The Web and its Publics

Tommaso Venturini

The Web and its Publics

In the talk, I will discuss the social and political consequences of the organization of digital media. I will consider the limits of a simplistic reading of the power-law distribution of online visibility and the hopes raised by the thematic clustering and the dynamism of the Web.
I will also touch on the risks that these dynamics entail exploring the causes of the recent proliferation of 'junk news'.

Le Web et ses publics

Dans le rencontre, nous discuterons des conséquences sociales et politiques de l'organisation des médias numériques. Nous considérerons les limites d'une lecture simpliste de la distribution en loi de puissance de la visibilité en ligne et les espoirs soulevés par la clusterisation thématique et le dynamisme du Web.
Nous nous pencherons aussi sur les risques que ces dynamiques comportent, en explorant les causes de la récente prolifération des 'junk news'.

La démocratie Internet

Dominique Cardon
Seuil (2010)

On a beaucoup souligné les origines militaires d'Internet… Mais la chose est désormais établie: Internet est surtout né de la rencontre entre la contre-culture américaine et l'esprit méritocratie du monde de la recherche (p. 1).

Chercheurs, artistes, militants, passionnés et freaks de toutes espèces, les premier publics de l'Internet, y ont fait proliférer des utopies futuristes, des expérimentations esthétiques, des provocations et des gestes politiques d'un nouveau genre (p. 2).

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The Internet Imaginaire

Patrice Flichy
2007, MIT Press

The founding utopias of computer communication not only guided the initial Arpanet project but also constantly interacted with its technical realization (p. 65).

[For hackers the use and future of IT] was not only an intellectual tool for academics but also a device to put into everyone's hands, capable of building not only new invisible colleges but also a new society (p. 67)

The first many-to-many medium of communication
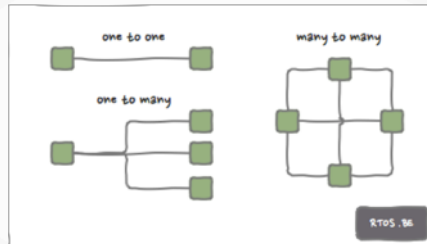

A new Athens

"In a sense, the Global Information Infrastructure will be a metaphor for democracy itself...

it will in fact promote the functioning of democracy by greatly enhancing the participation of citizens in decision-making. And it will greatly promote the ability of nations to cooperate with each other.
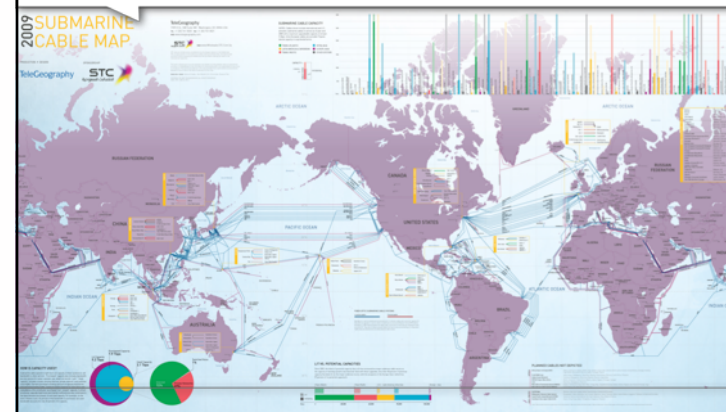
I see a new Athenian Age of democracy forged in the fora the Global Information Infrastructure will create."
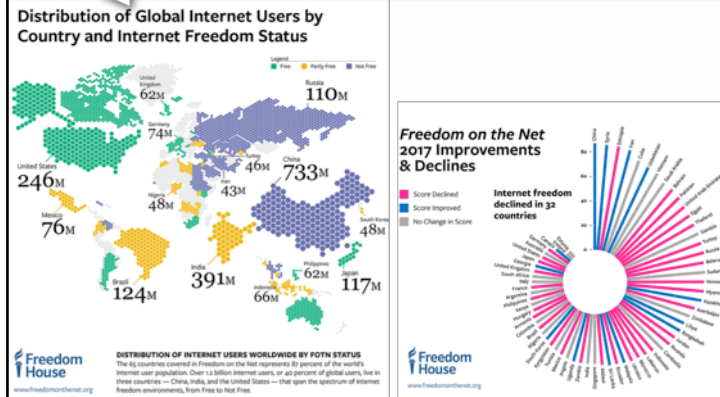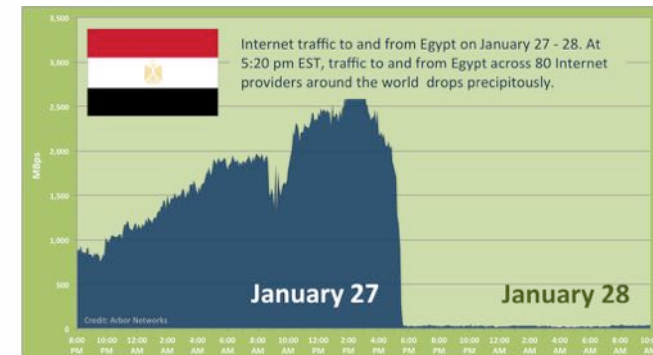
Digital divide
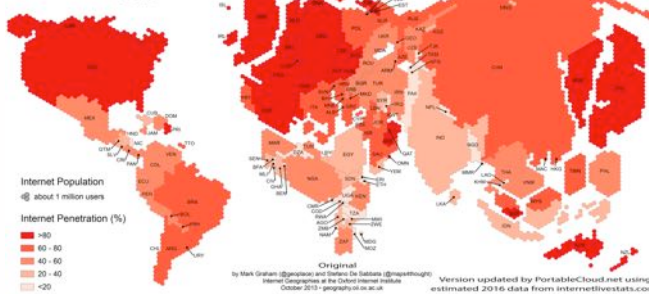
Infrastructure bottlenecks

