JOURNALIST FIELD GUIDE:
NAVIGATING CLIMATE MISINFORMATION

Media and newsroom techniques to prevent and undermine dis/misinformation, conspiracy theories, and propaganda

Climate Action
Against Disinformation

TABLE OF CONTENTS

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EXECUTIVE SUMMARY

A body of research on **disinformation, misinformation, and malinformation** (hereafter: "misinformation") has expanded vastly in recent years. Social media algorithms and fossil fuel industry spending on public relations, advertising and campaign contributions have fueled an explosion of political myths, the circulation of fabricated or misleading material on the Internet, increasingly self-selected news consumption, and the evolution of 'fake news' as a means to dismiss inconvenient information.

Misinformation related to climate change science **predates** the birth of social media. The **definition of climate misinformation** used by Climate Action Against Disinformation (CAAD) refers to deceptive or misleading content that:

- Undermines the existence or impacts of climate change, the unequivocal human influence on climate change, and the need for corresponding urgent action according to the IPCC scientific consensus and in line with the goals of the Paris Climate Agreement;

- Misrepresents scientific data, including by omission or cherry-picking, in order to erode trust in climate science, climate-focused institutions, experts, and solutions; or

- Falsely publicizes efforts as supportive of climate goals that in fact contribute to climate warming or contravene the scientific consensus on mitigation or adaptation.

Academics and professionals in this field, including journalists and editors, have attempted to track the evolution of these trends in real time. The Internet has accelerated the symbiotic growth of conspiracy theories and violence in the material world, often outpacing the ability to imagine, develop and coordinate solutions.

Existing norms and standards for high-quality journalism remain **paramount** in an era of declining newsrooms and consolidated media, but more help is needed. **Surveys** of journalists indicate an **unfulfilled** appetite for professional training on how to assess and handle misinformation.

This report layout is as follows:

- The Best Practices section focuses on visual examples showing some key dos and don'ts for journalists and editors to consider in order to avoid fanning the flames of misinformation and getting gamed by grifters.

- The Academic Literature Review delves into the field of research that informs the Best Practices in this guide. Most references in this section are in the endnotes.

- The Case Studies section summarizes reports published by academics and advocacy organizations that help show the nature and impact of misinformation online, mostly related to climate change.

- The Additional References section offers further sources of expertise that journalists and editors can rely on for more learning.

BEST PRACTICES

COMMUNICATION TECHNIQUES TO DISARM DISINFO

When misinformation is having an adverse and widespread enough impact to merit strategic amplification, an informed and intentional approach is required.

The 2020 Data & Society Research Institute's **10 Tips for Reporting on Disinformation** include the following suggestions:

How climate change is rapidly fueling super hurricanes

An unprecedented number of storms rated Category 4 or stronger have lashed the U.S. shoreline in recent years

Damaged homes and debris in the aftermath of Hurricane Ian, Thursday, in Fort Myers, Fla. (Wilfredo Lee/AP)

As Hurricane Ian barreled toward Florida this week, it did what six other storms did over the past six years as they approached the United States: It intensified, quickly.

A few factors help account for the shift, including the warming waters — fueled by climate change — that give hurricanes more energy to release through crushing winds and pounding waves. Climate scientists suspect the slow movement of storms like Ian also stems from global warming, giving them a greater opportunity to strengthen and destroy as long as day-to-day conditions remain ripe.

Accounts for nuance without missing key context

> "Avoid inflating the importance of single examples or speculating about the threat level."
>
> Data & Society Research Institute

Antarctica hit record high temperature in 2020, scientists confirm July 3, 2021

South Pole posts most severe cold season on record, an anomaly in a warming world   Oct. 1, 2021

The "source"

DELINGPOLE: GLOBAL WARMING SHOCK. ANTARCTICA POSTS COLDEST WINTER SINCE RECORDS BEGAN   Oct. 4, 2021

Not mentioned

5 months later -- no update:

It's 70 degrees warmer than normal in eastern Antarctica. Scientists are flabbergasted.   Mar. 18, 2021

POLITIFACT
The Poynter Institute

Tucker Carlson
stated on February 16, 2021 in a TV segment:

"Unbeknownst to most people, the Green New Deal came to Texas; the power grid in the state became totally reliant on windmills."

PANTS ON FIRE!
POLITIFACT TRUTH-O-METER

Facebook posts
stated on July 27, 2022 in a Facebook post:

"96% of U.S. climate data is corrupted."

FALSE
POLITIFACT TRUTH-O-METER

Bloggers
stated on October 24, 2021 in a blog post:

"COP26 luxury EVs to be recharged using diesel generators"
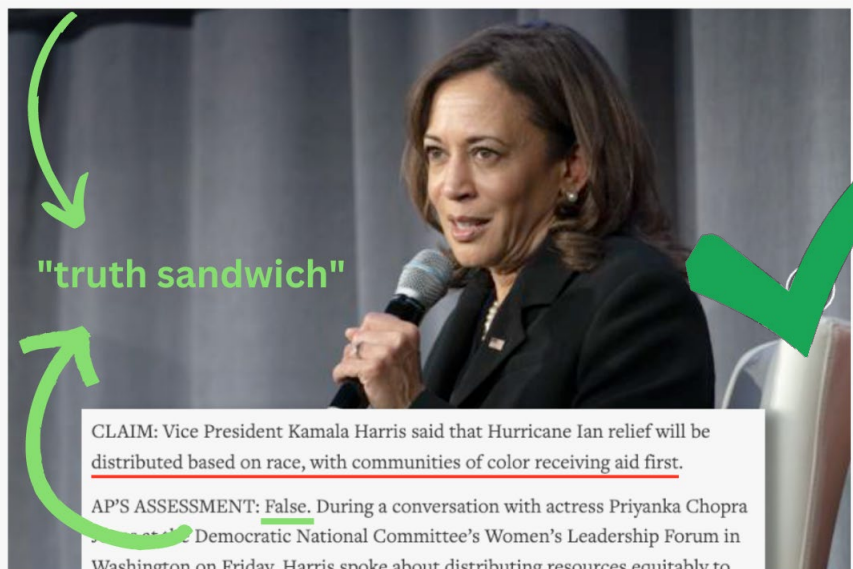
MOSTLY FALSE
POLITIFACT TRUTH-O-METER

"Write headlines that omit the disinformation, rather than repeating or questioning it."

