

# Vaccine Insights Study Companion

A pack of digital resources  
to support the Flexible Learning Course.

# Find further digital resources to help you gain mastery over vaccine misinformation

This study companion has been designed to support the Vaccine Insights Flexible Learning Course. You'll find accessible reminders of all the key theories and principles you need to know from the workshops, along with a curated collection of further readings and resources. Bookmark it, download it, share it, and use it your way to keep one step ahead of vaccine misinformation.

To get the most from each section of this study companion, it is best to take the corresponding 30-minute workshop first. If you've missed any and want to catch up, you can watch the recap on demand at the [First Draft YouTube channel](#).

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## 1

# How to understand vaccine misinformation

An overview of the misinformation landscape, and a rundown of the commonly used tactics for spreading misinformation online.

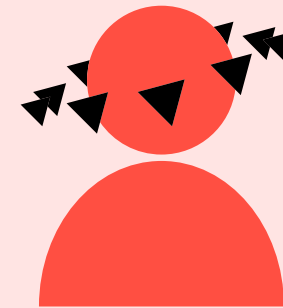


## Disinformation

When people intentionally create false or misleading information to make money, have political influence, or to maliciously cause trouble or harm.

### Why do people share disinformation?

Money, political gain, to cause confusion, to sow mistrust.



## Misinformation

When people share disinformation but they don't realize it's false or misleading, often because they're trying to help or want to feel part of a community.

### Why do people share misinformation?

Out of fear and wanting to protect people they care about or to connect with others who are sharing similar information.





## Content

- Often involves a kernel of truth, e.g. reframing genuine content
- Visual content (images, videos and memes) is highly shareable and effective
- Disinformation is designed to create an emotional response

## Motivation

- The key drivers are: financial, political, social and psychological

## Circulation

- Closed Facebook groups, encrypted chat apps, email and SMS are increasingly used to spread misinformation, as they are hard to monitor
- People are very trusting of local information sources, so monitor local Facebook pages, Nextdoor and local news sites

## Remember

- Think about the big picture, not just the content. Where did the disinformation originate? What might be motivating someone to create or share?
- Disinformation is hard to trace and attribute in the moment



# The Deceptive Seven: seven common types of disinformation

KEY THEORIES AND PRINCIPLES:  
A RECAP FROM THE WORKSHOP



## Satire or parody

Content that isn't intended to cause harm, but has potential to fool



## Misleading content

Information that frames an issue or a person in a misleading way



## Imposter content

Content that impersonates or falsely claims to be from a genuine source



## Fabricated content

New content that is 100% false, made to deceive and do harm



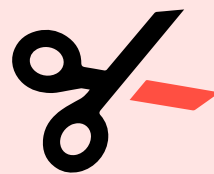
## False connection

Headlines, images or captions that over-sell the content (e.g., clickbait)



## False context

Genuine content that is shared out of its original context



## Manipulated content

Genuine information or imagery that is manipulated or edited to deceive

Low manipulation

High manipulation



## Behind the term ‘Anti-vaxx’

The term “anti-vaxx” refers to people who refuse, and even campaign against vaccination. The term became popular in the 2010s, but some groups have rejected and contested the label, saying that it is derogatory and inflammatory. The movement itself is often masked in phrases that are hard to argue against, such as “informed consent”, “health freedom”, and “vaccine safety”, as a tactic to gain credibility. On the other side, WHO has used the term “vaccine deniers”, defined as people who “do not accept recommended vaccines and are not open to a change of mind no matter what the scientific evidence says.”

PHOTOGRAPHY: UNSPLASH (EHIMETALOR AKHERE UNUABONA)

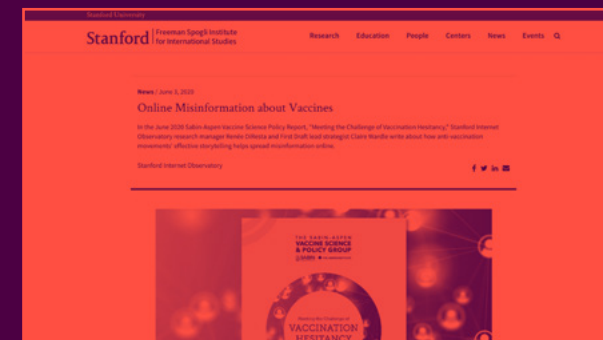






## Vaccine case study: Understanding the impact of polio vaccine disinformation in pakistan →

Discover how false rumors and historical precedent heightened Pakistani’s vigilance around polio vaccines.



## Meeting the challenge of vaccine hesitancy →

(The Sabin-Aspen Vaccine Science & Policy Group) Learn how anti-vaccination movements’ effective storytelling helps spread misinformation online.



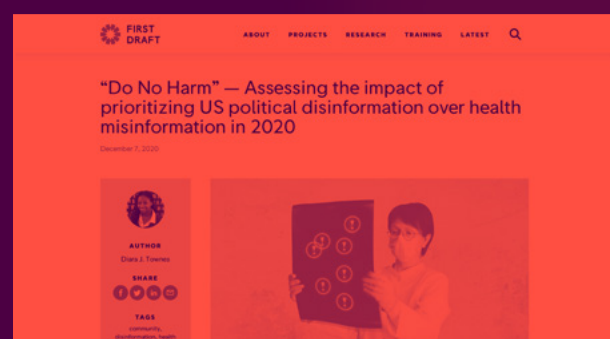
## Vaccine case study: Exploring the controversy around Dengvaxia and vaccine misinformation in the Philippines →

Learn about the power of data deficits and how they helped fuel vaccine skepticism in the Philippines.



## Too little, too late: Social media companies’ failure to tackle vaccine misinformation poses a real threat →

(British Medical Journal) Read up on how social media companies reacted too slowly to health misinformation.



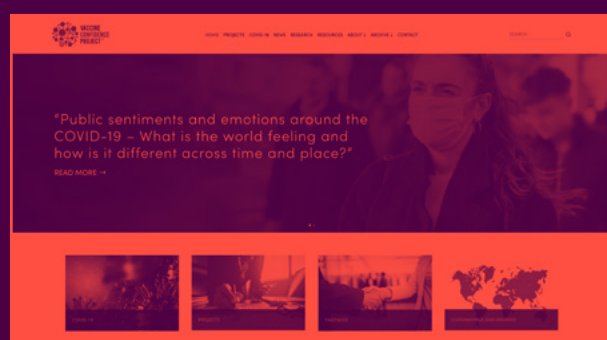
## “Do No Harm”: Assessing the impact of prioritizing US political disinformation over health misinformation in 2020 →

Explore the debate on how can newsrooms, researchers and policymakers get can better prepared for health misinformation.



## The online competition between pro- and anti-vaccination views →

(Nature) Discover research on how online groups come to doubt vaccines.



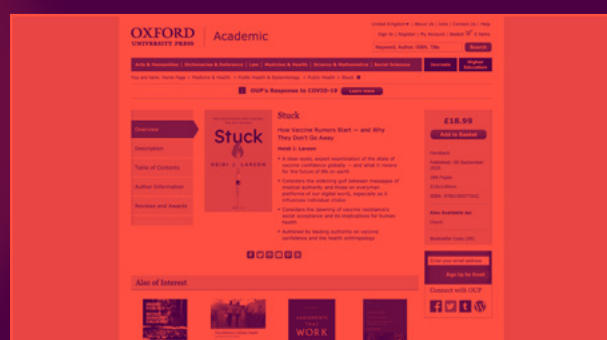
## The Vaccine Confidence Project →

Learn about public sentiments and emotions regarding Covid-19.



## Vaccine hesitancy: Definition, scope, and determinants →

(SAGE Working Group on Vaccine Hesitancy) Take a deep dive into vaccine hesitancy.



## How vaccine rumors start — and why they don't go away →

(Heidi J. Larson, Oxford University Press) Discover an in-depth history and diagnosis of vaccine skepticism.



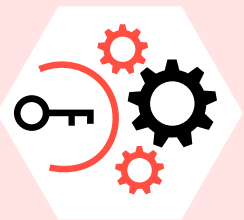
## Vaccination misinformation management guide →

Find guidance for practitioners on addressing a global infodemic and fostering demand for immunization. (English, Spanish and French)

## 2 How to identify the key vaccine narratives

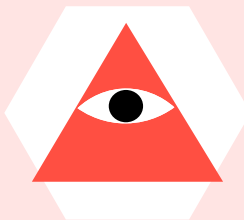
The dominant vaccine narratives, misinformation, and data defects on social media platforms.

## The dominant online Covid-19 vaccine narratives



### Development, provision and access

Posts related to the ongoing progress and challenges of vaccine development. This also includes posts concerned with the testing (clinical trials) and provision of vaccines as well as public access to them.



