

Argument technologies and online disinformation: pitfalls and prospects



Fabio Paglieri

SSA 2020 – Perugia, 7 September 2020



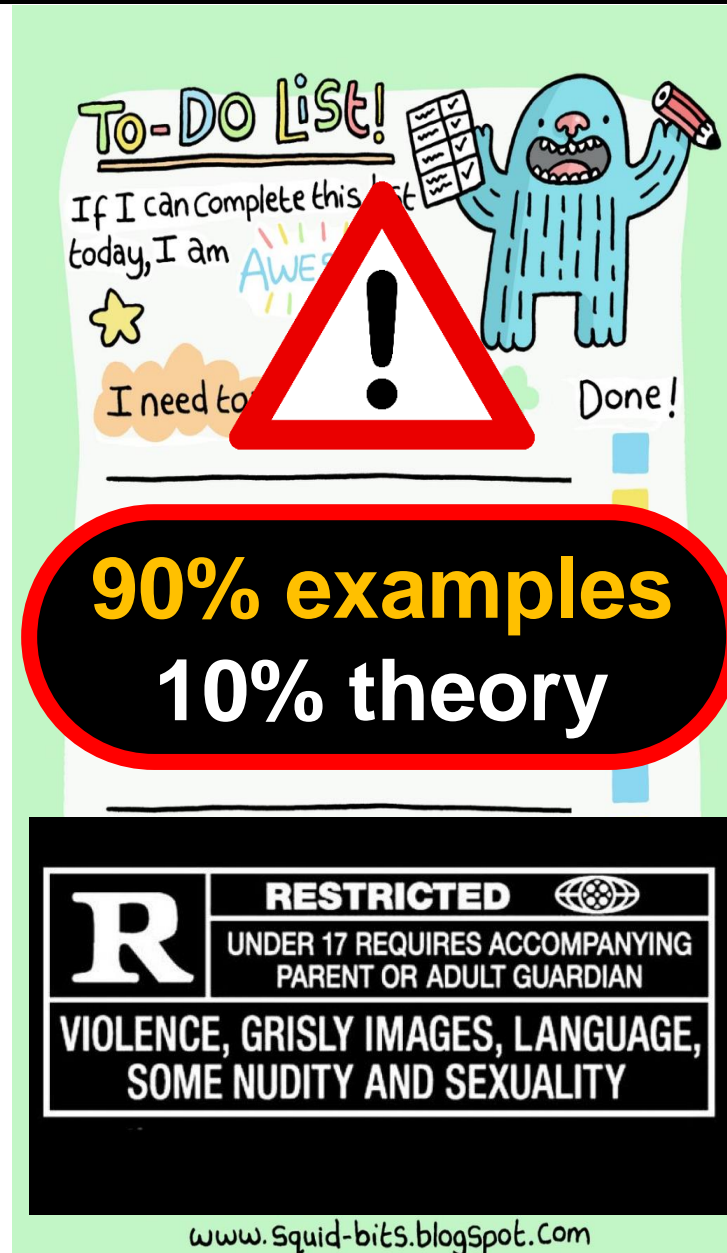
Outline

- **Problem setting:** the relevance of *fake news*, some recent *examples*
- **The history of fake news:** examples of *pre-digital disinformation*, what's *different* now?
- **Fake news today:** *honest mistakes* vs. *malicious manipulation*, lessons learned on *what makes us vulnerable*
- **Argument technologies to the rescue?** *Pitfalls* to avoid vs. *best practices*
- **Take-homes messages** on *how to develop argument technologies helpful in dealing with disinformation*



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Fake news: a contemporary concern

- A **dominant buzzword** in the *public and* scholarly debate on the impact of technology on society
- A growing **political concern**:
 - suggested *impact on world-changing events* (e.g., last US Presidential election, Brexit, COVID-19 pandemic)
 - *EU High-Level Group on Fake News and online disinformation*



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 - *EU High-Level Group on Fake News and online disinformation*
- From their **final report** (March 2018):
 - promote **media and information literacy** to counter disinformation and help users navigate the *digital media environment*
 - develop **tools for empowering users and journalists** to tackle disinformation and foster a positive engagement with *fast-evolving information technologies*
 - safeguard the **diversity and sustainability** of the European *news media ecosystem*

FNs: argumentation to the rescue?

- The problem of **fake news** is the problem of the **spreading of online disinformation**, against a backdrop of *shallow reasoning, lack of epistemic vigilance, and disregard for source quality*



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Wow – but **HOW**, exactly?!

Here are some strategies to shield yourself from fake news.

FNs may cause silly incidents...

An Italian Couple Believing In A Flat Earth Was Taken Back To Quarantine, Lost In Search Of The Edge Of The World

NEWS

WORLD

Mary Davis | September 6, 2020 | 22 | 0



...but also grievous mishaps

COVIDeniers: Anti-Science Coronavirus Denial Overlaps with Climate Denial

NEWS

Protests in Germany: 45 officers injured at Berlin rally against coronavirus curbs

Berlin police said dozens of officers were injured — and three were hospitalized — while dispersing some 20,000 people protesting anti-pandemic measures. Many participants dismissed the coronavirus as a "false alarm."



DW correspondent Leonie von Hammerstein reporting from coronavirus protests in Berlin



al machine created by the fossil fuel industry is now a major source of COVID-19 disinformation. many of the same tactics they have used to attack climate scientists and delay action to downplay avirus outbreak and sow distrust in the response efforts of governments, scientists and the medical ly consequences that are now unfolding before our eyes.

reat of COVID-19 to argue against action to address climate change, which would leave us all more rray of future catastrophes that scientists say will result from additional degrees of warming.

DeSmog presents the #COVIDenial evidence our team has gathered revealing the overlapping cast of g attacked climate science and are now spreading COVID misinformation, touting false cures, eories and fomenting attacks on public health experts. We began tracking this overlap in March y wrote [Meet the Climate Science Deniers Who Downplayed COVID-19 Risks](#).

including Koch network-funded entities such as Americans for Prosperity and State Policy Network cked stay-at-home orders and orchestrated 'Liberate' movement protests nationwide, as Steve Horn ate' Groups Are the Same Ones Pushing Climate Denial. And as DeSmog UK's Zak Derler reported in [Use Coronavirus to Downplay Environmental Threats](#), notorious climate deniers around the world he novel coronavirus pandemic is a hoax, or that it's an evil plot by "globalist elites" like Bill Gates ernately force vaccines or a "world population cull."

eratives at work spreading all manner of doubt and delusion to confuse the public, and their

actions and words will forever cement them on the wrong side of history.

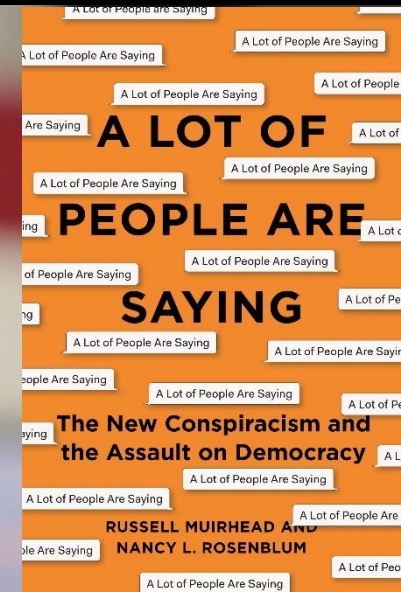
A new spin on conspiracy theory



A new spin on conspiracy theory

QAnon narrative in short (source: Travis View, WP)

*A worldwide cabal of Satan-worshiping pedophiles rules the world: they control everything (politicians, the media, Hollywood), so they cover up their existence. They would have continued ruling the world, were it not for the election of President Donald Trump, who knows all about this evil cabal's wrongdoing and was elected to put an end to them. Still now we would be ignorant of this behind-the-scenes battle of Donald Trump and the U.S. military were it not for "Q", a poster on 4chan, who later moved to 8chan, who **drops hint in a game-like fashion** about this secret struggle, what the cabal is doing, and how Trump will stop them*

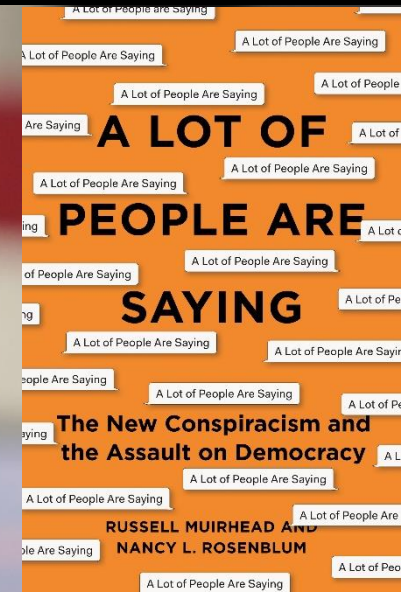


A new spin on conspiracy theory

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The **GAMIFICATION**
of conspiracy theory!

A worldwide cabal of Satan-worshipping pedophiles rules the world, while (politicians, the media, etc.) hide their existence from the public. Trump, who knows all about this cabal, was elected to put an end to them. Now we would be ignorant of this behind-the-scenes battle of Donald Trump and the U.S. military were it not for “Q”, a poster on 4chan, who later moved to 8chan, who drops hint in a game-like fashion about this secret struggle, what the cabal is doing, and how Trump will stop them

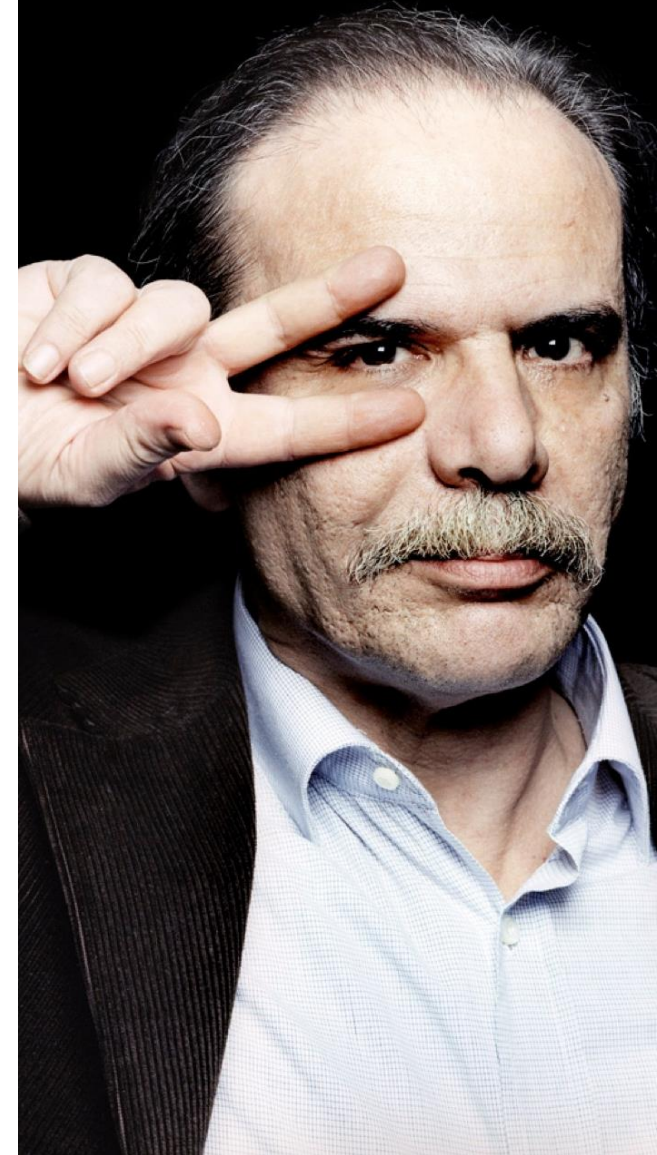


The history of FNs: a blast from the past



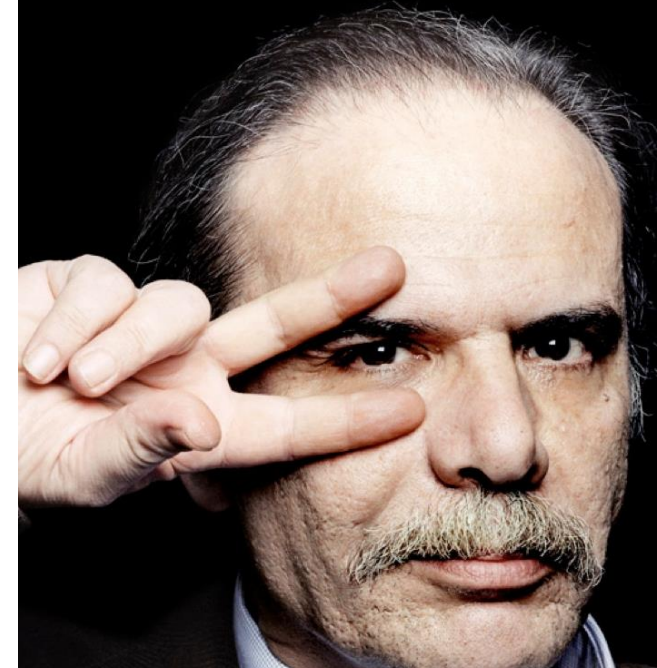
FNs as old news...

- **Diego Marconi** (2019), «Fake news, the crisis of deference, and epistemic deocracy»
- *Fake news has been with us since the beginning, if not of history, of history writing. According to Thucydides (II, 48), at the time of the “plague” (probably a hemorrhagic fever like Ebola) that hit Athens in 430 b.C. during the Peloponnesian war the rumor spread that the Spartans had poisoned the wells in Piraeus. The ground for the rumor was that the epidemics had started there, not in Athens proper, and Piraeus at the time had no fountains of drinking water, only wells. In fact, the epidemics was coming from Africa, so that it would naturally hit the port city of Piraeus before reaching Athens.*



...which tend to repeat themselves

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*At the time of the **COVID-19 pandemic** that hit the world in **2020**, the **Trump administration** spread accusations and innuendos that **China** had created the virus in **a lab in Wuhan**.*

A common counter-objection

*Sure, falsehood
and disinformation
have been around
for ages...*



*...but once upon a time
they used to be much
LESS FREQUENT and
definitely **LESS
INFLUENTIAL!***

Old FNs were no less frequent

- In the *Middle Ages*, **fake documents** were **extremely frequent**: the *Donation of Constantine* (more on that in the next slide) was the norm, not the exception
- **Forgeries** were *easy to produce* and *very hard to debunk*, in a world where a significant proportion of **people could not even read or write** (*illiteracy in 1820* was at **88%** worldwide)

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- In a **pre-digital environment**, with *extremely limited mobility*, *no photographic data*, and *no news services*, **impersonations of notable characters** were also fairly common. Some people even got **resuscitated** thanks to this practice, simply because the news of their death had not yet circulated widely enough: among others, *Henry V of Germany*, *Alfonso I of Aragon*, and the maid of Orleans, *Joan of Arc*



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- Btw, now we are busy *blaming the Internet* as the source of all our worries, yet we fail to appreciate **how much it improves our ability to detect and debunk false claims**



Old FNs were no less damaging

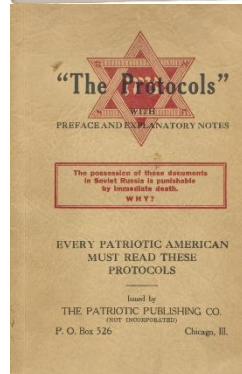
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Well before the Internet, plenty of *relevant examples* throughout human history:

- the **Donation of Constantine**, 4th century
- the letter of **Prester John**, 1165
- the **island of California**, 1510-1747
- the **Protocols of the Elders of Zion**, 1903
- and many more...



Enough with the good old days!

THE GOOD OLD DAYS

by Erwin L. Hess

THE BIG THRILL OF YESTERYEAR'S WINTERS.... WHEN SOME WELL-TO-DO UNCLE, OR SOMEBODY "RICH", GAVE YOU A RIDE IN A TWO HORSE-POWERED, TWO-SEATER

- FNs were already **abundant** and **influential** well before the Internet got invented

- NO evidence that humans were **better arguers** or **more competent reasoners** in *times past*

What HAS changed dramatically

Unprecedented **ACCESS**



What HAS changed dramatically

Unprecedented **ACCESS**

- to **DATA**
- to **PEOPLE**
- to **PRODUCTS & SERVICES**



What HAS changed dramatically

Unprecedented **ACCESS**

+ **PRODUCTION & DISTRIBUTION**

- to **DATA**
- to **PEOPLE**
- to **PRODUCTS & SERVICES**



DISINTERMEDIATION

Now **traditional gate keepers** of information (*authors, journalists, authorities*) have a much more **marginal role in the information ecology**, since *any schmuck* with a device and an Internet connection is a **potential information hub**



With great power...

SPIDER-MAN!



LIKE COSTUME HEROES? CONFIDENTIALLY, WE IN THE COMIC MAG BUSINESS REFER TO THEM AS "LONG UNDERWEAR CHARACTERS"! AND, AS YOU KNOW, THEY'RE A DIME A DOZEN! BUT, WE THINK YOU MAY FIND OUR *SPIDERMAN* JUST A BIT... DIFFERENT!

SAY, GANG, WE NEED ONE MORE GUY FOR THE DANCE! HOW ABOUT *PETER PARKER* OVER THERE?

ARE YOU KIDDIN'? THAT BOOKWORM WOULDN'T KNOW A CHA-CHA FROM A WALTZ!

PETER PARKER? HE'S MIDTOWN HIGH'S ONLY PROFESSIONAL WALL FLOWER!



Stan Lee & S. DITKO

V-789 1

- These *new possibilities* should imply **increased personal responsibility**, as per Spidey motto: "*with great power comes great responsibility*"
- Alas, users do not feel particularly responsible for the contents they share, while *most platforms encourage a carefree attitude*; plus, little is done to give them the tools needed to exercise **epistemic responsibility** (more on this later)



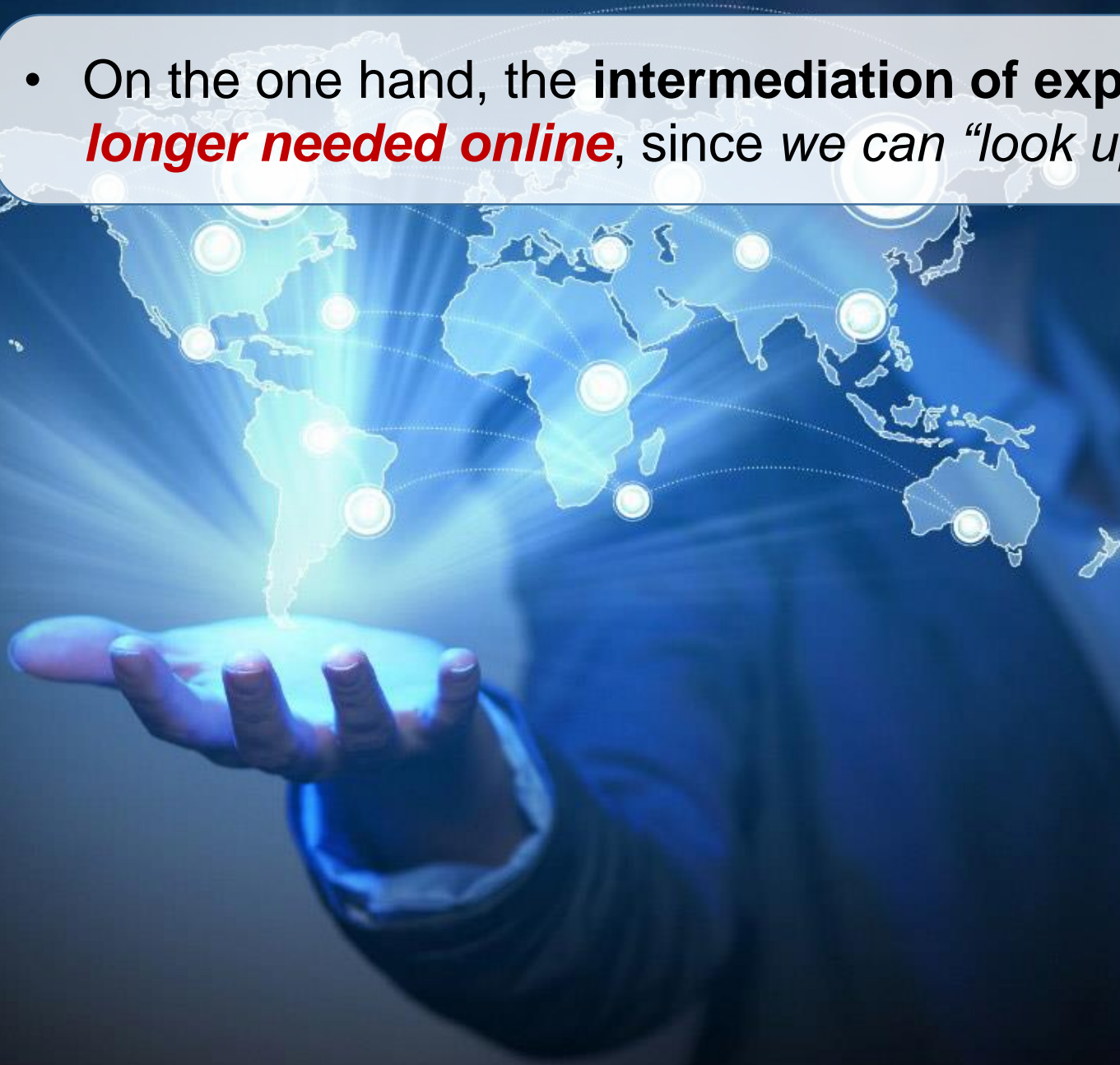
BE SURE TO SEE THE NEXT ISSUE OF *AMAZING FANTASY* --- FOR THE FURTHER AMAZING EXPLOITS OF AMERICA'S MOST DIFFERENT NEW TEEN-AGE IDOL -- *SPIDERMAN*!

Epistemic delusion of online information



Epistemic delusion of online information

- On the one hand, the **intermediation of experts** seems ***no longer needed online***, since we can “look up stuff” on our own



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- On the one hand, the **intermediation of experts** seems ***no longer needed online***, since we can “look up stuff” on our own
 - However...
 - Everything online **IS mediated** by several agencies, we often ***lack ways of tracking*** them or ***don’t even bother trying***
 - Unprecedented **access** + growing **specialization** = impossibility of expertise, ***more need to rely on experts***

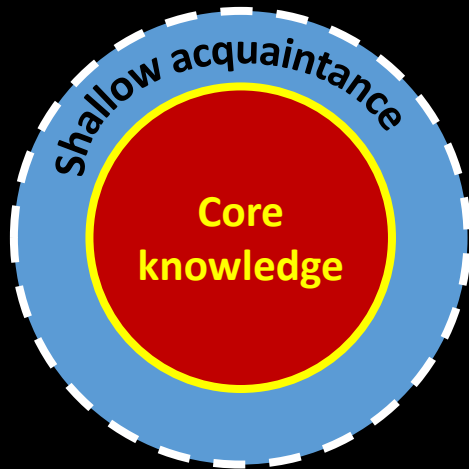
Epistemic delusion of online information

- 
- A hand holding a glowing globe with network lines. The background is dark blue with a world map and glowing nodes connected by lines, suggesting a global network or internet theme.
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 - Unprecedented **access** + growing **specialization** = impossibility of expertise, ***more need to rely on experts***
 - On a *growing set of key issues*, we **lack the skills needed to make up our mind in an epistemically responsible way**

What changes and what doesn't

How it used to be...

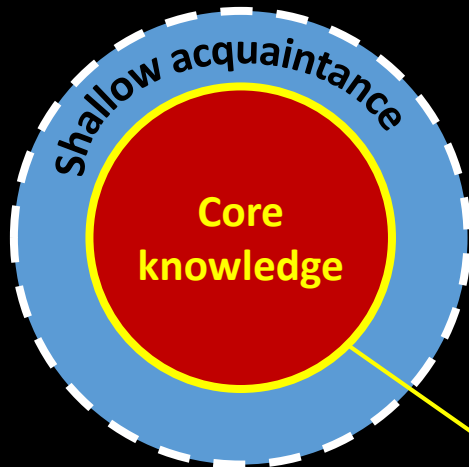
Deep ignorance



What changes and what doesn't

How it used to be...

