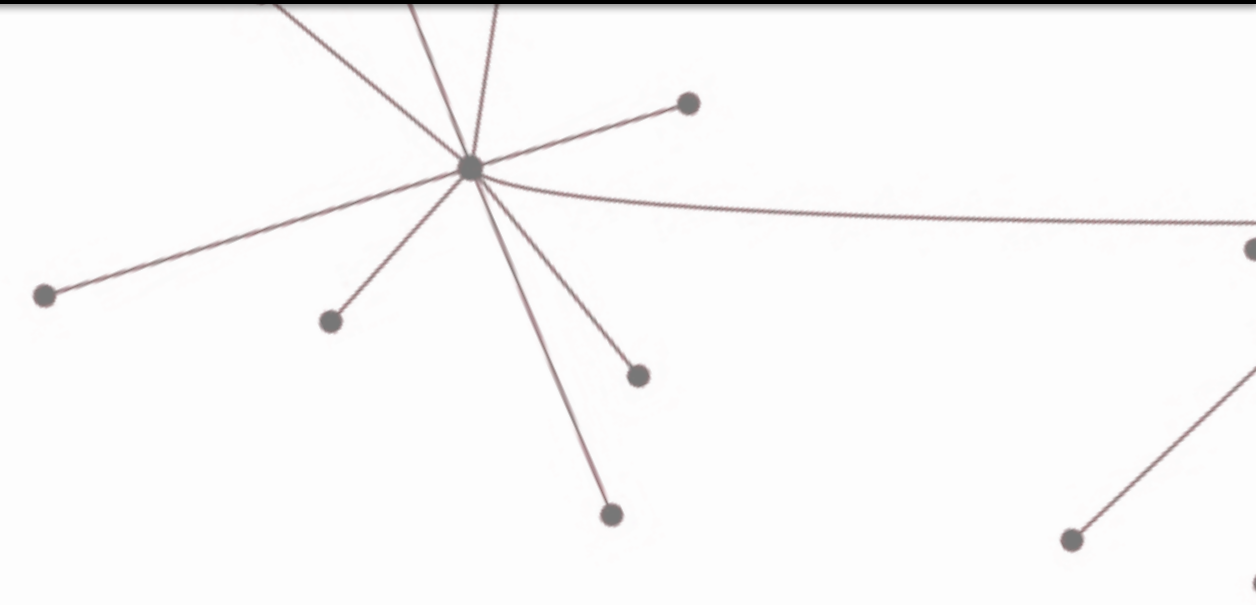
Crowds

1. *Outsourcing*
2. *Crowdsourcing*
3. *Crowdfunding*
4. *Sharing economy*
5. Désintermédiation
6. (ré)intermédiation



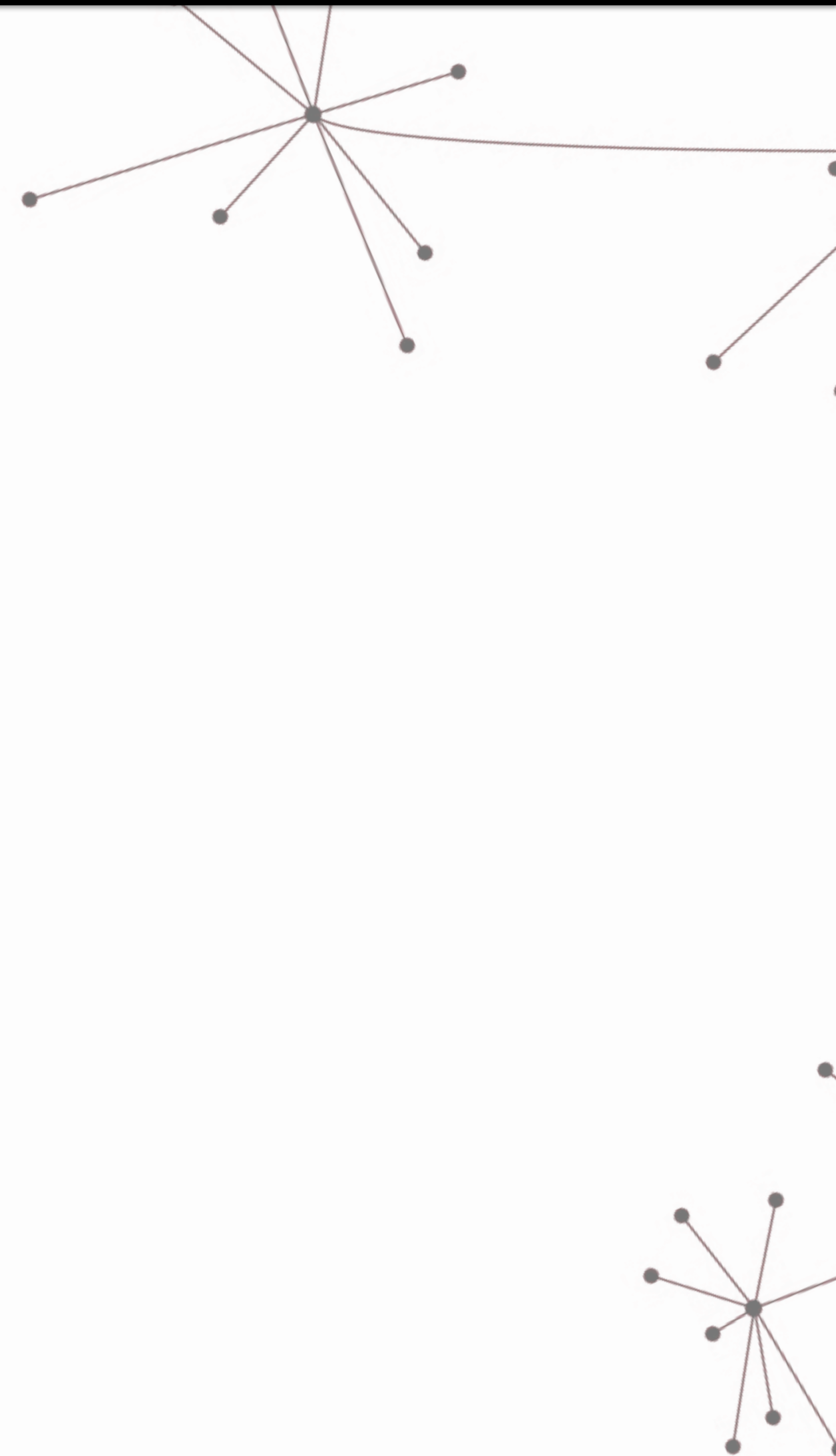
Intelligence ? Collective ?