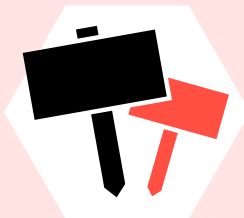
### Conspiracy theory

Posts containing well-established or novel conspiracy theories involving vaccines.



### Safety, efficacy and necessity

Posts concerning the safety and efficacy of vaccines, including how they may **not** be safe or effective. Content related to the perceived necessity of vaccines also falls under this topic.



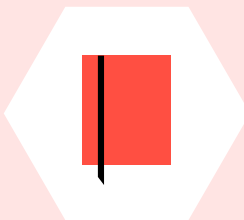
### Liberty and freedom

Posts pertaining to concerns about how vaccines may affect civil liberties and personal freedom.



### Political and economic motives

Posts related to the political and economic motives of actors (key figures, governments, institutions, corporations, etc.) involved with vaccines and their development.



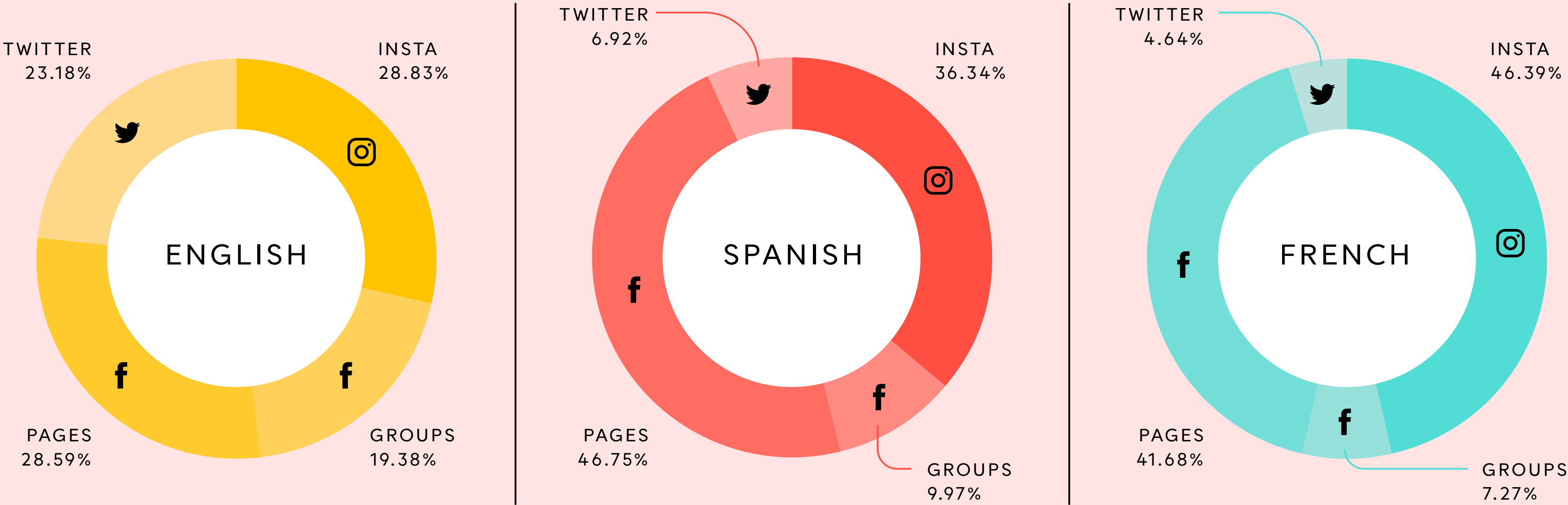
### Morality and religion

Posts containing moral and religious concerns around vaccines, such as their composition and the way they are tested.



Percentage of total engagement  
by platform for each language

From the engagement generated by the top 100 most interacted-with posts on each platform in each language published between June 15 and September 15 which featured the word vaccine or vaccination.



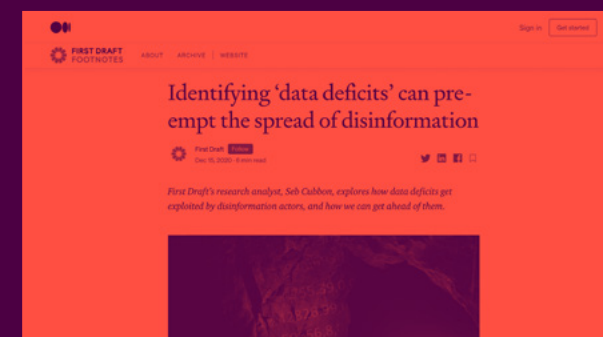
SOURCE: FIRST DRAFT RESEARCH [→LINK](#)





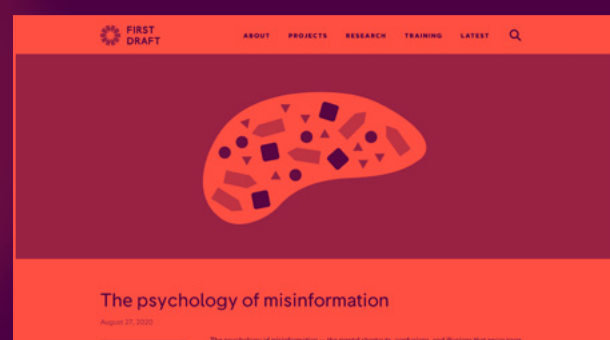
## Under the surface: Covid-19 vaccine narratives, misinformation and data deficits on social media →

Unearth a truly global picture of how the most dominant vaccine stories and rumors traverse languages and borders.



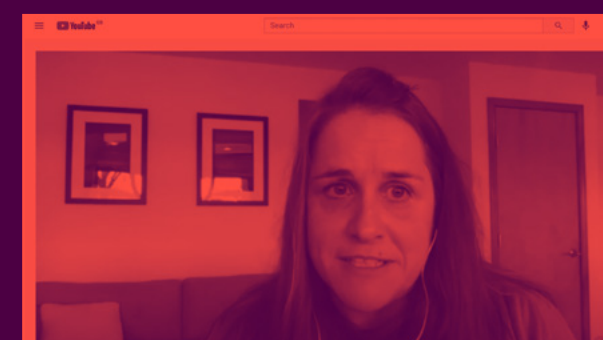
## Identifying “data deficits” can pre-empt the spread of disinformation →

Learn how data deficits emerge when the demand for information from an anxious public outstrips its supply.



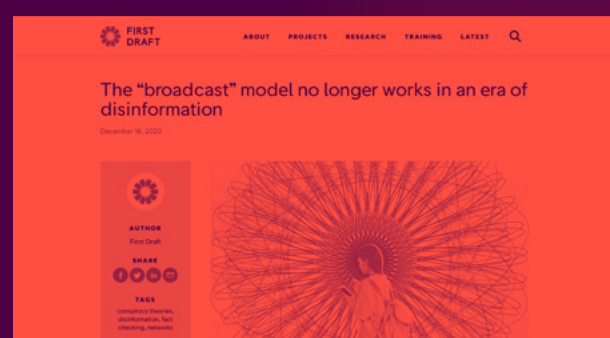
## The psychology of misinformation →

Explore an article series on the emotional relationship we all have with information.



## The challenge of reporting on vaccine misinformation →

Watch a webinar from First Draft’s Vaccine Misinformation Sessions.



## The “broadcast” model no longer works in an era of disinformation →

Learn why we’ve relied on an outdated top-down view of disinformation for too long.

# 3 How to search online

Tips and tricks for better searching, including using boolean queries and smarter keywords.

Look for problematic social media accounts and communities on different platforms



Search new and evolving keywords on platforms: vaccines

- Covid19
- Microchip
- Mandatory
- Bill Gates
- Indemnity
- Moderna
- Pfizer
- Lockdown
- Quarantine
- Big pharma

AND

Limits  
your results

vaccine AND injury

This will return search  
results or posts that  
mention both "vaccine"  
and "injury"

OR

Expands  
your results

moderna OR pfizer

This will return search  
results or posts that  
mention either  
"moderna" and "pfizer"

-/NOT

Excludes  
from results

vaccine - moderna

This will return search  
results or posts that  
mention "vaccine" but  
not "moderna"

“”

Searches for  
the entire phrase

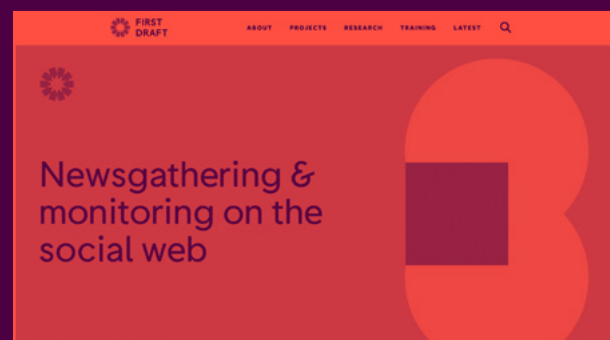
“adverse reaction  
after vaccine”

This will give you only  
content that mentions the  
exact phrase “adverse  
reaction after vaccine”

# Keywords



- 1 Make a list of all the relevant keywords with the topic you're researching
- 2 Think about the language people use when talking online
- 3 Remember to include slang, misspellings and swear words
- 4 Think about how people across the political spectrum use language
- 5 Keep an eye on how language evolves and see if any keywords should be updated



## Newsgathering and monitoring on the social web →

Discover the best free tools and techniques in newsgathering and monitoring.



