

Fake News, Algorithmen und Filterblasen: Journalismus und Öffentlichkeit im Zeitalter der Digitalisierung

Christian Stöcker, @ChrisStoecker
(HAW Hamburg)

Intermediäre?



facebook®





**Intermediäre sind relevant für die
Meinungsbildung, aber nicht entscheidend.**

weit verbreitet:
57% der Onliner
informieren sich am
Tag bei Intermediären
übers Zeitgeschehen.

aber weiter unten:
51% der Onliner nennen
TV ihre Hauptquelle für
Nachrichten.
6% soziale Medien.

Was ist Relevanz?

Nachrichtenfaktoren (nach Weischenberg, 2001)

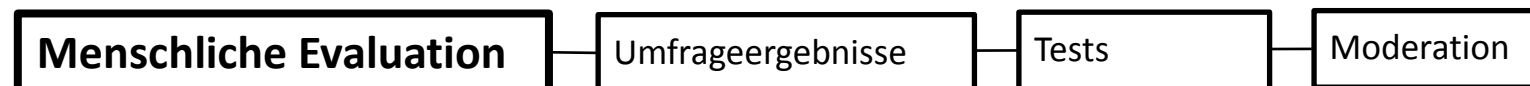
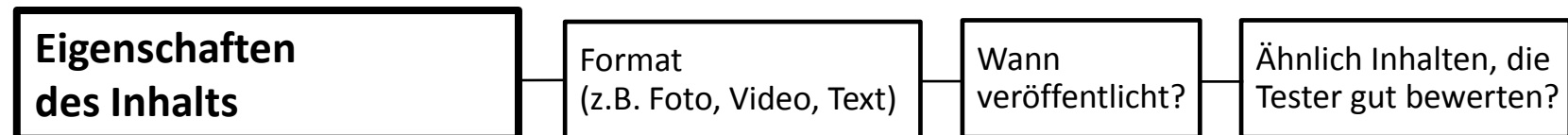
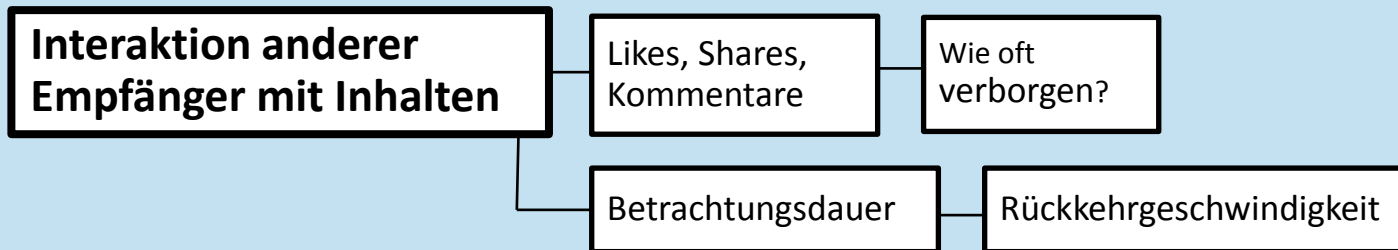
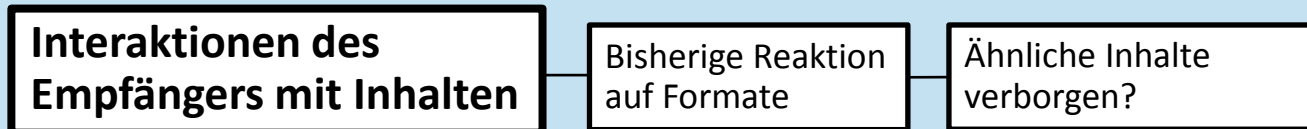
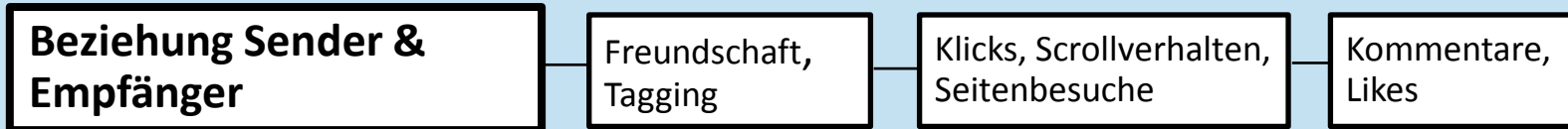
Bedeutung:

- Ausmaß: **direkte Folgen** eines Ereignisses
- Konsequenzen: **Reichweite** eines Ereignisses

Publikumsinteresse:

- Nähe: **Ort** des Ereignisses und **seine Bedeutung** für das Ereignis (räumliche und psychologische Nähe)
- **Prominenz**: Bekanntheitsgrad einbezogener Personen
- Aktualität: **Neuigkeitswert**
- Human Interest: **menschliche und emotionale Aspekte** eines Ereignisses

Signalauswahl exemplarisch: Facebook wertet aus, wie Menschen reagieren





Aber: Automatische, impulsive Reaktionen von Menschen sind unzuverlässige Signale für Relevanz und Wahrheit.

Schnelles Denken, langsames Denken

System 1:

- automatisch
- schnell
- weitgehend mühelos
- ohne willentliche Steuerung

Beispiel: Feindseligkeit in einer Stimme erkennen

System 2:

- mühevoll/anstrengend
- bewusst
- logisch denkend
- hat Überzeugungen
- kontrolliert Denken und Handeln

Beispiel: Steuererklärung machen

Die Macht der Plattformen



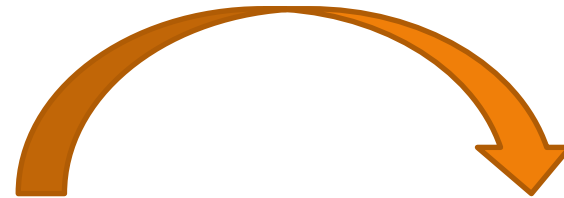
Plattform-Design beeinflusst menschliches Verhalten. Das Verhalten werten Plattformen aus.

“We find that the introduction of the 'People You May Know' feature locally nearly doubled the average number of edges added daily.”

(Malik & Pfeffer, 2016)

„At Facebook, we run over a thousand experiments each day.“

(Bakshy, 2014)



Es zählt nur, was man sieht



Darstellung externer Quellen auf Plattformen kann die einzige Grundlage für Diskussionen sein.

