WHY YOU SHOULD TAKE SOCIAL NETWORKS INTO…

ACCOUNT

Donato Ramani
SISSA Media Relations and Communications Unit

ramani@sissa.it
Trieste, 15 January 2020

JAN 2020

DAILY TIME SPENT USING SOCIAL MEDIA

AVERAGE DAILY TIME (IN HOURS AND MINUTES) THAT INTERNET USERS AGED 16 TO 64 SPEND USING SOCIAL MEDIA ON ANY DEVICE

92

SOURCE: GLOBALWEBINDEX (Q3 2019). FIGURES REPRESENT THE FINDINGS OF A BROAD SURVEY OF INTERNET USERS AGED 16 TO 64. SEE GLOBALWEBINDEX.COM FOR MORE DETAILS.

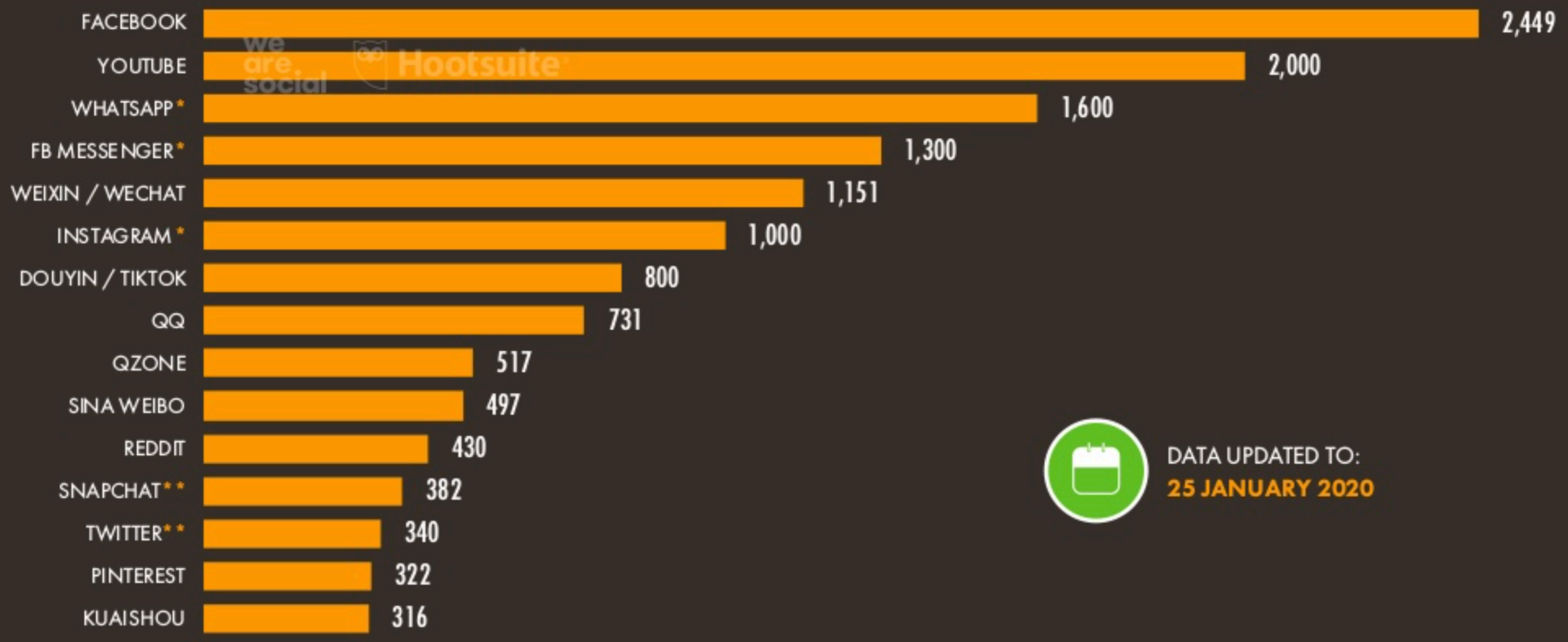
we are social Hootsuite

https://wearesocial.com/digital-2020

JAN 2020

THE WORLD'S MOST-USED SOCIAL PLATFORMS

BASED ON MONTHLY ACTIVE USERS, ACTIVE USER ACCOUNTS, ADVERTISING AUDIENCES, OR UNIQUE MONTHLY VISITORS (IN MILLIONS)