## Boolean basics: How to write a search query for newsgathering that works →

Learn to master the secret weapon of strategic searching.



How to think about monitoring,  
use better keywords and find sources →

Watch a video containing four easy tips to improve your monitoring.



Advanced searches  
- AFP Fact Check →

Learn to refine your searches on the internet and social media platforms.



## 4

# How to monitor conversations on social media

A guide to better monitoring and social listening on online platforms such as Twitter, Facebook and Google.

### Twitter lists allow you to:

- Monitor a Twitter account without following it
- Organize your Twitter stream into thematic lists
- Make a list public or share with colleagues
- Follow other people's lists

### How to find Twitter lists:

- View an account's list on its profile
- View what lists an account is using

How to find out which Twitter lists  
a specific account is on

<https://twitter.com/firstdraftnews/memberships>

Replace with Twitter account

How to find lists using a Google site search

[site:twitter.com/\\*/lists Cats](https://www.google.com/search?q=site:twitter.com/*/lists+Cats)

Replace with search term

# Don't forget about Reddit



## Think you can't track Reddit?

Think about setting up alerts for subreddits about topics you're interested in. So if you're monitoring covid misinfo try r/coronavirus or r/covid19.

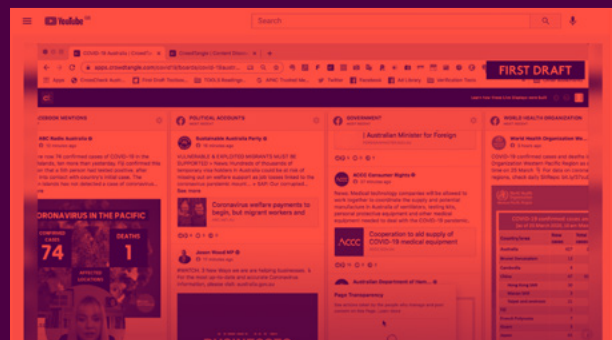
Use removeddit.com to retrieve a thread or comment that has been deleted. For example, if you see a thread that's been deleted, replace "reddit" in the URL with "removeddit."

Want to find a particular subreddit?  
Try using a site search to find reddit boards related to a specific search term.

`site:https://www.reddit.com/r/cooking`

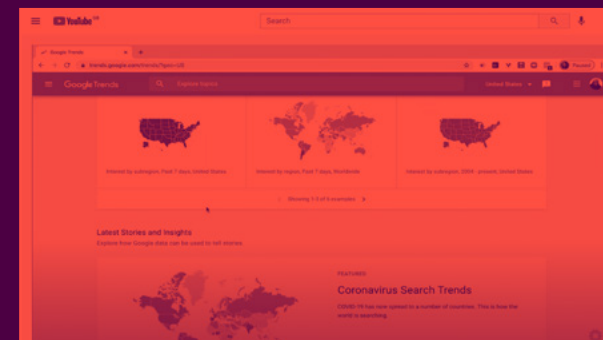
You can also use site searches to search within a reddit board for example:

`site:https://www.reddit.com/r/Cooking/(tomato AND soup)`



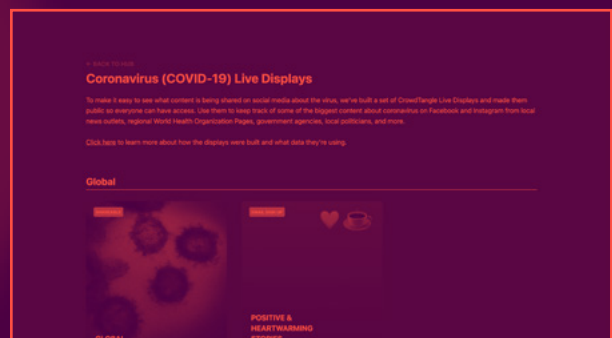
## How to use CrowdTangle's public Coronavirus Live Displays →

Watch a tutorial to using CrowdTangle's Coronavirus Live Displays.



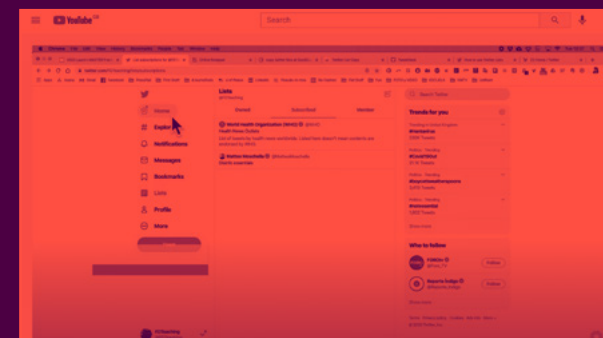
## How to use Google Trends' Coronavirus Dashboard →

Watch a video on how to discover data deficits by finding what people are searching for on Google.



## Covid-19 CrowdTangle Live Display →

Get free access to an easy-to-use tracker of Covid-related content.



## How to find Twitter Lists using advanced Google search →

Watch a tutorial on how you can use a Google shortcut to find public Twitter Lists by topic.

## 5

# How to monitor conversations in closed spaces

A look at the practicalities and ethical considerations of tracking content in closed groups and messaging apps.

In many countries, closed messaging apps like WhatsApp, Telegram, and WeChat are the main platforms for sharing information.

They are similar to SMS but have additional functions, like end-to-end encryption. Users are often members of many private groups, and misinformation in the form of links, images and videos, can travel fast.

So the origins of a falsehood can be impossible to verify. Some people actively promote their groups and use them to promote their agenda.



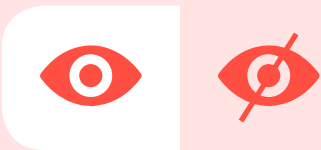


Facebook Groups  
can help you uncover  
valuable information.

You can search them  
by location or topic,  
but not all are public  
and open to join.



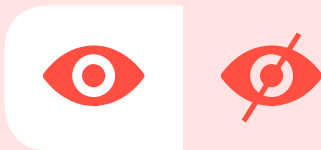
Anyone can see who's  
in the group and  
what they post



Visible  
Anyone can find  
this group



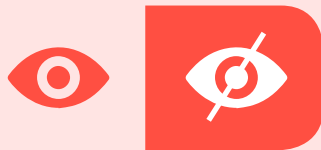
Only members can see  
who's in the group and  
what they post



Visible  
Anyone can find  
this group



Only members can see  
who's in the group and  
what they post



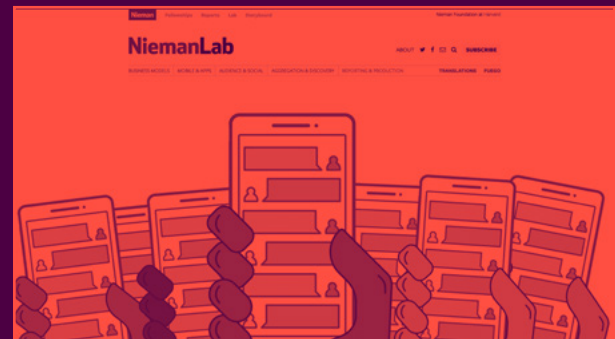
Hidden  
Only members can  
find this group

## 8 questions to ask before joining a platform

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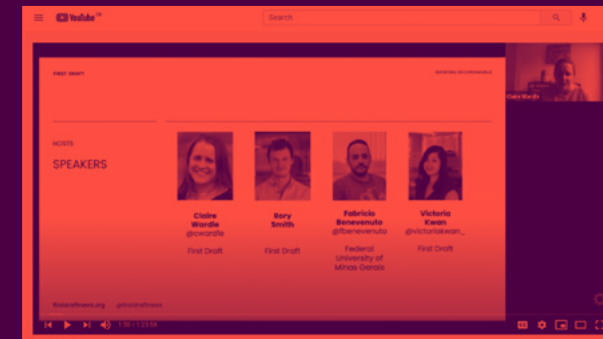
KEY THEORIES AND PRINCIPLES:  
A RECAP FROM THE WORKSHOP

- 1 Have you thought about the personal information you are giving the platform?
- 2 Have you checked what device data is being linked to you?
- 3 Have you checked your privacy settings within the platform?
- 4 Are you informed about what kind of content the platform allows on the site?
- 5 Do you know what privacy experts have to say about the platform?
- 6 How will you identify yourself on the platform?
- 7 Have you thought about the implications of being in certain spaces?
- 8 What are you going to do with what you find?