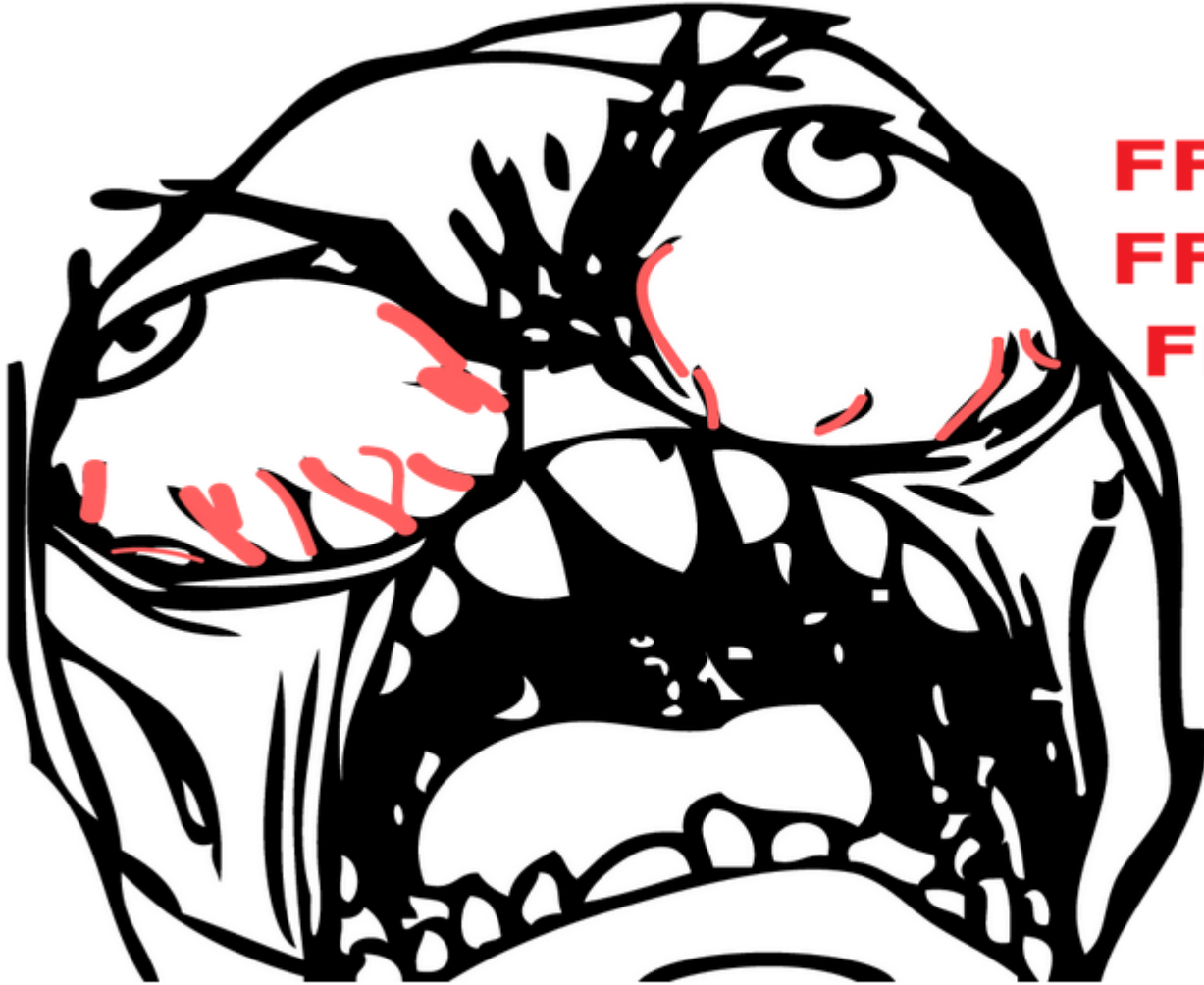
“Our results show that sharing content and actually reading it are poorly correlated.”

“People form an opinion based on a summary, or summary of summaries, without making the effort to go deeper.”

Gabielkov, Ramachandran, Chaintreau, Legout (2016)



Emotion bringt Reichweite



FFFFFFFFF
FFFFFFFFF
FFFFFFF
FFFUU
UUUU
UUUU
UUUU
UUUU
UUUU-

Emotional negativ aufgeladene Beiträge provozieren mehr Reaktionen

“We found that while negative emotions articulated in Wall posts make them more likely to receive more comments, the opposite is true for posts featuring positive emotions.”

“Emotionally charged Twitter messages tend to be retweeted more often and more quickly compared to neutral ones.”

Stieglitz, S., & Dang-Xuan, L. (2012).

Stieglitz, S., & Dang-Xuan, L. (2013)

★★★ AN INDEPENDENT VOICE FOR FREEDOM ★★★

AMERICA FIRST - AMERICA ONLY

ALIEN INVASION!

Alliance members have unearthed information on the existence of extraterrestrial oppressors in Europe. Part serpent, part assassin, this new breed of menace has set its sights on our women and children, ready to eradicate America as we know it. If we don't wise up to this harrowing situation, then the space mutants will surely enslave us all... or worse.

**THIS IS THE END
OF LIFE AS
WE KNOW IT!**

Scores of Alliance members have been working tirelessly on their SRPA.net terminals to keep us informed as to the presence of these creatures in Europe. That makes it official: they're coming here next and the War Department is preparing to fight these walking vermin on our shores.

„Fake News“?





Will Schulz Umerziehu Anhänger?
blog.halle-leaks.de



Gabriel findet Mord an Maria statt

Maas billigt Kinderehen – Solang sich das Kind nicht beschwert Save
halle-leaks.de - More from this domain

FACEBOOK ENGAGEMENTS

111.3K

DEIN T-SHIRTSHOP:



SHIRTSHOP OUTLET – SHIRTS FÜR 6,66 €



Folgt Halle-Leaks auch auf unserer aktuellen [Facebook-Präsenz \(HIER klicken\)](#) und auf [V-Kontakte \(HIER klicken\)](#). Facebook wird immer mal durch die Maas-Gesinnungs-Polizei gelöscht. Also schaut, ob Ihr noch die [aktuelle Seite](#) geliked habt. Und ladet Eure Freunde dazu ein.

pssst, shirtshop outlet mit 10.000 T-Shirts für je 6,66 €... Vor Weihnachten fix sein!

50 WIKINGER-SHIRT-MOTIVE



FOLG UNS AUF FACEBOOK



Facebook

https://www.facebook.com/halle.leaks.de/

Suche nach Personen, Orten und Dingen

MZ Mitteldeutsche Zeitung

Freunde finde

⚠ Leider ist dieser Inhalt derzeit nicht verfügbar

Der von dir angeklickte Link ist abgelaufen oder die Seite ist nur für eine Zielgruppe sichtbar, in der du nicht enthalten bist.