Internet censorship

Internet censorship

The rise of platforms

Wikipedia 2010
Fundraising campaign


And even if we forget about all this

Does technical symmetry guarantees communication equality ?

Irving Kristol (1920-2009):
"Democracy does not guarantee equality of conditions it only guarantees equality of opportunities"
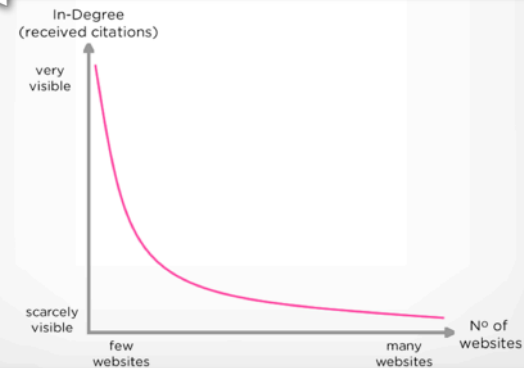
The Web as a scale-free network

Barabasi, A, Albert, R., & Jeong, H. (2000). Scale-free characteristics of random networks: the topology of the world-wide web. Physica A:, 281(1-4), 69-77.
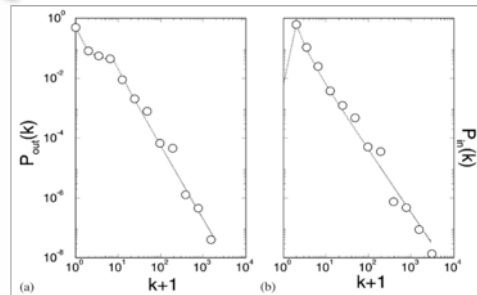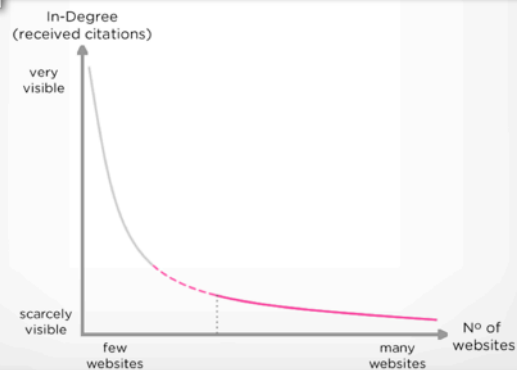
The probability of finding very popular addresses, to which a large number of other documents point, is non-negligible, an indication of the flocking sociology of the www (p. 72)