## The promises and pitfalls of reporting within chat apps and other semi-open platforms: A journalist's guide →

(Neiman Lab) Learn how to continue reporting ethically and responsibly as communities move onto closed apps.



## Reporting on Coronavirus: Using WhatsApp to find Covid-19 stories →

Explore how to monitor public WhatsApp groups and learn more about the ethics of doing so.



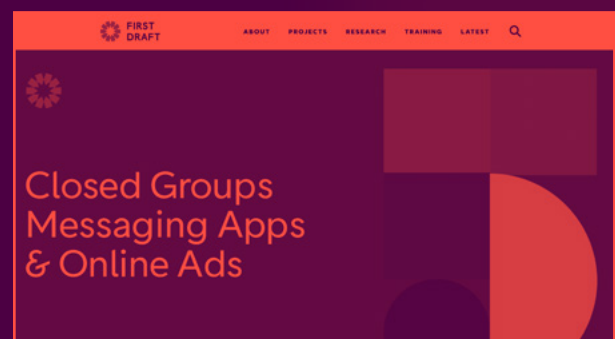
## The five closed messaging apps every journalist should know about — and how to use them →

Discover the top five closed messaging apps you need to know.



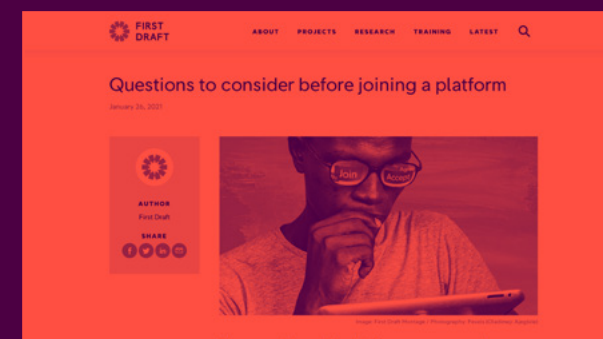
## Reporting on Coronavirus: How to use WhatsApp to find stories and communities →

Find out more on the ethical issues of reporting in closed groups.



## Closed groups, messaging apps and online ads →

Discover our Essential Guide.



## Questions to consider when joining a new social media platform →

Learn how to stay safe when joining closed platforms.

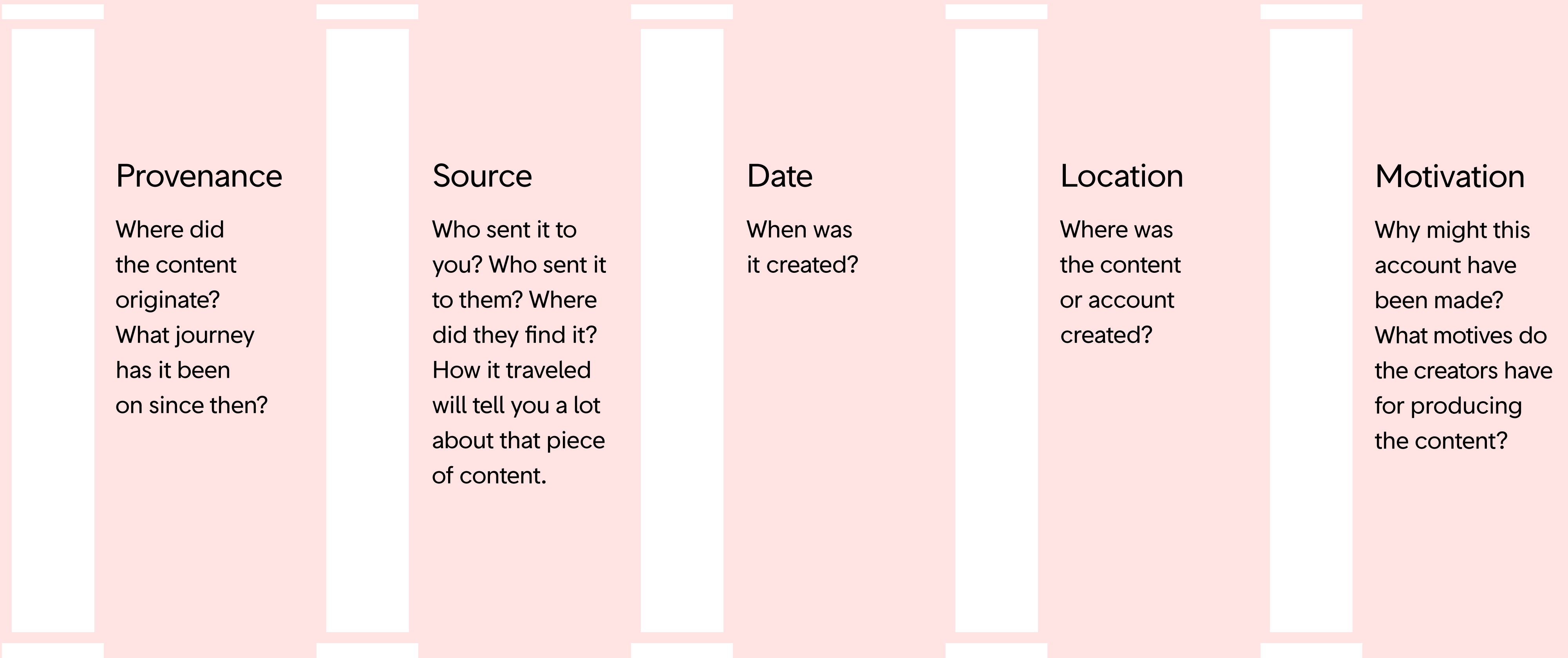
## 6

# How to verify visual content online

Tips and tricks for verifying images and videos,  
and a look at how they are often manipulated.