Deep ignorance

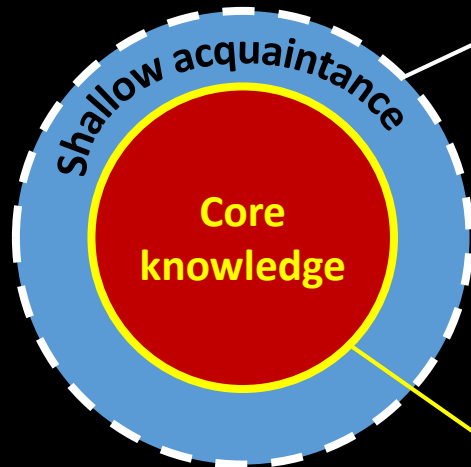


Boundary based on
cognitive resources,
very **RIGID**

What changes and what doesn't

How it used to be...

Deep ignorance



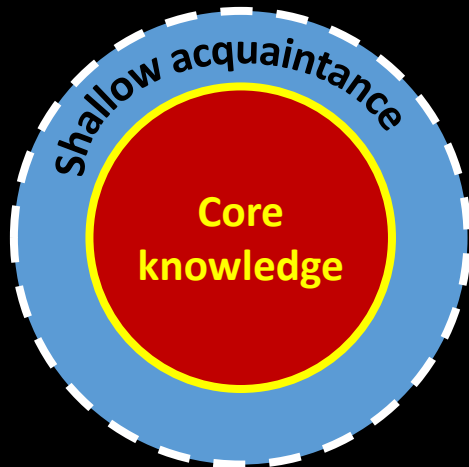
Boundary based on
information ecology,
more **FLEXIBLE**

Boundary based on
cognitive resources,
very **RIGID**

What changes and what doesn't

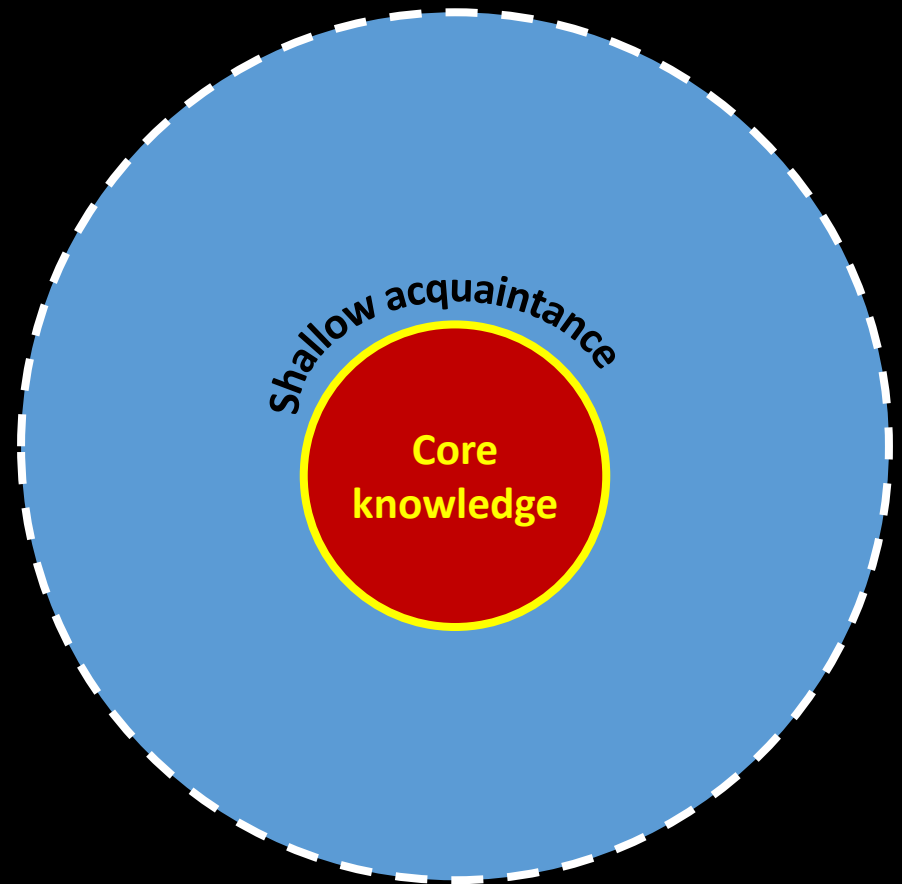
How it used to be...

Deep ignorance



...how it is now.

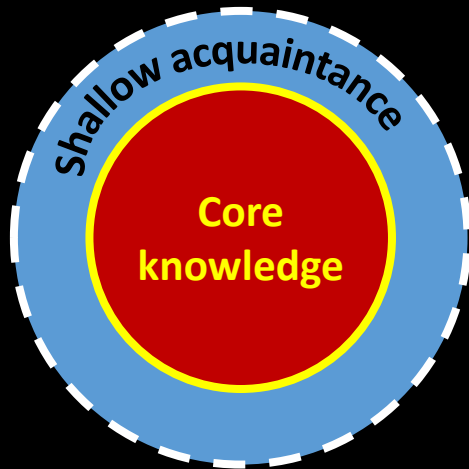
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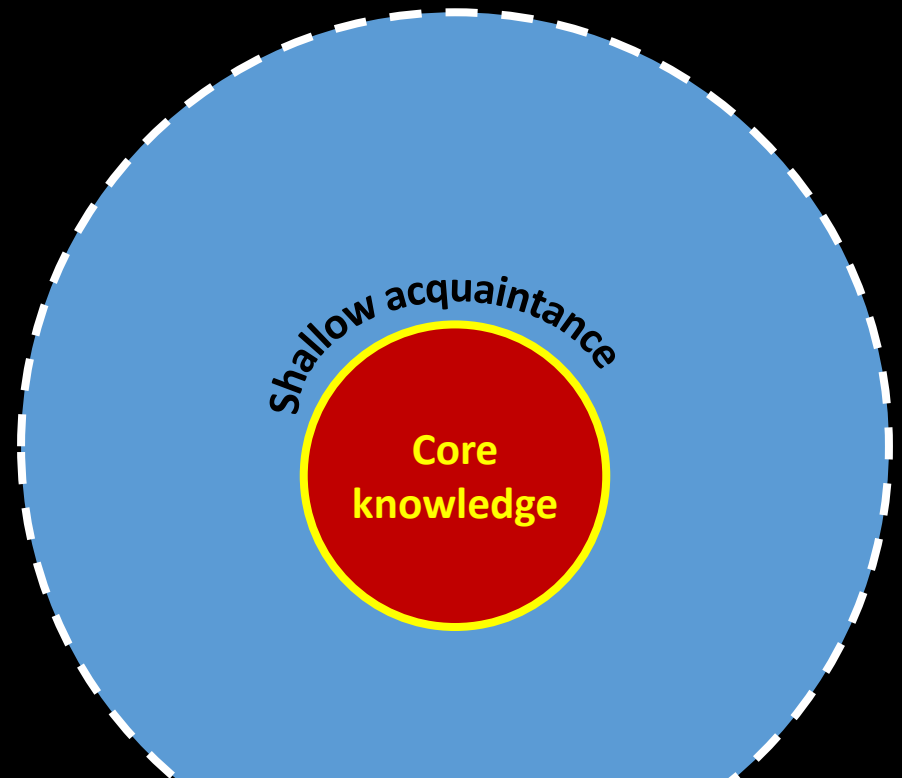
How it used to be...

Deep ignorance



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Deep ignorance



Problem: easy to mistake *shallow acquaintance* for *core knowledge*!

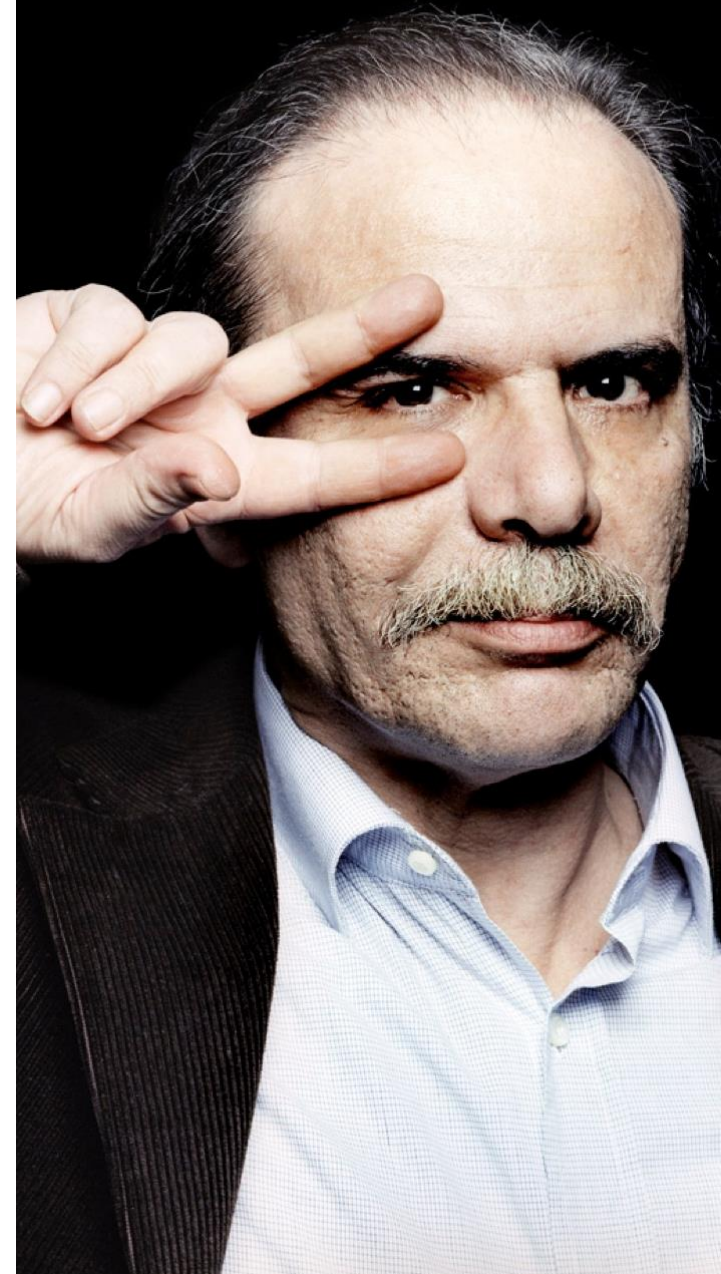
What HAS changed dramatically

- The **information ecology** has *changed much more and more rapidly* than we have – **fake news** as a misalignment issue



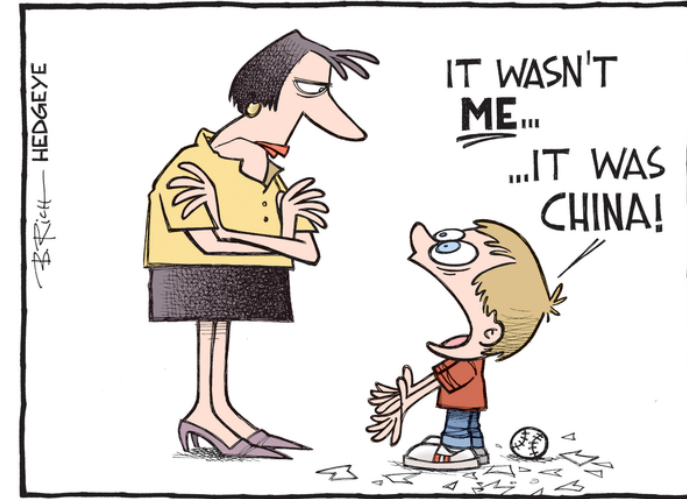
Marconi on epistemic democracy

- **Diego Marconi** (2019), «Fake news, the crisis of deference, and epistemic democracy»
- **Epistemic democracy** [is] the belief that every opinion is not just as legitimate as any other, but as *authoritative* as any other. Freedom of the expression of opinions is a constitutive principle of liberal democracy. However, it does not carry with it the corollary that all opinions are equally valuable. Freedom of expression is compatible with the notion that there are *socially grounded entitlements* that make some opinions more authoritative than others, depending on subject matter. (...) In a liberal-democratic society, such epistemic entitlements are not based on birth, or wealth, or political allegiance: they are based on socially established educational processes and the judgment of socially acknowledged communities of experts.



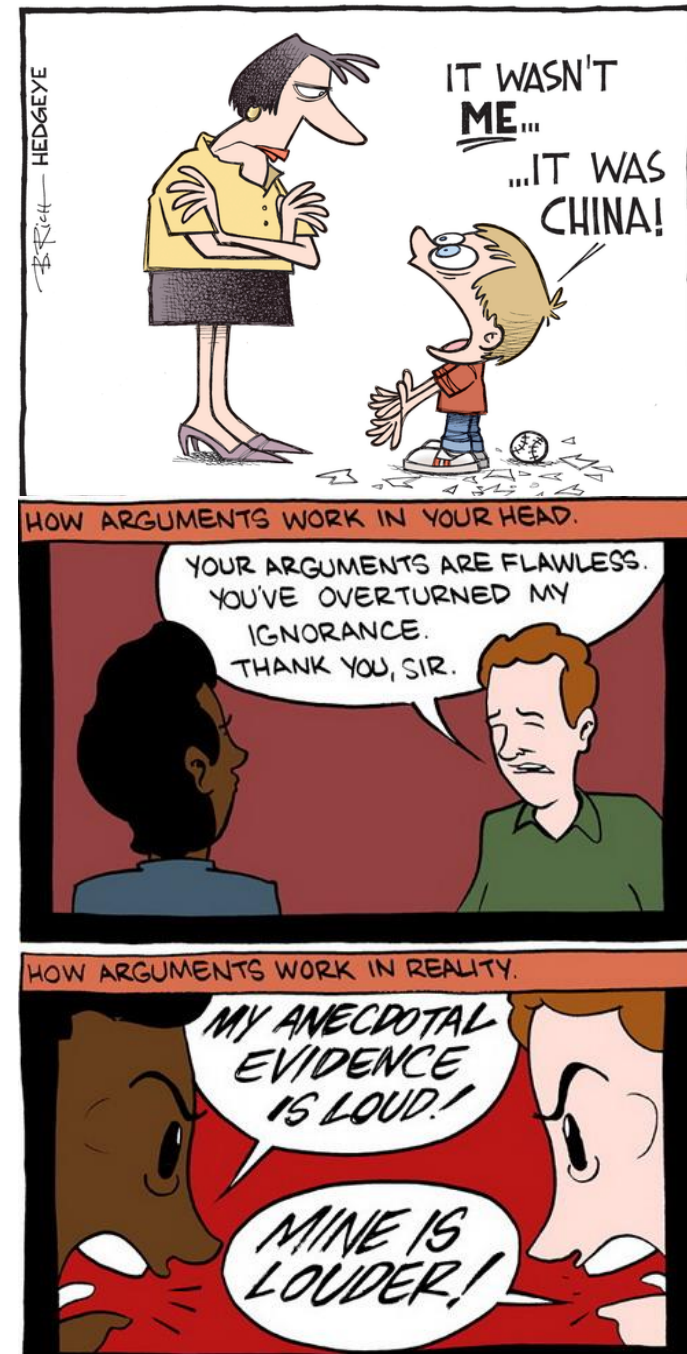
Epistemic democracy: wrong but appealing

- **Scapegoat mentality:** regarding *experts as flawed or biased* and favoring simplistic explanations that *place the blame on someone else* appeals to our *need to avoid taking responsibility* for our predicament – “if it is their fault, then it’s not mine!”



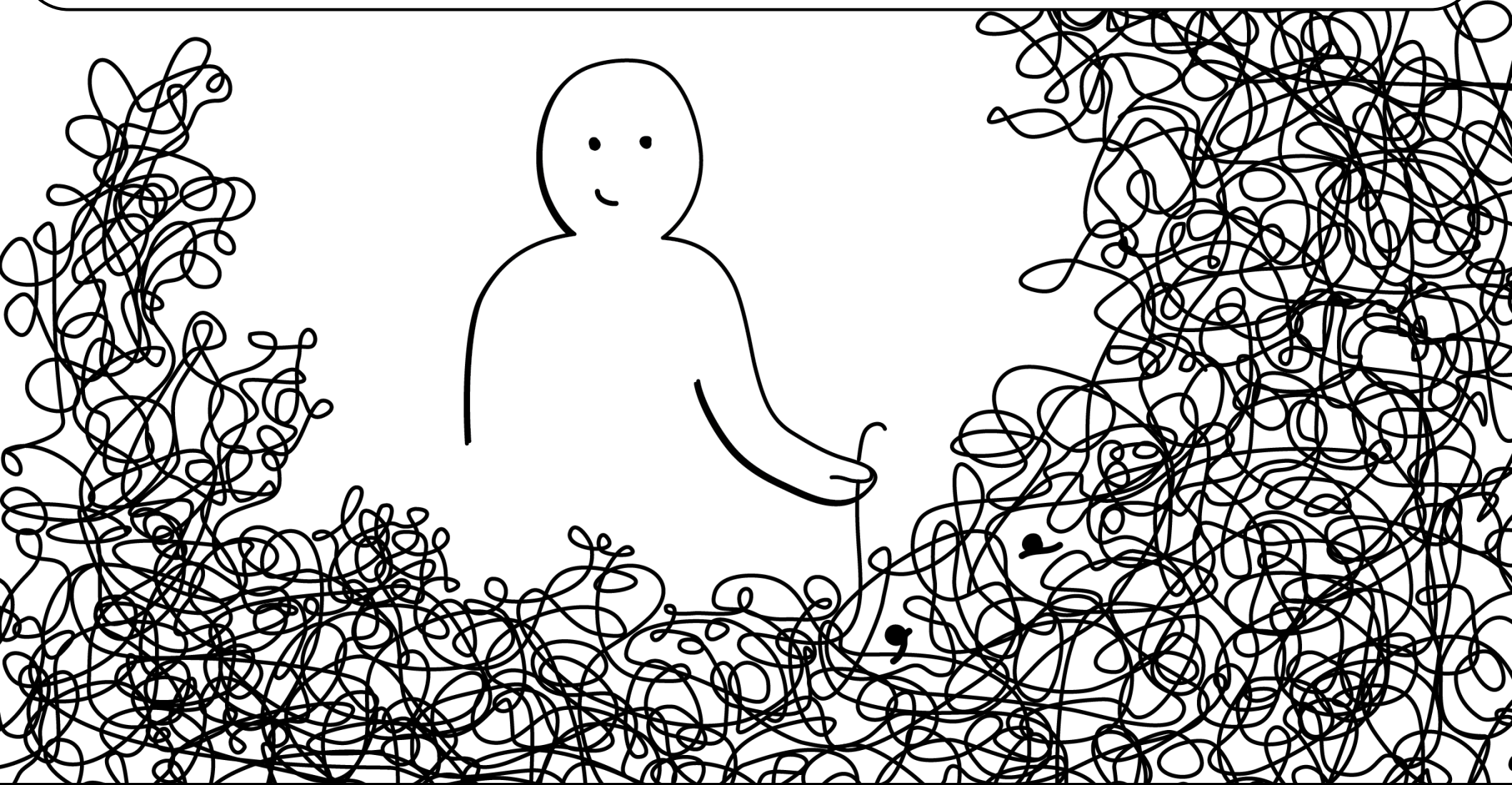
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- **Rhetoric of empowerment:** by *levelling the playfield*, epistemic democracy opens up the possibility of *engaging as peers any interlocutor*, regardless of their credentials and competence – which is what we observe every day in public discourse



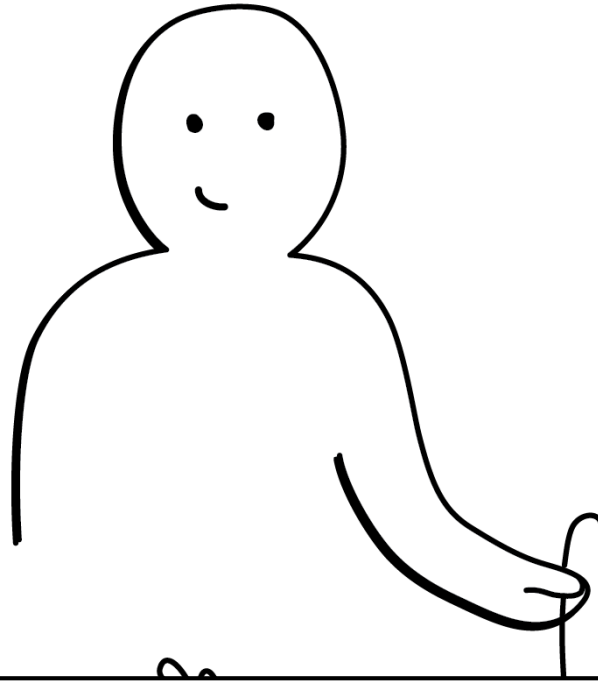
Truth? It's complicated!

- Establishing even a simple and partial truth is **hard work**



Truth? It's complicated!

- Establishing *even a simple and partial truth* is **hard work**



- The wrong attitude: **oversimplifying truth**
- Unfortunately, a *capital mistake* in **recent laws** “against fake news”

**Fake news today:
our mistakes are someone else's weapons**



A "friendly" chat on Facebook



PERIODO D'IMPOSTA 2017

CODICE FISCALE

REDDITI
QUADRO RW - Investimenti all'estero e/o attività estere di natura finanziaria - monitoraggio IVIE / IVAFE

Mod. N. 1

Codice titolo possesso	Vedere istruzioni	Codice individuaz. bene	Codice Stato estero	Quota di possesso	Criterio determin. valore	Valore iniziale	Valore finale
1	2	3	4	5	6	7	8
1	2	08	071	100	2	546.593,00	546.593,00
Valore massimo c/c paesi non collaboranti		Giorni (IVAFE)		IVAFE		Mesi (IVIE)	
9		10		11		12	
,00				,00		,00	
RW1		Credito d'imposta		IVAFE dovuta		Deduzioni	
14		15		16		17	
,00		,00		,00		,00	
Codice fiscale società o altra entità giuridica in caso di titolare effettivo		Codice fiscale altri coinvestitori		Vedere istruzioni		Quota partecipazione	
21		22		23		24	
POLIZZA LIFEPLUS						<input checked="" type="checkbox"/>	
1	2	3	4	5	6	7	8
1	2	01	071	50	2	768.945,00	768.945,00
9		10		11		12	
,00		365		17,00		,00	
RW2		14		15		16	
,00		17,00		,00		,00	
21		22		23		24	
C/C 954390 SWIS						<input type="checkbox"/>	



SEMPRONIO

13 ottobre · 🌐

È vero, il ministro Savona aveva preparato un personalissimo "piano B" in caso di uscita dall'euro: cautelarsi portando per tempo i propri risparmi all'estero (ma voi seguitate a comprare i btp, mi raccomando!) https://www.corriere.it/economia/18_ottobre_13/fondo-speculativo-inglese-euklid-giallo-dimissioni-savona-eb48743c-ce53-11e8-b10d-ee18a19b48a0.shtml

👍👎🗨️ 58

Commenti: 16 Condivisioni: 36



Mi piace



Commenta



Condividi

Visualizza altri 10 commenti



ANONIMO 1

Beh non è che la tessera numero 1 del pd, sia cittadino italiano, è italiano quando c'è da far fallire la olivetti o quando c'è da prendere a prestito 600 milioni di euro per acquistare Sorgenia, farla fallire e lasciarla al MPS (tanto ci sono gli italiani che pagano)

Mi piace · Rispondi · 8 s



ANONIMO 3

ha risposto · 11

risposte



ANONIMO 2

Il Genio



Scrivi un commento...



A “friendly” chat on Facebook



PERIODO D'IMPOSTA 2017

CODICE FISCALE

REDDITI
QUADRO RW

Investimenti all'estero e/o attività estere
di natura finanziaria e monitoraggio
IVIE / IVAFE

Mod. N. 1

- The original post uses **irony** to criticize the then current Italian Minister of European Affairs based on an inconsistency between his **official position on the soundness of Italian economy** and his **substantial investments in other countries**, as documented by his tax declaration
- Additional elements:
 - Snapshot** of his tax declaration
 - Link** to an article on “Il Corriere della Sera”



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👍👎👉 58

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ANONIMO 3

ha risposto · 11

risposte



ANONIMO 2

Il Genio



Scrivi un commento...