1. Intelligence + Collective → Intelligence collective
 1. participation **représentative** de la population de référence.
 2. expressions individuelles et **indépendantes**.
 3. agrégation des expressions individuelles **transparente**.
2. Capacité + Distribué → Capacité distribuée

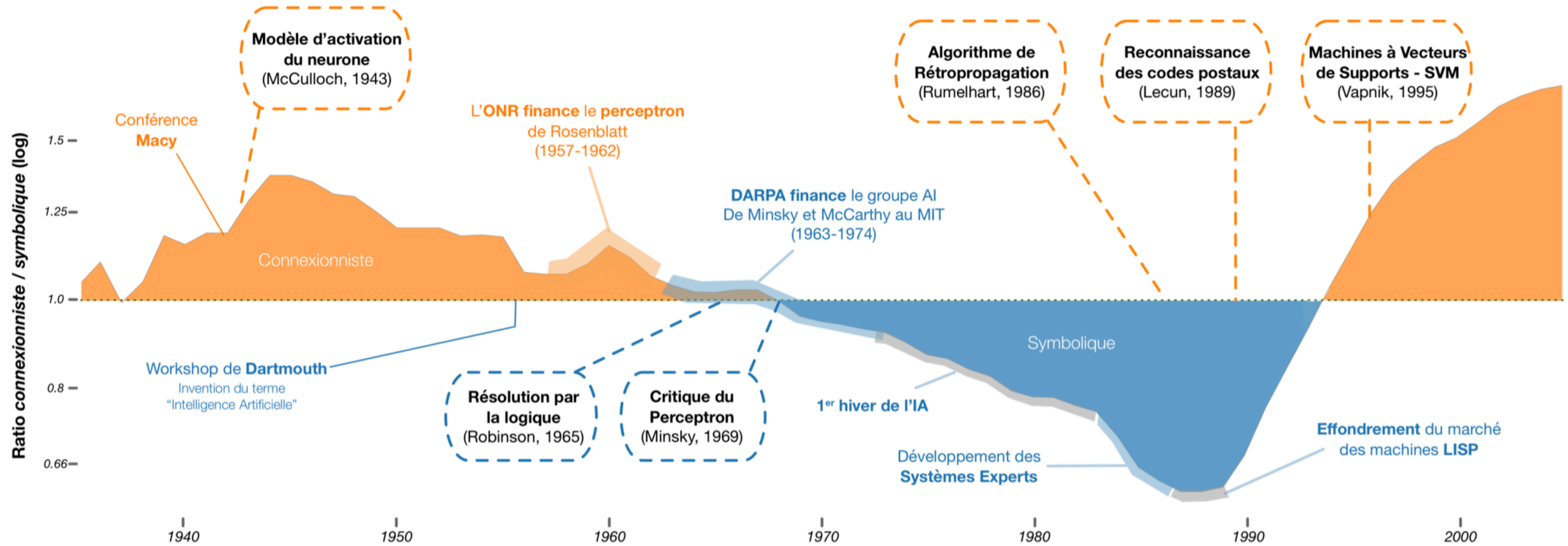


Intelligence artificielle ?

1. Big Data
2. Machine learning
3. Deep learning
4. Approche symbolique (& systèmes experts)
5. Approche connexionniste (& deep learning)



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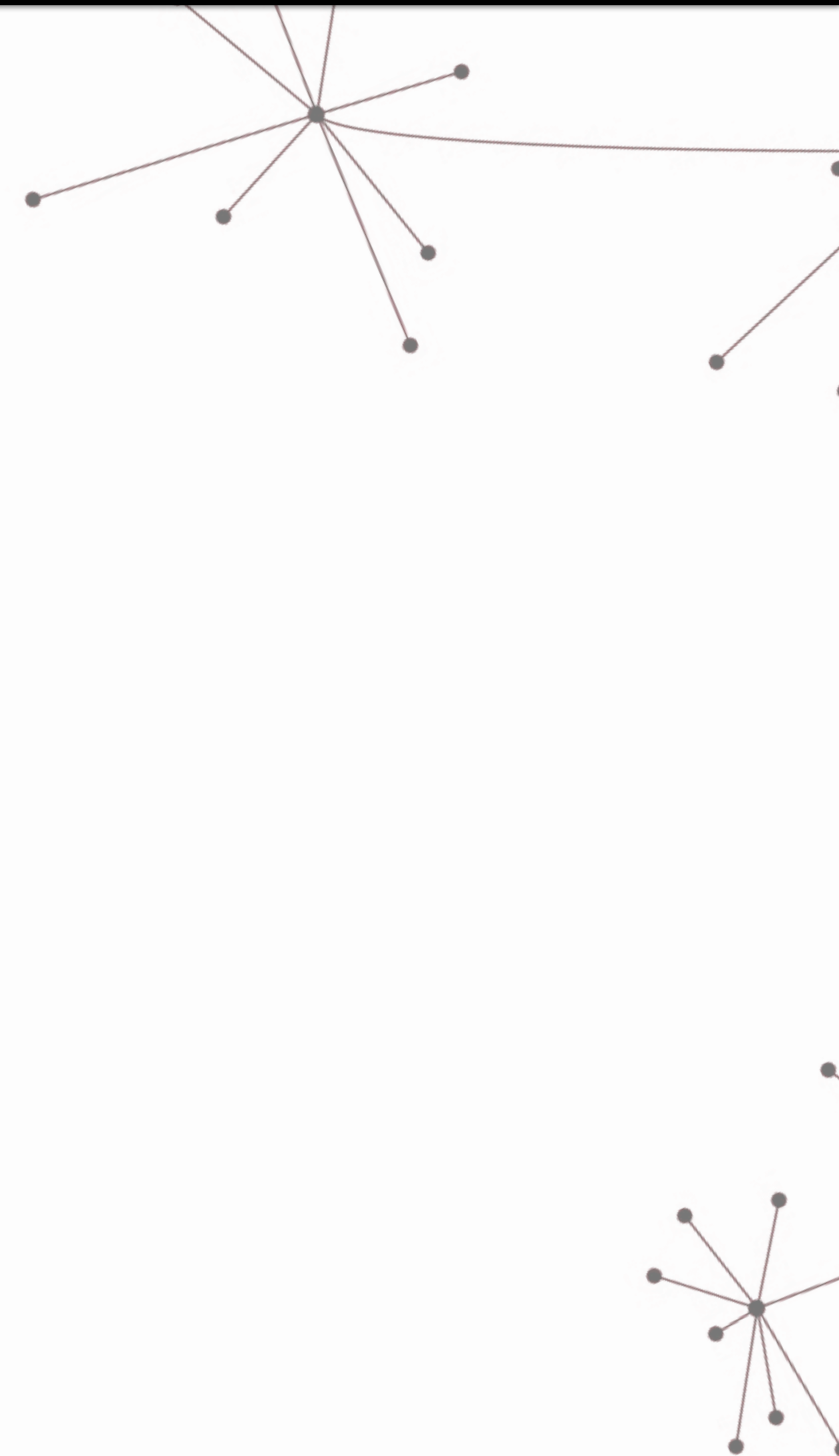


“Critical questions for Big Data”

danah boyd & Kate Crawford, Information, Communication & Society, June 2012, pp. 662–679.