DATA UPDATED TO: 25 JANUARY 2020

95

SOURCES: KEPIOS ANALYSIS; COMPANY STATEMENTS AND EARNINGS ANNOUNCEMENTS; PLATFORMS' SELF-SERVICE ADVERTISING TOOLS (ALL LATEST AVAILABLE DATA). **NOTES:** PLATFORMS IDENTIFIED BY (*) HAVE NOT PUBLISHED UPDATED USER NUMBERS IN THE PAST 12 MONTHS. PLATFORMS IDENTIFIED BY (**) DO NOT PUBLISH MAU DATA. FIGURES FOR TWITTER AND SNAPCHAT USE EACH PLATFORM'S LATEST ADVERTISING AUDIENCE REACH, AS REPORTED IN EACH PLATFORM'S SELF-SERVICE ADVERTISING TOOLS (JANUARY 2020).

we are social Hootsuite

WHY SHOULD YOU CONSIDER SOCIAL NETWORKS?

Recognition: Build a reputation

Chris Woolston

Nature 521, 113-115 (2015) doi:10.1038/nj7550-113a

Published online 06 May 2015

This article was originally published in the journal *Nature*

To get respect in a field, scientists need to consider not just their work, but also their interactions with others.

Barbour says that if she had a chance to update her editorial on building a reputation, she would add one more item: cultivate a positive online presence. Some researchers have already received that message. "Social media has been a big part of building my own reputation," Bik says. Twitter, she says, has been an excellent forum for burnishing her personal brand as a multidisciplinary, collaborative researcher. Every time she tweets about her own work or her take on other papers, her reputation spreads. "I'm regularly invited to speak at conferences and give departmental seminars at different institutes. Many of these invitations happen because students and other researchers know about my work through Twitter," she says. Bik, whose handle is @Hollybik, has tweeted more than 11,000 times since September 2010 and has more than 5,000 followers, including scientists from a wide variety of fields.