[Zurück zur vorherigen Seite](#) · [Zu den Neuigkeiten](#) · [Besuche unseren Hilfebereich](#)

[Über uns](#) [Werbeanzeige erstellen](#) [Seite erstellen](#) [Entwickler](#) [Karriere](#) [Datenschutz](#) [Cookies](#) [Datenschutzinfo](#) [Impres](#)

Facebook © 2016
Deutsch



Halle.leaks.06

Community · 3,069 like this



Halle-Leaks

Cause · 123 like this

Bei der Montagsdemo scheisse erzählen und sich zum Idioten mac...



Halle.leaks.07

Community · 1,320 like this



WasteLeaks Halle - Saale

Community · 70 like this

WasteLeaks Halle - Saale setzt sich aktiv gegen Lebensmittelversch...

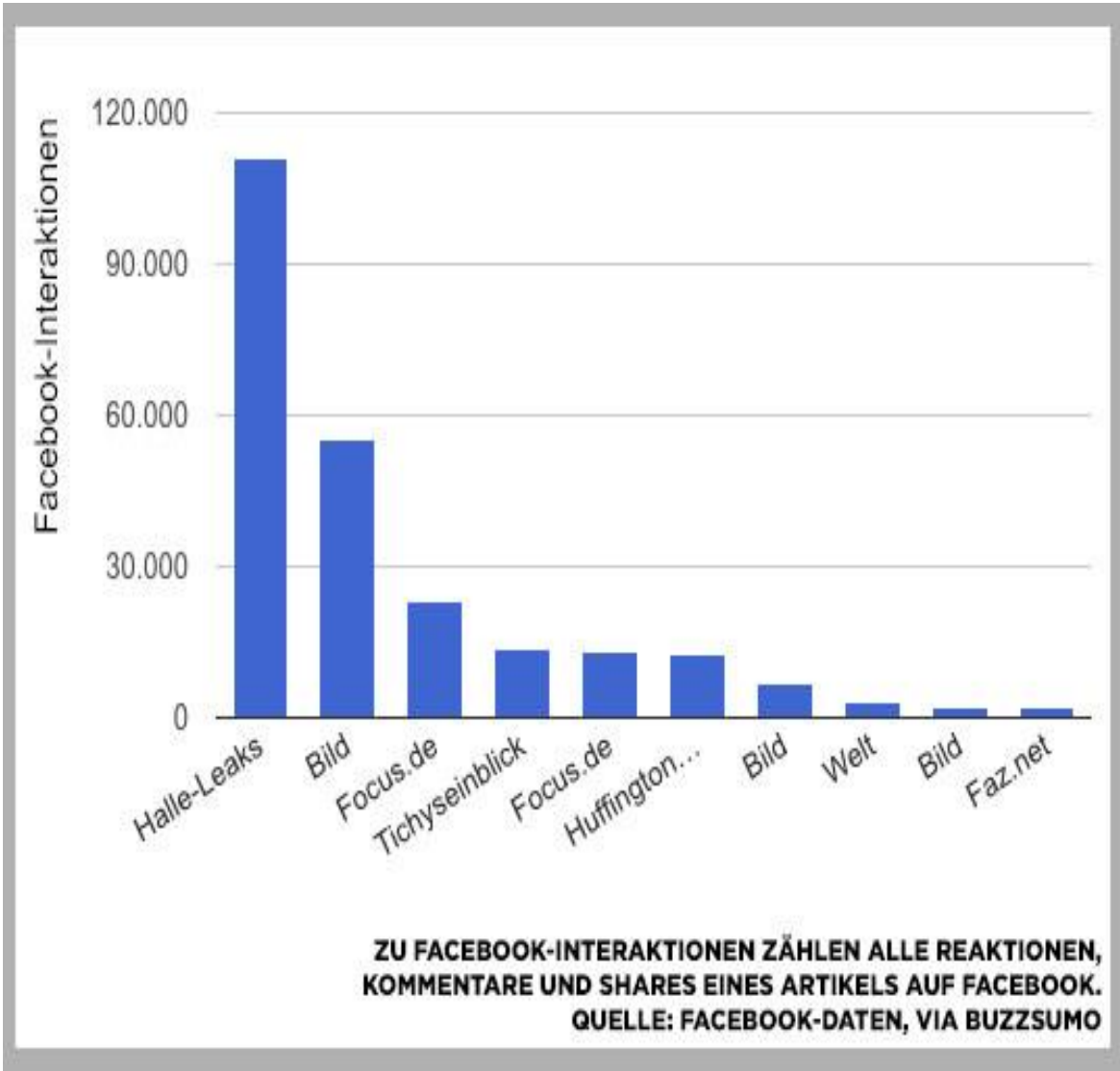


Halle.leaks.08

Community



Stand: März
2017



Quelle: BuzzFeed Deutschland

ALL NEWS ABOUT POLITICS

ELECTIONS 2016 POLITICS USA NEWS



BREAKING: PROOF SURFACES THAT OBAMA WAS BORN IN KENYA - TRUMP WAS RIGHT ALL ALONG...

October 31, 2016 admin 0

PROOF SURFACES THAT OBAMA WAS BORN IN KENYA - TRUMP WAS RIGHT ALL ALONG... Kenya has been the main reason why Obama has been dealing [...]



Bill Clinton's S*x Tare Just Leaked (VIDEO)

October 28, 2016 admin 0

While the mainstream media continues to target Donald Trump for s*xual assault allegations, despite the fact that there is no evidence to support them, it [...]

Pope Francis Forbids Catholics From Voting For Hillary!

By admin Posted in [Culture](#) [Politics](#)

Posted on October 28, 2016



Cardinal Ratzinger, who became Pope Benedict XVI in 2005 and served through 2013, wrote a blistering letter in 2004 forbidding Catholics from voting for pro-abortion Hillary Clinton or anyone who espouses her ideas. The letter reads: The Church teaches that abortion or euthanasia is a grave sin. The Encyclical Letter Evangelium vitae, with reference to ...

Robert De Niro Switches To Trump Shocks Hollywood

By admin Posted in [Culture](#)

Posted on October 28, 2016



Many Hollywood celebrities have openly spoken about their faith in Donald Trump, but one comes as a surprise to many. The last celebrity that opened up on the matter is a well-respected actor, director, and a true movie star, whose voice is definitely heard in Hollywood. Today, right next to trump stands Robert De Niro, ...