The law of power

The Web as a narrowcasting medium

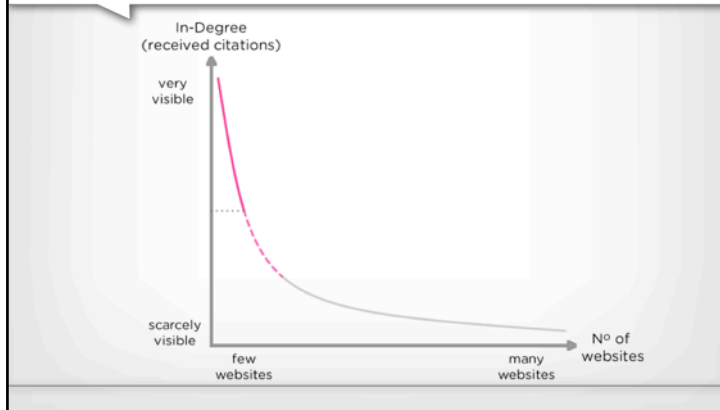## The Web as a narrowcasting medium

*Cass Sunstein (2001)
Republic.com
Princeton University Press*

When the power to filter is unlimited, people can decide, in advance and with perfect accuracy, what they will and will not encounter (p. 5)

I will emphasize the risks posed by any situation in which thousands or perhaps millions or even tens of millions of people are mainly listening to louder echoes of their own voices. A situation of this kind is likely to produce far worse than mere fragmentation (p. 16)

republic.com
cass sunstein

The Web as a broadcasting medium

In-Degree (received citations)

very visible

scarcely visible

few websites — many websites — Nº of websites

The Web concentration

Three Metrics of Media Concentration

	Gini coeff.	HHI	Noam index
All Web sites	.76	69	22
News and media sites	.88	134	40
Political sites	.85	140	31
Radio audience	.53	19	—
Newspaper circulation	.69	73	18
Magazine circulation	.70	123	34

Metrics of Concentration for Newspapers

	Top 10	Gini	HHI	Noam
Newspapers—Print circulation (top 200)	30%	.50	143	33
Newspapers—Web site visits (top 200)	42%	.62	304	65

The Myth of Digital Democracy
Matthew Hindman
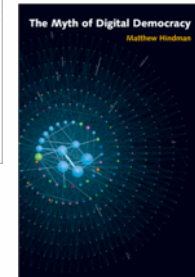
Democracy?
Not at the top nor at the bottom
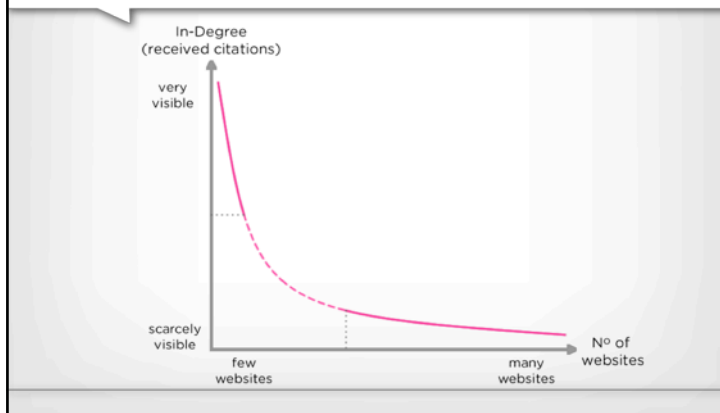
In-Degree (received citations)

very visible

scarcely visible

few websites — many websites — Nº of websites

What about the middle?

In-Degree (received citations)

very visible

scarcely visible

few websites — many websites — Nº of websites
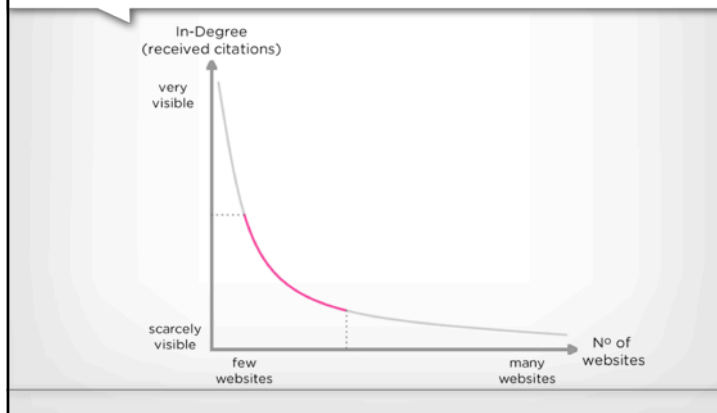
## The Filter Bubble

To some extent we've always consumed media that appealed to our interests and avocations and ignored much of the rest. But the filter bubble introduces three dynamics we've never dealt with before.