# Verification: the five pillars of visual verification

KEY THEORIES AND PRINCIPLES:  
A RECAP FROM THE WORKSHOP



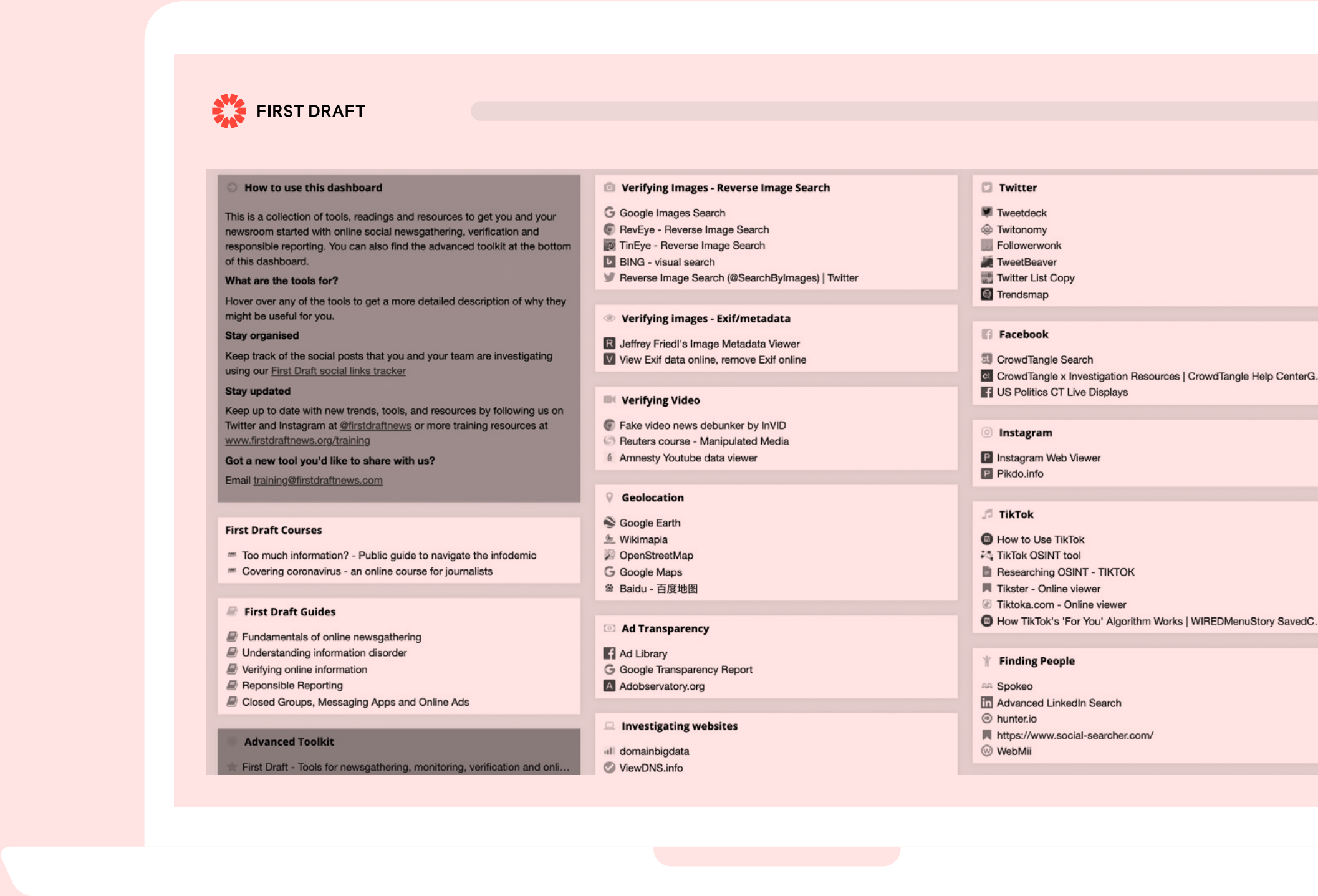


Here are some toolkits that will come in handy when tackling misinformation.

Basic Toolkit - An online dashboard with essential tools to research, monitor, verify and cover disinformation.

Advanced Toolkit - An online dashboard constantly updated with the latest tools, websites, resources, API scrapers and more.

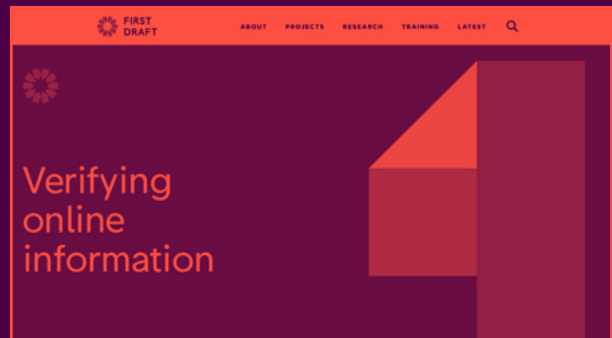
Mobile journalism toolkit - A free app toolkit specifically designed for mobile phones, with tools, how-to guides, games and challenges.





Just as you can ask search engines to check for facts and names, you can also ask them whether an image has been previously published online.

Google Chrome	Right-click on any image, hit “Search Google for image” and see if a picture has appeared online before.
Yandex	Enter an image address or upload a file to search a huge image database.
TinEye	Search on TinEye and you can sort results by date, making it useful for finding the original.
RevEye browser extension	Right click on a pic and immediately perform a search on any or all of the above platforms and more.
Bing	The main search bar has an option to “Try Visual Search”. You can upload an image, copy in a URL or even take a photo to search.



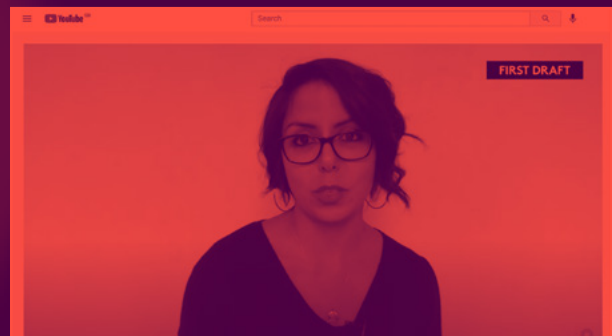
## Verifying online information →

Discover our Essential Guide.



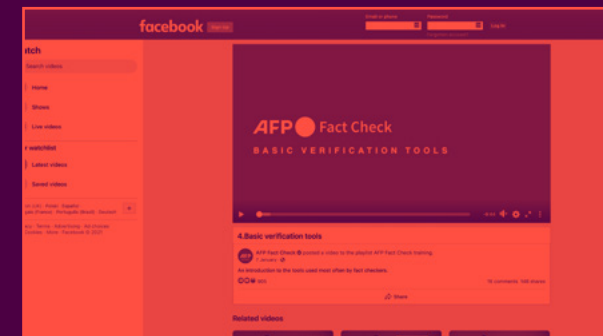
## Health fact checking - AFP Fact Check →

Learn the concepts you'll need to master to fact check claims around health.



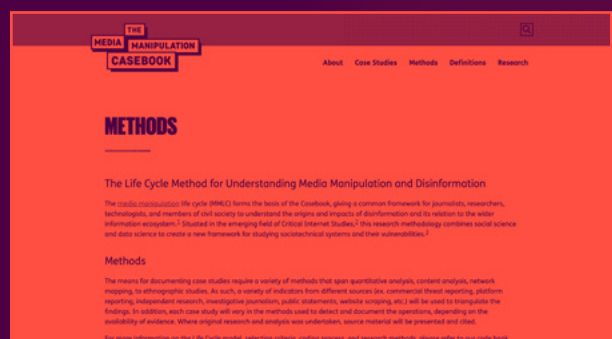
## How to reverse image search to verify stories on your phone →

Watch a tutorial on how to perform a reverse image search.



## Basic verification tools - AFP Fact Check →

Get an introduction to the tools used most often by fact checkers.



## The media manipulation casebook →

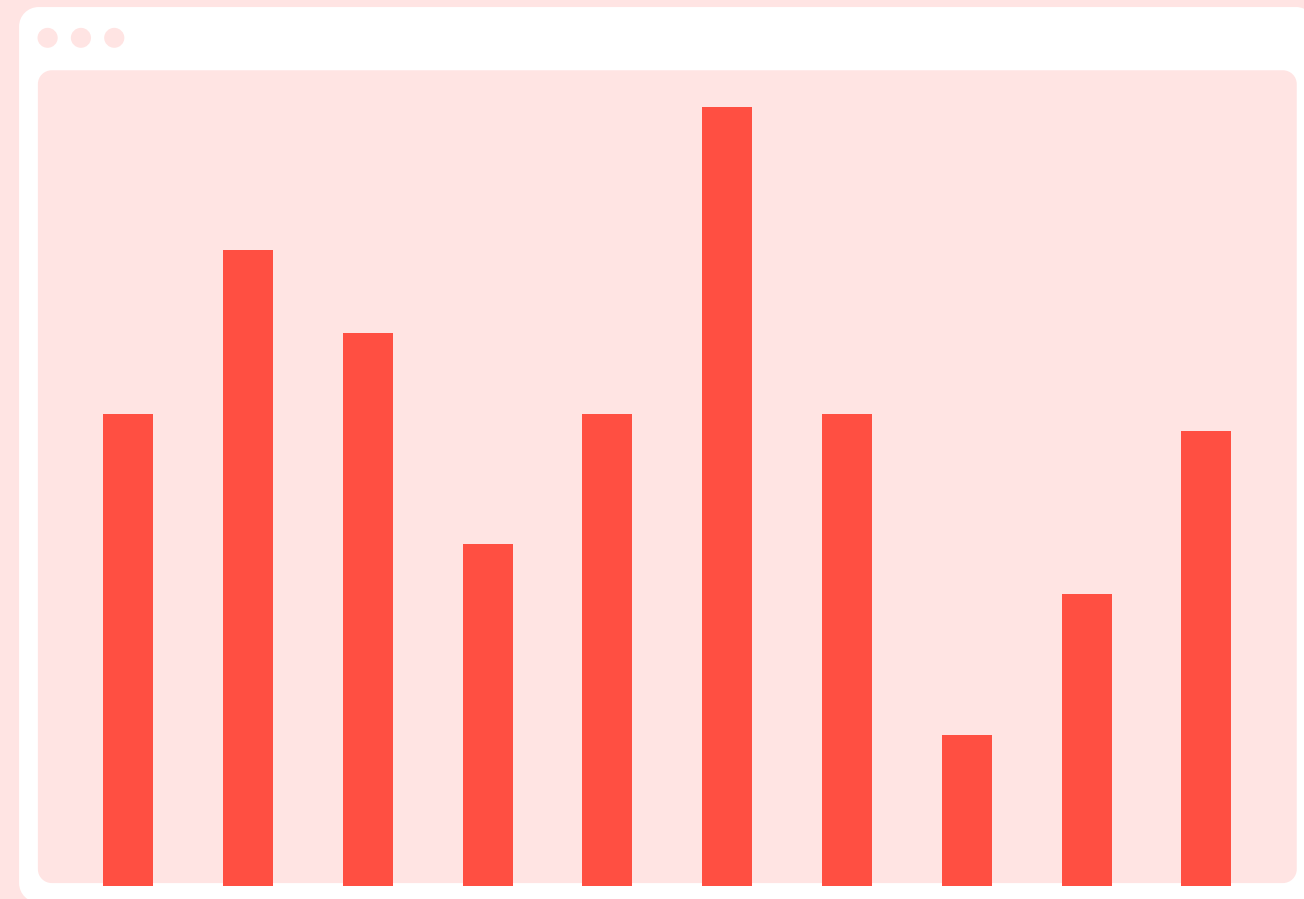
(Technology & Social Change Project at Harvard Kennedy School's Shorenstein Center) Read up on the life cycle method for understanding media manipulation and disinformation.