A “friendly” chat on Facebook



ANGRY JIM

Come si chiamano le notizie false? Bufale? Beh liberi di credere alle sciocchezze del corriere!

<https://www.laverita.info/il-corriere-accusa-savona-ma-le...>



LAVERITA.INFO

Il Corriere accusa Savona di sedere...

Mi piace · Rispondi · 8 s



SARCASTIC JOE

La verità 😂😂😂😂

😂😂😂😂😂😂😂😂😂😂😂 pagliacci



Mi piace · Rispondi · 8 s



ANGRY JIM

ha risposto · 6

risposte

- A commentator who **disagrees** with the original post, **Angry Jim**, challenges the reliability of “Il Corriere della Sera” by posting the alleged debunking of another news item (*only partially related*) on the same politician by CdS

A “friendly” chat on Facebook



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Mi piace · Rispondi · 8 s



SARCASTIC JOE

La verità 😂😂😂😂

pagliacci

Mi piace · Rispondi · 8 s



ANGRY JIM

risposte

ha risposto · 6

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- Then another commentator, **Sarcastic Joe**, sarcastically challenges the credibility of the debunking site itself, LaVerità.Info, making fun of Angry Jim for believing in it (“*you people are clowns!*”)

A “friendly” chat on Facebook



Angry Jim

Sarcastic Joe erano tanto i bravi i tuoi che la maggioranza dei popolo italiano ha scelto altro! Non hai la percezione di quanto avete fatto schifo a governare?

Mi piace · Rispondi · 8 s · Modificato



Sarcastic Joe

tranquillo ignorantello, alla prossima richiesta di mutuo forse capirai.
Capra

Mi piace · Rispondi · 8 s



Angry Jim

Sarcastic Joe a parte che c'entra il mutuo (stai a sentire le cazzate di martina?) Il mutuo ce l'ho già fenomeno!

Mi piace · Rispondi · 8 s

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- **Angry Jim** reacts by *lashing out at Sarcastic Joe's alleged political party*, who lost the last elections, and accusing them of having governed poorly



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- **Sarcastic Joe** keeps provoking Tizio using heavy-handed sarcasm: “*don’t worry fool, next time you’ll ask for a mortgage maybe you’ll understand. Goat!*”



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Sarcastic Joe

il mutuo (stai a sentire le cazzate di martin
già fenomeno!

Mi piace · Rispondi · 8 s

- **Angry Jim** replies with a vulgar allusion to *the views of the current Secretary of Caio’s alleged political party* (“le cazzate di Martina”)

A “friendly” chat on Facebook



Angry Jim

Sarcastic Joe se poi, invece ti

vuoi veramente documentare, invece di dare della capra a qualcuno ad cazzum, ti consiglio di leggere questo articolo sulla inesistente correlazione tra spread e mutui!

https://www.agi.it/.../spread_mutui.../news/2018-10-12/



AGI.IT

Un mutuo costa davvero di più se lo spread aumenta?

Mi piace · Rispondi · 8 s



Sarcastic Joe

mi convinco sempre di più che le pezze al culo le meriterete tutte tutte

Mi piace · Rispondi · 8 s



Angry Jim

Sarcastic Joe tu prendi le

obbligazioni della banca dell'etruria e vedrai come ti aumenta il capitale!

Mi piace · Rispondi · 8 s

A “friendly” chat on Facebook



Angry Jim

Sarcastic Joe

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https://www.agi.it/.../spread_mutui.../news/2

- **Angry Jim** further reacts *with ironic vulgarity* (“ad cazzum”) and *providing a source that **should debunk the correlation between spread and mortgage rates** somehow invoked by Caio – but the article **does NOT prove the point**, and **nobody notices**!*



AGI.IT

Un mutuo costa davvero
lo spread aumenta?

Mi piace · Rispondi · 8 s



Sarcastic Joe

mi convinco sempre di più che le pezze
al culo le meriterete tutte tutte



Mi piace · Rispondi · 8 s



Angry Jim

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AGI.IT

Un mutuo costa davvero
lo spread aumenta?

Mi piace · Rispondi · 8 s

- **Sarcastic Joe** keeps *taunting* Tizio and treating him as a *prototypical member of a larger group* of alleged moroons



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Mi piace · Rispondi · 8 s




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Mi piace · Rispondi · 8 s

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 **Sarcastic Joe** mi convinco sempre di più che le pazzie
al culo le meriterete tutte tutte

Mi piace · Rispondi · 8 s

- **Angry Jim**, for the *gran finale*, throws into the mixture the 2015 Banca dell'Etruria scandal, which involved a prominent member of Caio's alleged political party and *has nothing to do with anything else*

 **Angry Jim** Sarcastic Joe t
obbligazioni della banca dell'etruria e vedrà
il capitale!

Mi piace · Rispondi · 8 s

Some general remarks on this chat



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- *No thematic connection to the original post and no interaction with its author. the **rude dinner guests**' metaphor*
- **Thematic inconsistency** within the debate: *no point is critically examined, many topics feel like items in a **standardized arsenal***



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- *Framing the counterpart in a **bigger narrative / larger group**, without proof*

LAD
BIBLE

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- **Sources** are often quoted but rarely read and never discussed in details: **weapons of aggression**, rather than tools for knowledge
- *Different views, **same (awful) debating quality***

Some general remarks on this chat

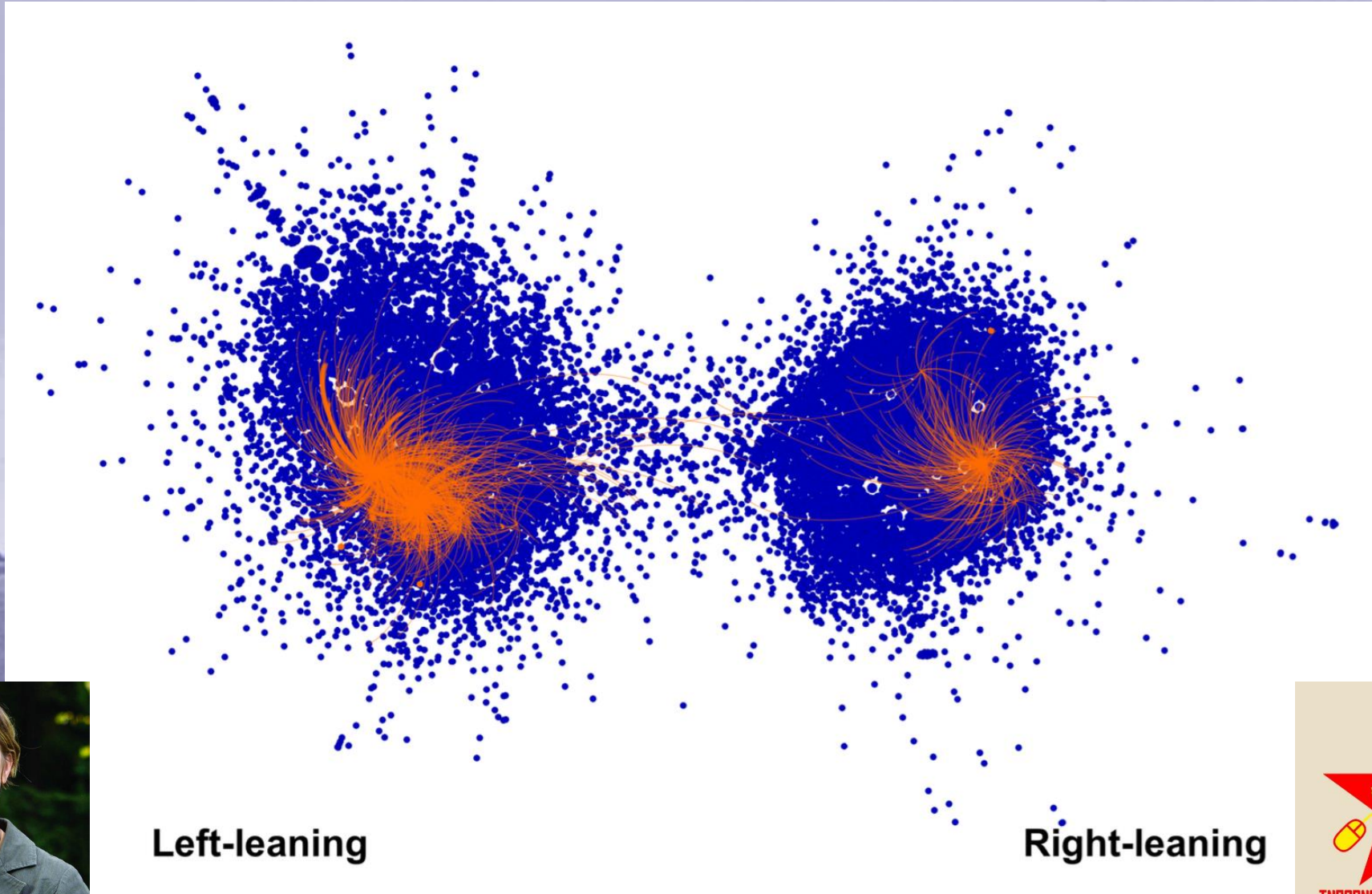
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- *Different views, **same (awful) debating quality***

This kind of debates are **naturally conducive of fake news**, whether they are based on them or not to begin with

Starbird: IRA in #BlackLivesMatter

TRASH
ISLES

LAD
BIBLE



Left-leaning

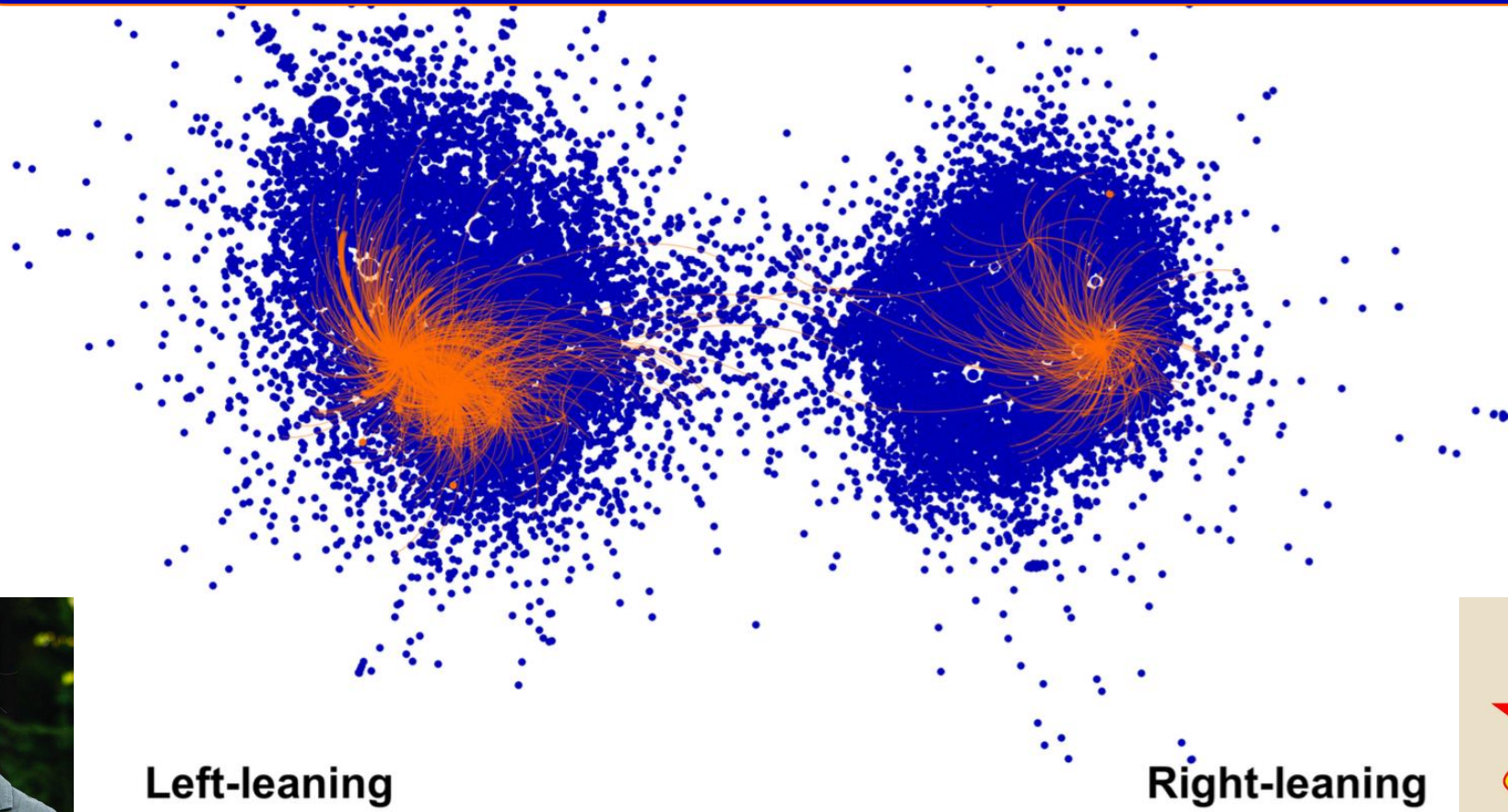
Right-leaning



INTERNET RESEARCH AGENCY

Starbird: IRA in #BlackLivesMatter

"The people who seek to manipulate us (...) are not merely yelling at us from the "other side" of these political divides, but are increasingly trying to cultivate and shape us from within our own communities."



INTERNET RESEARCH AGENCY

Friendly fire: Di Batista "cazzaro!"



Alessandro Di Batista

Mi piace questa Pagina · 16 ottobre 2018 ·

Stamattina mio figlio Andrea mi chiede "papà, come mai stai mettendo a disposizione il tuo bagaglio culturale e le tue competenze qui in Guatemala e non in Italia?"

Gli rispondo col primo sentimento che ho provato in quel momento, ovvero con umiltà: "Vedi Andrea, in Italia ho lasciato una parte di me. Una parte costituita per metà da intraprendenza e per l'altra metà da onestà. Questa parte di me ha un nome, e si chiama Luigi Di Majo".

Mia moglie Sahra, che senza che me ne accorgessi aveva ascoltato tutto, entra nella stanza e mi dice "Alessandro, potevi vantarti e dire a nostro figlio che tu hai contribuito al successo del Movimento 5 Stelle. Ma non hai ceduto alle manie di protagonismo, e per questo ti ringrazio, perché hai appena insegnato a nostro figlio il concetto di umiltà".

Questa è la nostra famiglia. Questo è il nostro modo di vivere. Questa è l'Italia che vogliamo.

#governodelcambiamento

👍👎❤️ 17.859 Commenti: 24.083 Condivisioni: 5737

👍 Mi piace 💬 Commenta ➦ Condividi 👤

Più pertinenti ▾



MIO AMICO Guarda quanto sei deficiente. Tuo figlio manco sta in piedi, a cazzaro!

Mi piace · Rispondi · 23 s



SCONOSCIUTO Ogni mattina in Guatemala un bambino di due anni chiede al padre lumi riguardo l'utilizzo del proprio bagaglio culturale e le proprie competenze.



Scrivi un commento...



Friendly fire: Di Batista “cazzaro!”

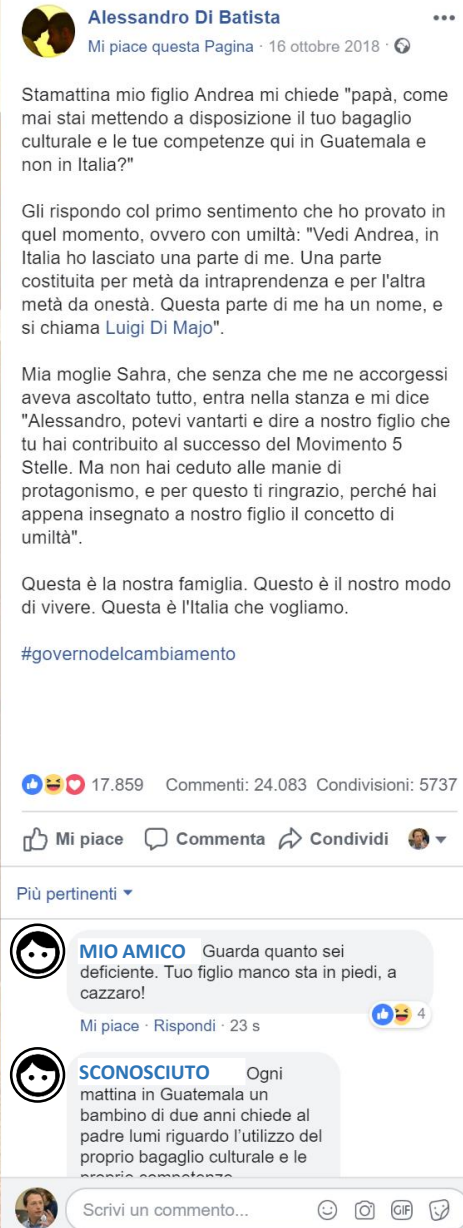
This morning my son Andrea asks me “daddy, how come you are making your cultural background and skills available here in Guatemala and not in Italy?”

I answer him with the first sentiment I felt in that moment, that is, humility: “You see Andrea, in Italy I left a part of me. A part made for one half of resourcefulness and for the other half of honesty. This part of me has a name, and it is called **Luigi Di Majo**.”

My wife Sahra, who unbeknownst to me had listened to everything, enters the room and tells me “Alessandro, you may have bragged and told our son that you were instrumental to the success of the Five Stars Movement. But you didn’t fall prey of an egotistic attitude, and for that I thank you, because you have just taught our son the concept of humility”.

This is our family. This is our way of life. This is the Italy that we want.

[#governmentofchange](#)

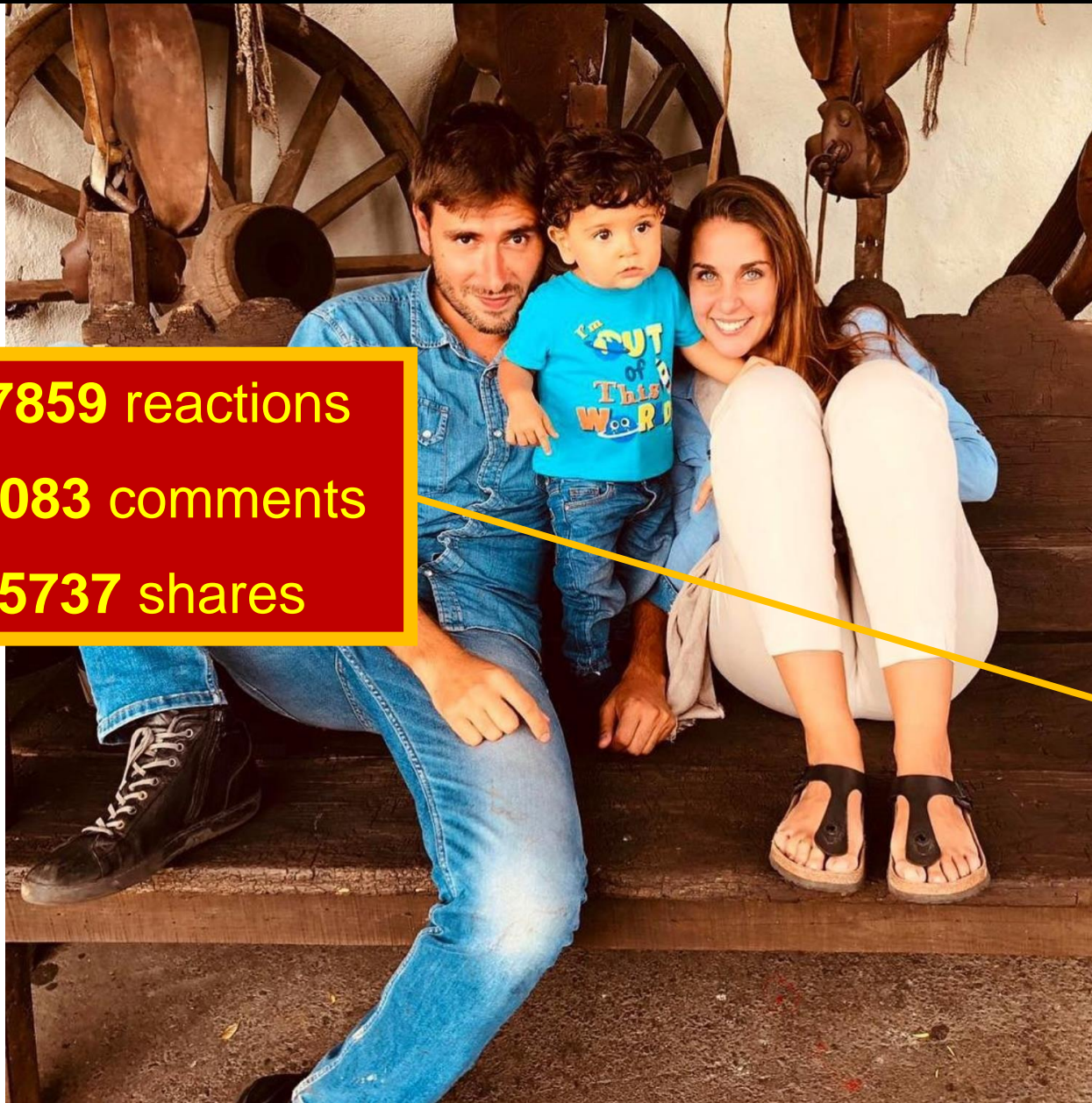


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Più pertinenti



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Scrivi un commento...

Friendly fire: Di Batista "cazzaro!"

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Many take it SERIOUSLY –
including my friend!



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- My friend not only **commented** the post, but also **re-posted** it on his wall – and thus *I saw it on my wall*
- At first **I fully share** his disparaging comment...

Friendly fire: Di Batista “cazzaro!”



- My friend not only **commented** the post, but also **re-posted** it on his wall – and thus *I saw it on my wall*
- At first **I fully share** his disparaging comment...
- ... until I discovered (thanks to my wife) that it is a **satirical account** (Di Batista vs. Di Batutista)
- My friend discovers it too: *doesn't delete the post* but **admits the error**
- “(correction... apparently it's a *satirical page, thanks for the laugh then, I needed it*)”

Friendly fire: Di Batista “cazzaro!”



- In the comments to the post, he makes an interesting **remark**:
- *“I rectified my post...disappointment or not, it is not correct and it is not right 1) to distribute bad information (social media doesn’t help in that, as a matter of fact) 2) to avoid admitting a mistake (like my share). This said, unfortunately my view of them doesn’t change: they are hypocritical, ignorant, incompetent and conceited. And unfortunately, by re-posting this thing, I wasn’t much better than them, this bothers me a bit, yes.”*

FB parodies: frequent & bipartisan



Alessandro Di Batista

Luigi Di Majo

Verginia Raggi

Gluseppe Conte

Matteo Renzi che fa cose

Matteo Salvini fa cose

Silvio Berlusconi - Thug Life

...etcetera etcetera

Problems with friendly fire



RISKS

- *More credible* because coming from **friendly / trustworthy sources**
- *More credible* because **congenial**

COSTS

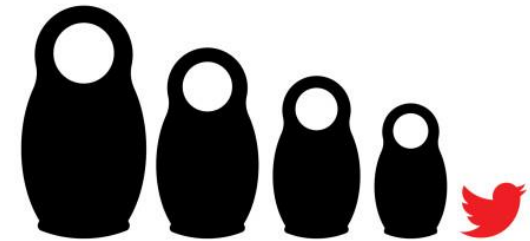
- Even when the «truth» is *re-established*, the *parody* works on **in-group / out-group mechanisms** → increased **polarization**
- It creates additional **noise** – especially when the *boundaries of parody are unclear / fuzzy*



Friendly fire as a manipulation tool

HOME > POLITICS > POLITICS FEATURES

NOVEMBER 25, 2019 9:02AM ET



That Uplifting Tweet You Just Shared? A Russian Troll Sent It

Here's what Russia's 2020 disinformation operations look like, according to two experts on social media and propaganda.