Data & Society Research Institute

AP

Harris comments on addressing climate inequity misrepresented

"truth sandwich"

CLAIM: Vice President Kamala Harris said that Hurricane Ian relief will be distributed based on race, with communities of color receiving aid first.

AP'S ASSESSMENT: False. During a conversation with actress Priyanka Chopra Jonas at the Democratic National Committee's Women's Leadership Forum in Washington on Friday, Harris spoke about distributing resources equitably to help vulnerable groups, such as low income communities and communities of color, recover from disasters related to climate change. She did not describe the structure that would be used to allocate aid to victims of the recent hurricane.

GOP Sen. Ron Johnson mouths to GOP luncheon that climate change is 'bullsh*t'

Ron Johnson: Climate change is 'bulls—'

Republican Sen. Ron Johnson Caught on Camera Calling Climate Change 'Bullshit'

Sen. Ron Johnson mouths to GOP group that climate change is 'bullsh--' just weeks before deadly heat wave

Covering Climate Now

Do Climate Deniers Really Believe Their Nonsense?

There is a major disconnect between what high-profile climate deniers, including politicians, say about climate change, and what the public believes to be true.

Sen. Ron Johnson (R-WI), who sits on the Commerce, Science and Transportation Committee, recently said he thinks climate change is "bullshit." (Photo by Anna Moneymaker/Getty Images)

It's not just COVID: Ron Johnson flunks climate science, too

Ron Johnson's nonsense about COVID is dangerous, but it appears his hostility toward climate science is just as jarring.

Naomi Seibt: 'anti-Greta' activist called white nationalist an inspiration

German teenager spoke at an event at US rightwing conference CPAC

A young campaigner who has been hailed by climate sceptics as the right's answer to Greta Thunberg has previously described a white nationalist who appeared to promote "white genocide" theories as one of her "inspirations".

Naomi Seibt, a 19-year-old from Münster, Germany, who styles herself as a "climate realist", has also had to deny she made remarks that could be seen as antisemitic following an attack on a synagogue last year.

The Guardian

Naomi Seibt styles herself as a 'climate realist'. Photograph: YouTube

The anti-Greta: A conservative think tank takes on the global phenomenon

How a group allied with the Trump administration is paying a German teen to question established climate science.

The Heartland Institute is a discredited anti-science organization

Naomi Seibt is a 19-year-old German who, like Greta, is blond, eloquent and European. But Naomi denounces "climate alarmism," calls climate consciousness "a despicably anti-human ideology," and has even deployed Greta's now famous "How dare you?" line to take on the mainstream German media.

"Anti-Greta" Climate Denier Naomi Seibt Marched with Neo-Nazis and Promotes White Nationalism

"Contextualize: make sure to include 'the behaviors and ideologies of the adversarial actors' if they merit reporting."

Data & Society Research Institute

6

Use the "Truth Sandwich" to Debunk:

The authors of the Debunking Handbook specifically recommend a communication technique that has gained increasing recognition since they first **published** in 2011. Communications consultant George Lakoff calls this method the "**truth sandwich**."

FACT
Lead with the fact if it's clear, pithy, and sticky—make it simple, concrete, and plausible. It must "fit" with the story.

WARN ABOUT THE MYTH
Warn beforehand that a myth is coming... mention it once only.

EXPLAIN FALLACY
Explain how the myth misleads.

FACT
Finish by reinforcing the fact—multiple times if possible. Make sure it provides an alternative causal explanation.

Image by Wendy Cook

## Avoid Partisan Signaling, When Possible:

This is obviously challenging for any political reporter, when it's important to plainly say how constituencies and politicians approach issues like climate change. Partisanship is often a predictable factor regarding trust in climate science or support for climate mitigation policies.

Democrats And Republicans Divided On Climate Change

Senate liberals press Biden for climate emergency declaration

More Americans see climate change as a priority, but Democrats are much more concerned than Republicans

Bill Nye Batters Republicans, Fox News With Emotional Plea On Climate Change
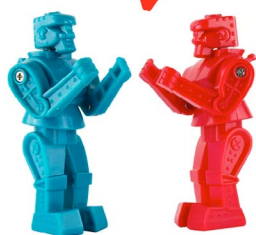
To help navigate this communications challenge, professor Brendan Nyhan **recommends** avoiding framing the discussion in response to specific statements from politicians.

Inside Climate News — Donate

Politics & Policy

Fact-Check: What Scott Pruitt Gets Wrong About Climate Change, Paris and Coal

EPA administrator Scott Pruitt has spread a lot of misinformation in defending President Trump's plan to exit the Paris climate agreement. Here's a reality check.

Forbes

On Fox, Donald Trump Calls Climate Change A 'Hoax': 'In The 1920's They Were Talking About Global Freezing'

Covering Climate Now **recommends** starting the conversation from a wide array of relevant angles, which many reporters and outlets are fantastic at.

Don't Preclude Accountability by Writing in the "Passive Voice"

In her 2022 **video** for the Union of Concerned Scientists, Sabrina Joy Stevens notes that a passive voice can invisibilize people impacted by issues journalists report:

> "When we just name disparities and outcomes without naming who and what is responsible for those disparities, we make it seem like a person's identity is responsible for the problem instead of the people and institutions discriminating against them on that basis." **[12:20]**

This screenshot from the video contrasts bad practice with best practice:

Hides responsibility:

"Marginalized communities have high incidences of asthma and other chronic illnesses"

Promotes accountability:

"Politicians deciding to build power plants and route trucking corridors near marginalized communities has led to higher rates of asthma and other chronic illnesses in those communities."

c. Sabijoy Creative Solutions, 2022. All Rights Reserved.

DON'T BOOST BAD CONTENT

Expose Bad Actors

Exposing bad actors is key when coverage is merited. Exposing bad actors is very different from helping platform them, which the communication techniques described above are designed to help with.