First, you're alone in it. A cable channel that caters to a narrow interest (say, golf) has other viewers with whom you share a frame of reference. But you're the only person in your bubble. In an age when shared information is the bedrock of shared experience, the filter bubble is a centrifugal force, pulling us apart.

The Filter Bubble
What ▮▮▮ the
▮▮▮ Internet
Is ▮▮
Hiding
From
You
Eli Pariser
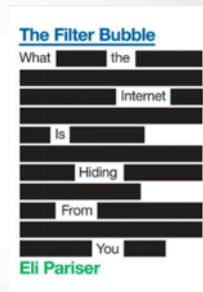
Preferential connectivity
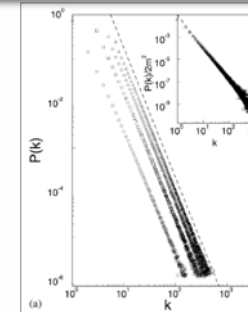
A newly created webpage will more likely include links to well known, popular documents with already high connectivity (p. 73)
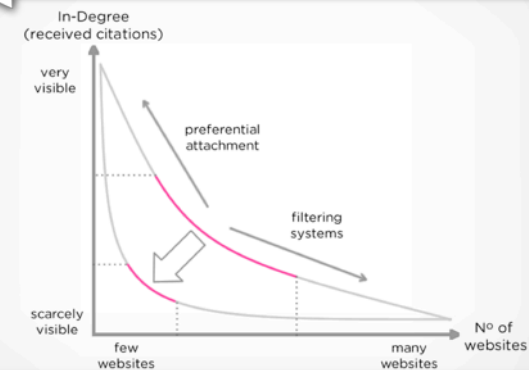
The Matthew effect

For unto every one that have shall be given, and he shall have abundance: but from him that have not shall be taken away even that which he have» (p. 59)

A scientific contribution will have greater visibility in the community of scientists when it is introduced by a scientist of high rank (p. 60)

Confronted with the growing task of identifying significant work published in their field, scientists search for cues to what they should attend to. One such clue is the professional reputation of the authors (p. 60)

The missing middle ?

The missing middle ?

Audience Share for Online and Off-line Media

	N	Top 10	Top 20	Top 50	Top 100	Top 500
All Web sites	1,325,850	26%	30%	35%	40%	51%
News and media	7,041	29%	37%	47%	56%	79%
Political sites	970	31%	43%	62%	77%	99%
Radio audience	1290	7%	11%	21%	33%	77%
Newspaper circulation	1058	19%	29%	46%	61%	91%
Magazine circulation	653	27%	36%	52%	67%	98%

Comparison of Audience Share, Print versus Digital

	Top 10	11–20	21–50	51–100	101–500	501+
News and media Web sites	29%	12%	10%	9%	23%	21%
vs. newspaper circulation	+10%	+2%	−7%	−6%	−7%	+12%
vs. magazine circulation	+2%	+3%	−6%	−6%	−8%	+20%

Two difficulties in methodology

1. **Semantic**
   hyperlinks are embedded in texts that influence the decision to follow a link

2. **Time**
   hyperlinks are created successively and more recent links are more relevant
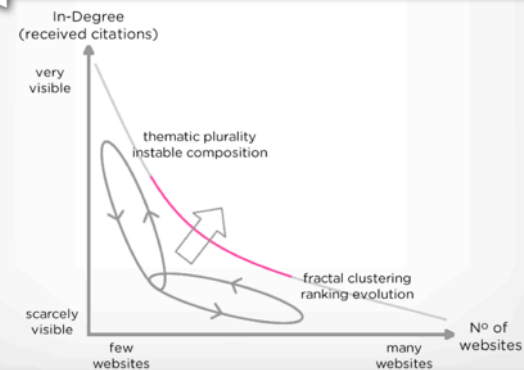
4 stirring mechanisms

From the Bottom to the middle

1. (S) The Web is not just clustered, it is fractally clustered

2. (T) Ranking within clusters can change rapidly

From to top to the middle

3. (S) Winner takes all, but different clusters have different winners

4. (T) Stable distribution but unstable composition

The Web visibility stream

"We are not intellectual lemmings"

It turns out that we are not intellectual lemmings. We do not use the freedom that the network has made possible to plunge into the abyss of incoherent babble.