By **DARREN LINVILL & PATRICK WARREN**

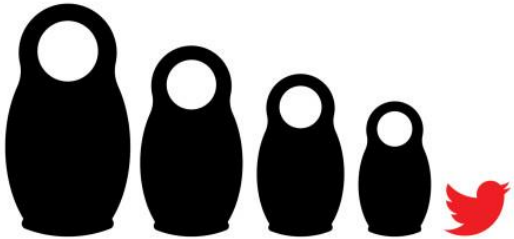


RollingStone

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*Professional trolls are good at their job. (...) The professionals know you catch more flies with honey. They don't go to social media looking for a fight; they go looking for new best friends. (...) Disinformation operations aren't typically fake news or outright lies. Disinformation is most often simply spin. **Spin is hard to spot and easy to believe, especially if you are already inclined to do so.** (...) Professional disinformation isn't spread by the account you disagree with — quite the opposite. **Effective disinformation is embedded in an account you agree with.** The professionals don't push you away, they pull you toward them.*

RollingStone

Friendly fire as a manipulation tool

Misinformation Review HARVARD KENNEDY SCHOOL

EXPLORE the review SUBMIT an essay REVIEW for Misinfo

MAY 12, 2020 SHARE DOWNLOAD PDF

COMMENTARY

Signs of a new world order: Italy as the COVID-19 disinformation battlefield

When Italy became the western center of the COVID-19 outbreak, it also became the focus of a series of states-sponsored coordinated disinformation campaigns. From early March through May 2020, disinformation operations in the country have increased noticeably, showing evidence of evolving strategies from multiple state actors geared towards reshaping the narrative of the global COVID-19 crisis and pushing forward geopolitical interests. Such campaigns may be a sign of things to come with Italy as a critical battleground subject to state-sponsored disinformation operations, acting as a gauge of power relations particularly between the United States, Russia, the EU, and China.

BY COSTANZA SCIUBBA CANIGLIA
Harvard Kennedy School Misinformation Review



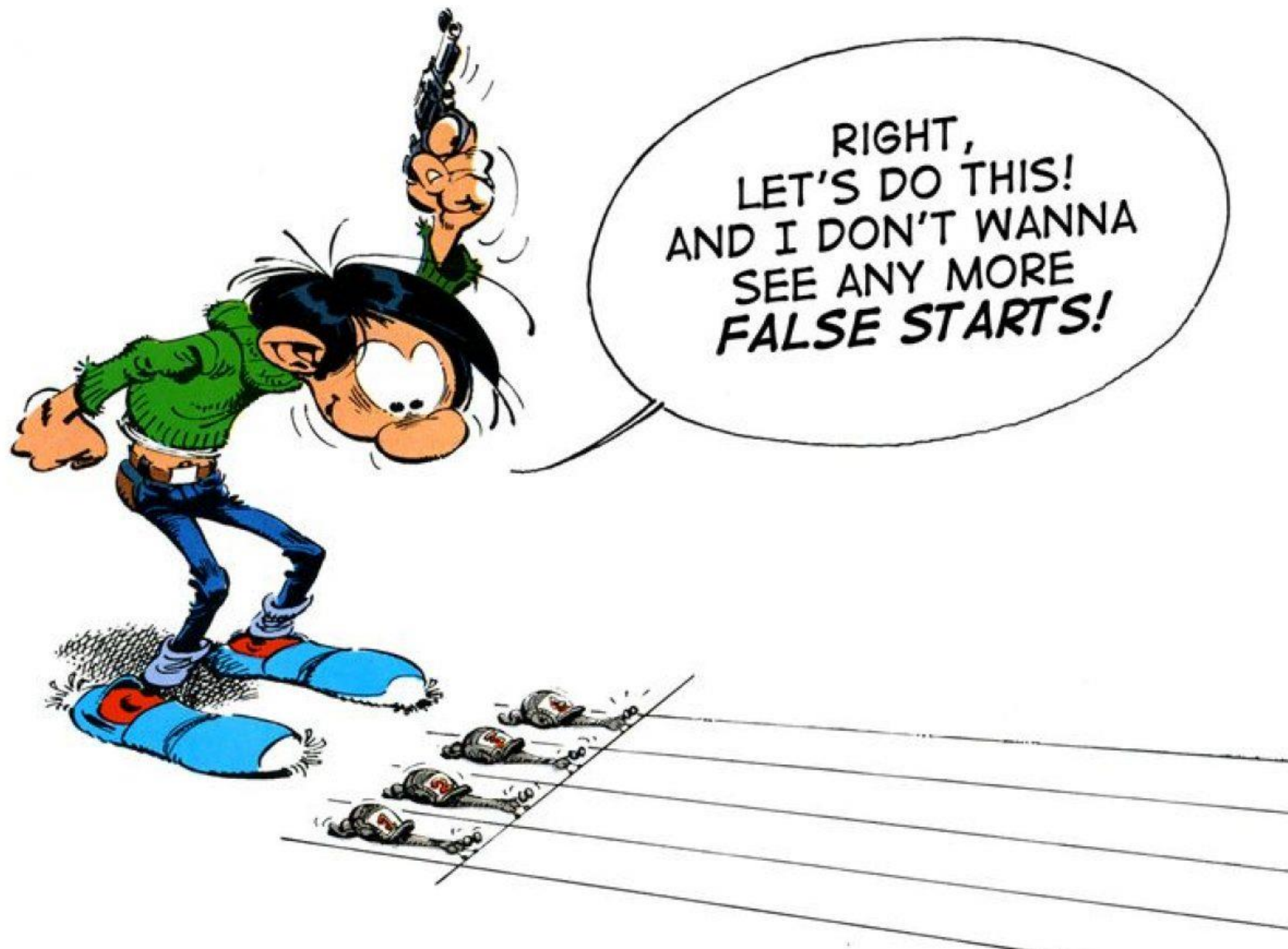
- Manipulation is *often* framed non-aggressively
- E.g., *China* and *Russia* orchestrated **massive information campaigns** to *use their international aids for COVID* as an opportunity to **improve their image** and **fuel skepticism / resentment** towards *local administrations* and *international competitors*, i.e. the US and the EU



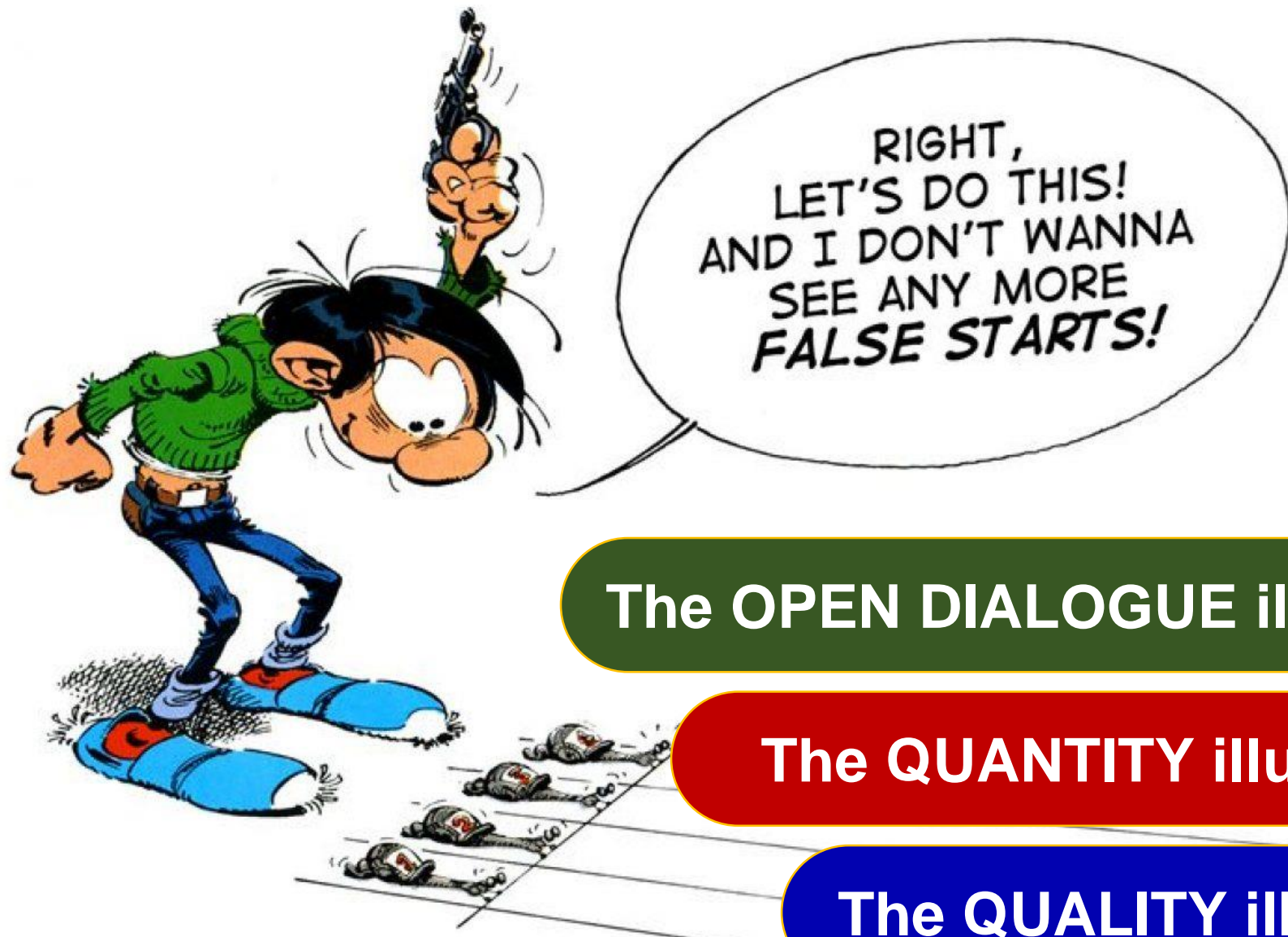
Argumentation & FNs: so what?



First, let's avoid some pitfalls



First, let's avoid some pitfalls



The OPEN DIALOGUE illusion

The QUANTITY illusion

The QUALITY illusion

The quality illusion

- False start n. 1: *good reasoners* argue **differently** from *bad reasoners*, therefore we can leverage **differences in argument structure** for *fake news detection*

The image shows a screenshot of a Facebook discussion titled "Vaccination Re-education Discussion Forum" from yesterday at 07:53. The conversation is between a parent and their 11-year-old son. The son asks about the safety of vaccines, and the parent responds with a list of safety concerns. The list includes: "The flu shot causes a 4,250% increase of fetal death syndrome when given to pregnant women - THE FLU SHOT IS LITERALLY KILLING FETUSES", "Children who get the flu vaccine have a 3x greater risk of hospitalization (105th International Conference of the American Thoracic Society)", "No real studies have been done that actually prove the safety of vaccines. The studies are either performed by those in the industry, are funded by vaccine makers, do not have controls (here's the scientific method if you forgot how an experiment is supposed to work), or are backed by poorly collected evidence. Study sponsorship is also positively correlated with optimistic results.", and "Vaccine Adverse Events Reporting System (VAERS), the vaccine".

Below the Facebook discussion is a screenshot of a Twitter thread. The thread starts with a tweet from Nathan Boonstra MD (@PedsGeekMD) who says: "All in all, @frontlinepbs #vaccinewar got science right but false balanced far too much and set poor tone. PBS can do better next iteration." This tweet is retweeted by Tara Haele. Below it is a tweet from Liz Ditz (@lizzditz) who says: "Avers love to misuse VAERS, @livemylife000 Anybody who says 'VAERS reports prove' doesn't understand the system. #VaccineWar #SimplyScience". This tweet is also retweeted by Tara Haele. Below that is a tweet from Voices for Vaccines (@Voices4Vaccines) who says: "Learn about Barbara Loe Fisher and why you shouldn't listen to a word she says ever. qub.me/G8hBQz #SimplyScience #vaccinewar". This tweet is retweeted by Tara Haele. Below that is a tweet from Nathan Boonstra MD (@PedsGeekMD) who says: "Wow, @frontlinepbs. Calling NVIC a watchdog group dedicated to 'vaccine safety' is just wrong. #VaccineWar". This tweet is retweeted by Tara Haele. Below that is a tweet from Leslie Waghorn (@lawaghorn) who says: "Ugh! @frontlinepbs stop calling them 'vaccine watchdogs' that's not what they are #vaccinewar #vaccinewars".

The quality illusion

- False start n. 1: *good reasoners* argue **differently** from *bad reasoners*, therefore we can leverage **differences in argument structure** for *fake news detection*
- *Really?* Compare:
 - According to the website www.safeyourkidsfrombigpharma.com, *vaccines are very dangerous!*
 - According to The Lancet, *vaccines are essential to public health!*
- Structurally **identical**

The screenshot shows a Twitter thread discussing vaccine safety. At the top, there's a header for "Vaccination" under a "Re-education Discussion Forum". Below it, a conversation snippet shows a friend saying they have to leave early to get shots, and a son asking about vaccination. The main part of the image is a tweet by Nathan Boonstra MD (@PedsGeekMD) from 3 hours ago. He says that while @frontlinepbs and #vaccinewar got science right, they were too balanced and set a poor tone. This tweet has been retweeted by Tara Haelle and Liz Ditz (@lizditz). Below it, another tweet by Tara Haelle retweets @Voices4Vaccines, which mentions Barbara Loe Fisher and provides a link to qub.me/G8hBQZ. A third tweet by Nathan Boonstra MD follows, stating that calling NVIC a watchdog group dedicated to "vaccine safety" is wrong. This tweet is also retweeted by Tara Haelle and Leslie Waghorn (@lawaghorn).

Vaccination

Re-education Discussion Forum

Yesterday at 07:53 · 🌐

*Conversation between my 11 year old son and a friend at school:

Friend: "I have to leave early today. I'm going to the doctor to get shots."

Son: "Vaccination?"

Friend: "Yeah, the shot."

Son: "You do NOT know how dangerous those ingredients*"

Friend: *turns pale "Is this?!"

Son: "I'm sure you'll tell them to go to your parents."

I. Love. Him.

Safety

- The flu shot causes a 4,250% increase of fetal death syndrome when given to pregnant women - THE FLU SHOT IS LITERALLY KILLING FETUSES
- Children who get the flu vaccine have a 3x greater risk of hospitalization(105th International Conference of the American Thoracic Society)
- No real studies have been done that actually prove the safety of vaccines. The studies are either performed by those in the industry, are funded by vaccine makers, do not have controls (here's the scientific method if you forgot how an experiment is supposed to work), or are backed by poorly collected evidence. Study sponsorship is also positively correlated with optimistic results.
- Vaccine Adverse Events Reporting System (VAERS), the vaccine

Nathan Boonstra MD @PedsGeekMD · 3h
All in all, @frontlinepbs #vaccinewar got science right but false balanced far too much and set poor tone. PBS can do better next iteration.
👍 11 ⭐ 18 ...

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Liz Ditz @lizditz · 4h
Avers love to misuse VAERS, @livemylife000 Anybody who says "VAERS reports prove" doesn't understand the system. #VaccineWar #SimplyScience
👍 9 ⭐ 10 ... View conversation

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Voices for Vaccines @Voices4Vaccines · 4h
Learn about Barbara Loe Fisher and why you shouldn't listen to a word she says ever. qub.me/G8hBQZ #SimplyScience #vaccinewar
👍 9 ⭐ 5 ...

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Wow, @frontlinepbs. Calling NVIC a watchdog group dedicated to "vaccine safety" is just wrong. #VaccineWar
👍 19 ⭐ 22 ...

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Ugh! @frontlinepbs stop calling them "vaccine watchdogs" that's not what they are #vaccinewar #vaccineawareness

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- Really? Compare:
 - According to the website www.safeyourkidsfrombigpharma.com, vaccines are very dangerous!
 - According to The Lancet, vaccines are essential to public health!
- Structurally identical
- Big difference: the **kind of source** considered *relevant*, which is not about *argumentation*

The image shows a screenshot of a Facebook conversation and a Twitter thread. The Facebook conversation is titled "Vaccination Re-education Discussion Forum" and shows a dialogue between a parent and their 11-year-old son. The son is questioning the safety of vaccines, and the parent is responding with reassurance. The Twitter thread features several tweets discussing vaccine safety, including a tweet from Nathan Boonstra MD (@PedsGeekMD) and a tweet from Tara Haele retweeting a tweet from Liz Ditz (@lizzditz).

Facebook Conversation:

Vaccination Re-education Discussion Forum
Yesterday at 07:53 · 📷

*Conversation between my 11 year old son and a friend at school:

Friend: "I have to leave early today. I'm going to the doctor to get shots."

Son: "Vaccination?"

Friend: "Yeah, the school."

Son: "You do NOT know how dangerous the ingredients* are!"

Friend: *turns pale "this?!"

Son: "I'm sure you'll tell me to your parents."

I. Love. Him.

Safety

- The flu shot causes a 4,250% increase of fetal death syndrome when given to pregnant women - THE FLU SHOT IS LITERALLY KILLING FETUSES
- Children who get the flu vaccine have a 3x greater risk of hospitalization(105th International Conference of the American Thoracic Society)
- No real studies have been done that actually prove the safety of vaccines. The studies are either performed by those in the industry, are funded by vaccine makers, do not have controls (here's the scientific method if you forgot how an experiment is supposed to work), or are backed by poorly collected evidence. Study sponsorship is also positively correlated with optimistic results.
- Vaccine Adverse Events Reporting System (VAERS), the vaccine

Twitter Thread:

Nathan Boonstra MD @PedsGeekMD · 3h
All in all, @frontlinepbs #vaccinewar got science right but false balanced far too much and set poor tone. PBS can do better next iteration.

Tara Haele retweeted
Liz Ditz @lizzditz · 4h
Avers love to misuse VAERS, @livemylife000 Anybody who says "VAERS reports prove" doesn't understand the system. #VaccineWar #SimplyScience

Tara Haele retweeted
Voices for Vaccines @Voices4Vaccines · 4h
Learn about Barbara Loe Fisher and why you shouldn't listen to a word she says ever. qub.me/G8hBQz #SimplyScience #vaccinewar

Tara Haele retweeted
Nathan Boonstra MD @PedsGeekMD · 4h
Wow, @frontlinepbs. Calling NVIC a watchdog group dedicated to "vaccine safety" is just wrong. #VaccineWar

Tara Haele retweeted
Leslie Waghorn @lawaghorn · 3h
Ugh! @frontlinepbs stop calling them "vaccine watchdogs" that's not what they are #vaccinewar #vaccinewars

The quantity illusion

- False start n. 2: *good reasoners* argue more than *bad reasoners*, then **argument counting** can support better *fake news detection*

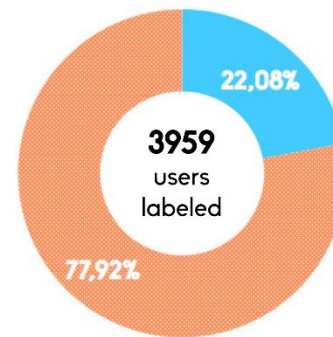
The quantity illusion

- False start n. 2: *good reasoners* argue more than *bad reasoners*, then **argument counting** can support better *fake news detection*
- Really? FNs supporters* can be as *argumentative as their opponents*, and in fact empirical evidence suggest the former **argue online more** than the latter

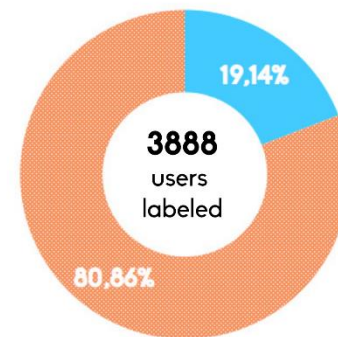
	Total	Science News	Conspiracy News
Pages	73	34	39
Posts	271,296	62,705	208,591
Likes	9,164,781	2,505,399	6,659,382
Comments	1,017,509	180,918	836,591
Likers	1,196,404	332,357	864,047
Commenters	279,972	53,438	226,534

doi:10.1371/journal.pone.0118093.t003

User affiliation
■ scientific news
■ alternative news



comments



likes



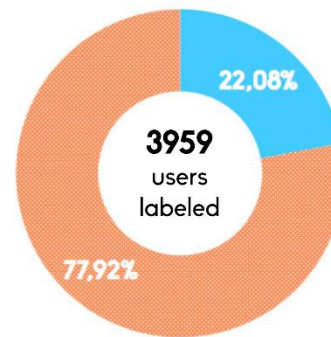
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- Really? FNs supporters* can be as *argumentative as their opponents*, and in fact empirical evidence suggest the former **argue online more** than the latter
- Will it work *the other way around*?
- NO**, because:
 - Easier* things to count (comments, likes)
 - Still *highly imprecise* metrics
 - FNs supported by both **credulous acceptance** of uncredited sources and **unreasonable skepticism** of authorities

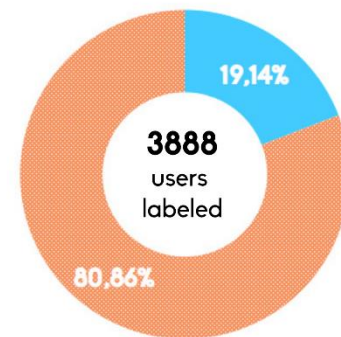
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comments

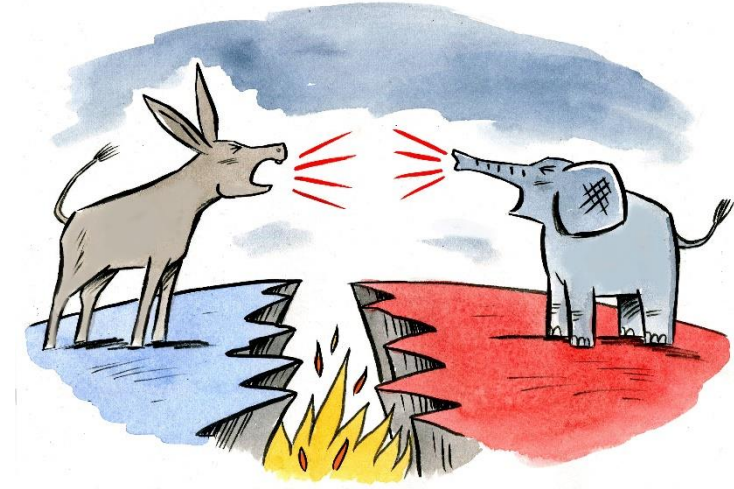


likes



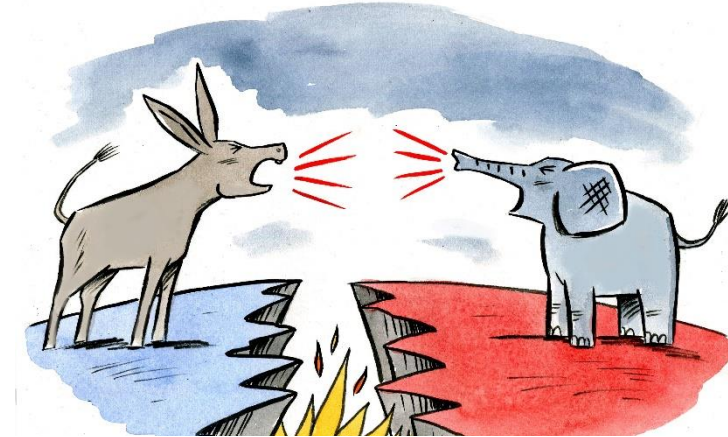
The open dialogue illusion

- False start n. 3: *fake news* thrive for lack of *critical scrutiny*, thus we need to make people with **opposing views** talk to each other on **controversial topics**, so that argumentation can lead to a *reasonable resolution*