## 7

# How to trace sources

Important steps to remember when searching for sources and verifying profiles and bios online.

# Definitions and Metrics



## Bot

Social media accounts operated entirely by computer programs, designed to generate posts and content.

## Cyborg

Accounts that are run by both bots and people.

## Sock puppet

An online account that uses a false identity to spread disinformation to a mass audience.

## Troll(ing)

Referring to any person harassing or insulting others online.

## Account

- Was it created recently?
- Is there a lack of personal information?
- Are there divisive words, hashtags, URLs or emojis in the bio?

## Network

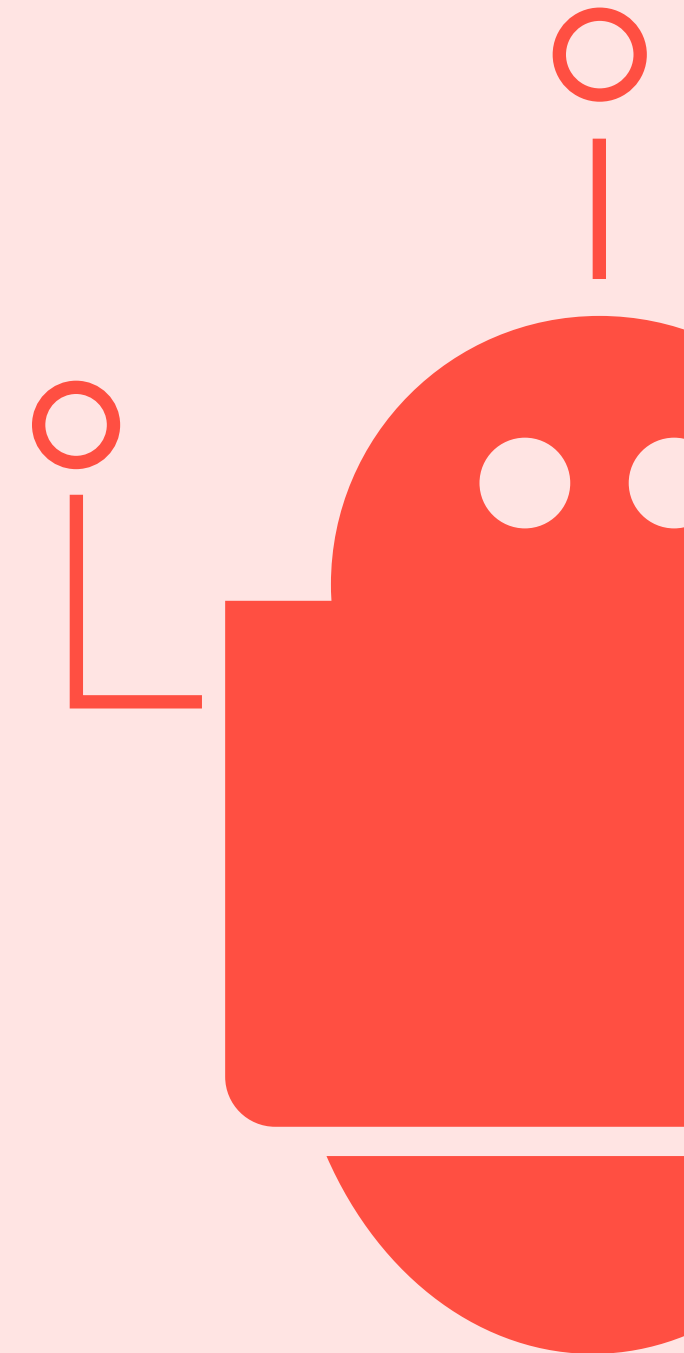
- Are the followers and following numbers high and almost identical?
- Is it following a suspicious mix of sources?

## Activity

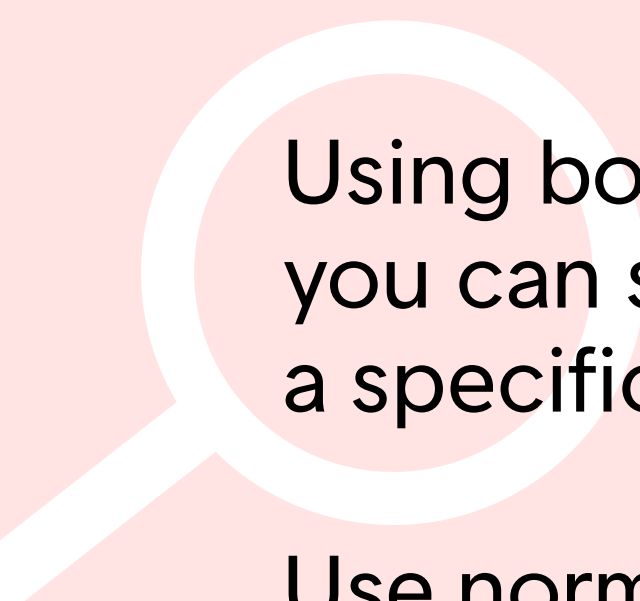
- Is there a high volume of tweets? (more than 100 a day)
- Is there a high percentage of retweets? (more than 80 per cent)
- Is it posting day and night?

## Content

- Is it tweeting in more than one language?
- Are there any signs of hashtag spamming?
- Are there any awkward turns of phrase?







Using boolean search queries, you can search for content within a specific URL.

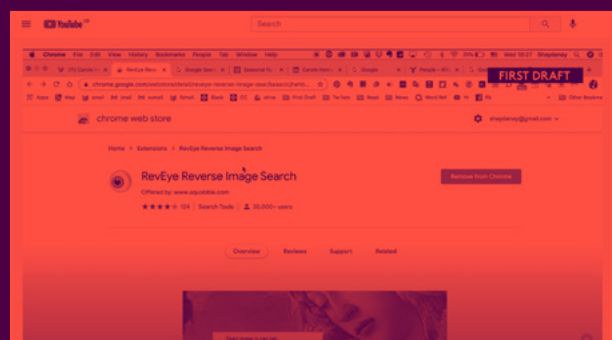
Use normal boolean operators like AND, OR and NOT, quotation searches and more to make these searches specific and incredibly powerful.

site:tiktok.com (vaccine OR vaccinations) AND (UK OR “United Kingdom”)

searches for posts that use a combination of these words within TikTok

site:facebook.com/pages “vaccine choice”

searches for this exact phrase within groups on Facebook



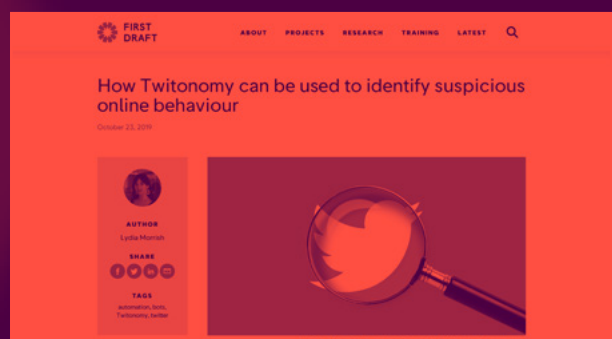
## How to verify accounts →

Watch a tutorial on how to check if someone is who they claim to be through their social media profile.



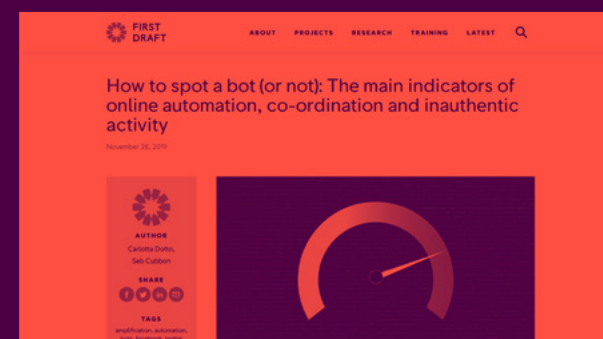
## The not-so-simple science of social media ‘bots’ →

Learn about the difficulties and complexities of understanding online automation.