Oprah Tells FOX News Host 'Some White People Have To Die', Her Reasoning Is Unbelievable

“In Macedonia the economy is very weak and teenagers are not allowed to work, so we need to find creative ways to make some money. I’m a musician but I can’t afford music gear. Here in Macedonia the revenue from a small site is enough to afford many things.”

Top 5 Fake Election Stories by Facebook Engagement (three months before election)

**“Pope Francis Shocks World, Endorses Donald Trump
for President, Releases Statement”**
(960,000, Ending the Fed)

**“WikiLeaks CONFIRMS Hillary Sold Weapons to ISIS...
Then Drops Another BOMBSHELL! Breaking News”**
(789,000, The Political Insider)

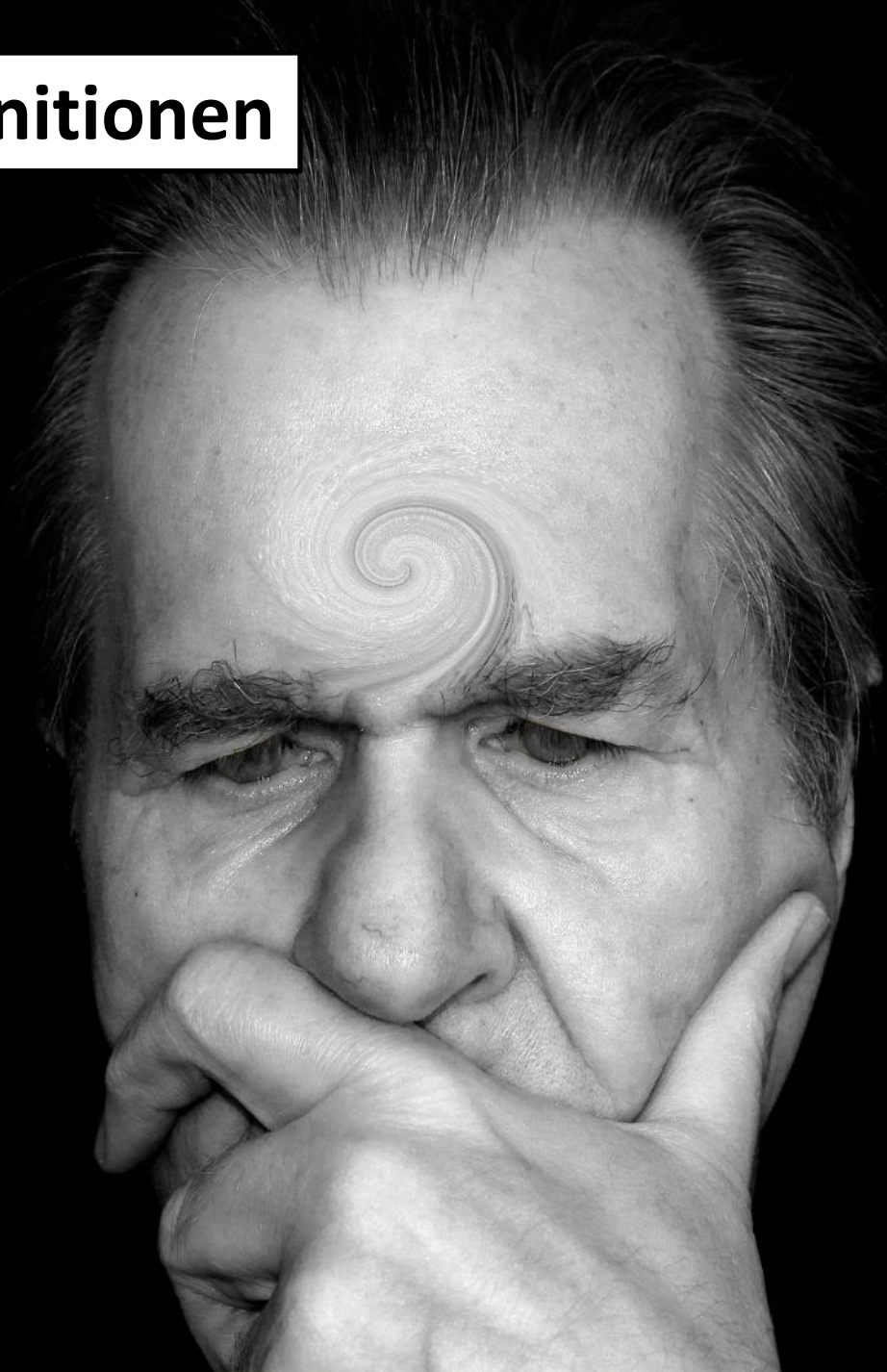
**“IT’S OVER: Hillary’s ISIS Email Just Leaked &
It’s Worse Than Anyone Could Have Imagined”**
(754,000, Ending the Fed)

**“Just Read the Law: Hillary Is Disqualified
From Holding Any Federal Office”**
(701,000, Ending the Fed)

**“FBI Agent Suspected in Hillary Email
Leaks Found Dead in Apparent Murder-
Suicide”** *(567,000, Denver Guardian)*

ENGAGEMENT REFERS TO THE TOTAL NUMBER OF SHARES, REACTIONS, AND COMMENTS
FOR A PIECE OF CONTENT ON FACEBOOK SOURCE: FACEBOOK DATA VIA BUZZSUMO

Verzerrte Kognitionen



Verfügbarkeitsheuristik: Woran man sich leicht erinnert, das scheint wichtiger, häufiger.

"People tend to assess the relative importance of issues by the ease with which they are retrieved from memory – and this is largely determined by the extent of coverage in the media."

(Kahneman, 2013)



Bundesarchiv, Bild 183-55802-0001
Foto: Hesse, Rudolf 1.29. Mai 1958

Quelle: Bundesarchiv, Bild 183-55802-0001 / Hesse, Rudolf / CC-BY-SA 3.0 [CC BY-SA 3.0 Wikimedia Commons]

Confirmation Bias und kognitive Dissonanz: Was nicht passt, wird passend gemacht

„There has been considerable interest among cognitive and social psychologists in the idea that people tend to hang on to their favored hypotheses with unwarranted tenacity and confidence. This tendency has been referred to as perseverance of beliefs, hypothesis preservation, and confirmation bias.”