Instead, through iterative processes of cooperative filtering and "transmission" through the high visibility nodes, the low-end thin tail turns out to be a peer-produced filter and transmission medium for a vastly larger number of speakers than was imaginable in the mass-media model

(p. 255)

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and yet…

"Fake News" and the Public Data Lab

The "Fake News" shock

Slide 1

according to the literature, the notion of fake news is

1. Vague

2. Undistinguishable from past forms of misinformation

3. Charged with a simplistic idea of journalistic truth

4. Politically dangerous

4 reasons to stay clear of "fake news"

Slide 2

TABLE 1
A typology of fake news definitions

Level of facticity	Author's immediate intention to deceive	
	High	Low
High	Native advertising Propaganda Manipulation	News satire
Low	Fabrication	News parody

Tandoc, E.C., Lim, Z.W. & Ling, R. (2017) Defining 'Fake News'. *Digital Journalism*. 811

Wardle, Claire
Fake news. It's complicated (2017).
First Draft
medium.com/1st-draft/fake-news-its-complicated-d0f773766c79

	Satire	False Connection	Misleading Content	False Context	Imposter Content	Manipulated Content	Fabricated Content
Poor journalism		✔	✔	✔			
To Parody	✔				✔		✔
To Provoke or to 'punk'					✔	✔	✔
Passion				✔			
Partisanship			✔	✔			
Profit		✔			✔		✔
Political Influence			✔	✔		✔	✔
Propaganda			✔	✔	✔	✔	✔

1. Vague

Slide 3

863,956 — The World — 863,956

MAINE EXPLOSION CAUSED BY BOMB OR TORPEDO?

Capt. Sigsbee and Consul-General Lee Are in Doubt---The World Has Sent a Special Tug, With Submarine Divers, to Havana to Find Out---Lee Asks for an Immediate Court of Inquiry---Capt. Sigsbee's Suspicions.

CAPT. SIGSBEE, IN A SUPPRESSED DESPATCH TO THE STATE DEPARTMENT, SAYS THE ACCIDENT WAS MADE POSSIBLE BY AN ENEMY.

Dr. E. C. Pendleton, Just Arrived from Havana, Says He Overheard Talk There of a Plot to Blow Up the Ship---Capt Zalinski, the Dynamite Expert, and Other Experts Report to The World that the Wreck Was Not Accidental---Washington Officials Ready for Vigorous Action if Spanish Responsibility Can Be Shown---Divers to Be Sent Down to Make Careful Examination.

2. Undistinguishable from past misinformation

Slide 4

Tuchman, G. (1978). Making News: A Study in the Construction of Reality. New York: The Free Press.

Schudson, M. (1989). The sociology of news production. *Media, Culture & Society*. 11 (3). pp. 263–282

Making News
A Study in the Construction of Reality
GAYE TUCHMAN

Social scientists who study the news speak a language that journalists mistrust and misunderstand. They speak of 'constructing the news', of 'making news', of the 'social construction of reality'. 'News is what newspapermen make it' (Gieber, 1964: 173). 'News is the result of the methods newsworkers employ' (Fishman, 1980: 14). News is 'manufactured by journalists' (Cohen and Young, 1973: 97). Even journalists who are critical of the daily practices of their colleagues and their own organizations find this talk offensive. I have been at several conferences of journalists and social scientists where such language promptly pushed the journalists into a fierce defence of their work, on the familiar ground that they just report the world as they see it, the facts, facts, and nothing but the facts, and yes, there's occasional bias, occasional sensationalism, occasional inaccuracy, but a responsible journalist never, never, never fakes the news.

That's not what we said, the hurt scholars respond. We didn't say journalists *fake* the news, we said journalists *make* the news.

To say that a news report is a story, no more, but no less, is not to demean the news, not to accuse it of being fictitious. Rather, it alerts us that news, like all public documents, is a constructed reality possessing its own internal validity. (Tuchman, 1976: 97)

3. Charged with a simplistic idea of journalistic truth

Claire, W. & Derakhshan, H. (2017).
Information Disorder: Toward an interdisciplinary framework for research and policymaking (Report to the Council of Europe).

