

CLIMATE MIS-/DISINFORMATION BACKGROUND

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What is climate mis-/disinformation?

Defining climate mis- and disinformation

Misinformation is any “[false or inaccurate information](#),” while disinformation is false or inaccurate information deliberately aimed to confuse or deceive.

The [Climate Action Against Disinformation \(CAAD\) coalition](#) consulted with experts and created the following [definition](#) of climate mis-/disinformation.

Climate disinformation and misinformation 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 publicises efforts as supportive of climate goals that in fact contribute to climate warming or contravene the scientific consensus on mitigation or adaptation.

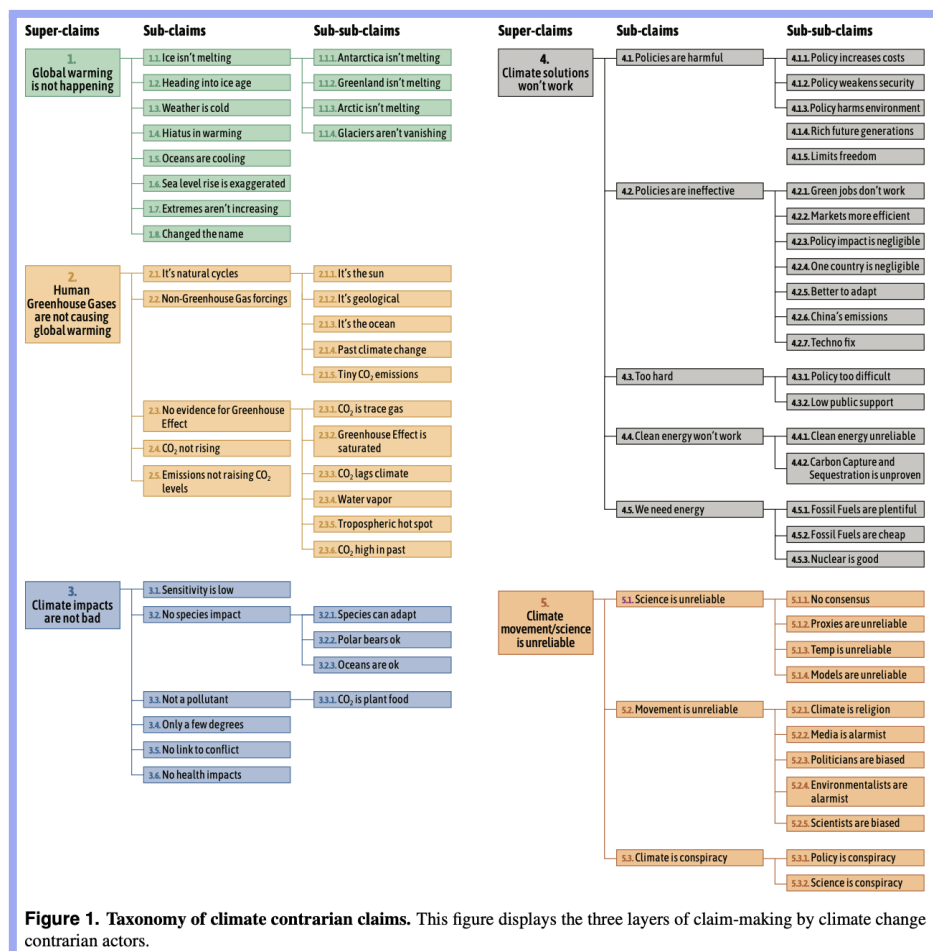
Why is climate mis-/disinformation a problem?

The [Intergovernmental Panel on Climate Change](#) has found that “there is a rapidly closing window of opportunity to secure a liveable and sustainable future for all.” Climate action needs to happen *now*, but [disinformation](#) about [climate change](#) science and solutions directly [obstructs](#) political action on the climate crisis. Even misinformation that is shared unintentionally and without malice can have harmful effects. False claims about climate change can [polarize the public](#), [decrease support for relevant mitigation policies](#), and result in numerous other [negative impacts](#).

Although most existing research has focused on English-language content, climate mis-/disinformation is a global concern that affects people in [many different countries](#) and speakers of [many different languages](#). [Climate justice](#) cannot be achieved without addressing the problem of climate mis-/disinformation.

Classifying climate mis-/disinformation claims

Academics have created various frameworks for classifying climate mis-/disinformation claims. A [2021 paper](#) by Dr. Travis Coan, Dr. Constantine Boussalis, Dr. John Cook, and Dr. Mirjam Nanko sets forth a taxonomy of climate contrarian claims. The five major narratives that they identified are “global warming is not happening,” “human greenhouse gases are not causing global warming,” “climate impacts are not bad,” “climate solutions won’t work,” and “climate movement/science is unreliable.” All of the claims within the first three narratives are examples of mis-/disinformation, as are most but not all of the claims in the fourth and fifth categories.



Additionally, “discourses of climate delay” represent an important sub-genre of climate mis-/disinformation claims. This term was coined by interdisciplinary climate change researcher [Dr. William Lamb](#) and nine other academics in a [2020 article](#) in the journal *Global Sustainability*. According to these researchers, discourses of delay “accept the existence of climate change, but justify inaction or inadequate efforts.” These “policy-focused discourses... exploit contemporary discussions on what action should be taken, how fast, who bears responsibility and where costs and benefits should be allocated.” Discourses of delay include claims that redirect responsibility for climate change, advocate for non-transformative climate solutions, highlight the downsides of climate action, and argue that society should surrender to climate change.