(Klayman, 1995)

„This theory centers around the idea that if a person knows various things that are not psychologically consistent with one another, he will, in variety of ways, try to make them more consistent.“

(Festinger, 1962)

Kurz: Geht es um die demokratische Öffentlichkeit, ist System 1 nicht unser Freund

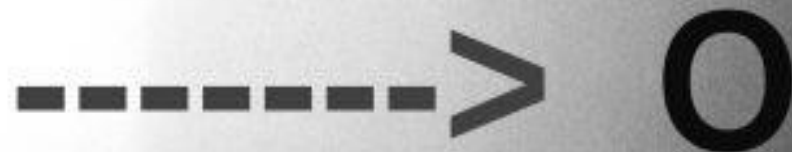


„Contrary to the rules of philosophers of science, who advise testing hypotheses by trying to refute them, people (and scientists, quite often) seek data that are likely to be compatible with the beliefs they currently hold. **The confirmatory bias of System 1 favors uncritical acceptance of suggestions and exaggeration of the likelihood of extreme and improbable events.**”

(Kahneman, 2012)

A vintage television set is shown in a black and white photograph. The screen displays the text "Click Here" in a large, bold, sans-serif font. Below the text is a dashed line that ends in a right-pointing chevron symbol (>), which points towards a large, solid black circle (0). To the right of the screen, the television's control panel is visible, featuring several knobs and a speaker grille. The brand name "BUNITRA 1610" is printed at the top of the control panel area.

Click Here



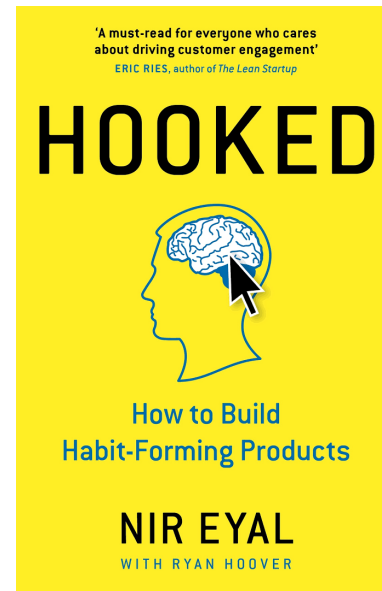
**„Captology“ oder die
Wissenschaft der digitalen
Verhaltensmanipulation**

Das Ziel: Verhalten ohne Nachdenken so wahrscheinlich wie irgend möglich zu machen

“As recent history of the web demonstrates, the ease or difficulty of doing a particular action affects the likelihood that a behavior will occur. To successfully simplify a product, we must remove obstacles that stand in the user’s way.”

“To initiate action, doing must be easier than thinking. The more effort – either physical or mental – required to perform the desired action, the less likely it is to occur.”

(Eyal, 2014)



"In my view, the evolution of persuasive technology systems should not be left to accident or to market forces alone."

(Fogg, 2003)

**Bots oder – welche
Reichweite
ist wirklich echt?**



Bots sind dafür optimiert, scheinbare Reichweite zu erzeugen.

„The bots try to hide their bot-identity; by being interesting to normal users whilst promoting topics via pushing hashtags and retweeting selected Tweets.“

„They follow abstract rules like ,take a popular tweet and add the following hashtags.““

(Hegelich & Janetzko, 2016)



Sie machen sich wichtig und erzeugen imaginäres Interesse für bestimmte Inhalte.

“This is a (non-comprehensive) list of the capabilities that they provide:

- Search Twitter for phrases/hashtags/keywords and automatically retweet them
- Automatically reply to tweets that meet a certain criteria
- Automatically follow any users that tweet something with a specific phrase/hashtag/keyword
- Automatically follow back any users that have followed the bot
- Automatically follow any users that follow a specified user
- Automatically add users tweeting about something to public lists
- **Search Google (and other engines) for articles/news according to specific criteria and post them, or link them in automatic replies to other users**
- Automatically aggregating public sentiment on certain topics of discussion
- Buffer and post tweets automatically.“

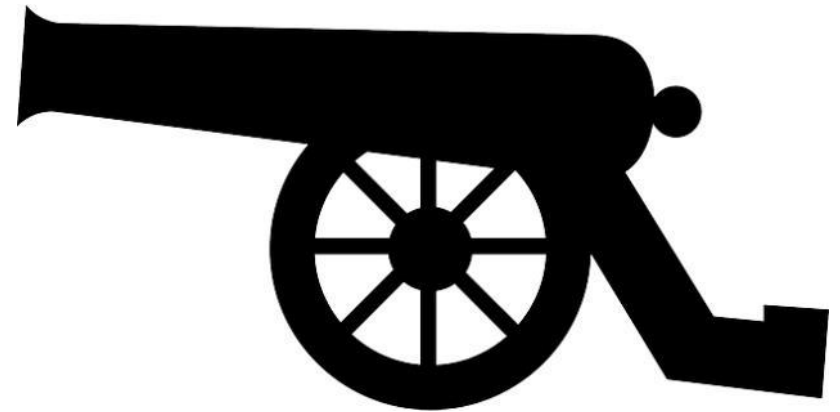
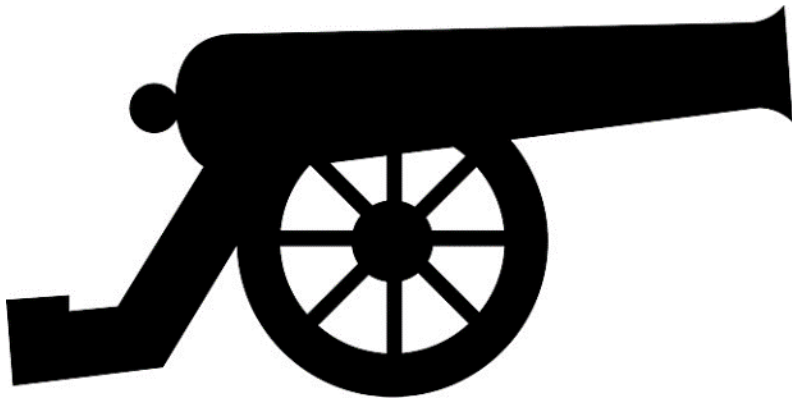
(Bessi & Ferrara, 2016)

Es sind ziemlich viele.

„By adopting state-of-the-art detection techniques developed by our group in the past, we estimated that about **400,000 bots** are engaged in the political discussion about the Presidential election, responsible for roughly **3.8 million tweets**, about one-fifth of the entire conversation.”

(Bessi & Ferrara, 2016)

Polarisierung und Radikalisierung



Polarisierung hängt von den gesellschaftlichen und politischen Rahmenbedingungen ab.