« Technology is **neither good nor bad**; nor is it neutral »

1. Big Data changes the **definition of knowledge**
2. Claims to **objectivity** and **accuracy** are **misleading**
3. **Bigger** data are not always **better** data
4. Taken **out of context**, Big Data loses its **meaning**
5. Just because it is **accessible** does not make it **ethical**
6. Limited access to Big Data creates **new digital divides**



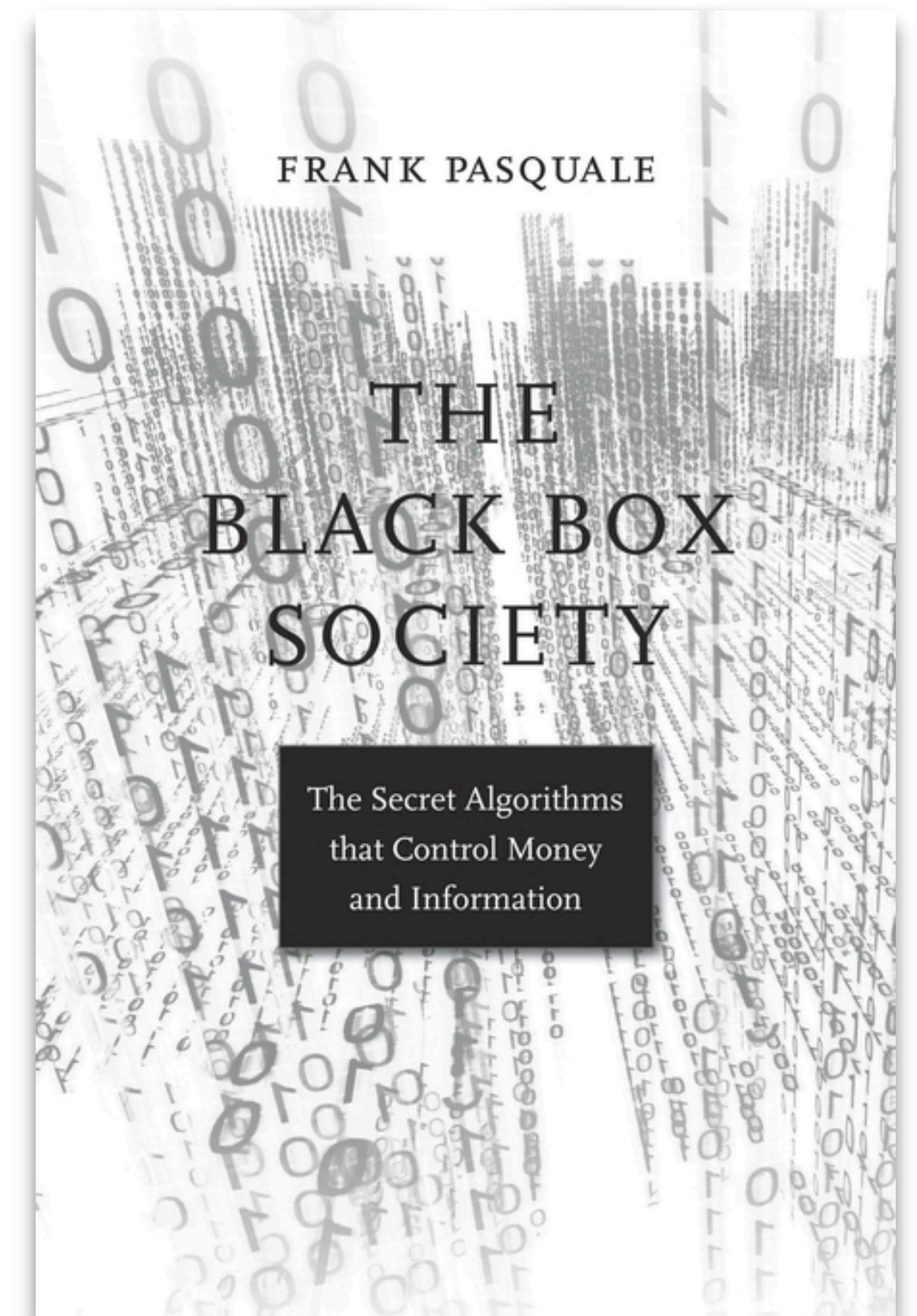
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The Black Box Society

Frank Pasquale, 2015

Dénonce le [pouvoir de voir sans être vu](#), les enjeux de l'opacité et s'interroge sur les moyens d'y remédier.

- Trois domaines sont particulièrement concernés par des techniques opaques :
 - [la réputation](#)
 - [les moteurs de recherche](#)
 - [la finance](#)
- Les entreprises veulent :
 - en [savoir de plus en plus](#) sur nous.
 - en [dire de moins en moins](#) sur elles.
- Cette opacité nous expose car :
 - elle rend notre [vie privée vulnérable](#).
 - elle décide de notre [avenir individuel et collectif](#) sans contrôle possible.
- Il faut donc :
 - avoir [accès](#) à leur fonctionnement (le secret commercial n'est pas tenable)
 - être en mesure de rendre ces boîtes noires [intelligibles](#) (droit et technique)
- « Surveiller, tout en se cachant, est la forme la plus haute du pouvoir »



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De la liberté d'expression au ciblage de l'individu

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◆ WSJ NEWS EXCLUSIVE | [TECH](#)

Google’s ‘Project Nightingale’ Gathers Personal Health Data on Millions of Americans

Search giant is amassing health records from Ascension facilities in 21 states; patients not yet informed



Google launched the effort last year with Ascension, the country’s second-largest health system.