NETWORKING/COLLABORATION/RECRUITING

TO BOOST YOUR PROFESSIONAL PROFILE

TO TALK ABOUT SCIENCE TO DIFFERENT AUDIENCES

TO DISCUSS SCIENCE, TO SHARE RESULTS AND NEWS

TO PROMOTE YOUR ACTIVITIES/PROJECTS

TO PROMOTE A CAUSE

BECAUSE ONLINE VISIBILITY IS IMPORTANT FOR YOUR RESEARCH WORK

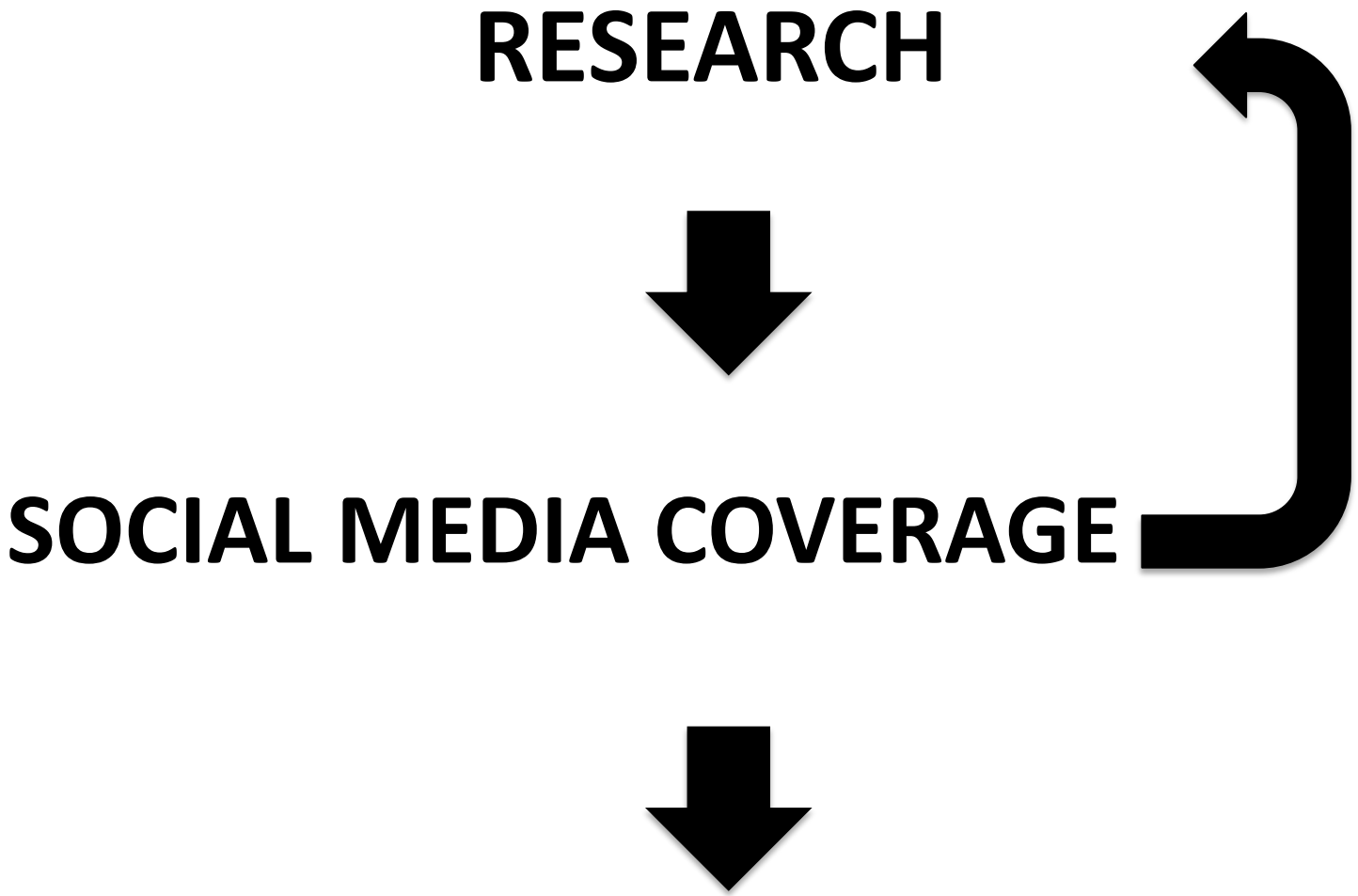
"For articles deposited in the preprint server arXiv, Twitter mentions were positively correlated with rapid article downloads and citations appearing only months after deposition"

*Bik H, Goldstein M.,"An Introduction to Social Media for Scientists", Plos Biology
Shuai X, Pepe A, Bollen J (2012) How the scientific community reacts to newly submitted preprints: Article downloads, Twitter mentions, and citations. PLoS ONE 7: e47523.doi

ONLINE VISIBILITY IS IMPORTANT FOR YOUR RESEARCH WORK

"Highly tweeted journal articles were 11 times more likely to be highly cited versus articles without strong social media coverage."*

*Bik H, Goldstein M.,"An Introduction to Social Media for Scientists", Plos Biology
Eysenbach G (2011) Can tweets predict citations? Metrics of social impact based on twitter and correlation with traditional metrics of scientific impact. J Med Internet Res 13: e123. doi: 10.2196/jmir.2012


RESEARCH
SOCIAL MEDIA COVERAGE
ARTICLE SUCCESS THERMOMETER
(beyond your community)

RESEARCH IMPACTS

"Social media and article-level metrics may thus be particularly important for unveiling research impacts that cannot be reflected in traditional scientific metrics."**

**Bik H, Goldstein M.,"An Introduction to Social Media for Scientists", Plos Biology
*Priem J, Piowar HA, Hemminger BM (2012) Altmetrics in the Wild: Using social media to explore scholarly impact. arXivorg arXiv:1203.4745 [cs.DL] 1–23.