„The effect of personalised news on **polarisation is conditional on the political system.**“

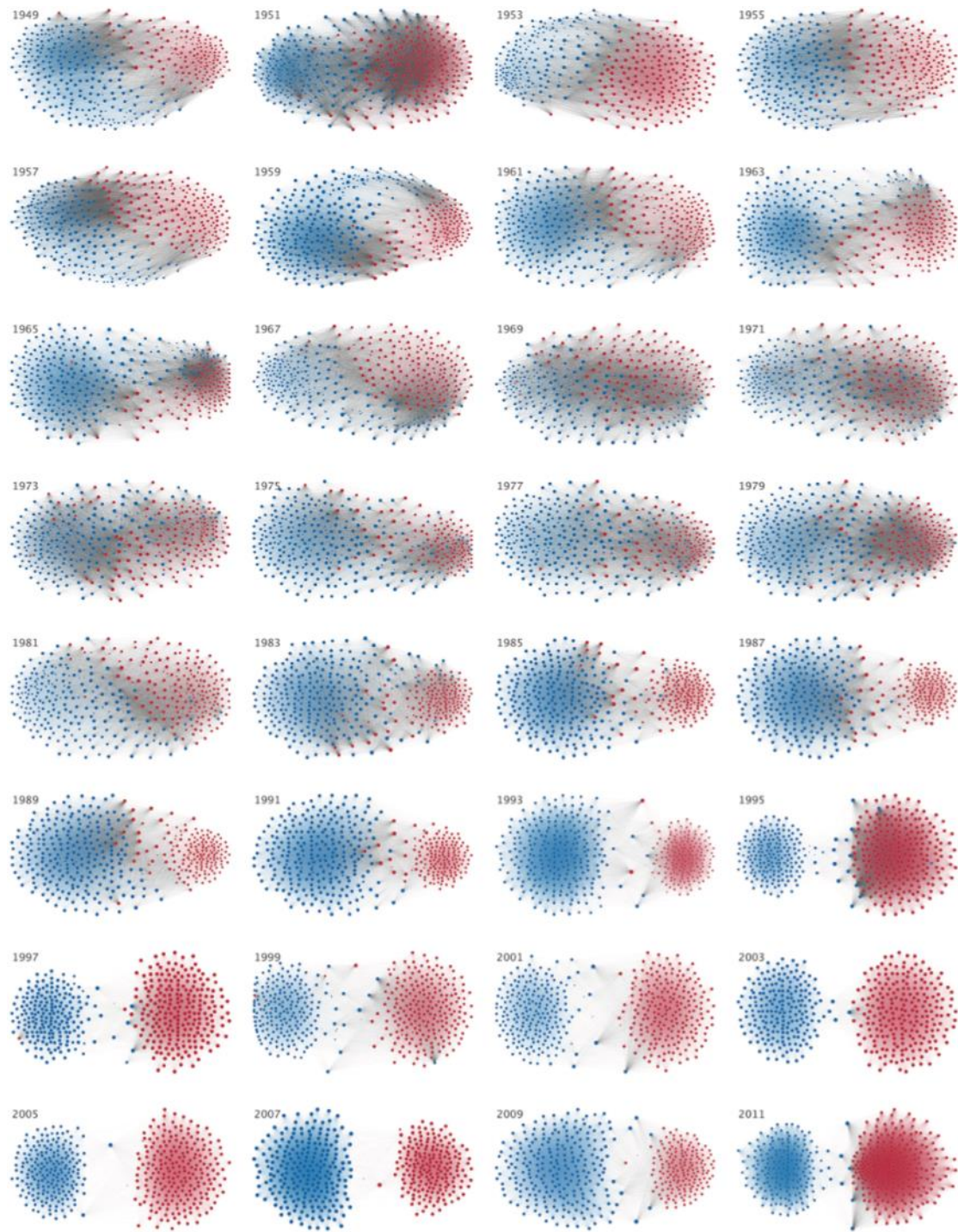
(Borgesius u. a., 2016)

„No matter how we sliced the data—either at the level of individuals or news stories — **the results demonstrate that Fox News is the dominant news source for conservatives.**“

(Iyengar & Hahn, 2009)

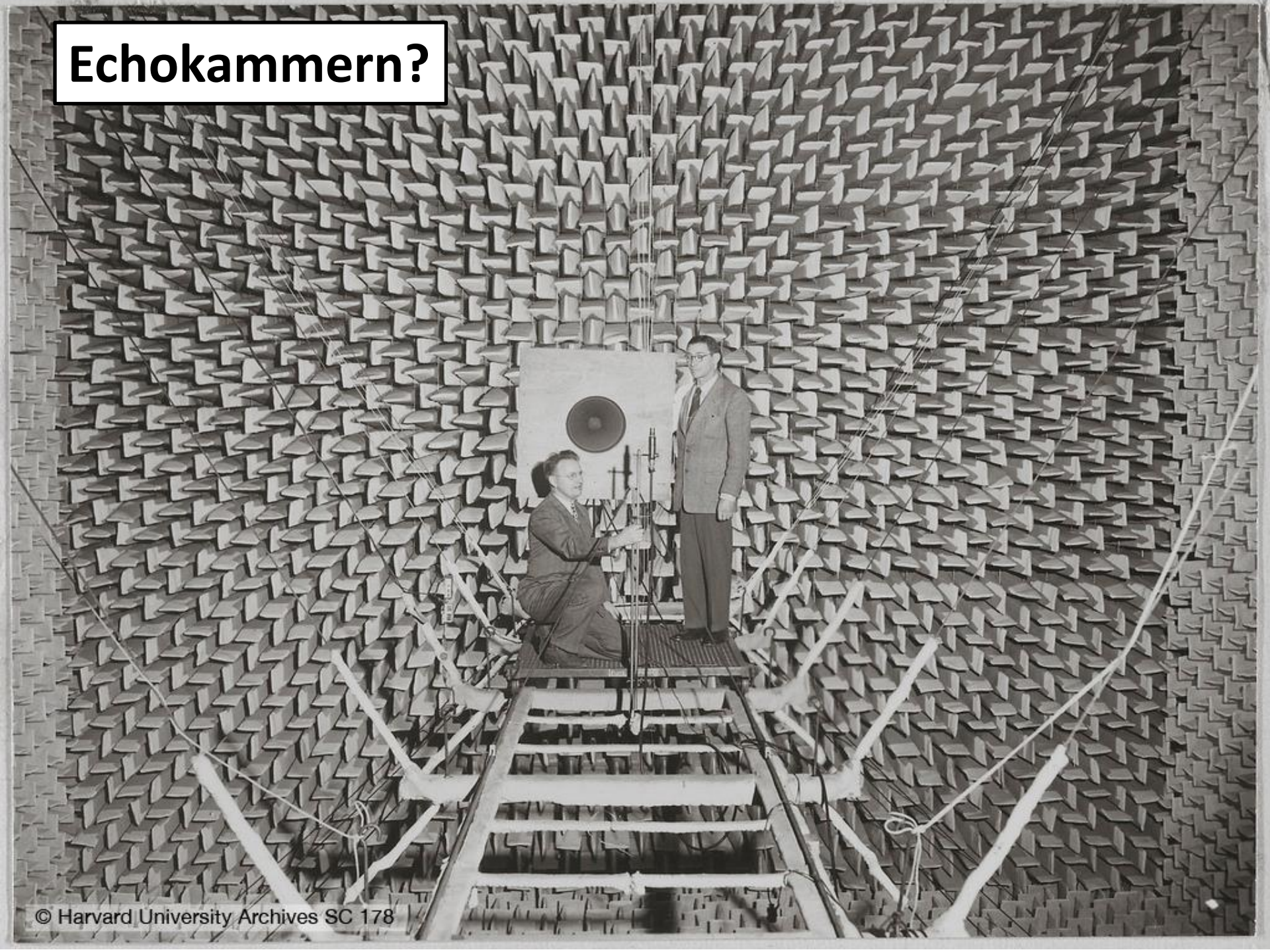
“In the contemporary American political environment, **there is evidence of increasing hostility across party lines**, which has been attributed to a variety of factors, including candidates’ reliance on negative campaigning and the availability of news sources with a clear partisan preference.”