PHOTO: DAVID PAUL MORRIS/BLOOMBERG NEWS

By [Rob Copeland](#)

Updated Nov. 11, 2019 4:27 pm ET



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The Atlantic

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TECHNOLOGY

Google's Totally Creepy, Totally Legal Health-Data Harvesting

Google is an emerging health-care juggernaut, and privacy laws weren't written to keep up.

SIDNEY FUSSELL NOVEMBER 14, 2019



ALISTAIR GRANT / AP

The summer after college, I moved back home to take care of my widower grandfather. Part of my job was to manage his medications; at 80, he was becoming a fall risk and often complained that his prescriptions made him light-headed. But getting someone on the phone was exhausting, and privacy law prevented pharmaceutical call-line

MORE STORIES

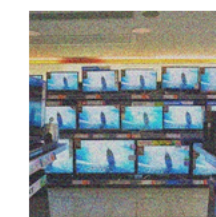
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SIDNEY FUSSELL



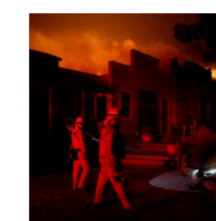
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SIDNEY FUSSELL

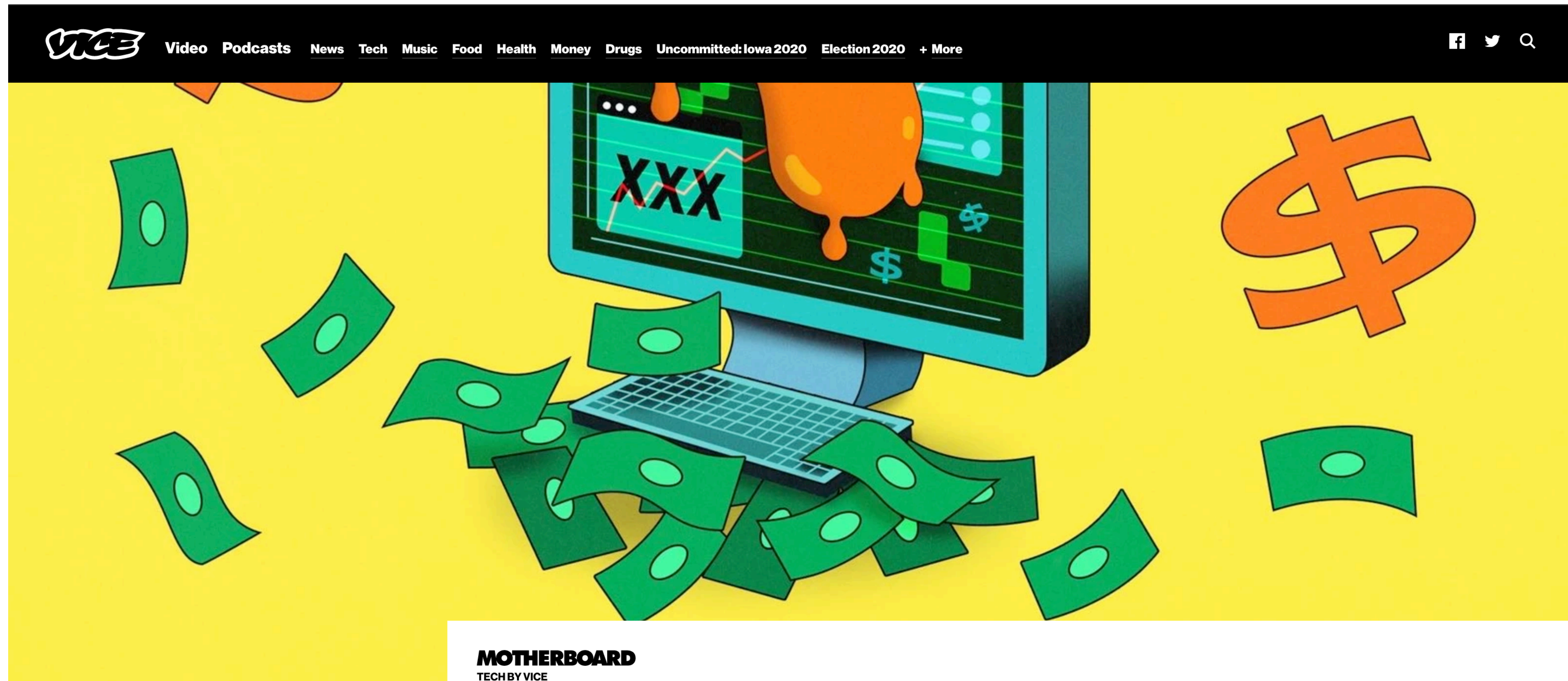


The Toxic Bubble of Technical Debt Threatening America

ALEXIS C. MADRIGAL



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Leaked Documents Expose the Secretive Market for Your Web Browsing Data

An Avast antivirus subsidiary sells 'Every search. Every click. Every buy. On every site.' Its clients have included Home Depot, Google, Microsoft, Pepsi, and McKinsey.

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Journal of Personality and Social Psychology
2018, Vol. 114, No. 2, 246–257

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0022-3514/18/\$12.00 http://dx.doi.org/10.1037/pspa0000098

INNOVATIONS IN SOCIAL PSYCHOLOGY

Deep Neural Networks Are More Accurate Than Humans at Detecting Sexual Orientation From Facial Images

Yilun Wang and Michal Kosinski
Stanford University

We show that faces contain much more information about sexual orientation than can be perceived or interpreted by the human brain. We used deep neural networks to extract features from 35,326 facial images. These features were entered into a logistic regression aimed at classifying sexual orientation. Given a single facial image, a classifier could correctly distinguish between gay and heterosexual men in 81% of cases, and in 71% of cases for women. Human judges achieved much lower accuracy: 61% for men and 54% for women. The accuracy of the algorithm increased to 91% and 83%, respectively, given five facial images per person. Facial features employed by the classifier included both fixed (e.g., nose shape) and transient facial features (e.g., grooming style). Consistent with the prenatal hormone theory of sexual orientation, gay men and women tended to have gender-atypical facial morphology, expression, and grooming styles. Prediction models aimed at gender alone allowed for detecting gay males with 57% accuracy and gay females with 58% accuracy. Those findings advance our understanding of the origins of sexual orientation and the limits of human perception. Additionally, given that companies and governments are increasingly using computer vision algorithms to detect people's intimate traits, our findings expose a threat to the privacy and safety of gay men and women.