Article | OPEN | Published: 23 August 2016

Altmetrics: diversifying the understanding of influential scholarship

Stacy Konkiel

Palgrave Communications **2**, Article number: 16057 (2016) | Download Citation

Conclusion

Altmetrics are a new class of research impact and attention data that can help researchers understand their influence and share it with others, for a variety of purposes. Though altmetrics currently have limitations to their formulation and use, these relatively young metrics are still evolving and may soon be more accurate measures of true research impact than their bibliometric predecessors. Until that day, researchers considering using altmetrics should follow a number of recommendations that can make a difference in their proper use, preventing abuse.

https://www.nature.com/articles/palcomms201657

https://www.altmetric.com/top100/2019/

https://www.altmetric.com/about-our-data/our-sources/

"Do Altmetrics Work? Twitter and Ten Other Social Web Services" http://dx.doi.org/10.1371/journal.pone.0064841

THERE IS SOMETHING MORE, THOUGHT

1) WHERE DO PEOPLE LOOK FOR INFORMATION?

According to Science and Engineering Indicators, **81% of young adults (18-24 years) use the Internet as their primary source of science and technology** information

https://journals.sagepub.com/doi/10.1177/2056305118797720

- Research indicates that 80% of internet users search for health information and almost half are seeking information about a specific doctor or health professional. (2)

- A study by PwC Health Research indicated that over 75% of Americans use social media to research their health symptoms. (2)

- 90% of individuals aged 18 to 24 stated they trust medical info shared on their social feeds. (2)

https://blog.medicalgps.com/social-media-and-healthcare-10-insightful-statistics/

2) https://getreferralmd.com/2017/01/30-facts-statistics-on-social-media-and-healthcare/

2) FAKE NEWS

https://advances.sciencemag.org/content/5/1/eaau4586

Using unique behavioral data on Facebook activity linked to individual-level survey data, we find, first, that sharing fake news was quite rare during the 2016 U.S. election campaign. This is important context given the prominence of fake news in post-election narratives about the role of social media disinformation campaigns. Aside from the relatively low prevalence, we document that both ideology and age were associated with that sharing activity. Given the overwhelming pro-Trump orientation in both the supply and consumption of fake news during that period, including via social pathways on Facebook (*3*), the finding that more conservative respondents were more likely to share articles from fake news–spreading domains is perhaps expected. More puzzling is the independent role of age: Holding constant ideology, party identification, or both, respondents in each age category were more likely to share fake news than respondents in the next-youngest group, and the gap in the rate of fake news sharing between those in our oldest category (over 65) and youngest category is large and notable.

https://advances.sciencemag.org/content/5/1/eaau4586

Vaccino contro il Covid: la paura degli italiani per il metodo Rna di Pfizer e Moderna. Gli scienziati: “E' una bufala che ci renda ogm"

https://twitter.com/profshanecrotty/status/1332425802617479168

FACT CHECKING

DEBUNKING

ECHO CHAMBERS

3) ECHO CHAMBERS

In news media an **echo chamber** is a metaphorical description of a situation in which beliefs are amplified or reinforced by communication and repetition inside a closed system and insulated from rebuttal. By visiting an "echo chamber", people are able to seek out information that reinforces their existing views, potentially as an unconscious exercise of confirmation bias. This may increase social andpolitical polarization and extremism.