(Iyengar & Westwood, 2015)



(Andris u.a., 2015)

Echokammern?



Facebooks Forscher und die Filterblase

„Despite the differences in what individuals consume across ideological lines, our work suggests that individuals are exposed to more cross-cutting discourse in social media than they would be under the digital reality *envisioned by some.*”

(Gemeint ist Eli Pariser's "Filter Bubble")



„The risk ratio comparing the probability of seeing cross-cutting content relative to ideologically consistent content is 5% for conservatives and 8% for liberals.“

(Bakshy u.a., 2015)

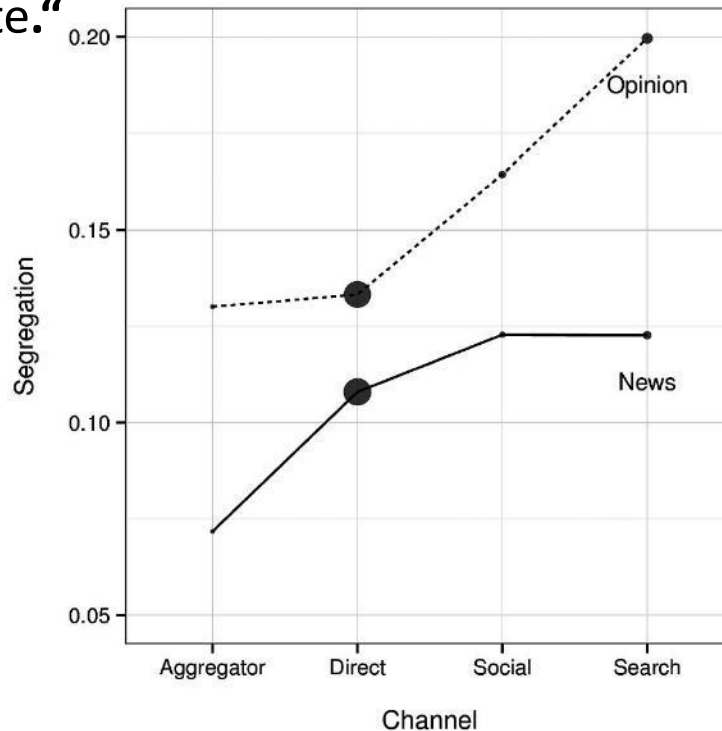
Echokammern?

„We showed that **articles found via social media or web-search engines are indeed associated with higher ideological segregation** than those an individual reads by directly visiting news sites. However, **we also found**, somewhat counterintuitively, **that these channels are associated with greater exposure to opposing perspectives**. Finally, we showed that **the vast majority** of online news consumption mimicked traditional offline reading habits, with **individuals directly visiting the home pages of their favorite, typically mainstream, news outlets**. We thus uncovered **evidence for both sides of the debate**, while also finding that the magnitude of the effects is relatively modest.“

(Flaxman u. a. 2016)

Echokammern?

„In any case, however, our results are directionally consistent with worries that social media increases segregation. We further find that search engines are associated with the highest levels of segregation among the four channels we investigate.“



(Flaxman u. a. 2016)

„78 percent of users get the majority of their news from a single publication, and 94 percent get a majority from at most two sources.“

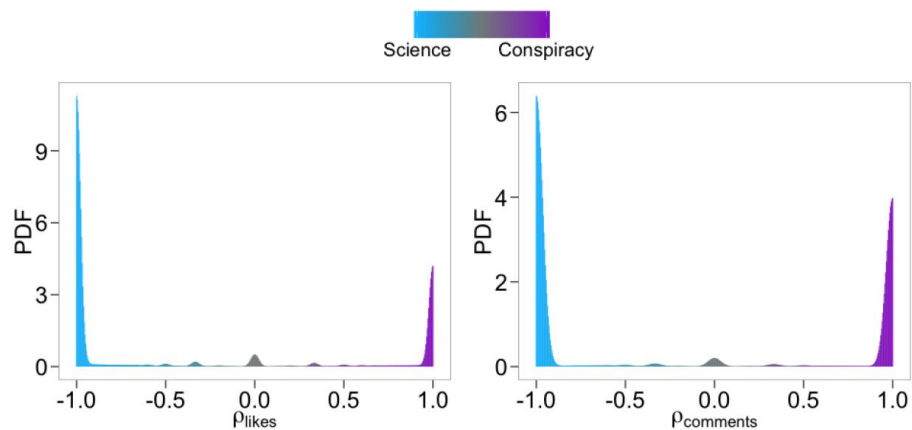
Figure 3. Estimates of Ideological Segregation across Consumption Channels. Point sizes indicate traffic fraction, normalized separately within the news and opinion lines.

Ist das Internet schuld?

"We find that the increase in **polarization is largest among the groups least likely to use the internet** and social media."