Many organizations have long worked to make this process easier for journalists. Some longtime experts that publish information about specific climate denial organizations and spokespeople include:

- **ACT Climate Labs**
- **Center for Countering Digital Hate (CCDH)**
- **Climate Action Against Disinformation (CAAD)**
- **Climate Investigations Center**
- DeSmog's **Climate Disinformation Database**
- **Energy and Policy Institute**
- **Greenpeace**
- **Influence Map**
- **Media Matters**
- **Skeptical Science**
- **SourceWatch** by the Center for Media and Democracy
- Southern Poverty Law Center's **Extremist Files**
- **Union of Concerned Scientists**

Use Archive Web Links Instead of Direct Links
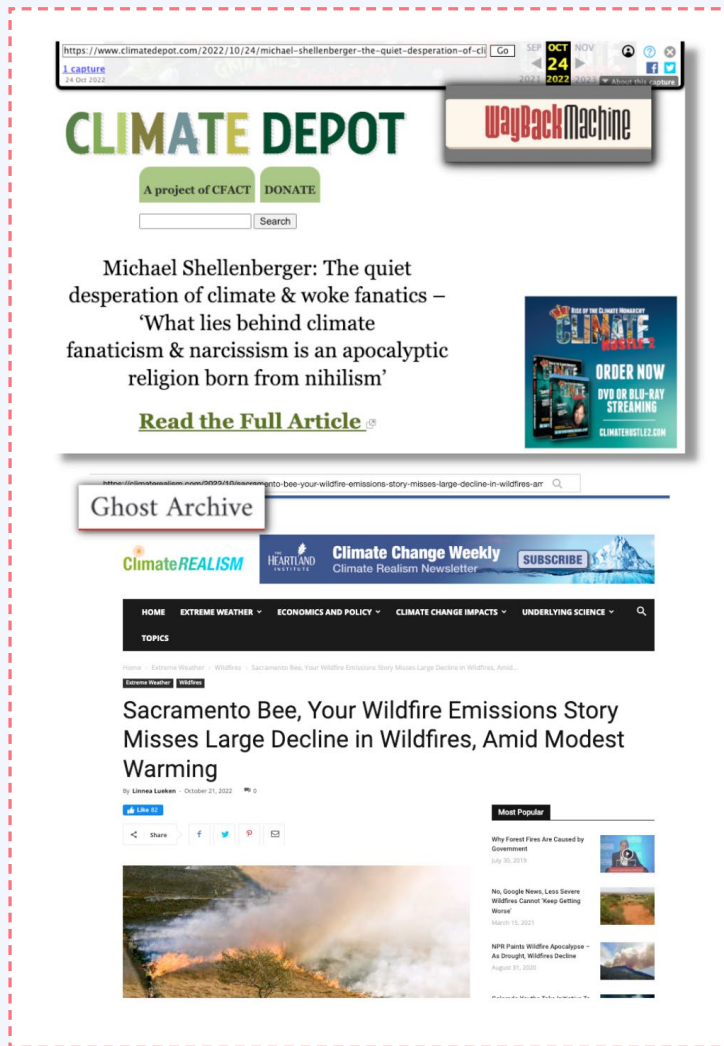
Use Internet Archives – like the **Wayback Machine, Perma.cc, GhostArchive**, or **Archive.Today** – as a way to prove the authenticity of misleading content, without uplifting it, nor enriching its producers. Alternatively, download and republish a PDF or screenshot of the content you want to preserve, since archive websites might not be online forever.

Use rel="nofollow" for Direct Links

Inserting **rel="nofollow"** into the **HTML code** of any hyperlink will prevent search engines from giving additional weight to that link in search results. It might also be wise to insert **"noopener" and "noreferrer"** into the same code, for both privacy and security reasons.

Here's how DeSmog handles it:

Screenshot...

Grassrootbeer Investigations *

DDT
Lawn chemicals
Cyclamates,
Nitrites
MSG
Red Dye #2
Saccharin
NutraSweet
Aspartame
Electric power lines
Hair Dye
Asbestos in hair dryers
Coffee
Alar

John Stossel lists problems he claims were overblown, in introduction to a Stossel TV clip titled "Are We Doomed?" 20...

... link to monetized YouTube video.

*author of this report. oops.

Don't Link Directly to YouTube Videos:

For YouTube videos that are monetized, avoid sending users to the video. Screenshots and transcripts can be used to help illustrate the significance of the video, so long as deceptive language isn't uplifted without truthful context first – see the "truth sandwich" technique, above. You can also **download** the video, both for presentation and long-term preservation.

Using a screenshot can help illustrate a problematic video in context without linking to it, but the author in this example made the mistake of linking to the video in the image caption. Any more traffic from the link means more money for both the disinformer and for Google (at least until Google **enforces** its policy to demonetize climate disinformation).

MISINFORMATION IS NOT AN OPINION WORTH PUBLISHING

Opinion sections of many major newspapers still **host** misinformation that would never pass a publication's editorial standards. Though there is always a firewall between reporting and opinion, that's not something audiences see or understand.

OPINION | COMMENTARY

The Coming Green-Energy Inflation

Demand for metals and other commodities will keep skyrocketing unless mandates are reversed.

WSJ | OPINION

By Mark P. Mills
April 17, 2022 1:44 pm ET

*

Mr. Mills is a senior fellow at the Manhattan Institute, a partner in Montrose Lane, an energy-tech venture fund, and author of "The Cloud Revolution: How the Convergence of New Technologies Will Unleash the Next Economic Boom and a Roaring 2020s."

The Washington Post
Democracy Dies in Darkness

Opinion | Climate change is not an 'existential threat'

Opinion by Marc Thiessen

Marc Thiessen writes a twice-weekly column for The Post on foreign and domestic policy. He is a fellow at the American Enterprise Institute, and the former chief speechwriter for President George W. Bush. 🐦 Twitter *

*These groups received millions of dollars from ExxonMobil and Charles Koch

Assess Whether to Report or Ignore Misinformation:

The **2020 Debunking Handbook's** authors created this flowchart to help determine when and how to cover misinformation:

Image by Wendy Cook
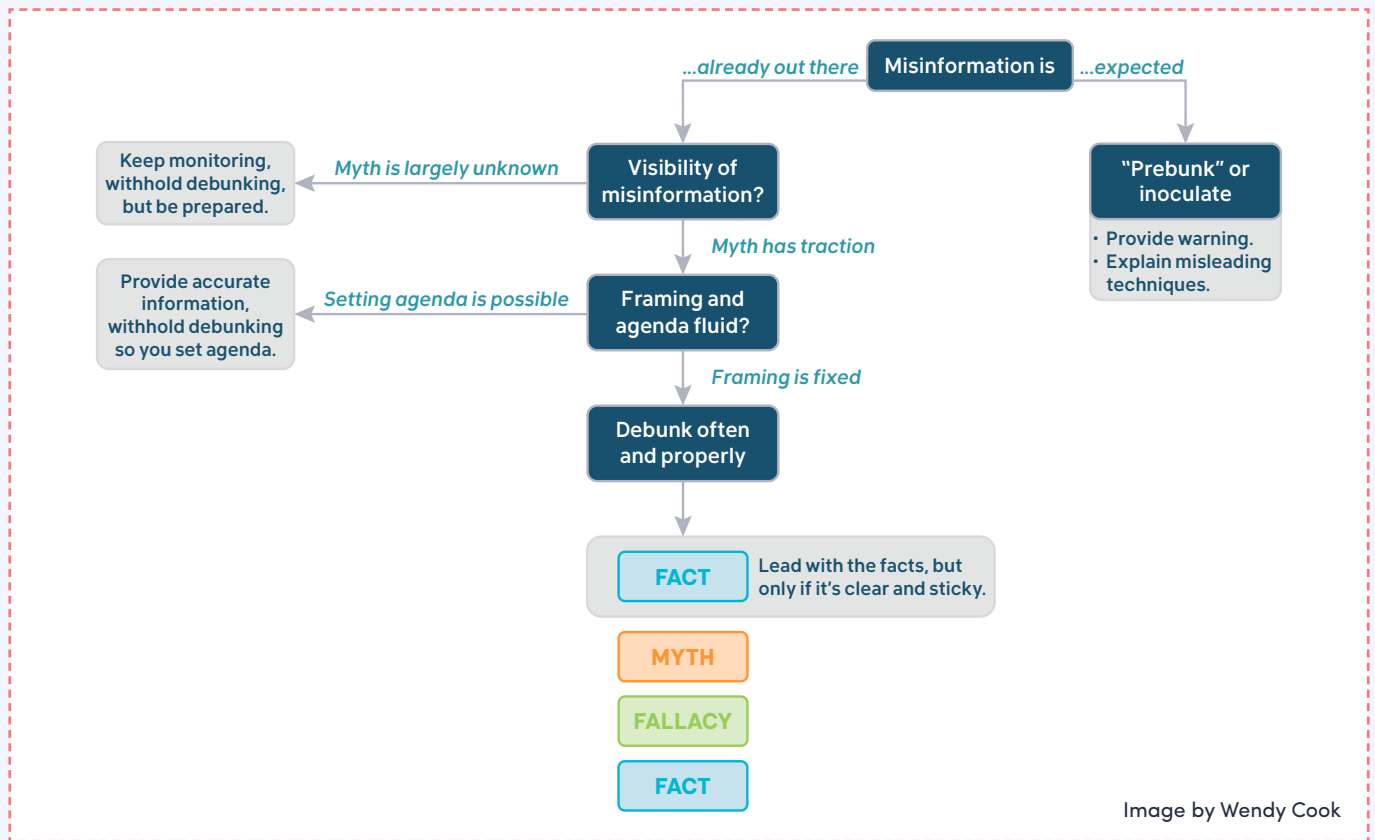
Similarly, Sabrina Joy Stevens created a response framework chart based on the spread and impact of misinformation, as published in the 2022 Union of Concerned Scientists video "**How to Counter Disinformation**." From time stamp **05:47**:

Assess if You Are Being Manipulated into Covering Misinformation:

The Data & Society Research Institute's **Source Hacking** report by Joan Donovan and Brian Friedberg examines four tactics that are used to manipulate reporters into helping misinformation spread, along with brief recommendations for journalists:

SOURCE HACKING
MEDIA MANIPULATION IN PRACTICE

Joan Donovan
Brian Friedberg

Viral Sloganeering: repackaging reactionary talking points for social media and press amplification

Leak Forgery: prompting a media spectacle by sharing forged documents

Evidence Collages: compiling information from multiple sources into a single, shareable document, usually as an image
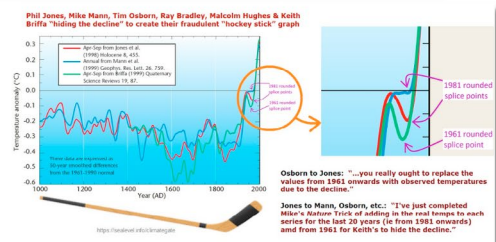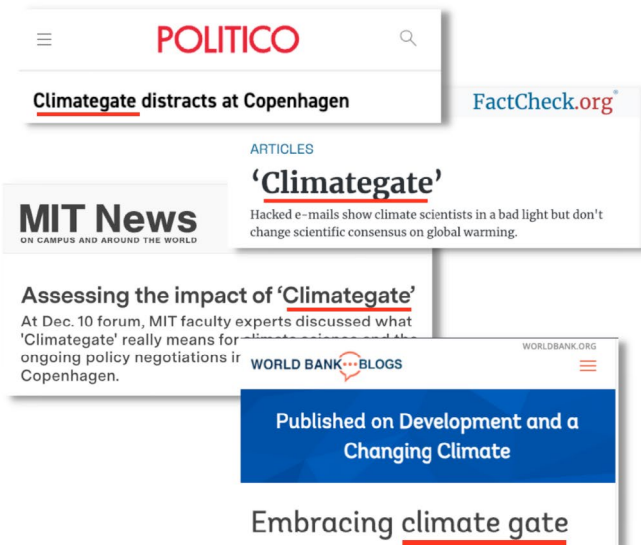
Keyword Squatting: the strategic domination of keywords and sockpuppet accounts to misrepresent groups or individuals

We advise journalists to seek out an **abundance of corroborating evidence** when reporting on the actions of social media accounts, and whenever possible, verify the identity of account holders.

We suggest that **newsrooms invest more resources in information security**, including creating a position or desk to vet chains of evidence through analysis and verification of metadata for evidence of data craft.