## How Twitonomy can be used to identify suspicious online behavior →

Learn how to use Twitonomy to spot the signs of automation.



## How to spot a bot (or not): The main indicators of online automation, coordination, and inauthentic activity →

Discover the indicators that might suggest automated activity online.

## 8

# How to avoid amplifying misinformation

Understanding the risks of amplifying problematic content around vaccines, including knowing when to report on it, and when not to.

# Trumpet of amplification

KEY THEORIES AND PRINCIPLES:  
A RECAP FROM THE WORKSHOP

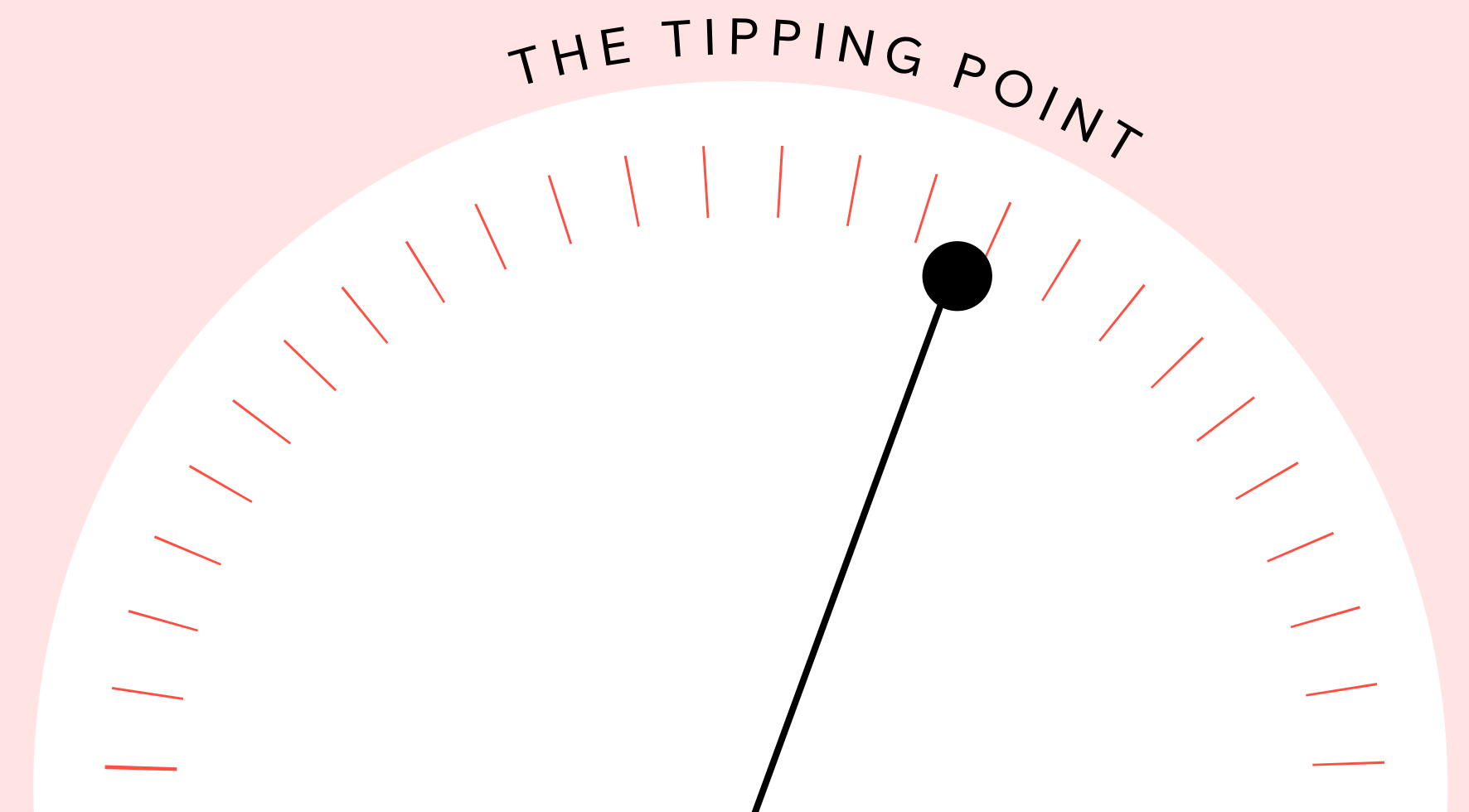


### What is a tipping point?

The tipping point is when content moves out of a community, crosses platforms and starts moving at speed. This point will vary according to factors such as the size of the relevant publications and platforms, and their audiences.

If misinformation hasn't reached the tipping point, reporting on it might give it extra oxygen and inadvertently help it spread.

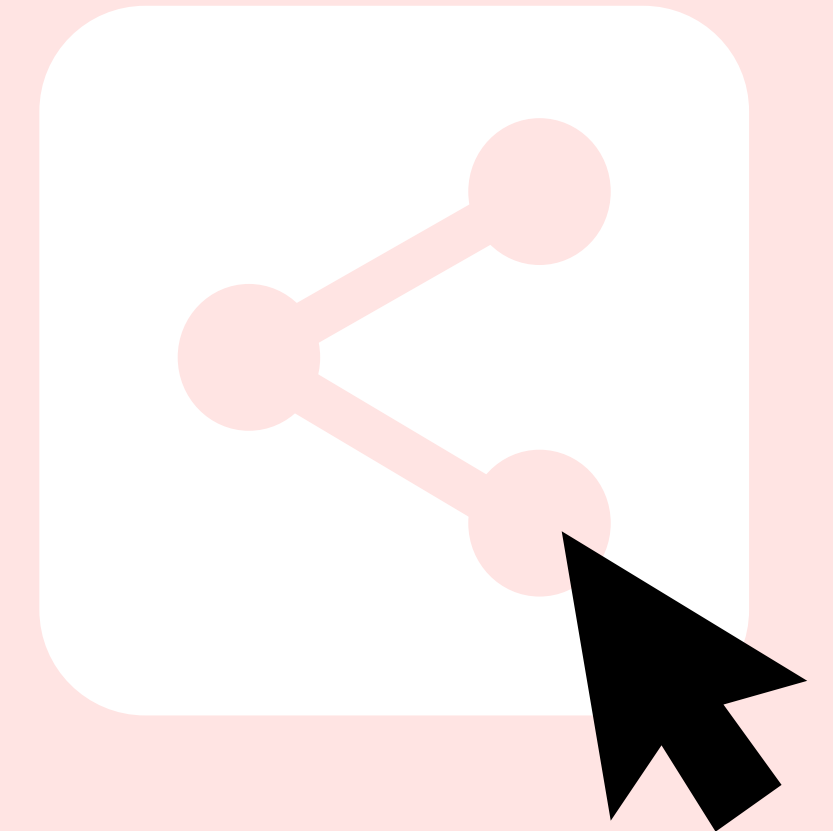
After the tipping point, it is important to push out debunks as widely as possible.

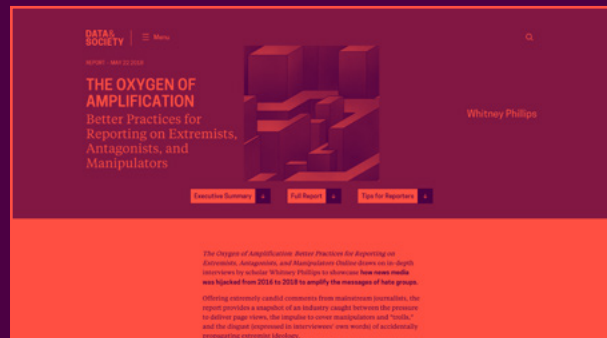




### How to decide if a tipping point has been reached

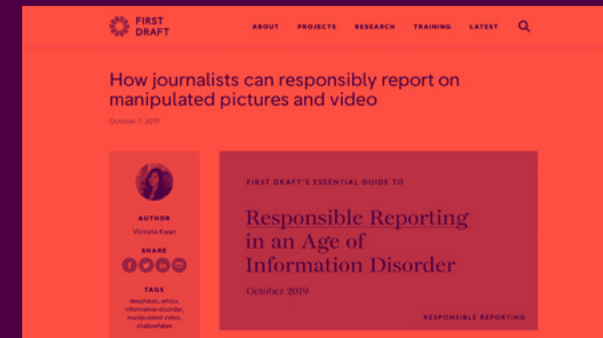
- P Platforms - Is it moving from one platform to another?
- O Outlets - Are other journalists and publishers writing about it?
- I Influencers - Did an influencer share it?
- N Numbers - How much engagement is it getting?
- T Travel - Is it moving from one community to another?