The open dialogue illusion

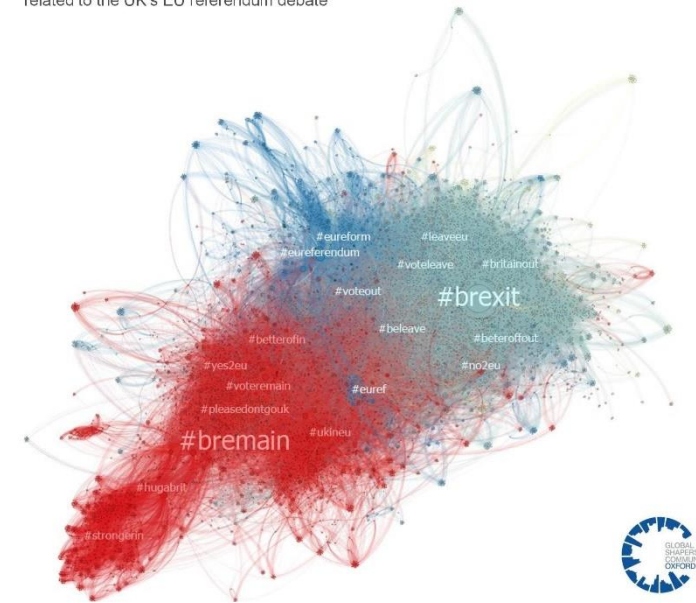
- False start n. 3: *fake news* thrive for lack of *critical scrutiny*, thus we need to make people with **opposing views** talk to each other on **controversial topics**, so that argumentation can lead to a *reasonable resolution*
- Not only it does not work, it actually **backfires** quite spectacularly! Cf. Quattrocioni et al. on *polarization* and the *downside of fact-checking*
- Two main problems:
 - People do **not willingly self-expose** themselves to *conflicting views*
 - When presented with *contrary evidence* or *debunking narratives*, this **increases polarization**, instead of *reducing it*



The EU referendum debate in the UK

Mapping polarization on social media

Semantic network analysis of 13,310 co-occurring hashtags on Instagram related to the UK's EU referendum debate

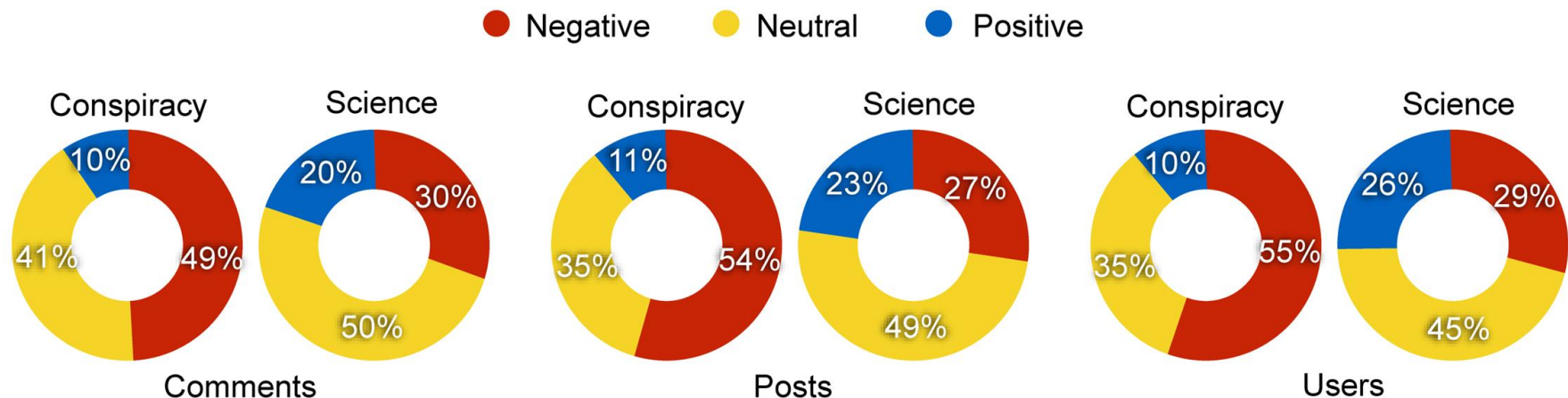


Source: Data visualisation and analysis provided by Vyacheslav Polonski, a Global Shaper from the Oxford Hub



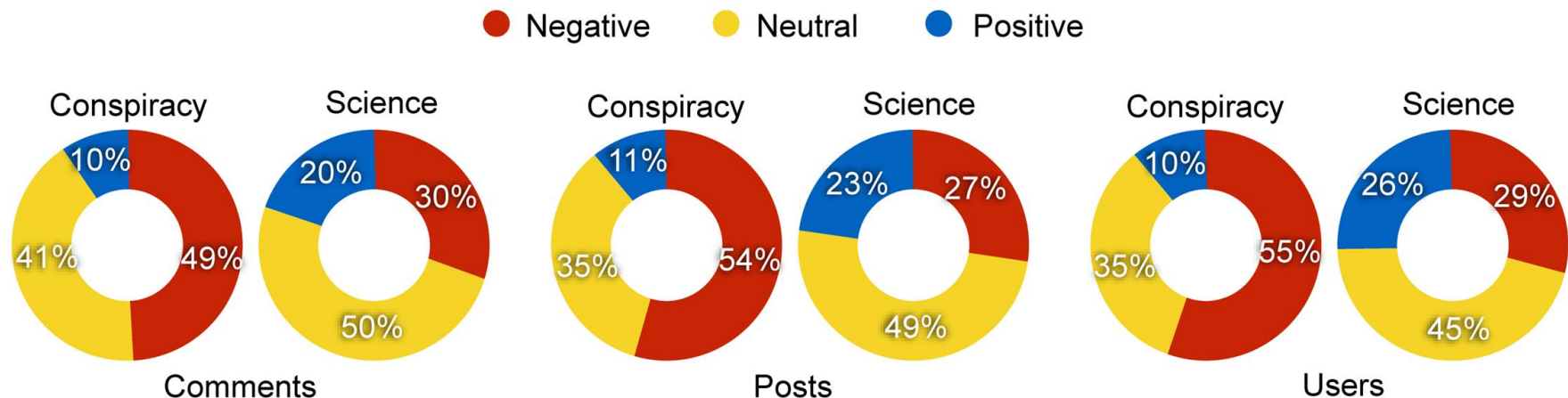
Interlude: angry people love FNs

- *Empirical evidence:* see Zollo et al., 2015



Interlude: angry people love FNs

- *Empirical evidence*: see Zollo et al., 2015
- Explain why fake news are so *attractive* for *certain people* (e.g., the downtrodden) and *in certain times* (e.g., economical crisis, pandemic)
- FNs basic *narrative offers*:
 - a **scapegoat** (Big Pharma, corrupted politicians, the Elders of Zion, etc.)
 - an **easy fix** (do not vaccinate your kids, vote some random New Person, don't trust the Jews, forget about COVID, etc.)
 - **freedom from blame** (on the contrary, people as free-thinking heroes)



Is argumentation doomed to fail with FNs?



Creativity is key for ATs success with FNs

- First impression: *very little argumentation* in the **traditional sense**
- However, to *deal with this fake news* we had to practice several **SKILLS** that are crucial for being a **good arguer**
- *Abstract* description:
 - attention
 - analysis
 - inference
 - comparison
 - evaluation... and more!

SKILL	SUB-SKILLS
1. Interpretation	Categorization Decoding Significance Clarifying Meaning
2. Analysis	Examining Ideas Identifying Arguments Analyzing Arguments
3. Evaluation	Assessing Claims Assessing Arguments
4. Inference	Querying Evidence Conjecturing Alternatives Drawing Conclusions
5. Explanation	Stating Results Justifying Procedures Presenting Arguments
6. Self-Regulation	Self-examination Self-correction



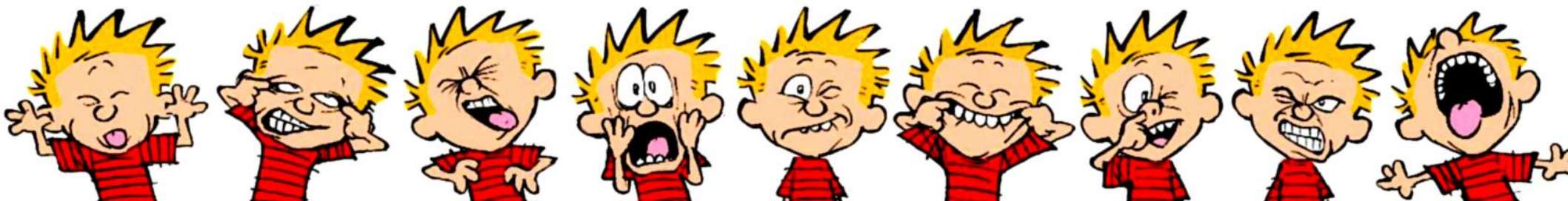
Creativity is key for ATs success with FNs

A more concrete list:

- **Asking questions**
- **Checking and comparing sources**
- **Reflecting** on the technology and **learning** how to use it
- Keeping an **open mind on data** and practicing **multiple epistemic attitudes**
- Deciding **whether and how to share** your findings / views
- **Contributing** to online information

CONSENSUS LIST OF CT COGNITIVE SKILLS AND SUB-SKILLS

SKILL	SUB-SKILLS
1. Interpretation	Categorization Decoding Significance Clarifying Meaning
2. Analysis	Examining Ideas Identifying Arguments Analyzing Arguments
3. Evaluation	Assessing Claims Assessing Arguments
4. Inference	Querying Evidence Conjecturing Alternatives Drawing Conclusions
5. Explanation	Stating Results Justifying Procedures Presenting Arguments
6. Self-Regulation	Self-examination Self-correction



How to convert that into ATs?

- Reasonable doubt: “Fine, but that’s mostly about *education* – how does it **translate** to developing *better argument technologies*?”



How to convert that into ATs?

- Reasonable doubt: “Fine, but that’s mostly about *education* – how does it **translate** to developing *better argument technologies*?”
- Two *cardinal principles*:
 - **Polarization is the enemy!**
 - **Nobody really cares about structure!**



ATs and the drama of structure

*An argumentation scholar reacting to
the claim "Nobody cares
about structure!"*



ATs and the drama of structure

An argumentation scholar reacting to the claim “Nobody cares about structure!”



- Argumentation is **ALL** about structure: e.g., a *network of claims* in an **abstract argumentation framework**, or the *premise-conclusion relationship* in **structured argumentation approaches**

ATs and the drama of structure

An argumentation scholar reacting to the claim “Nobody cares about structure!”



- Argumentation is **ALL** about structure: e.g., a *network of claims* in an **abstract argumentation framework**, or the *premise-conclusion relationship* in **structured argumentation approaches**
- *Don't forsake structure*, but remember that **end users** of argument technologies have **no particular interest in argument structures**, and that *making them aware of such structures* will most likely turn them away from that technology!

ATs and the drama of structure

An argumentation scholar reacting to the claim “Nobody cares about structure!”



- Argumentation is **ALL** about structure: e.g., a *network of claims* in an **abstract argumentation framework**, or the *premise-conclusion relationship* in **structured argumentation approaches**
- *Don't forsake structure*, but remember that **end users** of argument technologies have **no particular interest in argument structures**, and that *making them aware of such structures* will most likely turn them away from that technology!
- So: **keep your structure in your pants!**
- *Use it* to make your app, tool, or widget work, but **don't assume you need to make it explicit** for your users: you *don't*, and often you *shouldn't either*!

ATs as habit formation

Your task: to **encourage virtuous argumentative habits** in users, while **discouraging negative ones**

Hint: take a **concrete problem** and find a **practical solution**

Now, *three good examples*



Problem: acknowledging ignorance

Problem 1

How do we make **people aware of their epistemic deficits** without immediately putting them in a **defensive position**?

In other words, how do we even **begin a discussion on the limits of our knowledge** without feeding into **polarization**?



Thirteen questions on the world



To take the test online, go to factfulnessquiz.com

Thirteen questions on the world

Question	Answer
1	C
2	B
3	C
4	C
5	C
6	B
7	C
8	A
9	C
10	A
11	C
12	C
13	A



Thirteen questions on the world

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2017: about **12000** people
tested in **14** countries

Average: **2 points** (*except 13*)



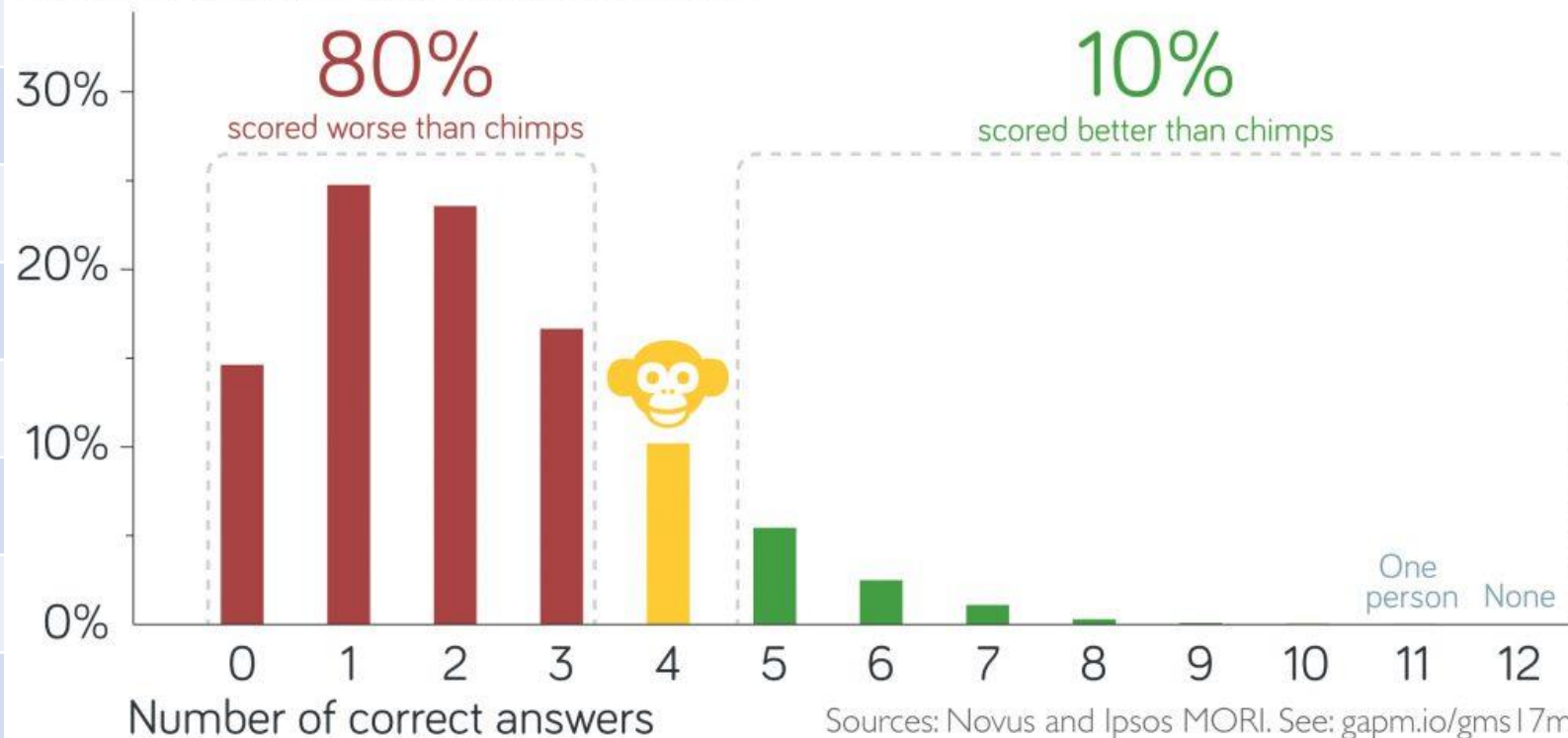
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Share of humans with different scores



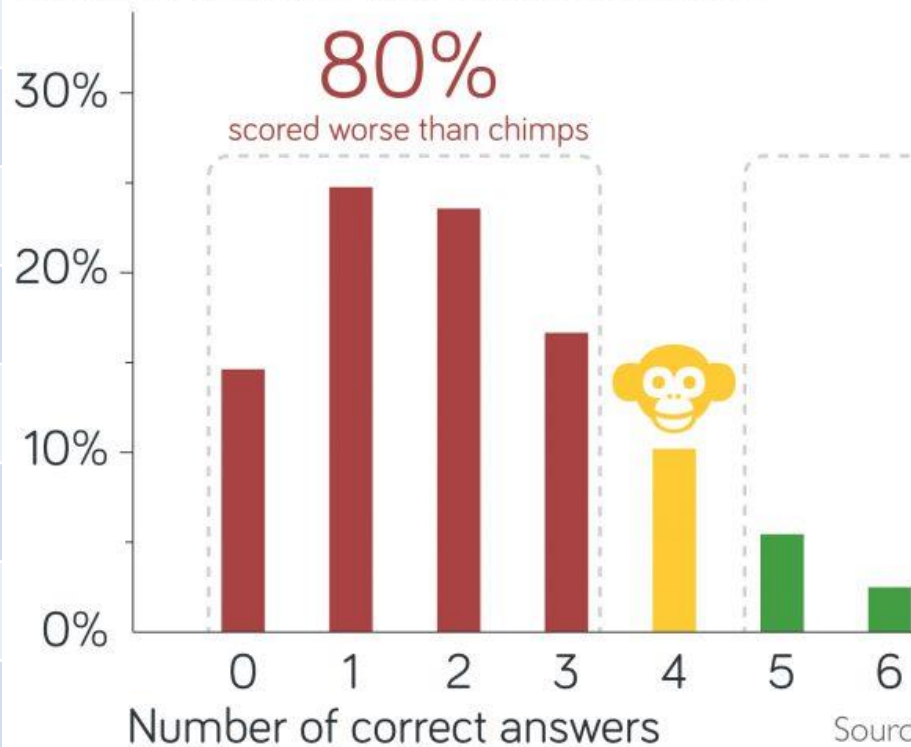
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Share of humans with different scores



FACT QUESTION 13 RESULTS: percentage who answered correctly.
Global climate experts believe that, over the next 100 years, the average temperature will ...
(Correct answer: ... get warmer)



Sources: Novus and Ipsos MORI. See: gapm.io/gms/7m

The argumentative value of the test

The test is designed to show you that **the world is better** than *what you believe it to be*



The argumentative value of the test

The test is designed to show you that **the world is better** than *what you believe it to be*

This is clever, because the **negative emotion** triggered by **being proved wrong** is compensated by the **positive emotion** associated with the **good news vibe** of the test

The argumentative value of the test

The test is designed to show you that **the world is better** than *what you believe it to be*

This is clever, because the **negative emotion** triggered by **being proved wrong** is compensated by the **positive emotion** associated with the **good news vibe** of the test

Hence the whole experience is *more likely to induce users* to **listen with an open-mind**, instead of *immediately getting defensive*

A Swedish sword-swallowing physician



"Uno dei libri più importanti che abbia mai letto. Una guida indispensabile per riflettere con chiarezza sul mondo." — BILL GATES

Hans Rosling con Ola Rosling e Anna Rosling Rönnlund

**FACT
FUL
NESS**

DIECI RAGIONI
PER CUI NON CAPIAMO
IL MONDO.
E PERCHÉ LE COSE
VANNO MEGLIO
DI COME PENSIAMO

Rizzoli

Optimism on the Anthropocene?



**DON'T
PANIC**
THE TRUTH ABOUT
POPULATION
WITH PROFESSOR HANS ROSLING

Or an appeal to fact-based debate?



DON'T PANIC THE TRUTH ABOUT POPULATION WITH PROFESSOR HANS ROSLING

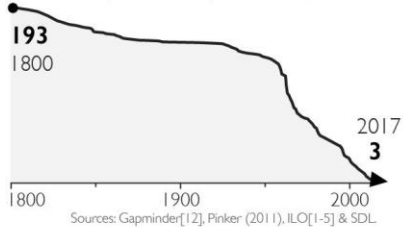
FACTFULNESS: The *stress-reducing habit* of only carrying opinions for which you have **strong supporting facts**

Bad things decreasing

16 BAD THINGS DECREASING

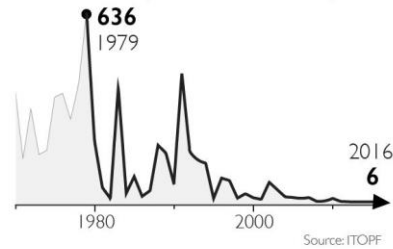
LEGAL SLAVERY

Countries where forced labor is legal or practiced by the state (out of 194)



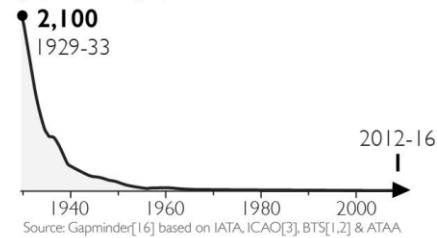
OIL SPILLS

1,000 tons oil spilled from tanker ships



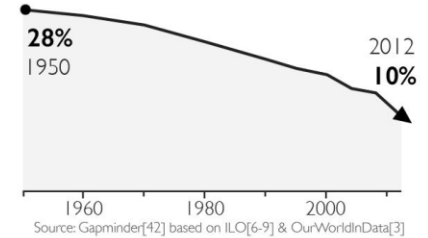
PLANE CRASH DEATHS

Deaths per 10 billion passenger miles (5-year averages)



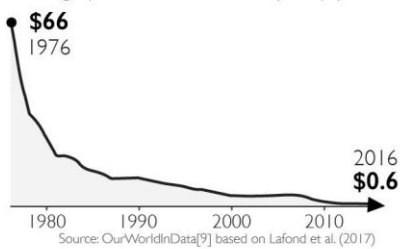
CHILD LABOR

Share of children aged 5-14 who work full time under bad conditions



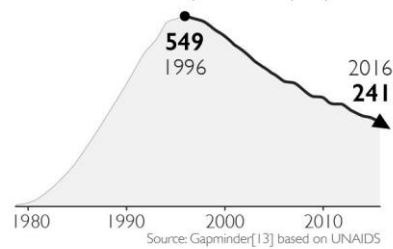
EXPENSIVE SOLAR PANELS

Average price of PV modules (\$/Wp)



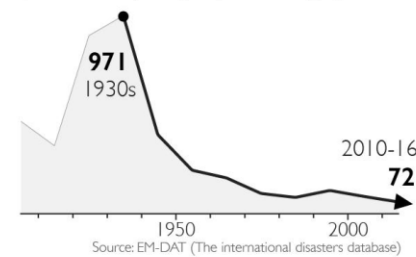
HIV INFECTIONS

New HIV infections per million people



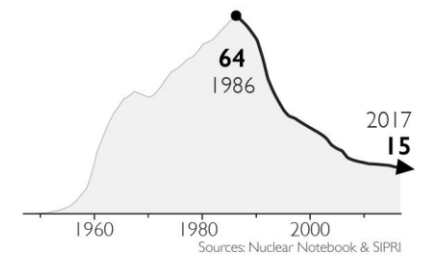
DEATHS FROM DISASTER

1,000 deaths/year (10-year averages)



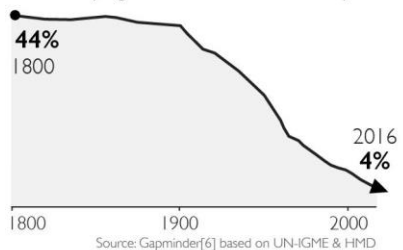
NUCLEAR ARMS

1,000s of nuclear warheads



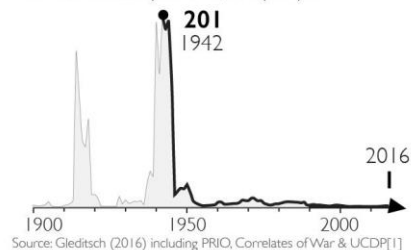
CHILDREN DYING

Percent dying before their fifth birthday



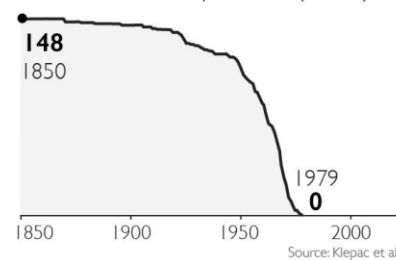
BATTLE DEATHS

Battle deaths per 100,000 people



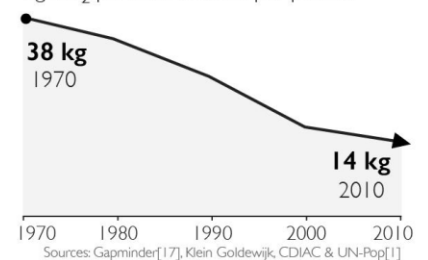
SMALLPOX

Countries with smallpox cases (of 194)