Keywords: sexual orientation, facial morphology, prenatal hormone theory, computational social science, privacy

Supplemental materials: <http://dx.doi.org/10.1037/pspa0000098.supp>

The science of judging one's character from their facial characteristics, or physiognomy, dates back to ancient China and Greece (Jenkinson, 1997). Aristotle and Pythagoras were among its disciples, and the latter is said to have selected his students based on their facial features (Riedweg, 2005). Such beliefs have persisted and grown in popularity over the centuries. Robert Fitz-Roy, the captain of the Beagle, believed that Darwin's nose revealed a lack of energy and determination, and was close to barring

him from the historic voyage (Glaser, 2002). Cesare Lombroso, the founder of criminal anthropology, believed that criminals could be identified by their facial features. He claimed, for example, that arsonists have a "softness of skin, an almost childlike appearance, and an abundance of thick straight hair that is almost feminine" (Lombroso, 1911, p. 51). By the 18th century, physiognomy "was not merely a popular fad but also the subject of intense academic debate about the promises it held for future progress" (Porter, 2003, p. 497).

Physiognomy is now universally, and rightly, rejected as a mix of superstition and racism disguised as science (Jenkinson, 1997). Due to its legacy, studying or even discussing the links between facial features and character became taboo, leading to a widespread presumption that no such links exist. However, there are many demonstrated mechanisms that imply the opposite. Such mechanisms can be arranged into three groups. First, there is much evidence that character can influence one's facial appearance (e.g., Löhmus, Sundström, & Björklund, 2009; Zebrowitz & Collins, 1997). For example, women that scored high on extroversion early in life tend to become more attractive with age (Zebrowitz, Collins, & Dutta, 1998). Second, facial appearance can alter one's character. Facial appearance drives first impressions of others, influencing our expectations and behavior toward them, which, in turn, shapes their character (Berry, 1991; Berry & Brownlow, 1989; Penton-Voak, Pound, Little, & Perrett, 2006; Todorov, Said, Engell, & Oosterhof, 2008; Zebrowitz & Collins, 1997; Zebrowitz

Yilun Wang and Michal Kosinski, Graduate School of Business, Stanford University.

Author notes are available at <https://goo.gl/9b2aR2>. Yilun Wang and Michal Kosinski contributed equally to this work. Yilun Wang and Michal Kosinski collected the data and conducted the analysis; Michal Kosinski wrote the article.

The study has been approved by Stanford University's IRB.

We thank Samuel Gosling, Robert Sternberg, Raphael Silberzahn, Martie Haselton, Amir Goldberg, Poruz Khambatta, Anonymous Gabriella, Jason Rentfrow, Kai Ruggeri, Pierre Dechant, Brent Roberts, David Mack, and Nicole Paulk for their critical reading of the earlier version of this article. Also, we thank Isabelle Abraham for proofreading and Mariia Vorobiova for graphical design. Finally, we would like to thank the creators of Face++ for allowing us to use their software free of charge.

Correspondence concerning this article should be addressed to Michal Kosinski, Graduate School of Business, Stanford University, 655 Knight Way, Stanford, CA 94305. E-mail: michalk@stanford.edu

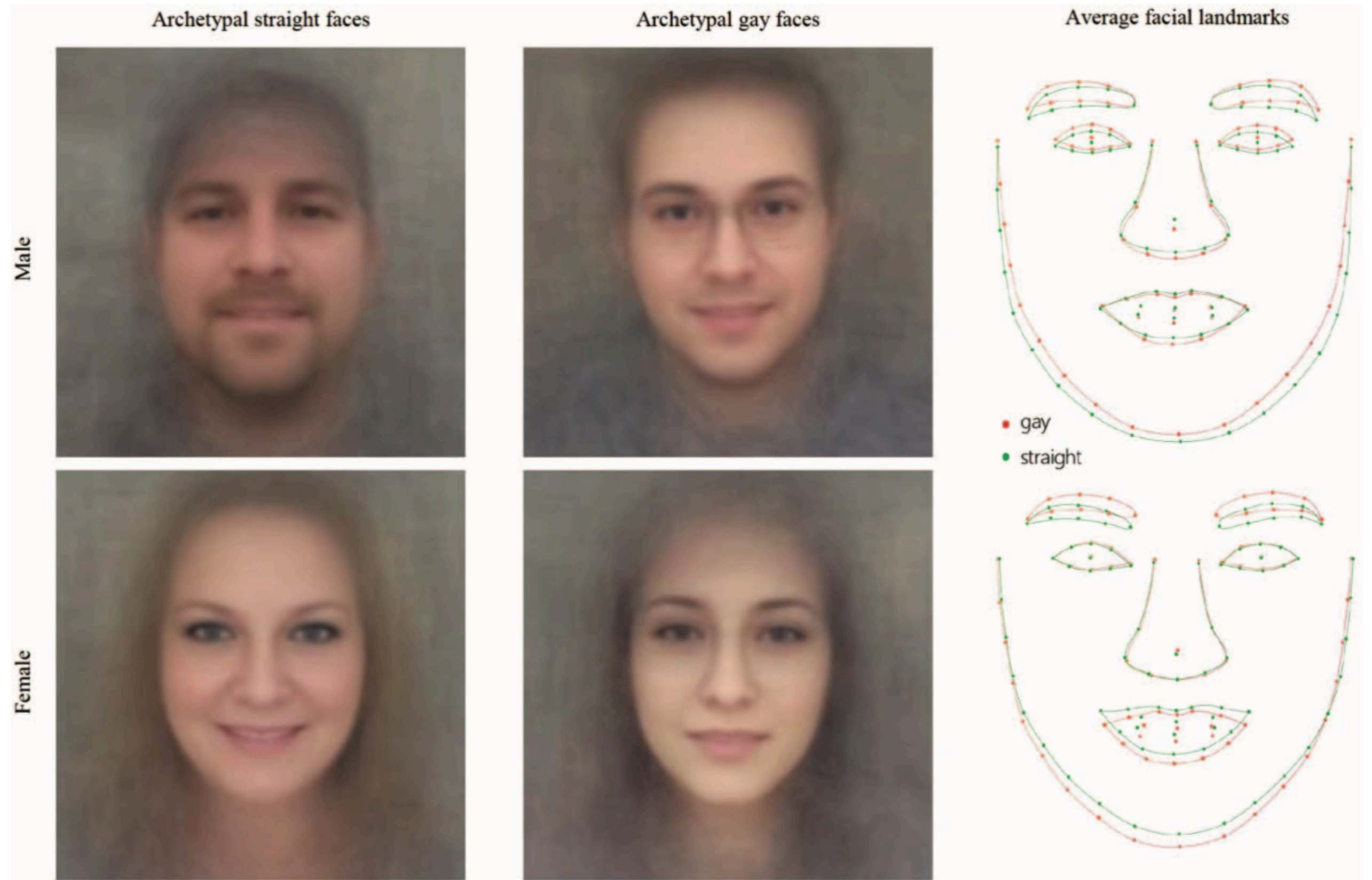


Figure 4. Composite faces and the average facial landmarks built by averaging faces classified as most and least likely to be gay.