CULTURAL TRIBALISM

RESEARCH ARTICLE

Anatomy of news consumption on Facebook

Ana Lucía Schmidt, Fabiana Zollo, Michela Del Vicario, Alessandro Bessi, Antonio Scala, Guido Caldarelli, H. Eugene Stanley, and Walter Quattrociocchi

Using quantitative analysis, we show that the more active a user is, the more the user tends to focus on a small number of news sources. Looking at the page clusters generated by user activity, we find a distinct community structure and strong user polarization. We provide evidence that preferences of users and news outlets differ in that communities established by page creators are more locally confined than communities identified by the users' activity, which can span across international borders. This segregation in distinct communities can be reproduced by a simple model that mimics the selective exposure of users. Content consumption on Facebook is strongly affected by the tendency of users to limit their exposure to a few sites. Despite the wide availability of content and heterogeneous narratives, there is major segregation and growing polarization in online news consumption. News undergoes the same popularity dynamics as popular videos of kittens or selfies. The spreading of fake news and unsubstantiated rumors motivated major corporations like Google and Facebook to provide solutions to the problem. Google news decided to flag fact-checked information and to penalize providers of fake news; others are proposing to use black lists of sources to automatically limit their spread. However, often debates, especially on socially relevant issues, are based upon conflicting narratives. Probably, the main problem behind misinformation is polarization of users online.

https://www.pnas.org/content/114/12/3035?fbclid=IwAR15e0oIGwPxrVufGUaIK6Ak78rjYUzppuGL9W-xtf3EtdWrDoMEvZumkiw

Walter Quattrociocchi
3 novembre alle ore 19:43 ·

Un collega mi chiede delucidazioni su come presentare la sequenza dei nostri lavori nel suo corso. E faccio una mail di sintesi e un po' mi spavento di quanta roba abbiamo fatto sti anni. Però ve la condivido, magari potrebbe tornare utile.

1) Gli utenti tendono a condividere informazioni aderenti alla loro visione del mondo anche se queste info contengono elementi falsi (esperimento fatto creando supercazzole sui social ed è stato divertentissimo). (Esperimento su qualche milione di utenti). E facciamo il primo botto.
Science Vs Conspiracy https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0118093

2) Per provare però che sia il confirmation bias e non una permeabilità a tutti i contenuti in generale bisogna fare un controllo, ovvero misurare come rispondono a informazioni che smentiscono la loro visione del mondo (55 milioni di persone analizzate). Viene fuori che non guardano le smentite e se per caso ci entrano in contatto aumentano il consumo di informazione che piace a loro (effetto backfire che tanto ha fatto incazzare i power ranger della verità assoluta). Secondo Botto termonucleare che fa chiudere la colonna del debunking del Washington Post.
Debunking in a World of Tribes https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0181821

3) A sto punto ci viene il dubbio: non è che si creano cluster omofili che rinforzano la narrativa condivisa? Pare de si. Echo chamber diventa neologismo Treccani nel 2017.
Viral Misinformation https://dl.acm.org/doi/abs/10.1145/2740908.2745939

4) Quindi che succede se modelliamo questo processo. Riusciamo a modellare le cascate informative (perchè pare che non si potesse fare).
Tante informazioni a disposizione, gli utenti cercano e nel marasma trovano alla fine fonti che nutrono la loro visione del mondo e li incontrano altri utenti che fanno la stessa cosa dando vita a quel processo di segregazione che chiamiamo Echo Chamber.
Il modello funge e trova riscontro pure sui dati e si può prevedere la dimensione della cascata (il numero di persone coinvolte).
The Spreading of Misinformation online (articolo che fa il 3 botto atomico e ad oggi ha più di mille citazioni) https://www.pnas.org/content/113/3/554

Non è che questi utenti a furia di stare insieme si polarizzano ancora di più e si incattiviscono? Pare proprio di si
Emotional Dynamics in the age of misinformation https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0138740
Emotional Contagion and Group Polarization on Facebook https://www.nature.com/articles/srep37825

E pare che si contagino pure a livello linguistico, cioè si parla allo stesso modo https://arxiv.org/abs/1903.11452