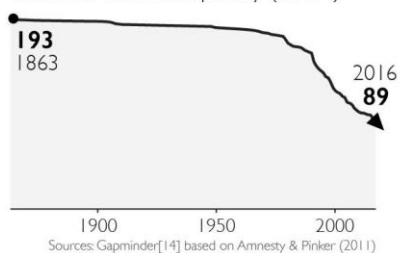
SMOKE PARTICLES

Kg SO₂ particles emitted per person



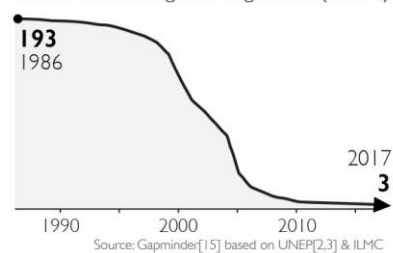
DEATH PENALTY

Countries with death penalty (of 194)



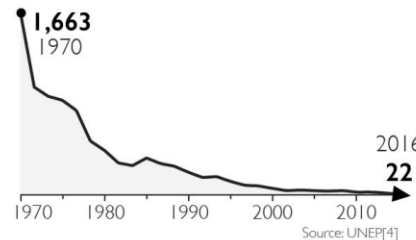
LEADED GASOLINE

Countries allowing lead in gasoline (of 194)



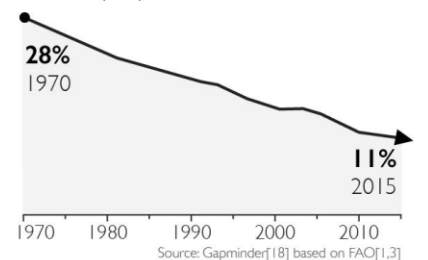
OZONE DEPLETION

1,000 tons ozone-depleting substances used



HUNGER

Share of people undernourished

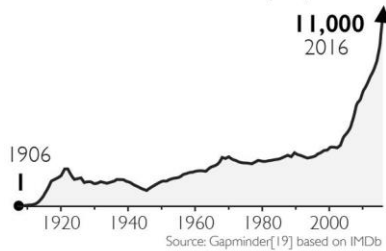


Good things increasing

16 GOOD THINGS INCREASING

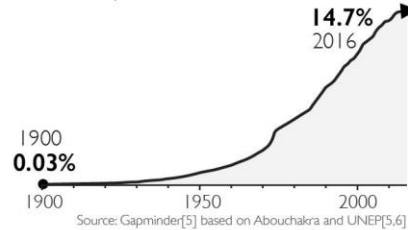
NEW MOVIES

Number of new feature films per year



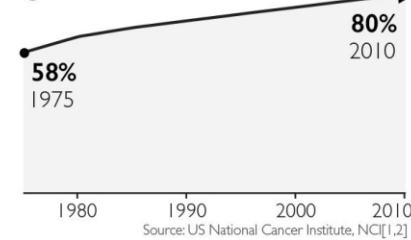
PROTECTED NATURE

Share of Earth's land surface protected as national parks and other reserves



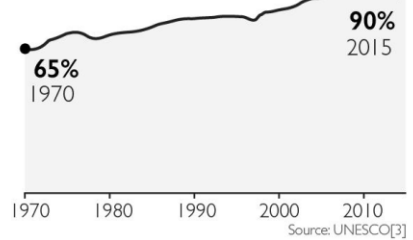
CHILD CANCER SURVIVAL

5 year survival of those diagnosed before age 20, with best treatment



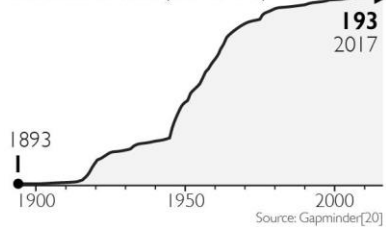
GIRLS IN SCHOOL

Share of girls of primary school age enrolled



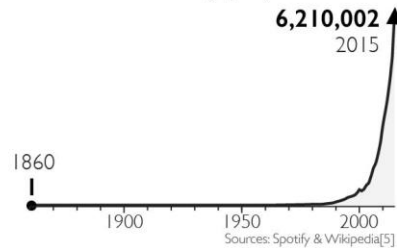
WOMEN'S RIGHT TO VOTE

Countries with equal rights for women and men to vote (out of 194)



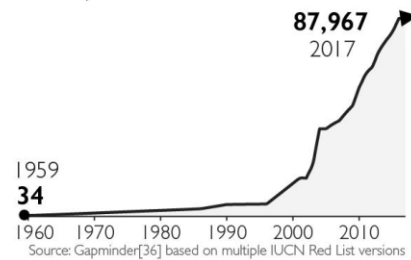
NEW MUSIC

New music recordings per year



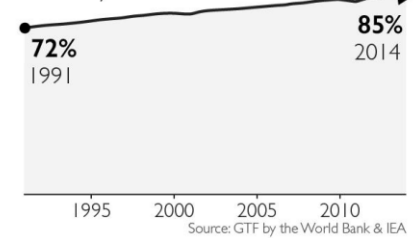
MONITORED SPECIES

Listed species with assessed threat-status



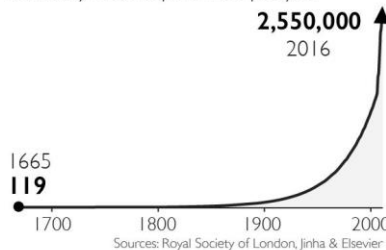
ELECTRICITY COVERAGE

Share of people with some access to electricity



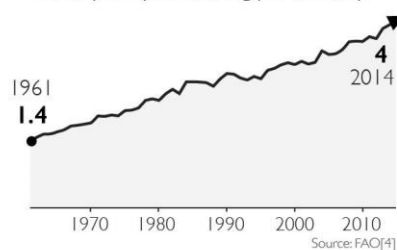
SCIENCE

Scholarly articles published per year



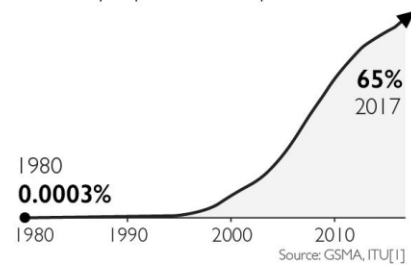
HARVEST

Cereal yield (thousand kg per hectare)



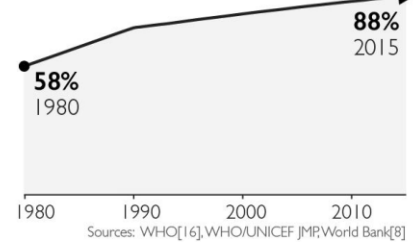
MOBILE PHONES

Share of people with a cellphone



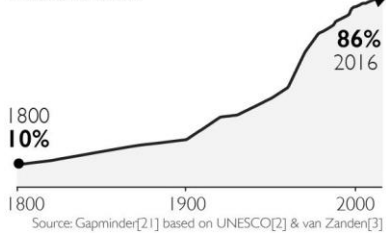
WATER

Share of people with water from protected source



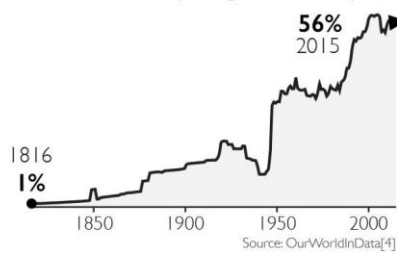
LITERACY

Share of adults (15+) with basic skills to read and write



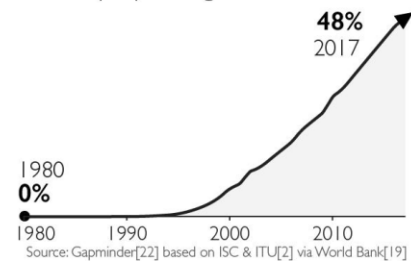
DEMOCRACY

Share of humanity living in democracy



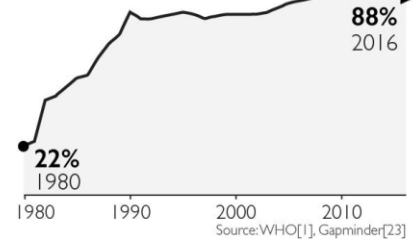
INTERNET

Share of people using the internet



IMMUNIZATION

Share of 1-year olds who got at least one vaccination.

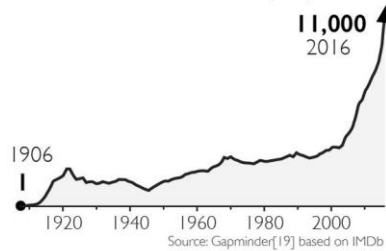


Good things increasing

16 GOOD THINGS INCREASING

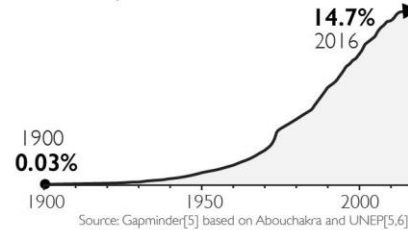
NEW MOVIES

Number of new feature films per year



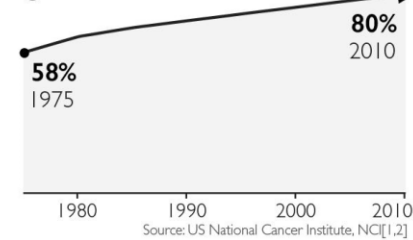
PROTECTED NATURE

Share of Earth's land surface protected as national parks and other reserves



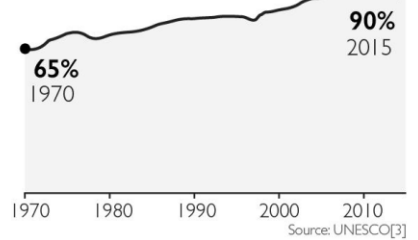
CHILD CANCER SURVIVAL

5 year survival of those diagnosed before age 20, with best treatment



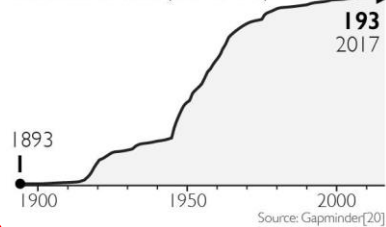
GIRLS IN SCHOOL

Share of girls of primary school age enrolled



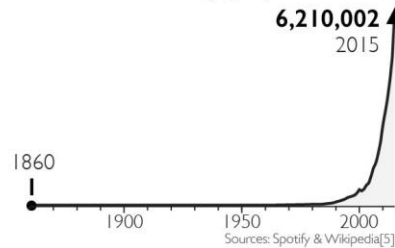
WOMEN'S RIGHT TO VOTE

Countries with equal rights for women and men to vote (out of 194)



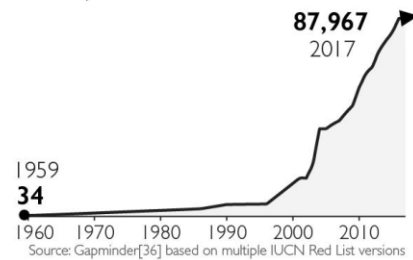
NEW MUSIC

New music recordings per year



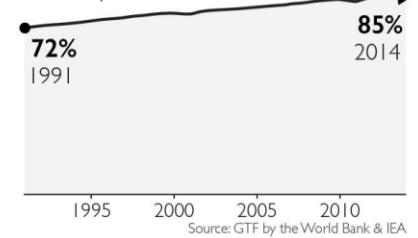
MONITORED SPECIES

Listed species with assessed threat-status



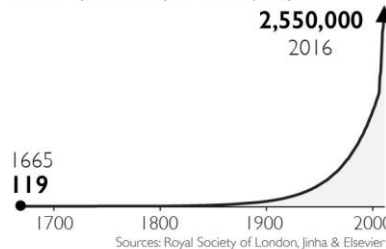
ELECTRICITY COVERAGE

Share of people with some access to electricity



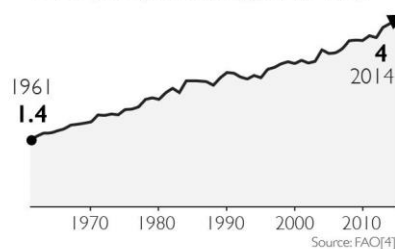
SCIENCE

Scholarly articles published per year



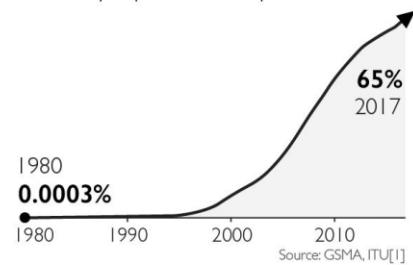
HARVEST

Cereal yield (thousand kg per hectare)



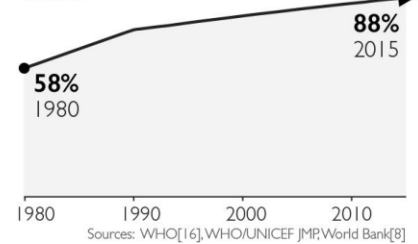
MOBILE PHONES

Share of people with a cellphone



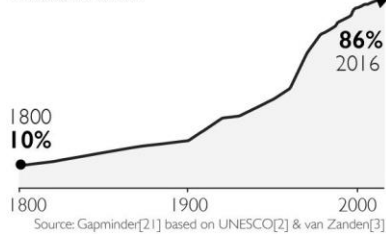
WATER

Share of people with water from protected source



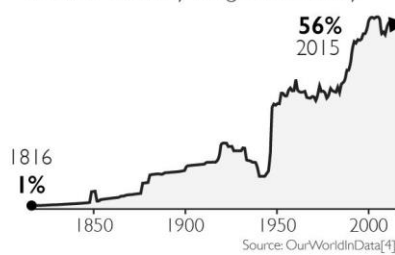
LITERACY

Share of adults (15+) with basic skills to read and write



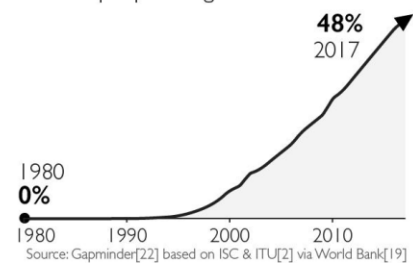
DEMOCRACY

Share of humanity living in democracy



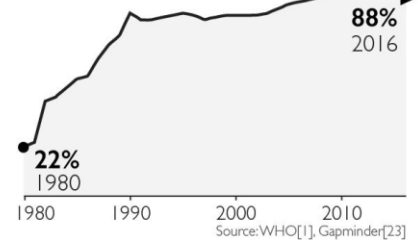
INTERNET

Share of people using the internet



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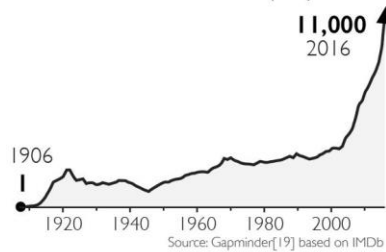


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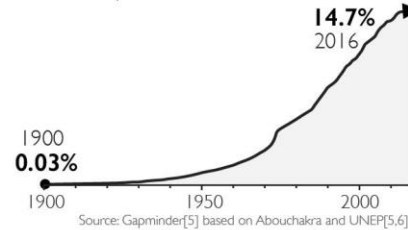
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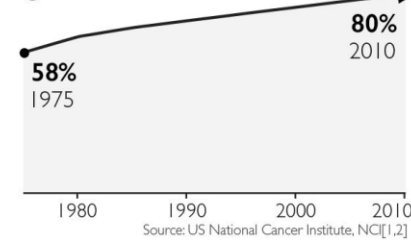
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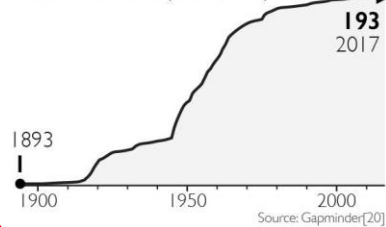
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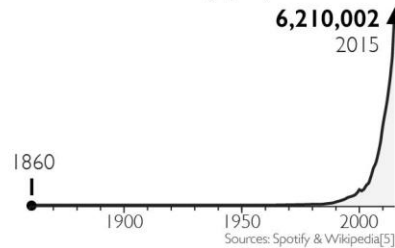
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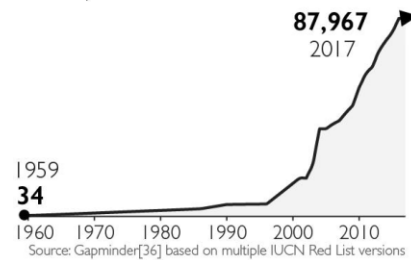
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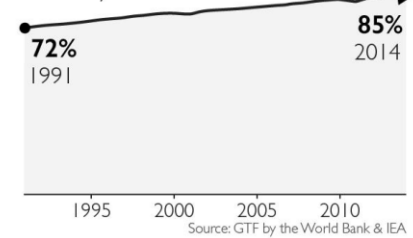
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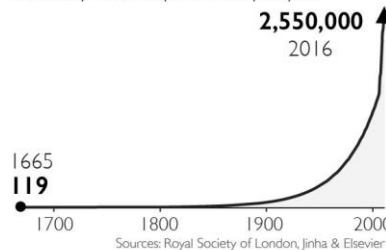
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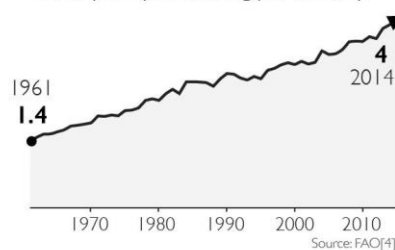
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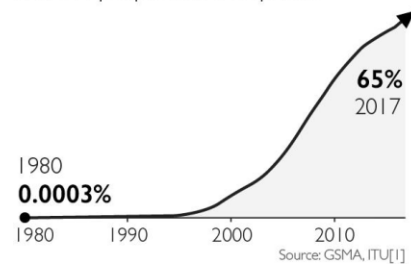
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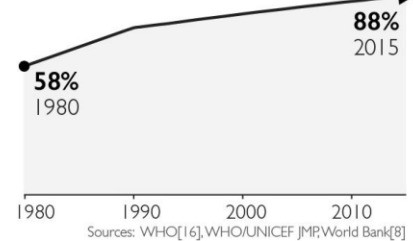
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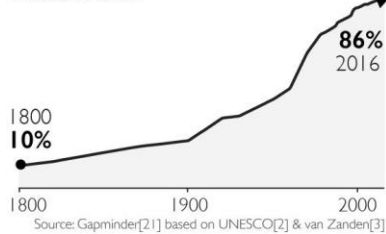
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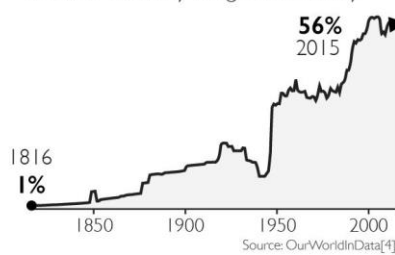
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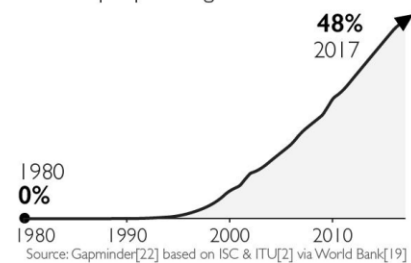
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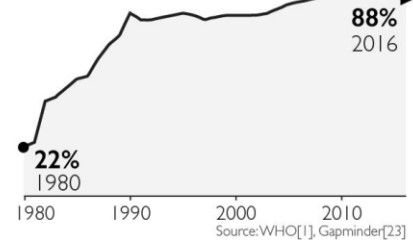
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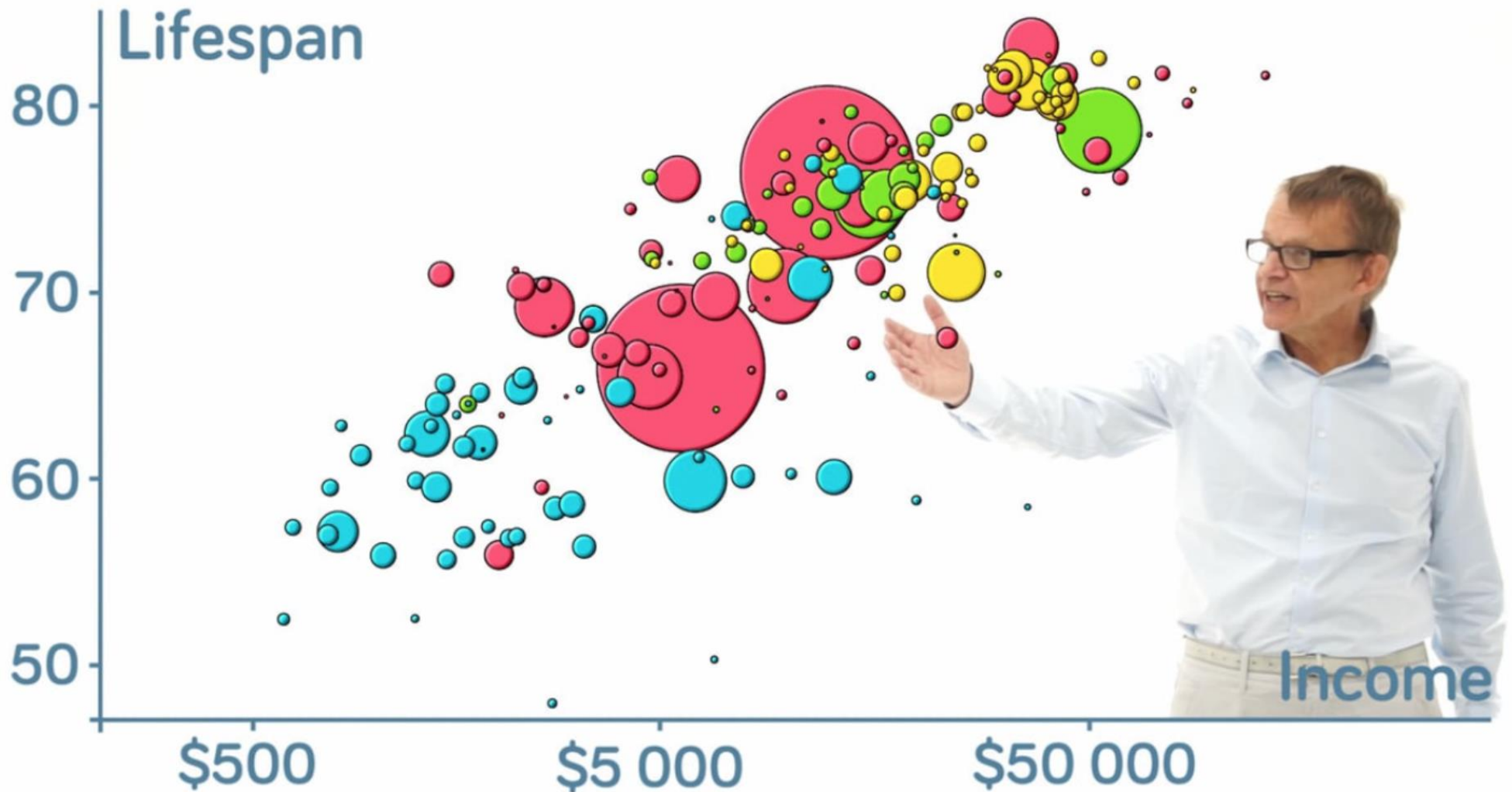
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Data visualization: Gapminder

- **Gapminder** and its software for dynamic visualization of world data, *Trendalyzer*: [https://www.gapminder.org/tools/#\\$chart-type=bubbles](https://www.gapminder.org/tools/#$chart-type=bubbles)



Diagnosis: dramatic instincts

FACTFULNESS POSTER

Dramatic Instincts

1 The gap instinct



Look at the gap!

2 The Negativity Instinct



It's getting worse!

3 The Straight Line Instinct



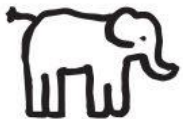
It just continues!

4 The Fear Instinct



It's scary!

5 The Size Instinct



It's big!

6 The Generalization Instinct



They are all the same!

7 The Destiny Instinct



It never changes!

8 The Single Perspective Instinct



This is the solution!

9 The Blame Instinct



That's the bad guy!