Viral Sloganeering: repackaging reactionary talking points for social media and press amplification

Evidence Collages: compiling information from multiple sources into a single, shareable document, usually as an image

POLITICO
Climategate distracts at Copenhagen

FactCheck.org
ARTICLES
'Climategate'
Hacked e-mails show climate scientists in a bad light but don't change scientific consensus on global warming.

MIT News
ON CAMPUS AND AROUND THE WORLD
Assessing the impact of 'Climategate'
At Dec. 10 forum, MIT faculty experts discussed what 'Climategate' really means for climate science and the ongoing policy negotiations in Copenhagen.

WORLDBANK.ORG
WORLD BANK BLOGS
Published on Development and a Changing Climate
Embracing climate gate

CLIMATEGATE: 30 YEARS IN THE MAKING
"A LITTLE TRUTH REPELS MUCH FALSEHOOD, JUST AS A LITTLE FIRE BURNS A LOT OF WOOD."
— HAZRAT ALI (D. 661)

Viral slogans often depend on specific influencers to be amplified, especially in instances where manipulators are seeding far-right, conspiratorial, and reactionary content. It is incumbent upon journalists and platforms to understand how these viral slogans rise in attention to determine if the content's spread is organic or operational. Journalists must also understand their role in an amplification network and look out for instances where they may unwittingly call attention to a slogan that is popular only within a particular, already highly polarized community online.
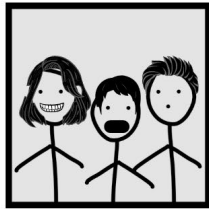
Do not repost collaged materials without vetting and confirming the source. To spot this kind of campaign, journalists and platform companies should seek out signs of cross-platform coordination, especially for image files that circulate without clear authorship. Because manipulators will use different methods to hide the origins of these images, use reverse image software to look for other possible sites. Use timestamps and the stray metadata contained within screenshots to infer if this is the work of an individual or group. If the identity of an individual is involved, do not recirculate without outside confirmation from a well-regarded source. Because these images are intended to sway public conversation, they usually end up in the replies of social media feeds of news organizations.

The Post Truth

Readers Can Help Stop Disinformation!

- ✅ Reverse image search
- ✅ Truth Sandwich
- ✅ Report bad content

- Re-share images ❌
- Debate trolls ❌
- "No, __ isn't true." ❌

There is no reason why news organizations should avoid passing these techniques on to readers. News consumers are often on the front lines of misinformation. People who read high-quality publications are likely better equipped to identify and interrupt emerging misinformation.

Encouraging and empowering readers to help neutralize misinformation can only help, perhaps starting in the comments of your publication's social media feeds. Readers can also be engaged to help circulate fact-checks and expert debunking when myths have already circulated.

ACADEMIC LITERATURE REVIEW

Academic articles referenced in this section are contained in endnotes, for brevity.

While the role of traditional media is vital, newsrooms and reporters cannot solely solve the world's misinformation problem without complementary efforts in other societal sectors.[1] This review is not comprehensive. It only touches upon the myriad of research on the creation, spread and mitigation of misinformation on social media, a field that has helped **inform** some of the proposed mitigation tactics included in this document.

Drawing from references reviewed here, solutions to the spread of misinformation will involve national and international policy, public education in information literacy, changes in social media company practices, and a reorientation of business incentives across traditional and social media.

What follows is a summary of research intended to help disrupt misinformation. The information contained in this review was used to inform the Best Practices section at the beginning of this report.

REVENUE INCENTIVES:
CLICKBAIT, SENSATIONALISM, AND SCOOPING ANXIETY

A longstanding field of research exists on economic incentives for the sources of misinformation, and the outlets that act as gatekeepers of information.[2] Legitimate sources of news are frequently **caught up** in this dynamic, as they are incentivized by maligned revenue models.[3] A race to the bottom dynamic exists when these revenue incentives mix with competition between journalists and news outlets for valuable material. When revenue depends on clicks, shares, and page views, the outcomes range from sensationalist headlines, misleading clickbait, and advertisements linked to dishonest websites.[4]

To make matters more complicated, there is a pervasive presence of bad-faith **publishers**, including outlets **financed** by vested interests, editorial pages that permit publishing misinformation as opinion, ideology-based publications, and partisan media (addressed below),[5] making it impossible for industry-wide best practices to be adopted and respected.[6] This must be considered when determining best practices in situations that can change quickly.

Control over the information that is available to the public is increasingly distributed, which precludes newsrooms from maintaining any real or perceived gatekeeping role. As 'strategic silence' is sometimes ineffective for particularly widespread or harmful misinformation, a newer concept of 'strategic amplification' has been proposed by researchers Joan Donovan and danah boyd.[7]

STRATEGIC SILENCE VS. STRATEGIC AMPLIFICATION

A 2017 Council of Europe study by Claire Wardle and Hossein Derakhshan recommend newsrooms assess when misinformation crosses a "tipping point" threshold in which false information has circulated enough to merit scrutiny, without the risk of artificially amplifying it.[8] Wardle's organization, First Draft - now part of the Brown University Information Futures Lab - **suggests** five questions to assess if a tipping point has been reached.

Victoria Kwan's prescriptive 2019 report for First Draft, Responsible Reporting in an Age of Information Disorder, advised understanding the responsibility that comes with having a large following. Media outlets with relatively large circulation and journalists with large followings must understand the power they can have to uplift misinformation simply by circulating it. Kwan created a list of questions to help journalists consider any unintended negative impacts their reporting or social media activity might cause.[9]

The issue of strategic silence is discussed in detail in a robust report by Syracuse University assistant professor Whitney Phillips, The Oxygen of Amplification for the Data & Society Research Institute.[10] The Institute published material diagnosing different kinds of manipulation tactics that bait reporters into amplifying misinformation that merits careful scrutiny, including Media Manipulation and Disinformation Online by Alice Marwick and Rebecca Lewis, and Source Hacking by Joan Donovan and Brian Friedberg.[11]

Techniques from each of these reports are incorporated into the Data & Society Research Institute's **10 Tips for Reporting on Disinformation**. Several of these techniques are included in the Best Practices section, above.