Ma sta dinamica vale solo per argomenti estremi o per l'informazione in generale? SI vale pure per il consumo delle news. Lo vediamo su 376 milioni di persone. Fa il botto pure questo.
https://www.pnas.org/content/114/12/3035

Si può fare qualcosa in termini di linguaggio giornalistico per abbassare la polarizzazione?
Ni https://www.nature.com/articles/s41599-020-0507-3?fbclid=IwAR2Sz1TsliBdGXDGq25LFnbqeyw4IU_2NsIUAjn_TDJMl1EF6BkEN9qSzX8

Infatti il consumo di informazioni sui social sembra guidato dall'esposizione selettiva
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0229129

E la polarizzazione è un ottimo predittore della diffusione di informazioni false
https://dl.acm.org/doi/abs/10.1145/3316809

Come si consuma l'informazione sui social quando arriva una pandemia?
Pare che i modelli epidemici per descrivere la fruizione di informazioni facciano abbastanza schifo, ma comunque la storia che le informazioni false circolano più velocemente delle vere sembra una boiata
https://www.nature.com/articles/s41598-020-73510-5

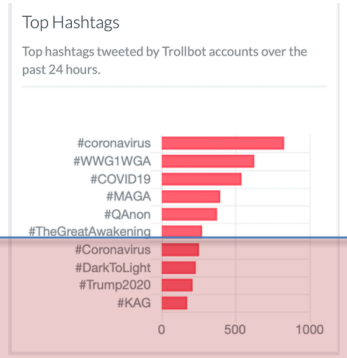
https://m.facebook.com/story.php?story_fbid=10224440735631106&id=1387942701&sfnsn=scwspwa

https://theconversation.com/trumps-twitter-ban-obscures-the-real-problem-state-backed-manipulation-is-rampant-on-social-media-153136?utm_medium=email&utm_campaign=Latest%20from%20The%20Conversation%20for%20January%2014%202021%20-%201833817841&utm_content=Latest%20from%20The%20Conversation%20for%20January%2014%202021%20-%201833817841+CID_fad97ab1d4fd24b2a856c273ed08e958&utm_source=campaign_monitor_uk&utm_term=Trumps%20Twitter%20ban%20obscures%20the%20real%20problem%20state-backed%20manipulation%20is%20rampant%20on%20social%20media

Meet ‘Sara’, ‘Sharon’ and ‘Mel’: why people spreading coronavirus anxiety on Twitter might actually be bots

April 1, 2020 5.20am BST

Busy busting bots



This figure shows the top Twitter hashtags tweeted by bots over 24 hours. Bot Sentinel

The exact scale of misinformation is difficult to measure. But its global presence can be felt through snapshots of Twitter bot involvement in COVID-19-related hashtag activity.

Bot Sentinel is a website that uses machine learning to identify potential Twitter bots, using a score and rating. According to the site, on March 26 bot accounts were responsible for 828 counts of #coronavirus, 544 counts of #COVID19 and 255 counts of #Coronavirus hashtags within 24 hours.

https://theconversation.com/meet-sara-sharon-and-mel-why-people-spreading-coronavirus-anxiety-on-twitter-might-actually-be-bots-134802