10 The Urgency Instinct



It's now or never!

Prognosis: factfulness in action

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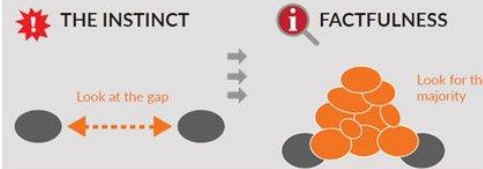
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Factfulness

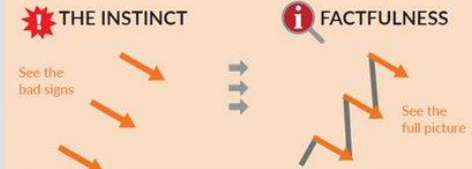
Controlling the 10 Dramatic Instincts

READINGGRAPHICS
Ideas Come Alive

1. The Gap Instinct



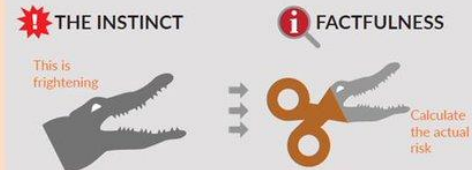
2. The Negativity Instinct



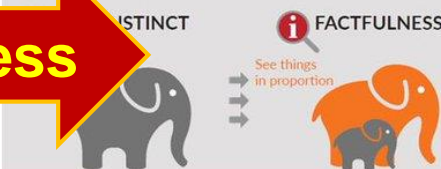
3. The Straight Line Instinct



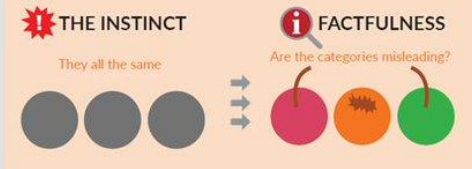
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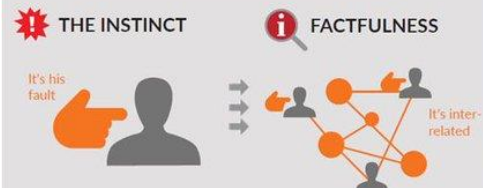
7. The Destiny Instinct



8. The Single Perspective Instinct



9. The Blame Instinct



10. The Urgency Instinct



Problem: getting users' hands dirty

Problem 2

How do we **familiarize users with the strategies and tricks behind disinformation**, without either *boring them to death with a patronizing attitude*, or *reinforcing their impression that the world is an awful place and the Internet a cesspool of corruption*?



Embracing fake news

<https://www.getbadnews.com/>

An online game to learn how to be an effective disinformation agent

The screenshot shows the homepage of the 'BAD NEWS WS' website. At the top center, the text 'BAD NEWS WS' is displayed in a large, red, blocky font, with each letter partially obscured by a red square. Below this, the main text reads: 'From fake news to chaos! How bad are you? Get as many followers as you can.' The interface features several interactive buttons: a blue button labeled 'DESTROY' on the left, a red button labeled 'STRIKE' on the right, a central button with a blue border labeled 'PLAY THE GAME', a black button labeled 'MOCK' to the right of the central button, and a red button labeled 'CONCEAL' on the bottom left. Below the 'PLAY THE GAME' button, there are three links: 'Info & other languages', 'For educators', and 'Challenge your friends'.

BAD NEWS WS

From fake news to chaos! How bad are you? Get as many followers as you can.

DESTROY

STRIKE

PLAY THE GAME

MOCK

CONCEAL

IGNORE

[Info & other languages](#)

[For educators](#)

[Challenge your friends](#)

Bad News: a walk on the wild side

How does Bad News work?

In *Bad News*, you take on the role of fake news-monger. Drop all pretense of ethics and choose a path that builds your persona as an unscrupulous media magnate. But keep an eye on your 'followers' and 'credibility' meters. Your task is to get as many followers as you can while slowly building up fake credibility as a news site. But watch out: you lose if you tell obvious lies or disappoint your supporters!

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Badges of dishonor



IMPERSONATION



POLARIZATION



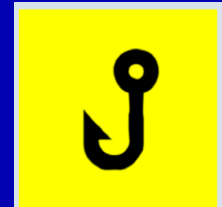
DISCREDIT



EMOTION



CONSPIRACY



TROLLING

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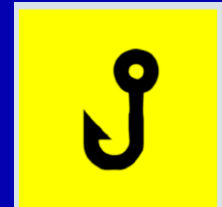
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TROLLING

**BAD
NEWS**

This game was developed by researchers at Cambridge University and DROG, a Netherlands-based platform against disinformation. For more information about the game and its development, or if you have ideas or feedback, we're very happy to hear from you. Ruurd Oosterwoud, founder of DROG, can be reached at ruurd@wijzijndrog.nl. Or visit DROG's website at www.aboutbadnews.com

How does it work?

DROG

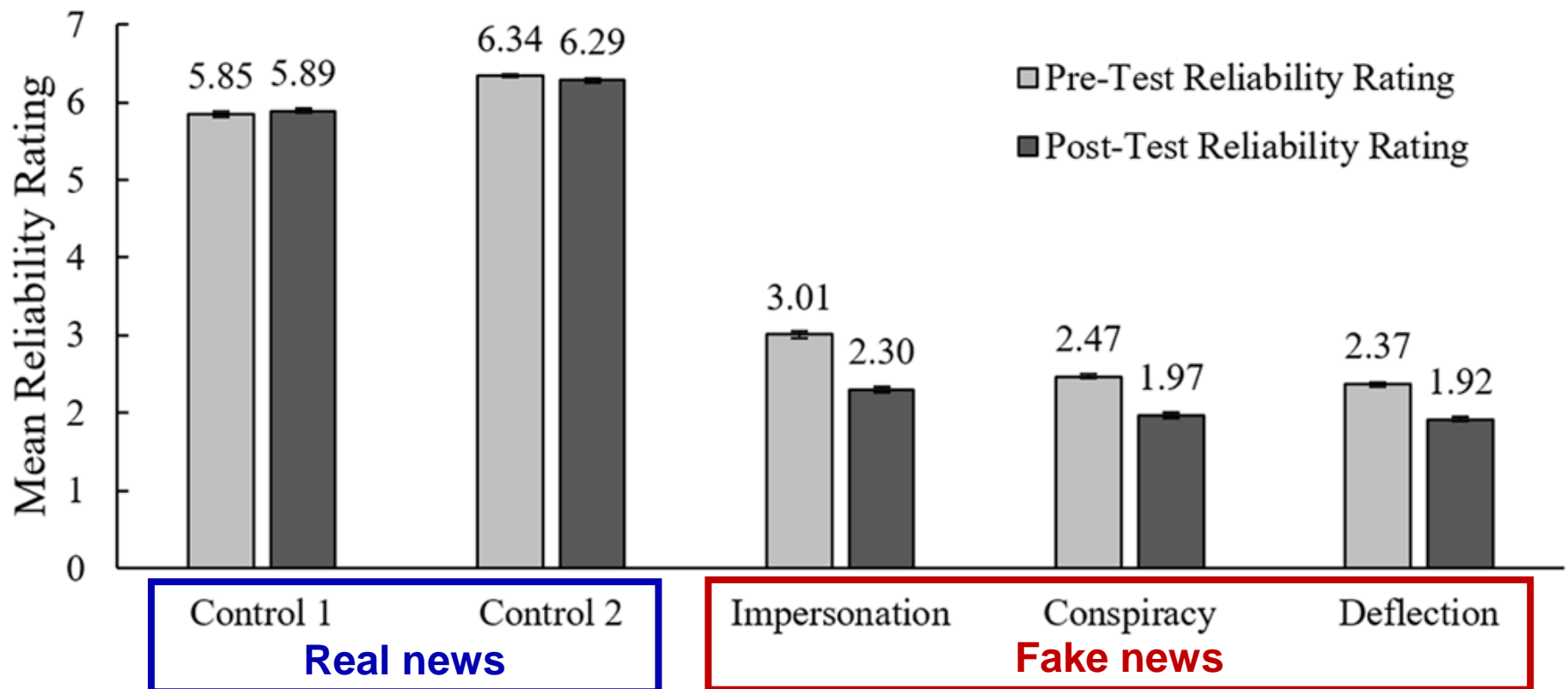
A good way to
fight bad news



- **INOCULATION THEORY:** people are able to *build up a resistance against disinformation* by being presented with **a weakened version** of a misleading argument *before being exposed to the “real thing”* – like a **vaccine**
- Best way to learn to recognize disinformation is to **create it yourself**. Users take on *the role of fake news-mongers*, to gain insight into the **tactics** and **methods** used by ‘real’ disinformants: this in turn builds up **resistance**

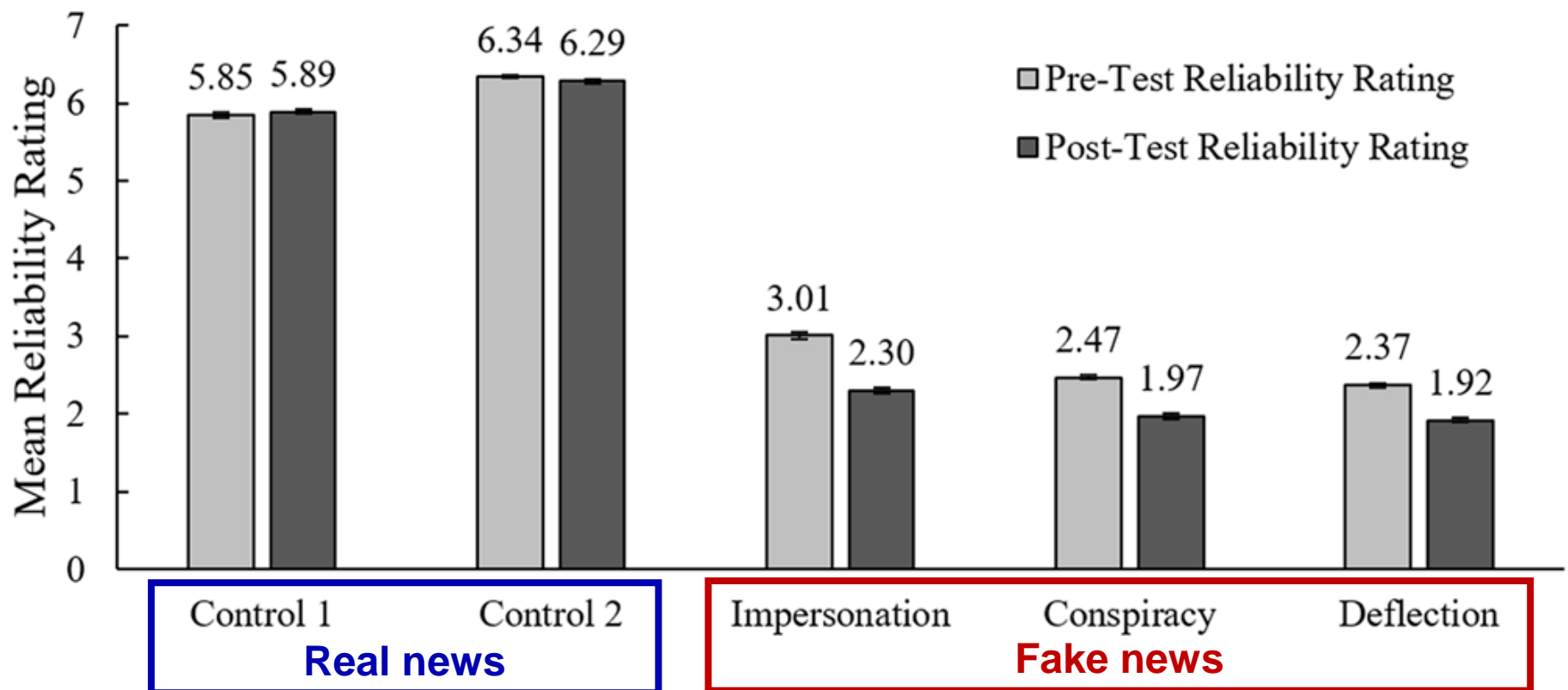
By the way, it does work!

- Roozenbeek & van der Linden, 2019: users ($N > 14K!$) ability to **detect fake news improved significantly** after playing the game, *without making them more skeptical towards real news too*



By the way, it does work!

- Roozenbeek & van der Linden, 2019: users ($N > 14K!$) ability to **detect fake news improved significantly** after playing the game, *without making them more skeptical towards real news too*
- Moreover, the **largest effects** were on **users who were most vulnerable** to fake news on the pre-test – *it works best for those who need it!*



Problem: visualization without polarization

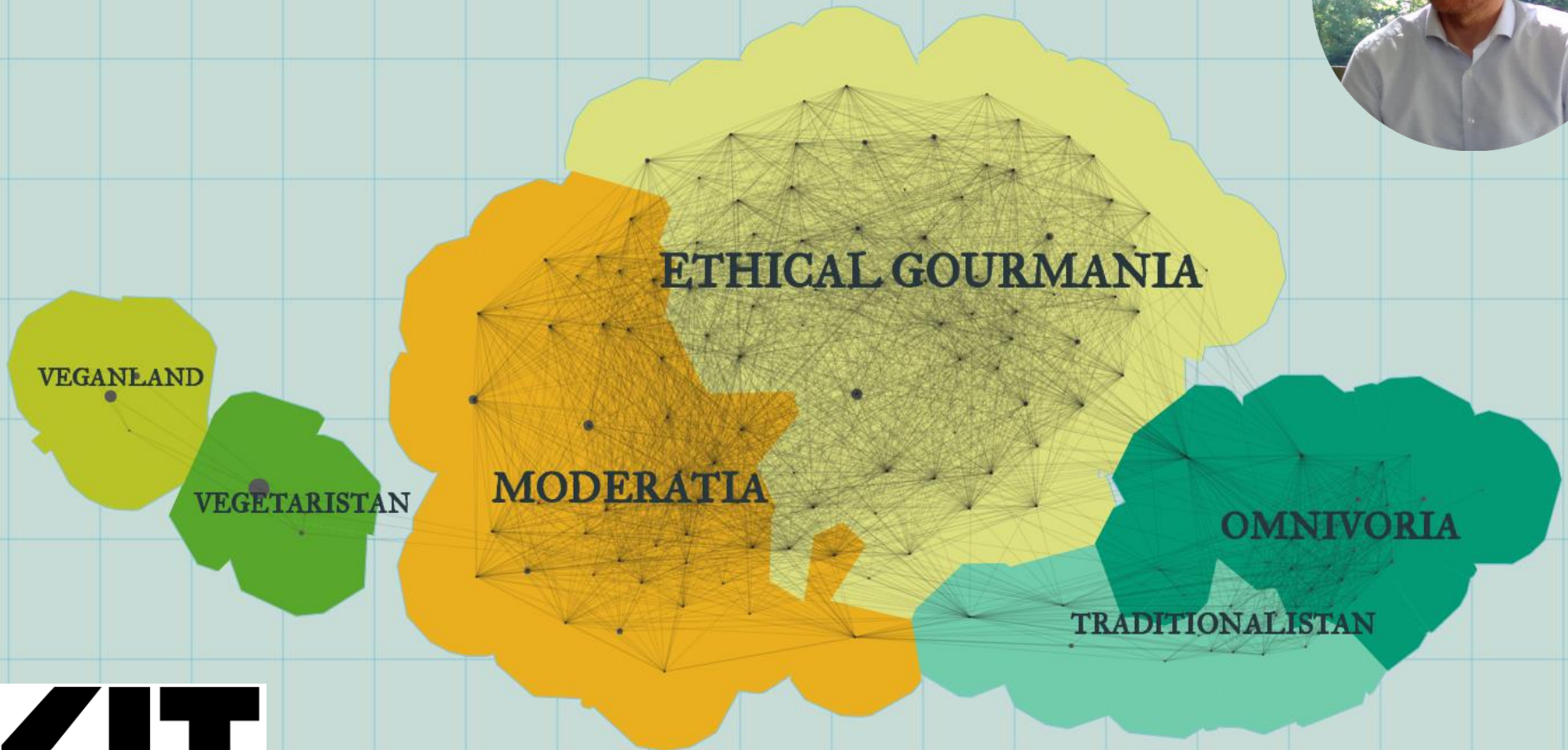
Problem 3

How do we **exploit all the structural information** we collect doing **argumentative analysis of complex debate**, in ways that are *relevant for users* and *do not promote further polarization*?



OpMAP: argument cartographies

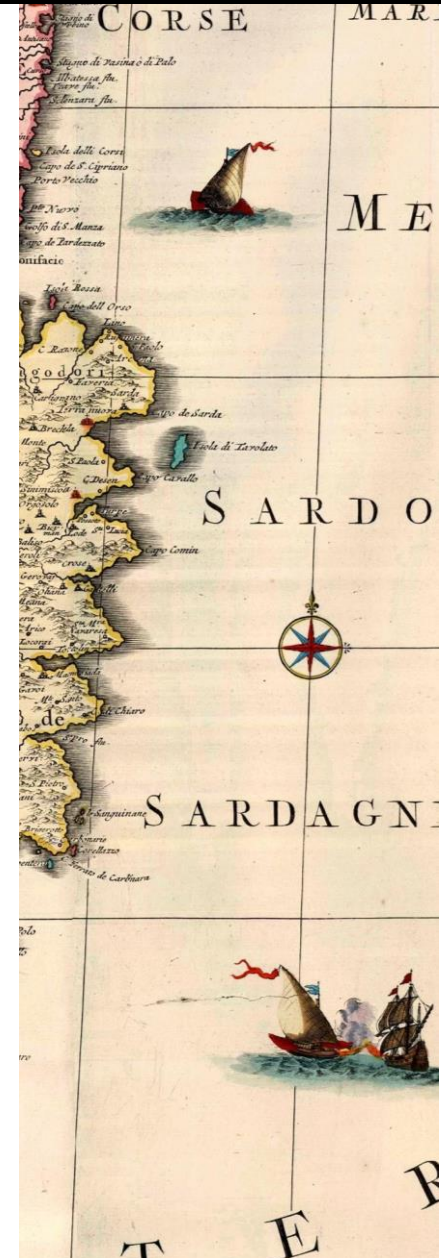
OpMAP of the
WORLD OF DIETS



OpMAP pipeline

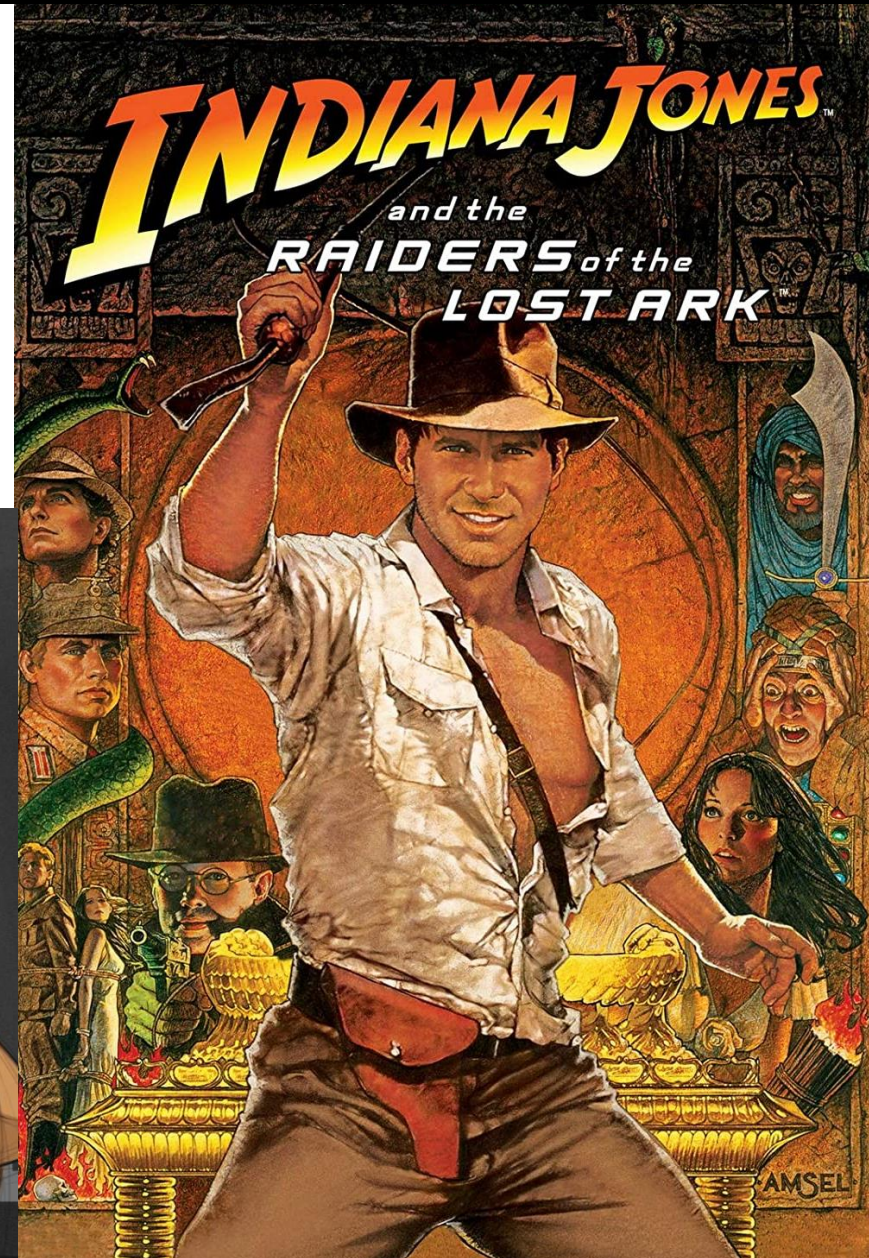
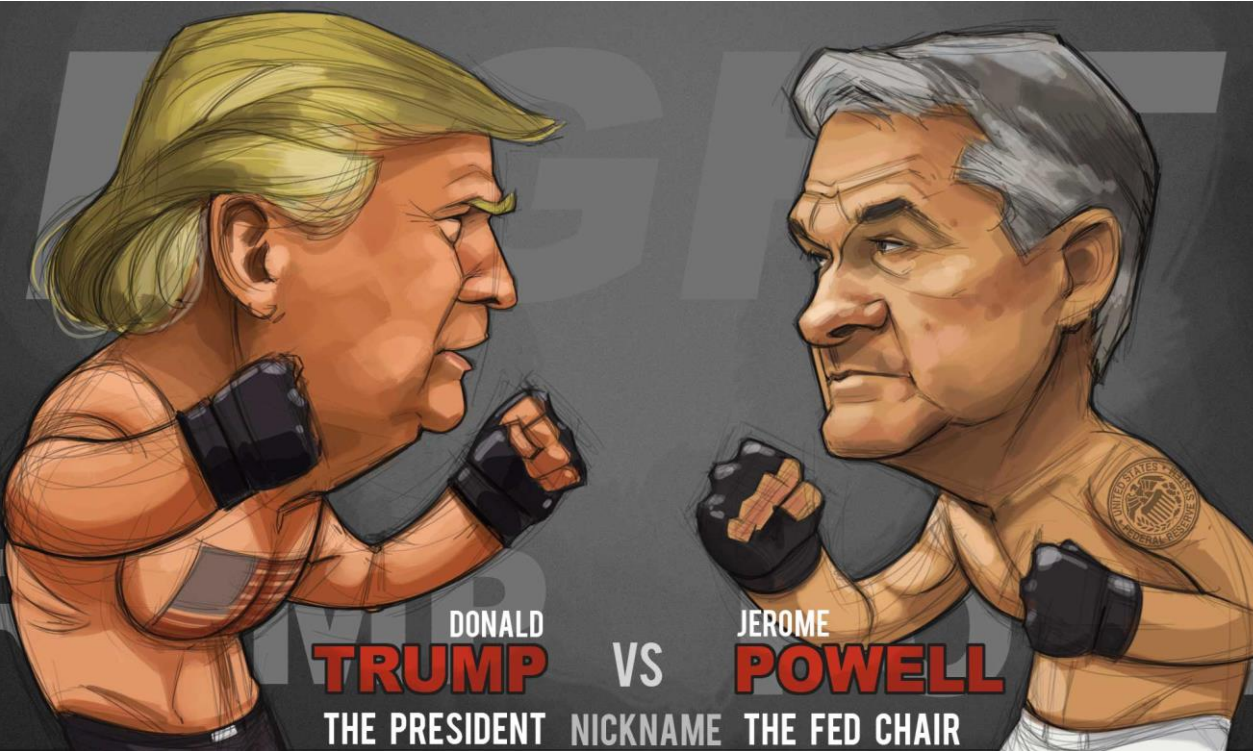
OpMAP aims to *facilitate sense-making* for **large-scale debates**

- First, the **debate is reconstructed**, i.e. *its arguments are analyzed and formalized*, using **Argdown** (<https://argdown.org/>) for *argument mapping*
- Second, the *logical analysis* is used to construct a **structured survey**, which serves to *elicit users' complex opinions* on the debate's topic
- Third, the *collected opinion data* is translated into an **opinion graph**: the *nodes* of this graph are the **opinions** held by the participants of the survey, and the *weighted edges* specify **how closely related** these opinions are (using *degree of mutual coherence* to calculate it)
- Then, the *resulting weighted graph* is analyzed by applying **clustering** and **filtering** methods
- The **initial map of the debate** is then *constructed*
- Finally, OpMAP allows for **dynamic updates** of the map



How would OpMAP improve debate?