INOCULATION

Ideally, audiences are inoculated against misinformation, with a properly contextualized version of the myth warning them not to fall for it, before being exposed to it. The metaphorical application of medical inoculation theory has been studied by information experts for over a half-century, including recent research on best practices.[12] First Draft's 2021 Guide to Pre-Bunking, by Laurie Garcia and Tommy Shane, offers a user-friendly summary of techniques, visual tools, and links to online pre-bunking games.[13]

More information and tips on prebunking are included in the 2020 Debunking Handbook and Conspiracy Theory Handbook by Lewandowsky and Cook, et al–detailed below–along with games on John Cook's **Cranky Uncle** website and related app.

FACT-CHECKING AND DEBUNKING

Much of the practical conversation on strategic amplification revolves around fact-checking. The universe of fact-checkers continues to expand, from niche publications like **Snopes** and **Skeptical Science** to established news organizations like the Washington Post, the Associated Press, and the Poynter Institute's PolitiFact website.

The Poynter Institute's International Fact Checking Network (IFCN) developed a **code of principles** signed by dozens of prominent news outlets worldwide. Signatories of this code are formally monitored by an unpaid advisory **board** consisting of people from participating and independent media organizations (It's worth noting that one source of Poynter's funding is a prominent **financier** of misinformation on climate change, **Charles Koch**).[14]

A general consensus seems to be emerging that fact-checking is necessary in certain situations, so long as common psychological traps and algorithmic incentives are intentionally avoided. Thinking around the risks of 'backfire effects', or attempts to correct misinformation that actually served to reinforce it, has evolved. Recent studies show that this risk is generally lower than of not responding at all. Fact-checkers should therefore not allow fear of 'backfire effects' to hinder their efforts. Rather, an understanding of the ways people resist information that conflicts with their worldviews should help inform more effective communication techniques.[15]

The 2020 Debunking Handbook, by John Cook, Stephan Lewandowsky and numerous co-authors from universities around the world, is a culmination of psychology and communications-based research on misinformation related to climate change science.[16] The authors address common psychological traps to avoid when refuting misinformation, and specific techniques to increase the likelihood of success - as detailed in the Best Practices section at the beginning of this guide.

Many of these co-authors published a peer-reviewed paper in *Nature Reviews Psychology* with a similar focus in 2022.[17] The paper cautions that retracting or correcting stories containing misleading content is not enough, without a sustained and proactive effort to disseminate corrections. It also flags how misinformation is often permitted on the opinion page and through advertisements that use '**paltering**' as a tactic.

Lewandowsky and Cook also co-authored the Conspiracy Theory Handbook, which uses psychological insights to teach readers how to interrupt deep-seated conspiratorial beliefs.[18] The recommendations pair well with findings by researchers Gabrielle Wong-Parod and Irina Feygina, who **found** that rooting conversations in personal values can help avoid psychological defense mechanisms that allow myths to persist.[19]

Finally, fact-checkers must recognize the power of visual aids over written or verbal mediums. A number of studies have examined how misinformation often spreads through deceptive visuals.[20] It's conversely true that visuals and interactive games can have an outsized impact in effectively undermining misinformation. Visuals can also be a good tool to inoculate people against misinformation.[21]

CITING BAD CONTENT WITHOUT AMPLIFYING IT

Iffy News founder Barrett Golding **recommends** the Wayback Machine Internet archive as a way to prove the authenticity of misleading content, without uplifting it, nor enriching its producers. The same method could be applied to other Internet archive websites such as **Perma.cc**, **GhostArchive**, or **Archive.Today**, among other **options** posed by freelance journalist Samantha Sunne.

Archive websites might not be online forever. An alternative is to save a PDF or screenshot of the website or content. The PDF can be uploaded to an employer website, or to document-hosting platforms like Adobe Acrobat, Scribd, DocumentCloud, or Archive.org.

Alternatively, reports written by Aviv Ovadya in 2016 and Victoria Kwan in 2019 for First Draft encouraged the use of "no follow" outgoing HTML links.[22] This practice prevents search engines from giving additional weight to that link in search results, including by avoiding sending curious readers to find problematic content on their own. (See Best Practices section.)

VERIFYING UNFAMILIAR SOURCES

Several efforts have cataloged discredited sources of information, and to rank the bias of different outlets and websites, including from the following list.

Note that the standards and means of accountability for these references vary. Some are backed by institutions with transparent standards, while others are maintained by specific individuals.

- Iffy **Index of Unreliable Sources**
- Credibility Coalition's **Credibility Catalog**
- U-Penn Annenberg Public Policy Center's **FactCheck.org**
- Duke University **directory of global fact-checking websites**
- **Media Bias / Fact Check** by Dave Van Zandt
- **Ad Fontes**. See **interactive chart**.
- **All Sides**
- **NewsGuard Ratings** (subscription required)
- **Logically** (AI fact check – subscription required)

PARTISAN MEDIA: DOUBLE STANDARDS, SELF-ISOLATED AUDIENCES, AND FALSE EQUIVALENCY PRESSURE

Many newsrooms and reporters struggle to hold sources of partisan bias accountable, often while facing accusations of partisan bias themselves.[23] This creates a great risk of false equivalency or 'false balance', when reporters and editors are pressured to treat every story as a matter of two equal sides, even when credibility of opposing viewpoints is not equal or comparable.[24] This dynamic has long been exploited to create doubt over climate change science.[25]

This 'us versus them' dynamic is particularly exacerbated in the United States, given there are only two viable political parties. For many online sources of information, partisan election outcomes are a primary goal.[26] Readers are also self-selective about where they get information, as Brendan Nyhan wrote for the Columbia Journalism Review in 2012: "People may tend to select the stories that reinforce their views and avoid those that make them uncomfortable. This is a daunting challenge." [27]

This precludes a cultural agreement of bilateral accountability in online news. Efforts to bridge this partisan divide, such as John Gable's **All Sides** and the **Common Ground Committee**, were established to help news consumers assess the partiality of their sources of information. It is unclear how much impact these efforts have.