## The oxygen of amplification: Better practices for reporting on extremists, antagonists, and manipulators online →

(Whitney Phillips, Data & Society) Read this report on how news media was hijacked from 2016 to 2018 to amplify the messages of hate groups.



## Responsible reporting in an age of information disorder →

Discover our Essential Guide.



## Searching for the Backfire Effect: Measurement and design considerations →

(Journal of Applied Research in Memory & Cognition) Learn about the barriers to measuring the Backfire Effect and find recommendations for fact checkers.



## Coronavirus: Responsible reporting and ethics →

Find tips for reporting on coronavirus and slowing the spread of misinformation.

## 9

# How to publish responsibly

Best practice for presenting information and debunks, including providing context, being careful with images, being precise with language, and focusing on the facts.

☐

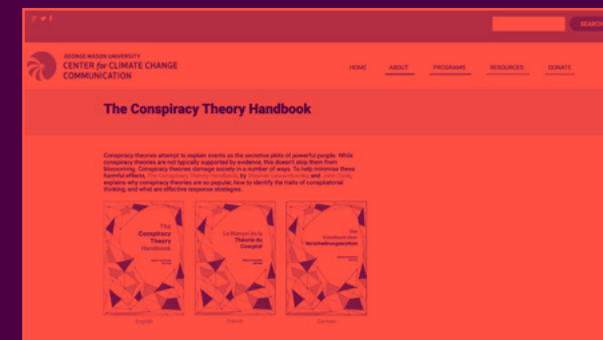
# Effective Coverage Checklist

- ☐ Could this piece unnecessarily amplify a falsehood or conspiracy?
- ☐ Have I checked any headlines, social media summaries or push notifications? Do they work without the context that exists in the article?
- ☐ Do I have permission to use the image or video?
- ☐ If the image or video is manipulated, have I added text or a graphic to make that clear?
- ☐ Have I considered the rights and vulnerabilities of everyone in the image or video?
- ☐ Have I considered the consequences of using posts that weren't originally intended for a large audience?



## The building blocks of reporting and discussing Covid-19 vaccines →

Discover six important pointers to follow when publishing information on vaccines.



## Health misinformation in Africa, Latin America, and the UK: Impacts and possible solutions →

(Full Fact) Read a briefing on the impact of misinformation on public health and the evidence on interventions.



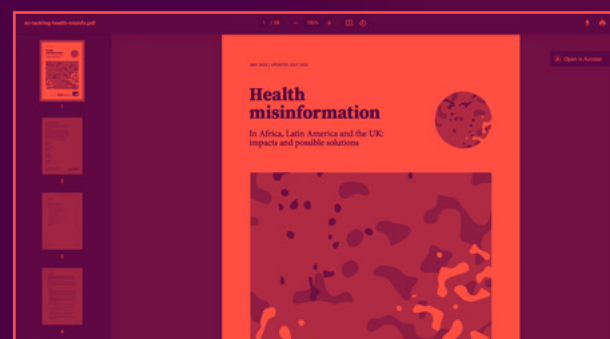
## COVID-19 conspiracies and beyond: How physicians can deal with patients' misinformation →

(JAMA) Read an interview on the viral spread of false health information and how time-pressed physicians can deal with it.



## Correction as a solution for health misinformation on social →

(American Journal of Public Health) Learn why corrections can prove less effective as issues become more polarized or beliefs become embedded in an individual's self-concept.



## The conspiracy theory handbook →

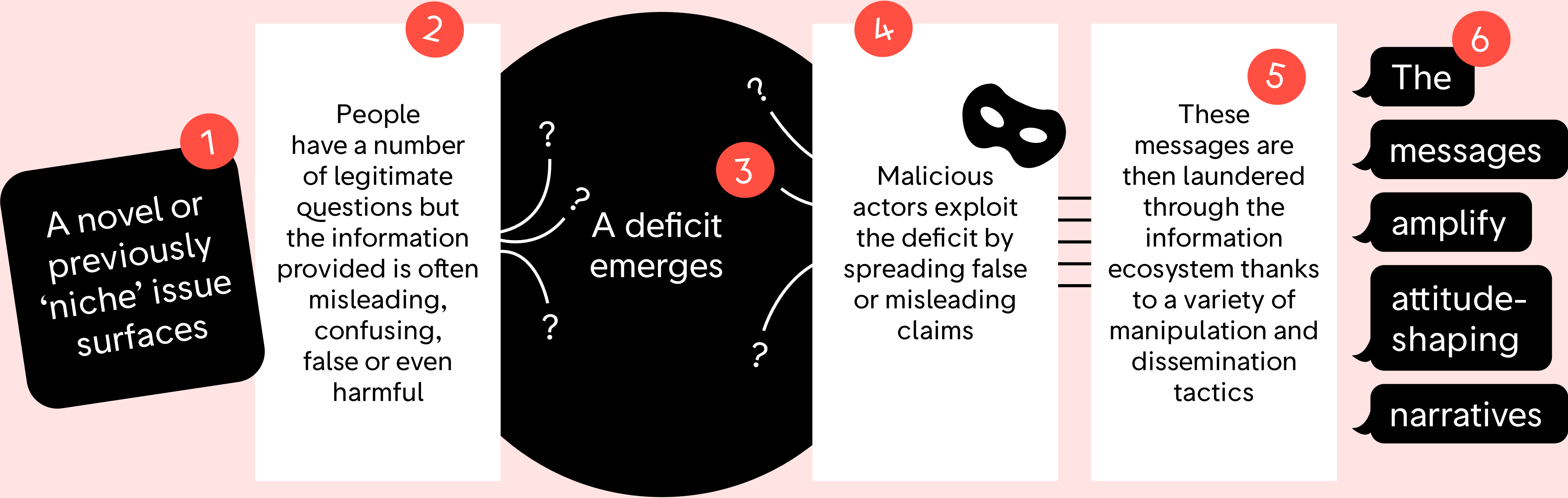
(George Mason University's Center for Climate Change Communication) Discover why conspiracy theories are so popular, the traits of conspiratorial thinking, and effective response strategies.

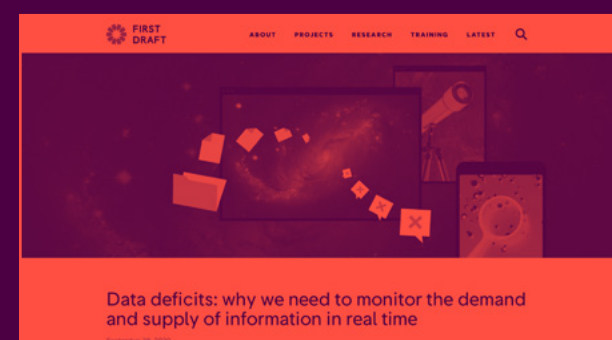


## 10

# How to answer questions (before they've been asked)

Advice on filling data deficits online, including considering what new information people are likely searching for, and publishing prebunks and explainers to fill the void.





## Data deficits: Why we need to monitor the demand and supply of information in real time →

Discover a case study looking at a data deficit that emerged early in the Coronavirus pandemic.



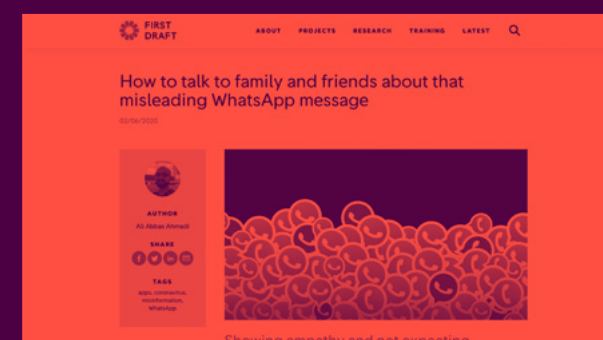
## The Debunking Handbook 2020 →

Find a great summary of the current state of the science of misinformation and its debunking.



## The Covid-19 and other vaccines: Where we're failing to provide the right information →

Read an article that takes you through data deficits and oversupply.



## How to talk to family and friends about that misleading WhatsApp message →

Learn why showing empathy and not expecting immediate changes in behaviour are recommended approaches when talking to someone who has shared misinformation.

And here's some great examples of engaging visual explainers on social media:

- How the Pfizer and Moderna vaccines work →
- Why some people got Covid-19 after their first vaccine shot →
- Washing your hands for proper disinfection →

# Want to explore more?

For more information, visit our [free library of training content](#), including online courses, toolkits and resources to help both journalists and the public understand and manage disinformation.