(Boxell et al 2017)

"Users tend to aggregate in communities of interest, which causes reinforcement and fosters confirmation bias, segregation, and polarization. This comes at the expense of the quality of the information and leads to proliferation of biased narratives fomented by unsubstantiated rumors, mistrust, and paranoia. According to these settings **algorithmic solutions do not seem to be the best options in breaking such a symmetry.**"



(Aus: Zollo u.a., 2015)

(Vicario u.a. 2016)

**Wechselwirkungen überall oder:
It's complicated**



Fragen:

- Wer hat das geteilt?
- Und warum?
- Wer hat es tatsächlich gelesen?
- Wieviele Shares und Likes stammen von Bots?
- Wieviele menschliche Nutzer haben das zu sehen bekommen, weil der Algorithmus die Signale von Nichtlesern und Bots als Relevanzsignale deutet?
- Bei wie vielen Nutzern ist davon etwas hängengeblieben?
- Bei wie vielen Nutzern hat das einen Einfluss auf ihre politische Haltung gehabt?
- Hat daran jemand verdient?

Top 5 Fake Election Stories by Facebook Engagement (three months before election)

“Pope Francis Shocks World, Endorses Donald Trump for President, Releases Statement”
(960,000, *Ending the Fed*)

“WikiLeaks CONFIRMS Hillary Sold Weapons to ISIS... Then Drops Another BOMBSHELL! Breaking News”
(789,000, *The Political Insider*)

“IT’S OVER: Hillary’s ISIS Email Just Leaked & It’s Worse Than Anyone Could Have Imagined”
(754,000, *Ending the Fed*)

“Just Read the Law: Hillary Is Disqualified From Holding Any Federal Office”
(701,000, *Ending the Fed*)

“FBI Agent Suspected in Hillary Email Leaks Found Dead in Apparent Murder-Suicide” (567,000, *Denver Guardian*)

ENGAGEMENT REFERS TO THE TOTAL NUMBER OF SHARES, REACTIONS, AND COMMENTS FOR A PIECE OF CONTENT ON FACEBOOK SOURCE: FACEBOOK DATA VIA BUZZSUMO

**Captology-Design:
Agieren ohne nachzudenken**

Kognitive Verzerrungen

**redaktionell
kuratierte
Medien**

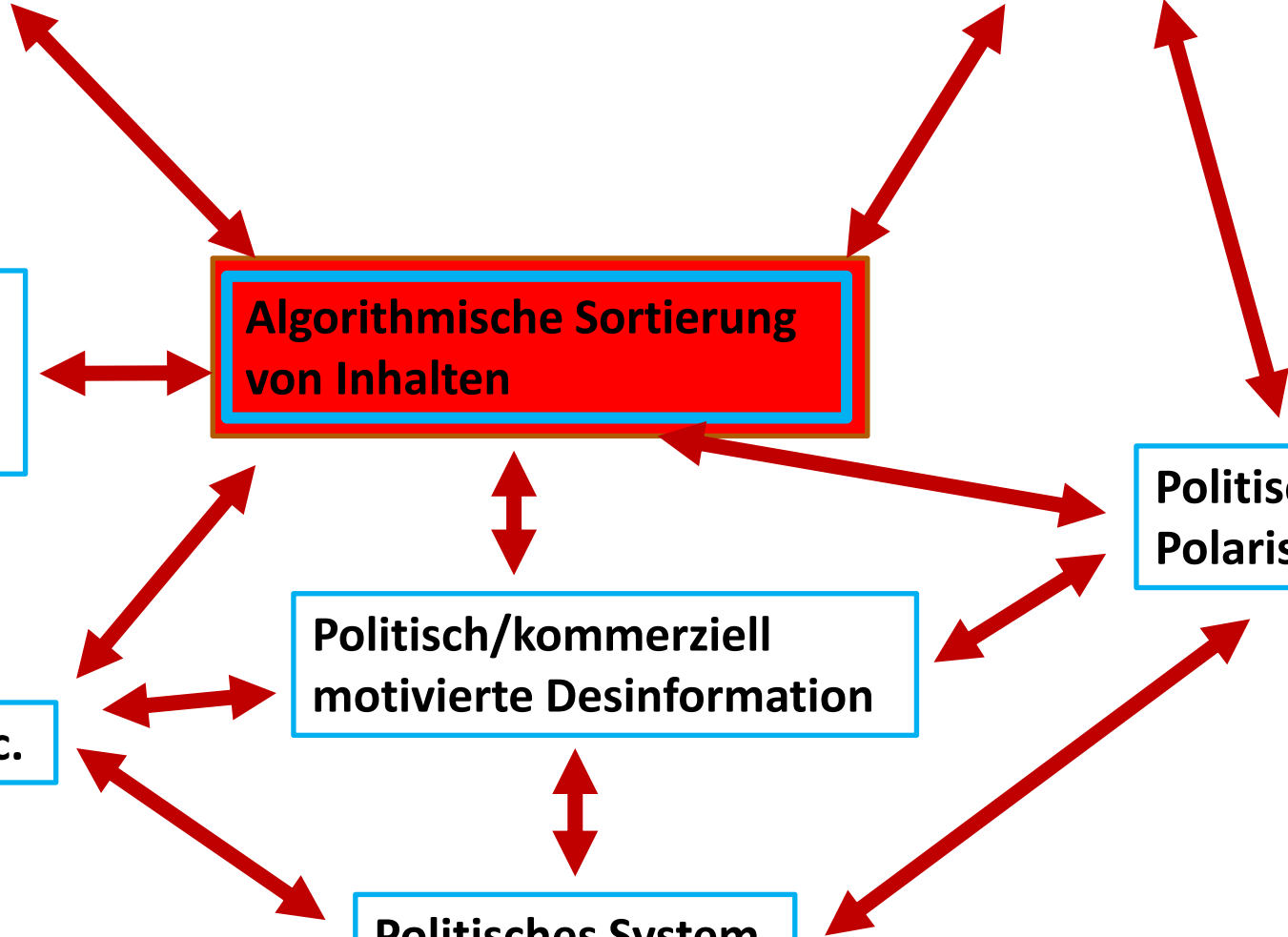
**Algorithmische Sortierung
von Inhalten**

**Politische
Polarisierung**

Bots etc.

**Politisch/kommerziell
motivierte Desinformation**

**Politisches System,
Wahlsystem**



Danke fürs Zuhören!

Christian Stöcker: @chrisstoecker
christan.stoecker@haw-hamburg.de

Quellen:

<https://gist.github.com/klishka/e366d91e32979d92c0272ea4c7bfadb9>