Attempts for media publications to bridge a partisan divide avoids the elephant in the room identified by researchers: outlets with a conservative political bias disproportionately participate in the spread of misinformation, a trend that primarily empowers partisan right politicians and some prominent **grifters**.[28]

Whether or not media outlets accept the disproportionate amplification of misinformation from conservative outlets, many still face unfounded accusations of liberal bias even without drawing attention to the trend.[29]

TRANSPARENCY IN MEDIA VS. ACCOUNTABILITY FOR CIRCULATING MISINFORMATION

Many newsrooms and journalists have made their reporting methods, finances, and potential sources of bias more transparent (see Best Practices section, above).[30] There is plenty of room for improvement. A review of these attempts to boost credibility found that the professional field has focused less on accountability, both for the distributors of misinformation, and for outlets that have made mistakes or engaged in negligence in promoting it.[31]

Building trust with readers is also key to maintaining legitimacy and expectations of responsible reporting. Tools to make online media outlets' credibility indicators more transparent have been developed, such as the Trust Project's **eight trust indicators**, which are used by over 200 newspapers and media outlets around the world.

EMOTIONS OUTPACE FACTS

Finally, journalists and editors are inherently outpaced by the way that most rampant misinformation appeals to emotion, typically through fear, anger, or humor.[32] Facts are no match for appeal to emotion – something the advertising industry has long understood.[33] Social media algorithms are built to make incendiary content viral, rather than quality content, so it is important to recognize that debunking and inoculating content also needs to tap into some level of emotion.

This is seemingly antithetical to the mandate of newsrooms to be fair and factual, but there are many angles from which reporters can cover stories that touch upon misinformation by centering it around social or human consequences. As the organization Covering Climate Now **suggests**, "The climate crisis is a story for every beat," none of which deserve to be framed with nihilistic narratives seeded by obstructionists.

MISINFORMATION CASE STUDIES

Deny, Deceive, Delay: Documenting and Responding to Climate Disinformation at COP26 and Beyond, Institute for Strategic Dialogue et al, 2022:

This coalition report is centered around climate change misinformation during the United Nations' 26th Conference of Parties (COP26). It details how a relatively small number of dishonest people and organizations took advantage of lax social media company standards to discourage any mitigation efforts.

The study relied upon the "**Discourses of Climate Delay**" rhetorical taxonomy model published by William Lamb and nine other academics in 2020, in order to categorize a wide variety of trending criticisms of COP26 that all ultimately served to undermine the public's willingness to take climate change seriously.

The rhetorical tactics examined in the report ranged widely in order to cultivate apathy in a variety of audiences. Examples included dishonest attacks on climate science, cynicism over political and technological solutions, the reuse of old images in false context, and class-based criticism of wealthy elites.

The study concludes with several specific policy recommendations, mostly geared toward social media companies, that would slow the spread and impact of climate misinformation from vested interests and dishonest sources.

Some of these recommendations could boost the efforts of journalists, such as the need for social media companies to allow access to API searches for images to help track visual misinformation. Other recommendations implicate media outlets, such as media reports that contribute to algorithmic amplification, or news outlets that allow companies to advertise on their platforms in ways that distract from harmful impacts of their business.

Climate Disinformation in Spanish Impacting Latinos, Climate Power, 2022

This study surveyed 1,600 people from eight regions of the United States and found that while a majority of Latinx people in the study supported climate change solutions, many were receptive to arguments designed to erode that support. The majority of those receiving false information encountered it online.

The Climate Divide: How Facebook's Algorithm Amplifies Climate Disinformation, Global Witness, 2022

This report found that Facebook fails to meet its own pledge on climate disinformation, and actually amplifies dishonest "skepticism." It includes helpful info on how the business model of tech companies like Facebook can incentivize them to host disinformation.

In the Dark: How Social Media Companies' Climate Disinformation Problem is Hidden from the Public, Greenpeace USA, Avaaz and Friends of the Earth, 2022

This scorecard report used a 27-point assessment question system to review climate dis/misinformation policies on Facebook, Twitter, Youtube, TikTok and Pinterest. It outlines a number of recommendations for the platforms.

The Toxic Ten, Center for Countering Digital Hate, 2021:

This report outlines the ten publishers where climate change denial content was most rampant on Facebook, YouTube, Twitter, and Instagram. The report found that these ten websites accounted for 69% of climate disinformation posts on Facebook, 92% of which were unlabeled.

The websites examined variably have ties to the climate change denying billionaire financiers like **Robert Mercer** and the **Wilks brothers**, the fossil fuel-**invested foundation** of the late Richard Mellon Scaife, and **racist** political **consultants**, among other largely unknown supporters.

The report's key recommendation was for social media companies to discontinue monetizing climate disinformation posts, as the report tracked over $1.7 million these websites earned for Google in a six month period.

The Disinformation Dozen, Center for Countering Digital Hate (CCDH), 2021:

This **widely publicized** report found that "just twelve anti-vaxxers are responsible for almost two-thirds of [COVID-19] anti-vaccine content circulating on social media platforms."

The report shows the limitations of combating misinformation in the realm of journalism alone, and the need for strong, enforced policies against misinformation on social media platforms.

Rebecca Goldberg & Laura Vandenberg, The Science of Spin, Environmental Health, 2021:

This paper examines industry-backed disinformation campaigns that undermine solutions to the dangers posed by five different societal problems: climate change, air pollution from burning coal, atrazine pesticides, tobacco smoking, and sugar consumption.

The authors identified "28 unique tactics used to manufacture doubt," **compiled in this table**. Many of these tactics are used to mislead or bait reporters as a means to amplify discredited messages.

Ultimately, the strategy is to preserve profitable opportunities for the interest groups financing the misinformation. An understanding of these tactics can be used to increase scientific literacy and inoculate against deceptive public relations.

On the back burner: How Facebook's inaction on misinformation fuels the global climate crisis, Stop Funding Heat, 2021.

This report summarized all available literature on climate misinformation on Facebook, highlighting policy gaps, problems associated with Facebook's algorithm, and the failings of its own existing solutions in combating the spread.

Ad-funded Climate Change Disinformation: Money, Brands and Ad Tech, Global Disinformation Index, 2021

Similar to the Toxic Ten report above, the Global Disinformation Index reviewed 98 websites circulating climate misinformation from March to October, 2021. The report estimated that advertisers provided $36.7 million to these dishonest websites in that time frame.

Advertisers identified in the report ranged widely, including The Nature Conservancy, Amazon, Procter & Gamble, Johns Hopkins University, and BP.