The term "fake news" has also begun to be appropriated by politicians around the world to describe news organisations whose coverage they find disagreeable. In this way, it's becoming a mechanism by which the powerful can clamp down upon, restrict, undermine and circumvent the free press. It's also worth noting that the term and its visual derivatives (e.g., the red 'FAKE' stamp) have been even more widely appropriated by websites, organisations and political figures identified as untrustworthy by fact-checkers to undermine opposing reporting and news organizations" (p.16)

4. Politically dangerous

Donald J. Trump @realDonaldTrump — Follow
The FAKE NEWS media (failing @nytimes, @NBCNews, @ABC, @CBS, @CNN) is not my enemy, it is the enemy of the American People!
1:48 PM - 17 Feb 2017
52,477 Retweets 160,773 Likes

Donald J. Trump @realDonaldTrump — Follow
Sorry folks, but if I would have relied on the Fake News of CNN, NBC, ABC, CBS, washpost or nytimes, I would have had ZERO chance winning WH
5:15 AM - 6 Jun 2017
26,213 Retweets 106,804 Likes

Donald J. Trump @realDonaldTrump — Follow
The Fake News Media works hard at disparaging & demeaning my use of social media because they don't want America to hear the real story!
5:20 PM - 28 May 2017
29,821 Retweets 115,034 Likes

Donald J. Trump @realDonaldTrump — Follow
The Fake News Media hates when I use what has turned out to be my very powerful Social Media - over 100 million people! I can go around them
5:23 AM - 16 Jun 2017
28,709 Retweets 133,679 Likes

4. Politically dangerous

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http://www.trumptwitterarchive.com/archive/fake%20news/ttff

4. Politically dangerous

?

What is "fake news" about if it is not about fakeness?

"Macron is gay" hoax

AUTOMATING THE VISUALIZATION PROCESS WITH A SCRIPT (THE SLIME SLICER)

Harmful news bloom

"Macron is gay" hoax

Even Sputnik!

- Economy (automatization of the online attention market)
- Communication (socialization of a 'prosumer' audience)
- Technology (behavioral algorithms and spreading bots)
- Culture (virality-oriented subcultures)
- Politics (trolling warefare)

5 modes of junk news production

A market for attention economy
AdSense / AdWords & Page Rank

Google's success came from an understanding of what Chris Anderson refers to as "the long tail," the collective power of the small sites that make up the bulk of the web's content... The Web 2.0 lesson: leverage customer self-service and algorithmic data management to reach out to the entire web, to the edges and not just the center, to the long tail and not just the head (p.21)

O'Reilly, Tim. 2005. "What Is Web 2.0 - O'Reilly Media." http://oreilly.com/web2/archive/what-is-web-20.html.

Google Ad Network and the birth of the Web 2.0

The proliferation of attention trackers

Pick your traker!

Boris fed the beast with diligence. "At night I would make four or five posts to share the next day. When I woke up, I shared them. I went to drink coffee, came back home, found new articles, posted those articles on the website, and shared them."

The hit economy
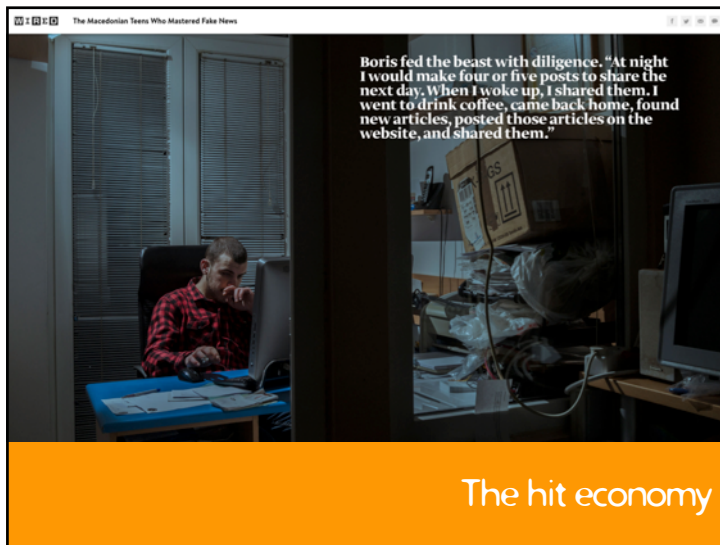
"The young Macedonians who run these sites say they don't care about Donald Trump. They are responding to straightforward economic incentives… Several teens and young men who run these sites told BuzzFeed News that they learned the best way to generate traffic is to get their politics stories to spread on Facebook — and the best way to generate shares on Facebook is to publish sensationalist and often false content that caters to Trump supporters."