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The Cambridge Analytica Files

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

Key stories

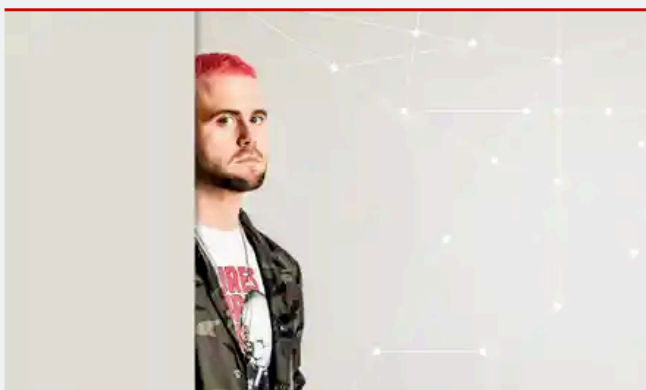


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The Brexit whistleblower / 'Did Vote Leave use me? Was I naive?'

Revealed: the ties that bound Vote Leave's data firm to controversial Cambridge Analytica



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

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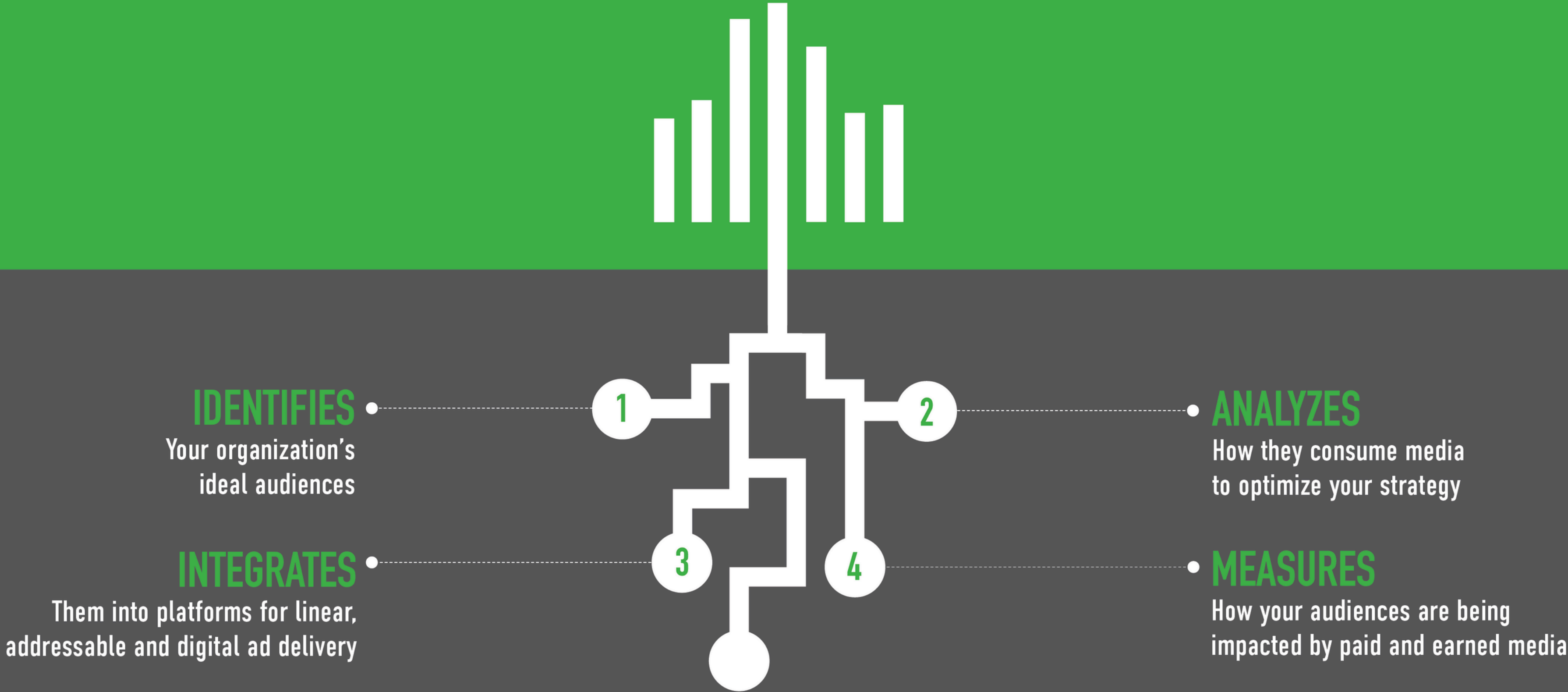
Politicians can't control the digital giants with rules drawn up for the analogue era
Andrew Rawnsley

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RNC_RegID	State	2012ObamaVoter_DRA_12_16	2012RomneyVoter_DRA_12_16	2016ClintonVoter_DRA_12_16	2016TrumpVoter_DRA_12_16	AmericaFirstForeignPolicy_agree_DRA_...	AmericaFirstForeignPolicy_disagree_DR...	AutoCompaniesShipJobsOver
4846-9310-B219917E9098}	AK	0.063016	0.571314	0.053027	0.551194	0.602687	0.160557	0.464875
2-4988-A7E0-E33CA71D52BE}	AK	0.053668	0.707244	0.050368	0.710313	0.481612	0.177465	0.331644
4EA4-81DC-AF10470EF8D5}	AK	0.084098	0.366629	0.084682	0.501998	0.377841	0.204837	0.318368
0-463D-9003-FFFB4A692794}	AK	0.055057	0.806223	0.04669	0.744124	0.479264	0.167188	0.35108
7-44B1-A9B7-4CFC3E84A585}	AK	0.066218	0.469906	0.061771	0.603631	0.484545	0.155052	0.408957
8-408E-938F-342B31F67617}	AK	0.270389	0.145265	0.263194	0.292038	0.522196	0.187472	0.39259
4-CBD-89C6-3A85C741E7E7}	AK	0.310231	0.17945	0.277853	0.265422	0.44298	0.244778	0.376611
0-4E91-9E58-DEDF71C38DF6}	AK	0.703669	0.053965	0.708858	0.08392	0.313643	0.307473	0.29446
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7-49F9-A32A-7F63A60A1B84}	AK	0.05925	0.797582	0.052514	0.773824	0.501335	0.168872	0.343528
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E-48B3-AA10-ECA4042ED488}	AK	0.058641	0.708128	0.049693	0.703338	0.506371	0.172593	0.321626
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A-41D3-B6F2-6F474CFF81C2}	AK	0.373483	0.116216	0.366706	0.186676	0.45696	0.235871	0.37697
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7-4394-B6D8-20E57DAA58E8}	AK	0.80217	0.06407	0.692983	0.088118	0.273626	0.361091	0.328082
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-4661-9D6F-E98FFFA85748}	AK	0.067158	0.72232	0.054013	0.593721	0.431352	0.182517	0.27088