The Oil & Gas Sector's Digital Advertising Strategy, InfluenceMap, 2021

InfluenceMap researchers found 25,147 ads from just 25 oil and gas sector organizations on Facebook's US platforms in 2020, which have been viewed over 431 million times with an approximate cumulative spend of $9.5 million. A free account is required to download the report.

Climate Lockdown and the Culture Wars, Institute for Strategic Dialogue, 2021

This study details the emergence and mainstreaming of the term 'climate lockdown' over the pandemic period. It is a useful example to help understand the origins of narratives used by disinformers.

#InDenial - Facebook's Growing Friendship With Climate Misinformation, Stop Funding Heat, 2021

This report found that climate misinformation runs rampant on Facebook and evidence that the company makes money from climate misinformation on its advertising platform.

Meta-Denial: How Facebook Fails to Keep Up with the Evolving Tactics of Today's Climate Misinformers, Avaaz, 2021

This analysis found that Facebook allowed top climate disinformers to ignore its policies and spread misleading content to millions of its users.

Four Days of Texas-Sized Disinformation: Social Media Companies Threaten Action on Climate Change, Friends of The Earth, 2021

This analysis of the February 2021 Texas power outages showed that despite Facebook and other platforms' fact-checking policies at the time, only 0.9% of interactions with content promoting the falsehood that wind turbines were at fault for the power outages carried fact-checking labels.

Yochai Benkler et al, Mail-In Voter Fraud: Anatomy of a Disinformation Campaign, Berkman Klein Center for Internet and Society, Harvard University, 2020

This report found that the U.S. media helped platform 'The Big Lie,' referring to the unfounded accusations against the integrity of the 2020 U.S. presidential election. After examining the evidence, the paper's authors focus on three common journalistic practices that allow misinformation to thrive in the media:

- The urge to consider anything said by certain political elites to be news--in this case, former president Donald Trump.

- A focus on sensationalistic material.

- False balance: the urge to make every story have two equal sides, even when facts are not evenly applied across both aisles of a debate.

The researchers used polling data assessing the top sources of U.S. news to approximate a misinformation supply chain. They found that the myth of a manipulated election outcome was dramatically amplified, rather than responsibly debunked, due to the partisan pressure campaigns waged directly and indirectly against print media outlets. The flawed coverage was then echoed by national and local TV networks, and the false accusations concerning the integrity of the election are now considered truth for about half of all Republican voters.

Hiroyuki Fujishiro, Kayo Mimizuka, & Mone Saito, Why Doesn't Fact-Checking Work? The Mis-Framing of Division on Social Media in Japan, 2020

The report was summarized in a two-part series in the Japanese newspaper, The Mainichi (see **part 1** & **part 2**), which compared the results of the Japanese study to similar research in the United States. The combined research suggests that fact-checks are more likely to be weaponized for partisan reasons than used to question one's own assumptions and beliefs.

This Japan-focused case study is consistent with other recent studies (see below) on the pitfalls of debunking and fact-checking information.

Climate Science Disinformation in Facebook Advertising, InfluenceMap, 2020

This research shows how anti-climate groups use Facebook's advertising platform and unique targeting tools to spread climate disinformation. A free account is required to download the report.

The Oxygen of Amplification, Data & Society Research Institute, 2018:

The introduction of this report (**PDF p.18**) is a case study on the mainstreaming of the 'alt-right'. This case study demonstrates how the media's sense of responsibility in reporting statements made by prominent public figures - in this case, presidential candidate Hillary Clinton - can create a harmful platform for ideas and sentiments that otherwise would remain fringe.

Dealing in Doubt, Greenpeace, 2013:

This qualitative research report includes some key historical information regarding how career climate change deniers and polluting companies worked to manipulate the outcomes of reports published by the Intergovernmental Panel on Climate Change (IPCC) and interfere with global climate negotiations hosted by the United Nations.

Smoke, Mirrors & Hot Air, Union of Concerned Scientists, 2007:

This qualitative report details the extent to which ExxonMobil worked to undermine scientific research on climate change by financing dishonest experts to seed disinformation into the public realm, complementing Exxon's own national and international lobbying operations.

ADDITIONAL RESOURCES

Beyond the Best Practices detailed at the beginning of this guide, there are numerous organizations, training programs and university operations designed to accommodate this need.

COMMUNICATION TECHNIQUES AND TRAININGS:

The Union of Concerned Scientists **What You Can Do about Disinformation** series, adapted from the intellectual property of Sabrina Joy Stevens and Jane McAlevey in 2022:

- **How to Spot Disinformation**
- **How to Stop Disinformation**
- **How Disinformation Works**
- **Resource Guide: Countering Disinformation in Your Community**
- **Video: How to Counter Disinformation**
- **The Disinformation Playbook** (2017)

FirstDraft has a number of **skills training videos**, including metadata analysis, reverse image searches, and digital footprint analysis. FirstDraft is now part of Brown University's **Information Futures Lab**.

FirstDraft also published a **five-part "Essential Guides" series** for journalists, including **Responsible Reporting in an Age of Information Disorder**, detailed above.

The Data & Society Research Institute created a **syllabus** for a course on media manipulation.

Trusting News has worked with **dozens** of newsrooms to provide **training** and **resources** designed to boost trust from readers and subscribers.

Media Well compiles research on a variety of related research tracks, including **Mitigating Misinformation**.

RESEARCH TOOLKITS:

- Specific tools for identifying and exposing misinformation have been **compiled** by journalist Craig Silverman into the **Verification Handbook**.
- The HeyStack **Crap Detection Resources** Guide
- The RAND Corporation's **Tools that Fight Disinformation** webpage is an index of dozens of websites and tools that might be helpful for specific reporting tasks.
- The Society of Professional Journalists' **Journalist Toolbox** contains many more resources for specific research tasks.
- The **Bellingcat OSINT Toolkit**

RESEARCH HUBS:

Harvard University's **Misinformation Review** features a robust collection of academic research on misinformation and fake news. Other Harvard programs that have published research and tips on misinformation include the Shorenstein Center's **Journalist's Resource** and the Berkman Klein Center's **Assembly: Disinformation**.

The MIT Sloan School hosts prominent **research** on misinformation, often with focus on problems and solutions in the realm of **social media**.

Simon Fraser University's **Disinformation Project** is a specialized hub of expertise on dis/misinformation.

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