Silverman, Craig, and Lawrence Alexander. 2016.
"How Teens In The Balkans Are Duping Trump Supporters With Fake News."
BuzzFeedNews, November.
https://www.buzzfeed.com/craigsilverman/how-macedonia-became-a-global-hub-for-pro-trump-misinfo?utm_term=.cro1F9mye#.bemMKOqmV

Using politics to influence virality (not the other way around)

"When looking at just the titles of fake and real news articles, I find an even stronger dissimilarity between the two, with high consistency between the data sets and high statistical significance in the differences. Precisely, I find that fake news titles are longer than real news titles and contain simpler words in both length and technicality. Fake titles also used more all capitalized words, significantly more proper nouns, but fewer nouns overall, and fewer stop-words…

When adding in satire articles to the analysis, I find that the majority of our features distributions are common between satire and fake. Specifically, both satire and fake use smaller, fewer technical, and fewer analytic words, as well as, fewer quotes, fewer punctuation, more adverbs, and fewer nouns than real articles. Further, fake and satire use significantly more lexical redundancy

Horne, Benjamin D., and Sibel Adali. 2017.
"This Just In: Fake News Packs a Lot in Title, Uses Simpler, Repetitive Content in Text Body, More Similar to Satire than Real News."

Detecting fake news is not the name of the game

"I can't help but laugh at the irony of folks screaming up and down about fake news and pointing to the story about how the Pope backs Trump. The reason so many progressives know this story is because it was spread wildly among liberal circles who were citing it as appalling and fake. From what I can gather, it seems as though liberals were far more likely to spread this story than conservatives. What more could you want if you ran a fake news site whose goal was to make money by getting people to spread misinformation? Getting doubters to click on clickbait is far more profitable than getting believers because they're far more likely to spread the content in an effort to dispel the content. Win!"a

Danah Boyd (2017). Did Media Literacy Backfire?
https://points.datasociety.net/did-media-literacy-backfire-7418c084d88d.

Debunking fake news is not the name of the game

The raise of click baiting
and native advertising

You don't even have to read to take the bait
(Data brokers & third party cookies)

"Real-time, auction-specific quality calculations of expected clickthrough rate, ad relevance, and landing page experience, among other factors, are used to calculate Ad Rank at auction time. These factors, which are based on things known only at the time of the auction, can heavily influence the quality of the user's experience" Google Support (2018).

Google Ads "Quality Score"

Improving the conversion rate
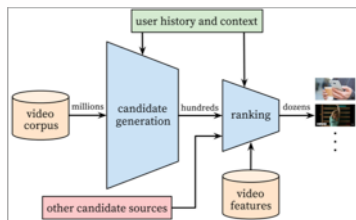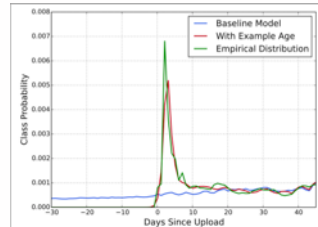
Covington, Paul, Jay Adams, and Emre Sargin. 2016
Deep Neural Networks for YouTube Recommendations
Proceedings of the 10th ACM Conference on Recommender Systems - RecSys '16
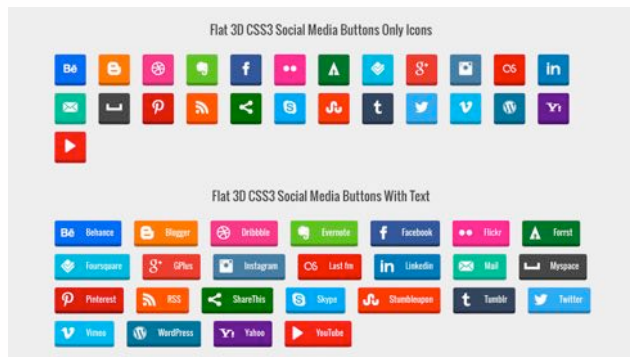
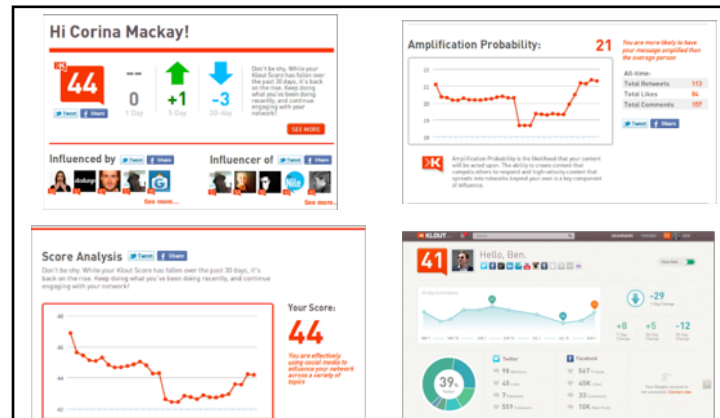## Behavioral recommendation algorithms
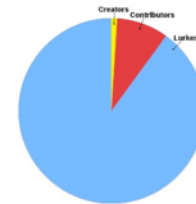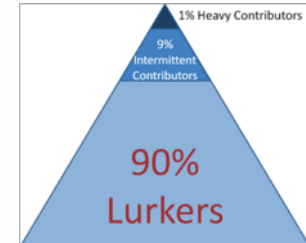
Posters and lurkers