2012 ObamaVoter - 2012 RomneyVoter - 2016 ClintonVoter - 2016 TrumpVoter - America First Foreign Policy - Auto Companies Ship Jobs Overseas - Egalitarians - Enviro Conscious - Opportunity Seekers - STEM Supporters - Financial Services Harmful Fossil Fuels Important For US Energy Security - Fossil Fuels Need To Move Away From - Invest Infrastructure - Invest Infrastructure - Lower Taxes - Pharma Comps Do Great Damage - Reform Govt Regulations - Repeal Obamacare - Stop Illegal Immigration - USA Financial Situation Optimistic

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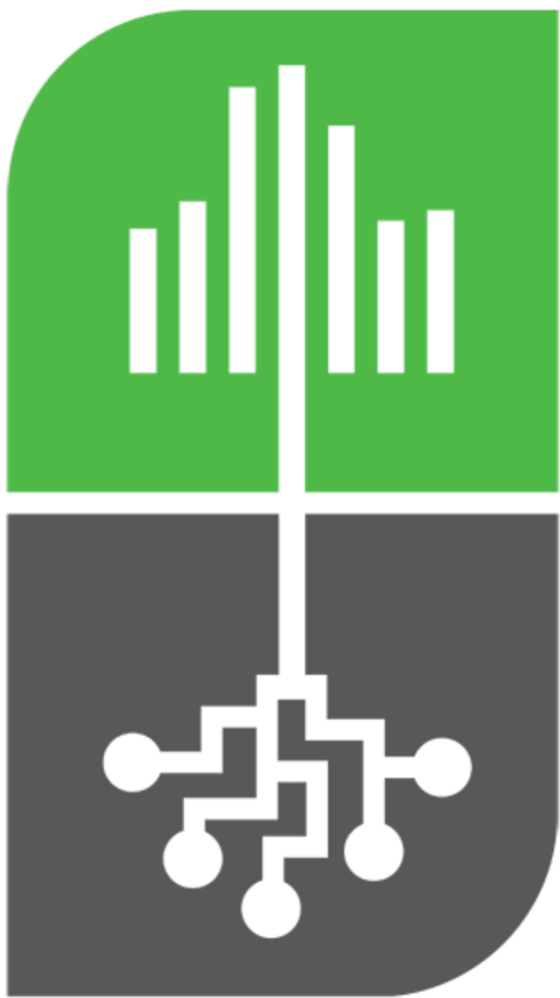


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AGGREGATEiQ

PURE - DATA - INTELLIGENCE

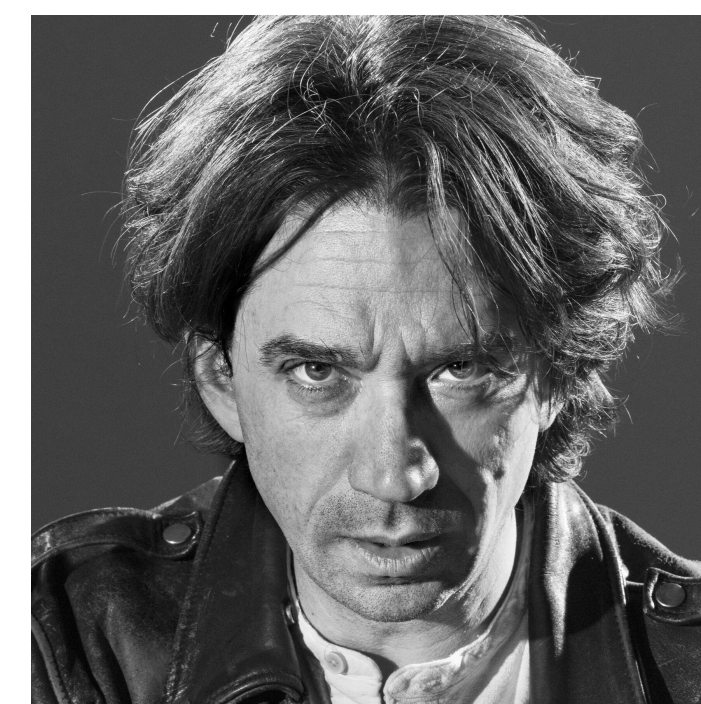
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AI-Powered Automation for Every Decision