4) READ BETWEEN THE LINES

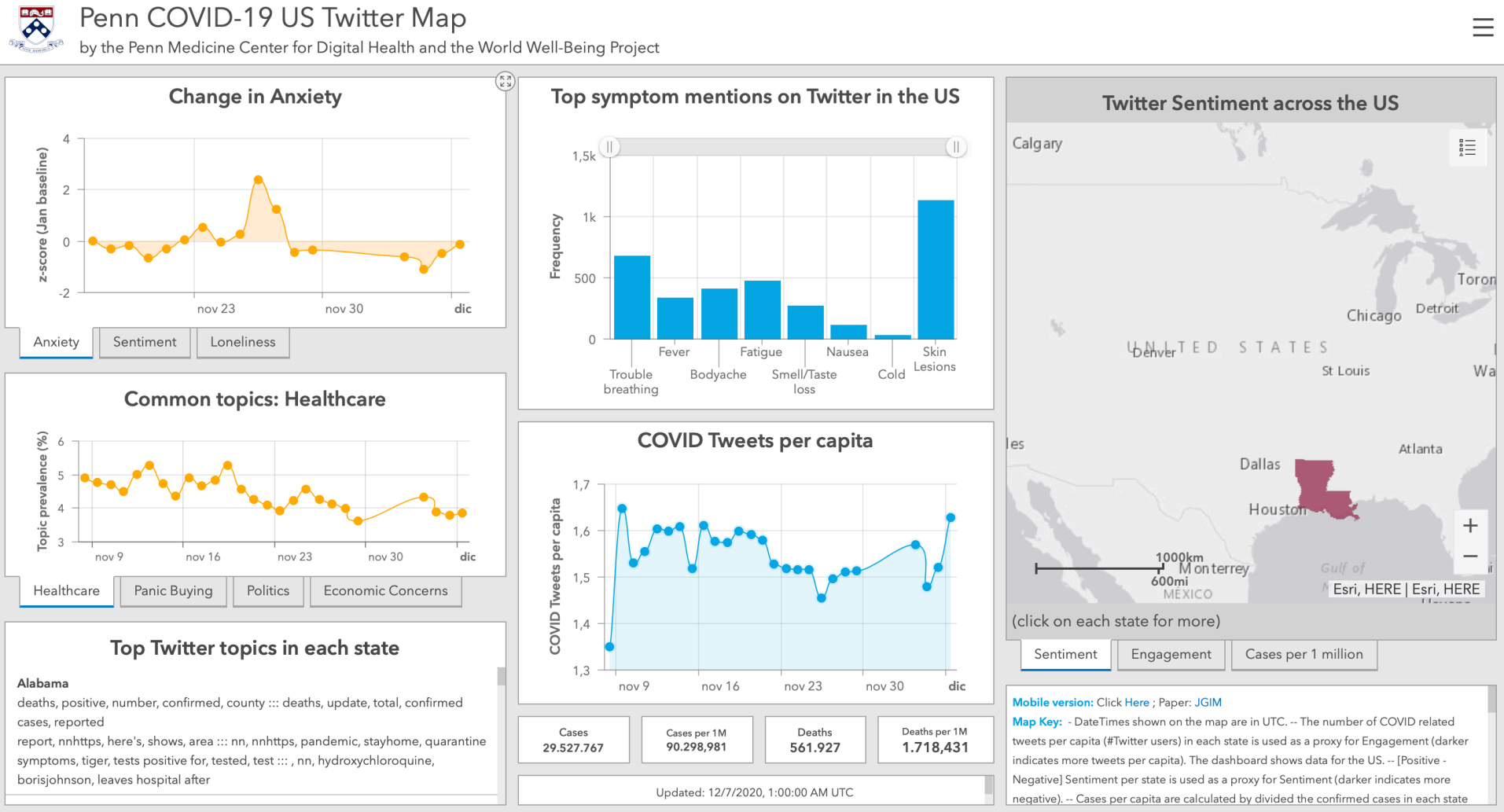
In an article published in JAMA Network last month, Raina Merchant, an associate vice president at Penn Medicine and an associate professor of emergency medicine at the Perelman School of Medicine, wrote that "integrating social media as an essential tool in preparedness, response, and recovery can influence the response to COVID-19."

This is not the first time that the Center for Digital Health has used social media to look at trends or patterns surrounding a current health issue —in November, the team published a study that used tweets with words like *lonely* or *alone* to identify early signs of mental health issues.

SENTIMENT ANALYSIS

https://www.inquirer.com/health/covid19-coronavirus-twitter-social-media-20200415.html

Penn researchers analyze Twitter to track changing perceptions of coronavirus



https://www.arcgis.com/apps/opsdashboard/index.html#/abb41818160d4cec91f604520a088349