The rise of social buttons

And of social metrics

Personal branding
and micro-celebrities

Pizzagate and LOLcats
4chan and virality oriented subcultures

Hagen, Sal. 2018. "Rendering Legible the Ephemerality of 4chan/Pol/." Open Intelligence Lab
http://oilab.eu/rendering-legible-the-ephemerality-of-4chanpol/

How 4chan promotes viral ephemerality

King, G., Pan, J. & Roberts, M.E. (2017). How the Chinese Government Fabricates Social Media Posts for Strategic Distraction, Not Engaged Argument. *American Political Science Review*. 111 (3). pp. 484–501.

Political astroturfing

Political astroturfing

"the team doing this research… fail[s] to understand the legitimacy of "public opinion guidance" within the Chinese system…

traditional public opinion guidance systems don't seem to be pulling their weight when it comes to overcoming these problems. The Internet media space has an infinite capacity but its borders and its core are unclear, so some grassroots social issues are always able to suddenly attract the attention of the entire Internet, creating one hot button issue after another"

translation in King, G., Pan, J. & Roberts, M.E. (2017). How the Chinese Government Fabricates Social Media Posts for Strategic Distraction, Not Engaged Argument. *American Political Science Review*. 111 (3). pp. 484–501.
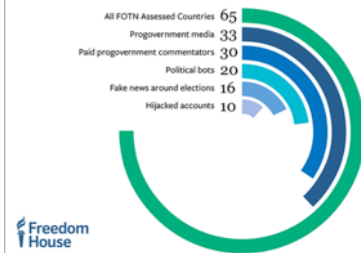
opinion.huanqiu.com/editorial/2016-05/8958840.html
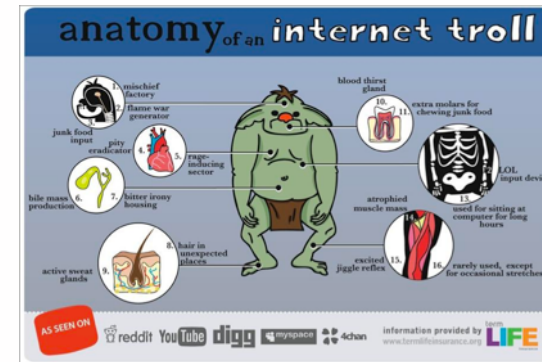
Internet trolling

Political trolling

https://freedomhouse.org/report/freedom-net/freedom-net-2017

Thank you!

+ Bounegru, Liliana, Jonathan Gray, Tommaso Venturini, and Michele Mauri. 2018. *A Field Guide to Fake News and Other Information Disorders*. *Amsterdam*: Public Data Lab.

+ Venturini, Tommaso. 2019. "From Fake to Junk News, the Data Politics of Online Virality." In *Data Politics: Worlds, Subjects, Rights*, edited by D. Bigo, E. Isin, and E. Ruppert, Forthcoming. London: Routledge.

+ Venturini, T. (2018). Sur l'étude des sujets populaires ou les confessions d'un spécialiste des fausses nouvelles. In P. Trudel (Ed.), *Les fausses nouvelles*. Presses de l'Université Laval. Gray,

+ Jonathan, Liliana Bounegru, and Tommaso Venturini. 2018. "The Infrastructural Uncanny: 'Fake News' and the Fabric of the Web as Matter of Concern." *New Media & Society*, forthcoming.

tommasoventurini.it