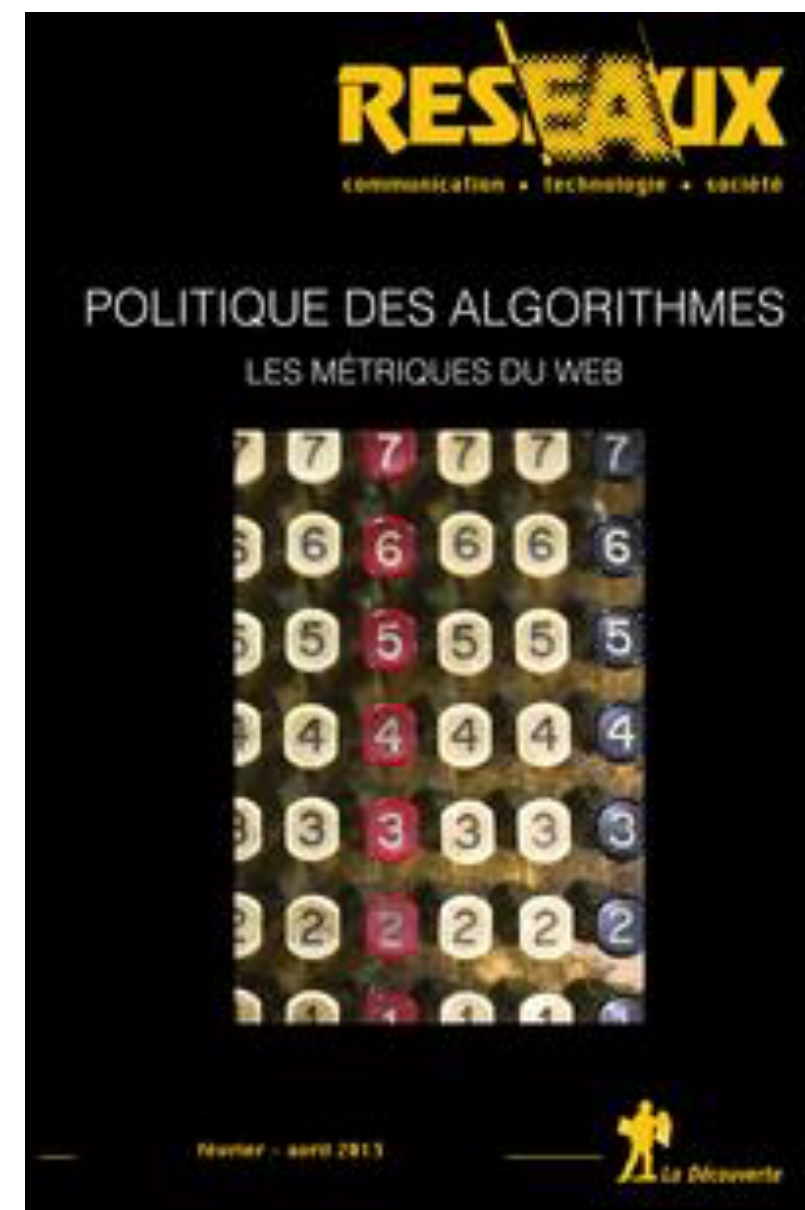
“Gouvernementalité algorithmique et perspectives d'émancipation”

Antoinette Rouvroy et Thomas Berns, Réseaux, 2013, n°177, pp. 163-196.

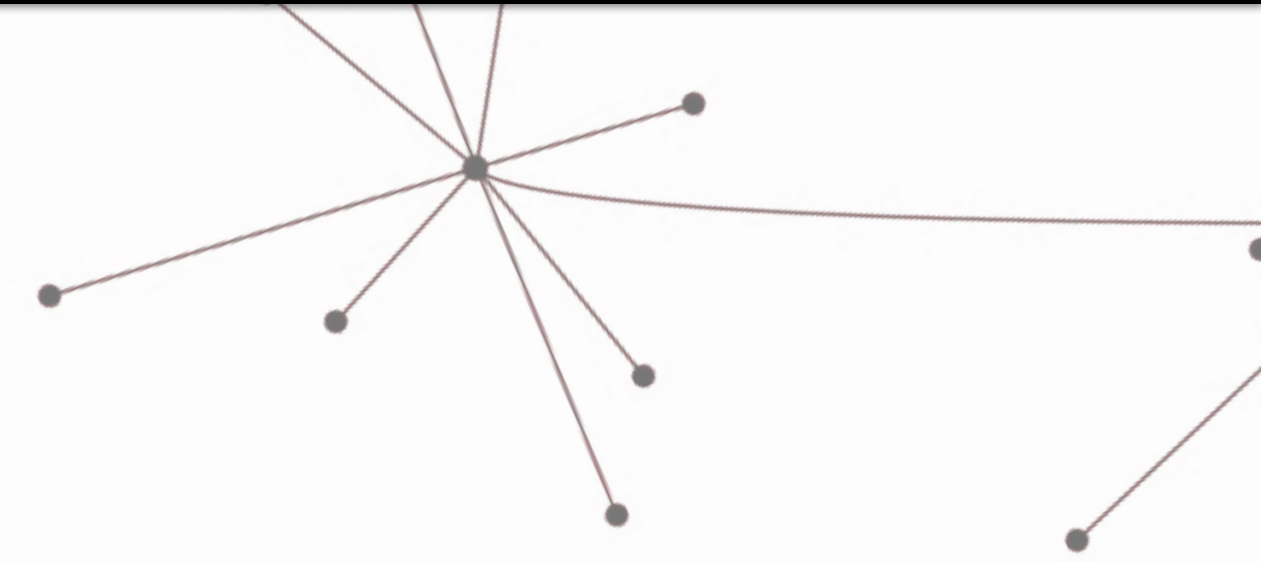
Ce texte présente la [double disparition de la personne](#). Le big data ne permet ni d'être personne, ni d'être une personne, ce qui pose des problèmes majeurs de [gouvernance](#).

Ils opposent la recherche de causes, de motivations et d'explications à la perspective statistique et inductive.

- Les « sujets » n'ont plus rien à [dire](#), car tout est déjà [pré-dit](#).
- Les données parlent d'elles-mêmes, elles ne [représentent](#) pas, car [tout est déjà présent](#).
- Les big data épuiserait la totalité du réel, dont la totalité des possibles : [l'avenir](#).
- La [puissance du sujet](#) est remise en cause :
 - choisir les [actualités](#) de nos [virtualités](#) (Deleuze)
 - l'automatisation passe directement des [pulsions](#) à l'[action](#).
 - le [choix](#), la [décision](#) et la [responsabilité](#) contre l'[opérationnalité](#) des machines
- Qu'est-ce que l'[émancipation](#), lorsque nos [désirs](#) nous précèdent ?



Enjeux sociaux et politiques d'Internet



Publicité, recommandation, assurance, prêt bancaire, santé personnalisée, justice prédictive...

- Qui **actualise** les **virtualités** de l'individu ?
- Que peuvent **dire** les sujets si tout est déjà **pré-dit** ?
- Qu'est-ce qu'une **loi naturelle** / **sociale** ?
- *In fine*, la trace questionne le mérite et la **responsabilité individuelle**



Notions

Astroturfing, *A/B Testing*, bulles de filtre, PageRank, *black box society*, cybernétique, *social credit system (Chine)*, *code is law*, consentement, biais, *data driven society*, intelligence artificielle, big data, *machine learning*, *deep learning*, gouvernance algorithmique.

Transition

→ La résilience du réseau ne constitue-t-elle pas une vulnérabilité ?

Sur les traces numériques de l'individu



Andrei Lacatusu, Social decay, Janvier 2018

Boris Beaude

STSLab - Université de Lausanne

Courriel : boris.beaude@unil.ch

Site : <http://www.beaude.net/boris/>

Les fins d'Internet, Fyp, 2014

<http://www.beaude.net/ie/>

Internet, changer l'espace, changer la société, Fyp, 2012

<http://www.beaude.net/icecs/>