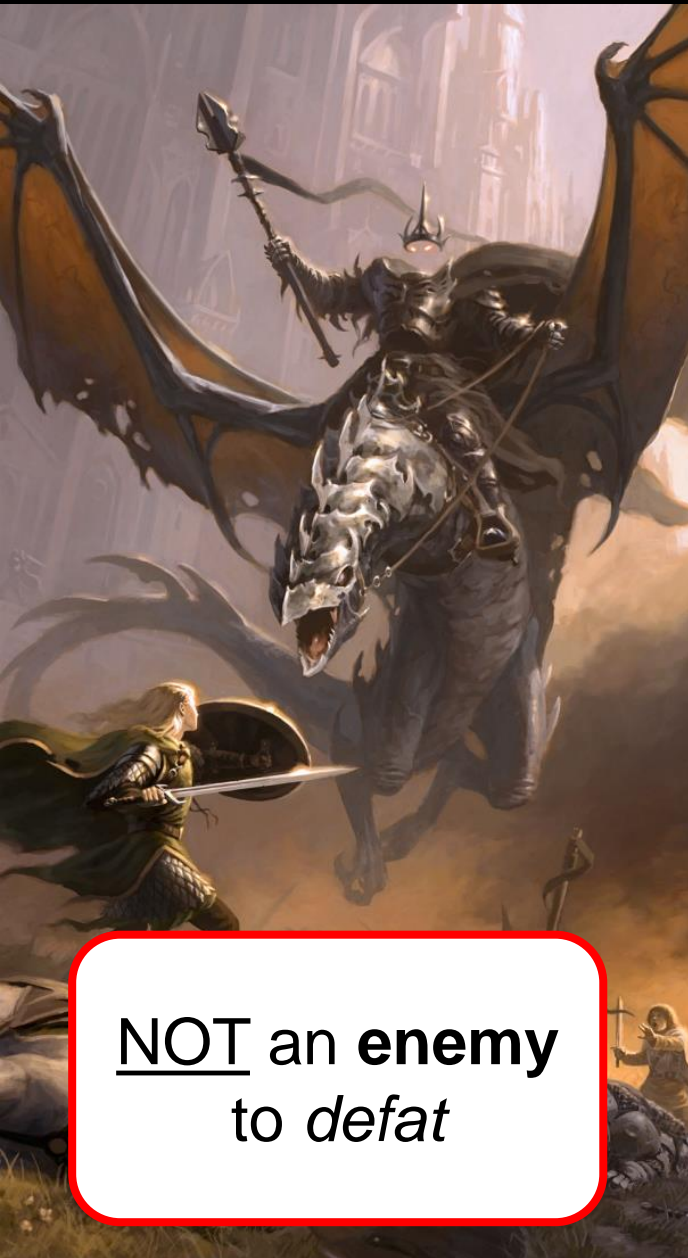
- OpMAP promotes a *shift* from **argument as war** to **argument as exploration**
- Users as **neutral visitors** to see *the many different features of the land* (i.e., **various facets of the problem**), instead of *framing users as partisans within a fight*



Concluding remarks



Who's afraid of fake news?



NOT an **enemy**
to *defeat*

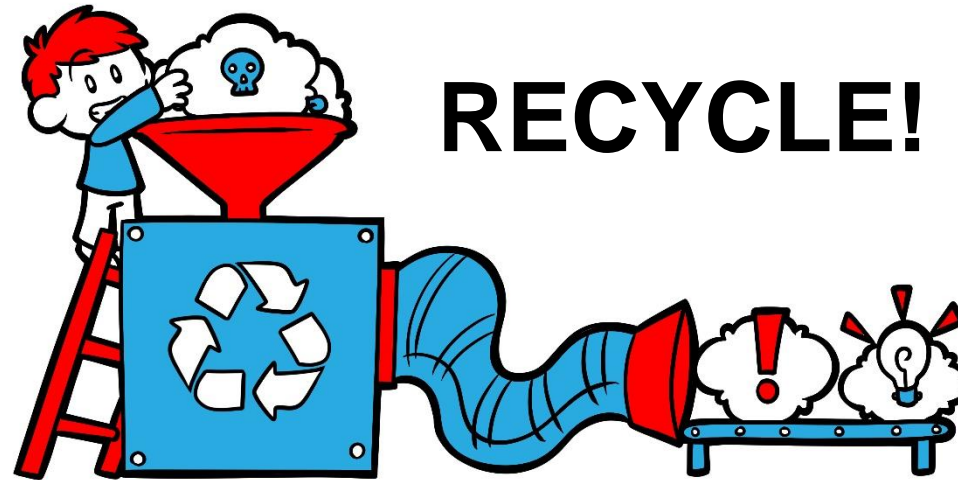


NOT a **cancer**
to *eradicate*



NOT a **criminal**
to *banish*

Who's afraid of fake news?

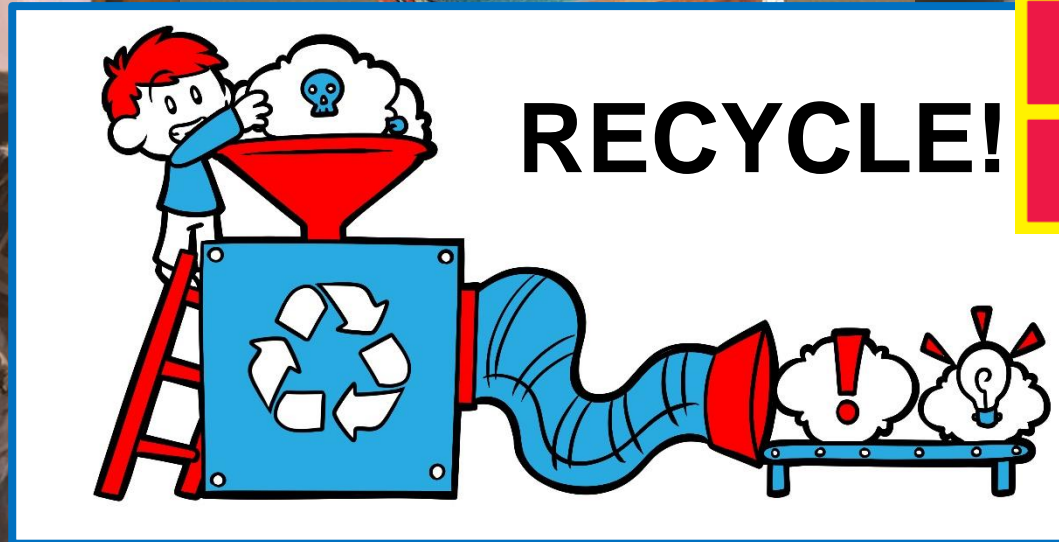


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**BAD
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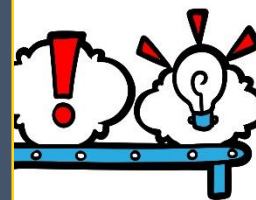
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RECYCLE!

BAD
NEWS

Peter Burger, UL: *"Thanks to our fact-check, many of these news items were corrected, because they proved to be untrue. And by collaborating with Google, we ensure these fact-checks end up at the top of the search results, so above the incorrect reports."*



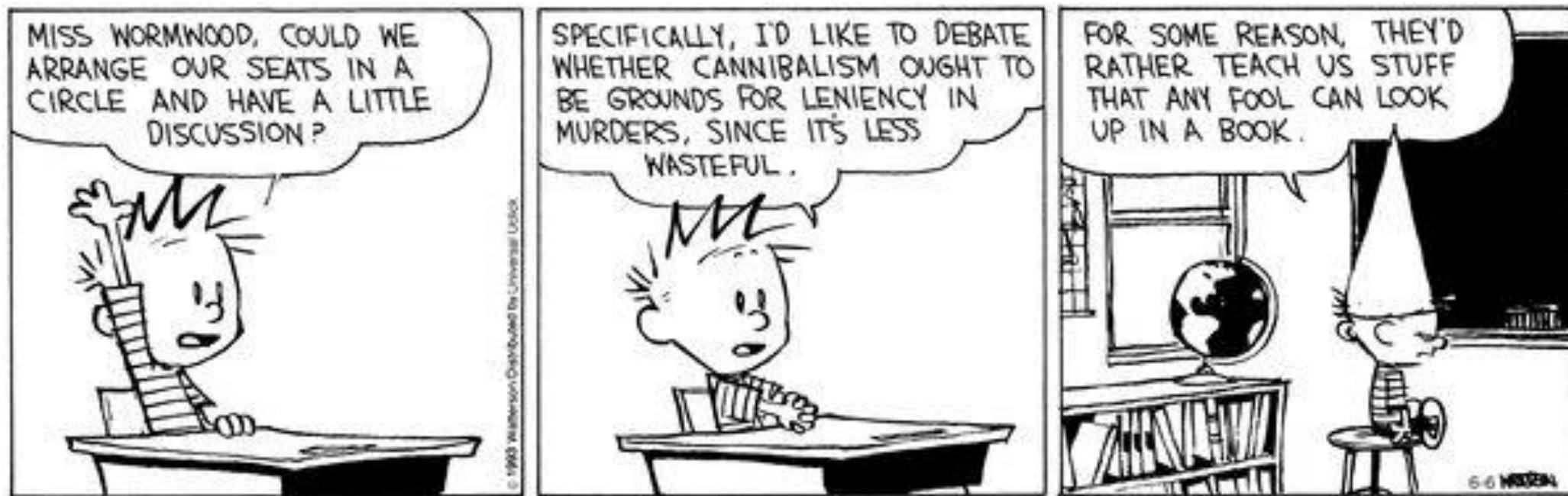
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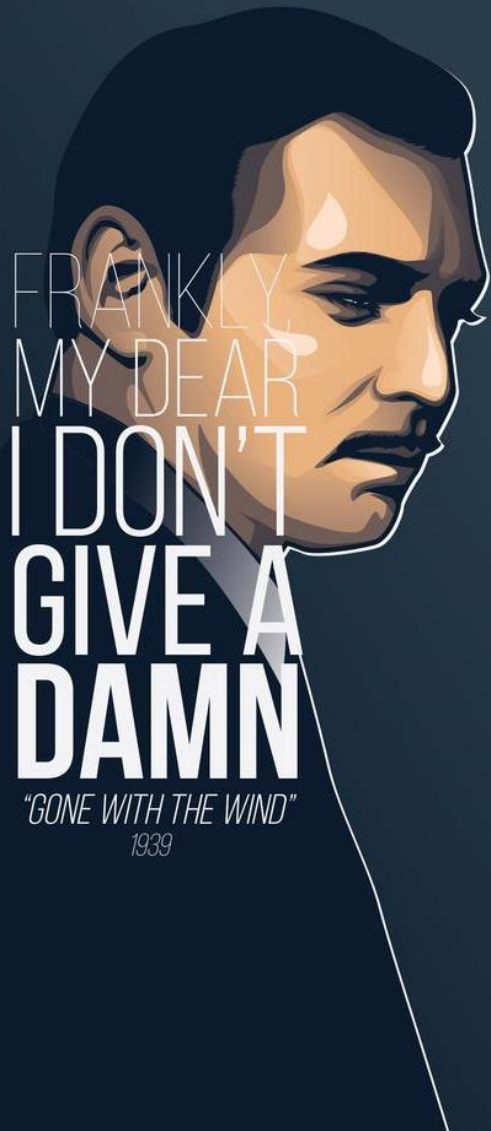
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Is this even about ATs?

- The *examples of virtuous argument technologies* we discussed are all rather **non-standard**
- With the exception of OpMAP, which is based on *some good-old fashioned argument analysis*, many of them would **not even be considered as argument technologies** by most

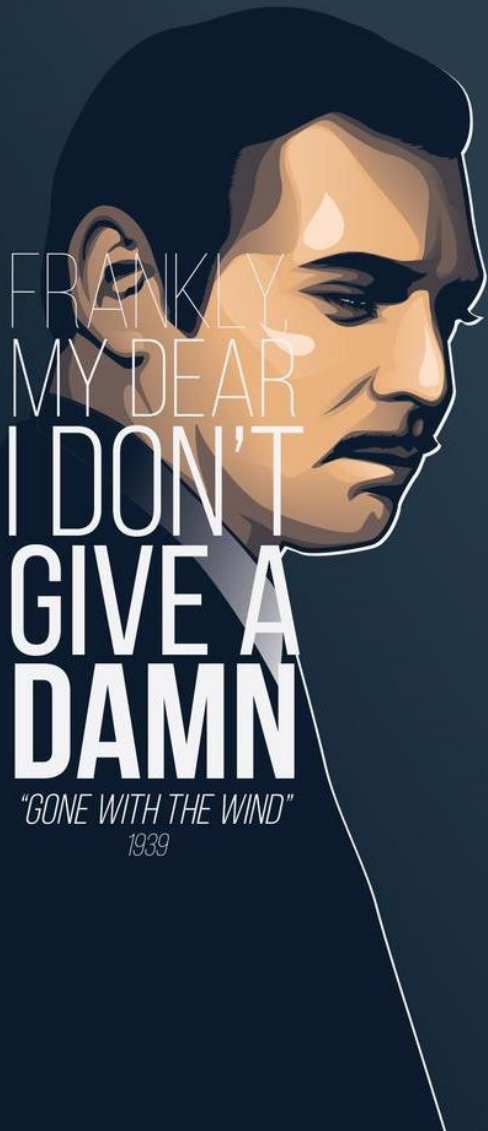


Go beyond the obvious!



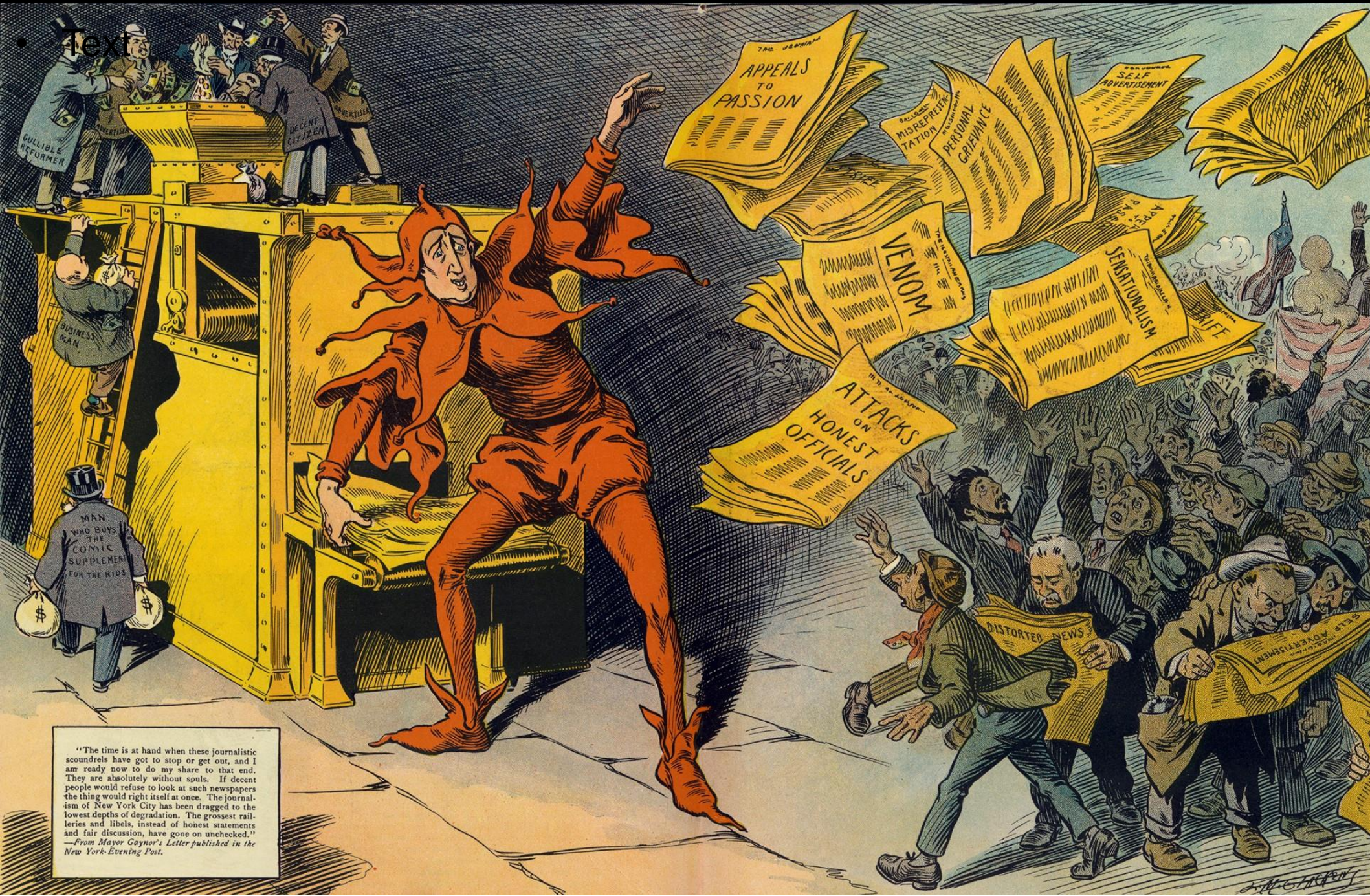
- I **don't care** much about *what is “kosher” in argument technologies*, and I invite you to **care even less**
- My *broad definition of argument technologies*: any technology that **systematically improves the quality of human dialogue and reasoning**

Go beyond the obvious!



- I **don't care** much about *what is “kosher” in argument technologies*, and I invite you to **care even less**
- My *broad definition of argument technologies*: any technology that **systematically improves the quality of human dialogue and reasoning**
- Whether you accept such definition or not, you still need to *be creative and think outside the box*, especially when engaged in **developing applications**
- There are **real, important problems** to be solved out there, and **whatever you can do to help** is *vastly more relevant than tinkering with old, ineffective approaches*
- Don't do something simply because *it has always been done that way*, do it because **you think it works!**

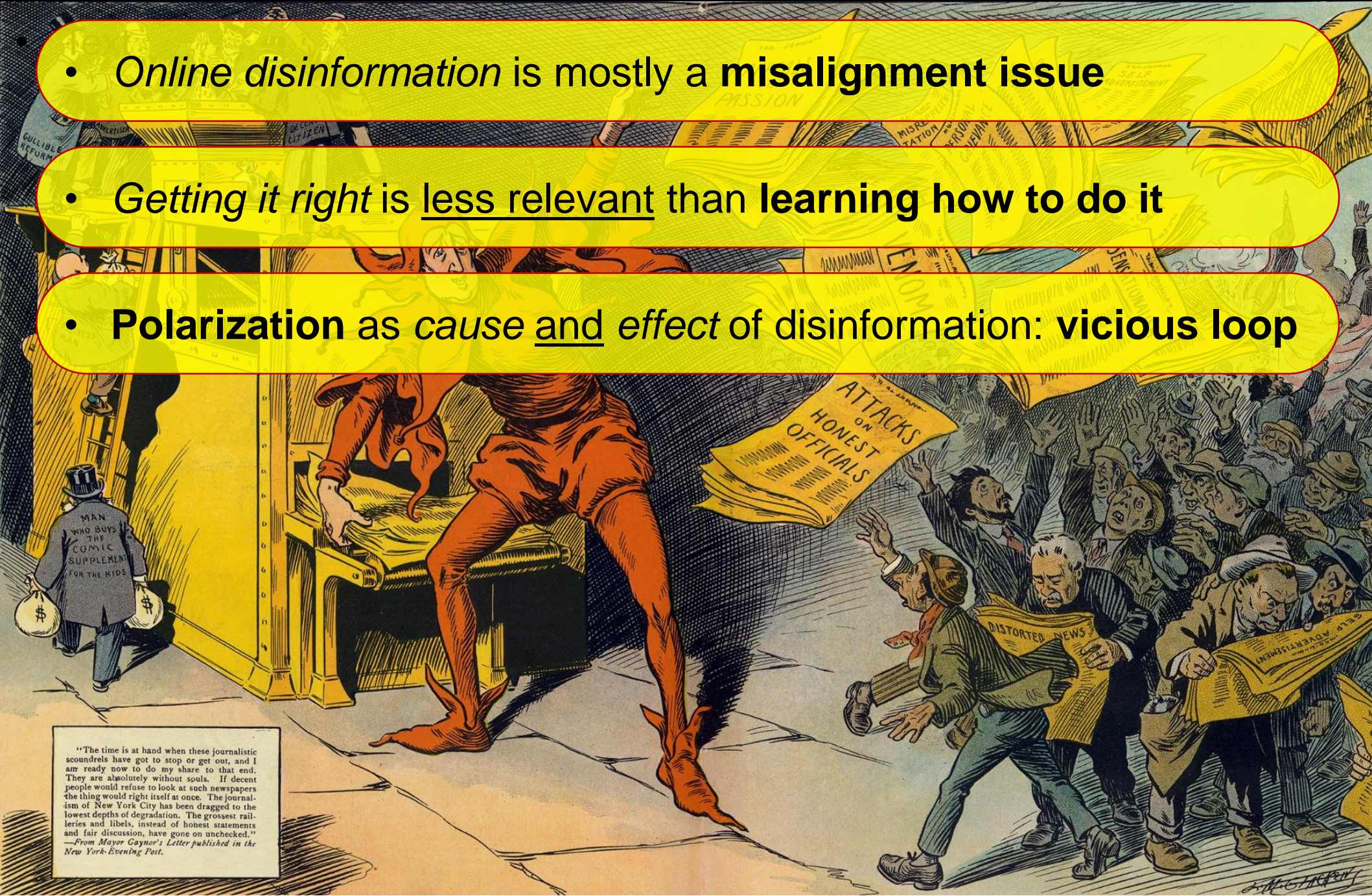
Take home messages



"The time is at hand when these journalistic scoundrels have got to stop or get out, and I am ready now to do my share to that end. They are absolutely without souls. If decent people would refuse to look at such newspapers the thing would right itself at once. The journalism of New York City has been dragged to the lowest depths of degradation. The grossest raileries and libels, instead of honest statements and fair discussion, have gone on unchecked."
—From Mayor Gaynor's Letter published in the New York Evening Post.

Take home messages

- Online disinformation is mostly a **misalignment issue**
- Getting it right is less relevant than **learning how to do it**
- Polarization as *cause* and *effect* of disinformation: **vicious loop**



Take home messages

- *Online disinformation* is mostly a **misalignment** issue
- *Getting it right* is less relevant than **learning how to do it**
- **Polarization** as *cause* and *effect* of disinformation: **vicious loop**
- *Technology* as a tool for **habit formation**
- I repeat: keep your **argumentative structure** *in your pants*!
- *First* find a **real problem**, then start thinking about **how to fix it**
- *Good tech* to improve argumentation differ from *regular ATs*...

...The thing is, these soundrels have got to stop or get out, and I am ready now to do my share to that end. They are absolutely without merit. If people would refuse to look at such newspapers the thing would right itself at once. The journalism of New York City has been dragged to the lowest depths of degradation. The masses of false and dishonest news are a disgrace to the city. —From *Manhattan*, New York Evening Post.

End titles



Enjoy the fake news!

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