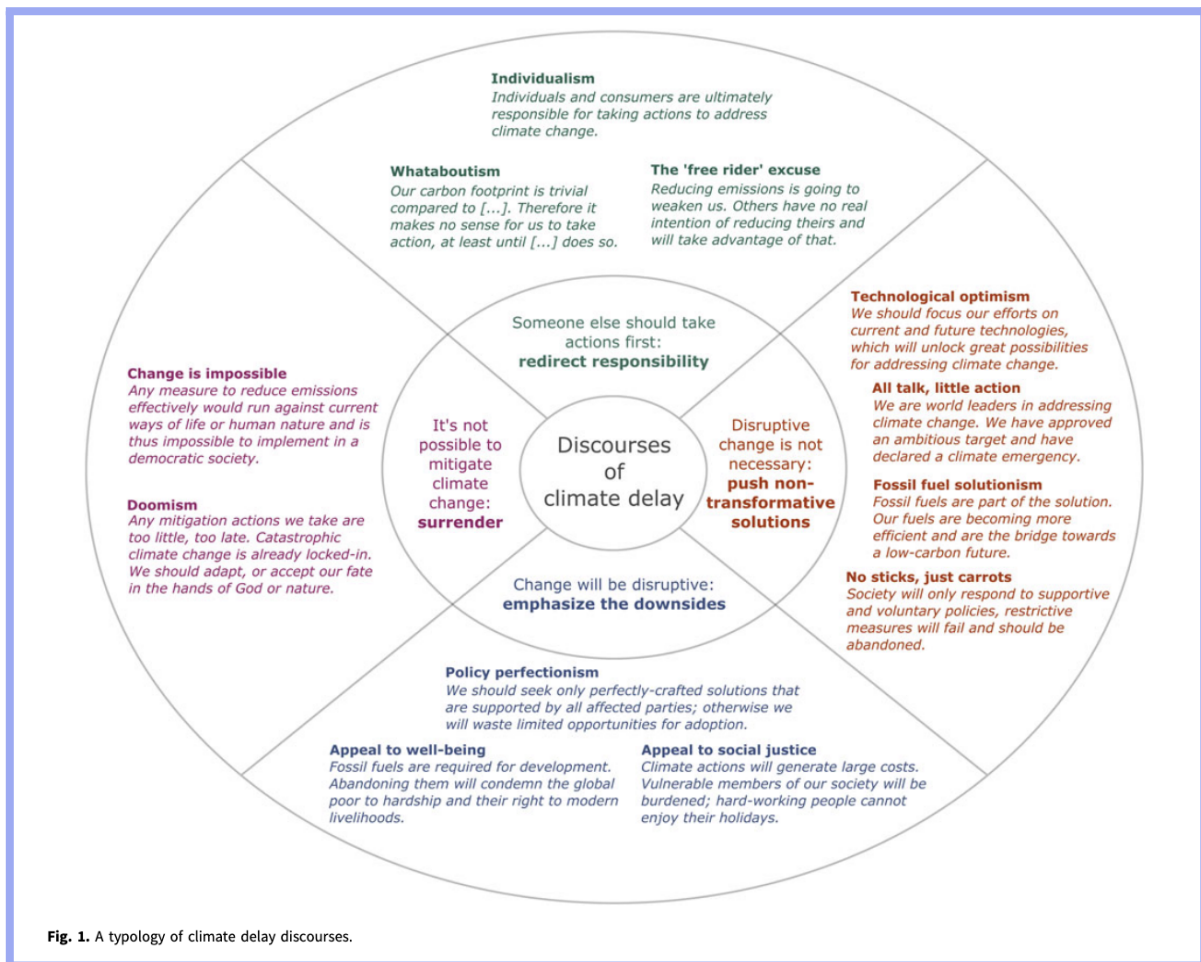


Fig. 1. A typology of climate delay discourses.

[Dr. William Lamb et al. \(2020\)](#), Page 2

Where does climate mis-/disinformation come from?

What is the climate change counter-movement?

Climate disinformation originates from the coordinated network of actors [obstructing political action](#) on climate change, which environmental sociologist [Dr. Robert Brulle](#) calls the climate change counter-movement (CCCM). According to environmental sociologists [Dr. Riley Dunlap and Dr. Aaron McCright](#), the CCCM, which they refer to as the “denial countermovement,” includes many different types of actors:

- Fossil fuel corporations and other corporations
- Industry trade associations
- Conservative think tanks
- Conservative foundations
- Contrarian scientists
- Front groups and astroturf campaigns
- Conservative politicians
- Conservative media
- The climate change denial blogosphere

Additionally, Dr. Brulle has [found](#) that public relations (PR) firms also play a major role in obstructing climate action.

The CCCM [largely began](#) in 1989 in the United States, responding to key developments the previous year such as the formation of the [Intergovernmental Panel on Climate Change \(IPCC\)](#) and [Dr. James Hansen’s historic testimony](#) about climate change in front of the U.S. Congress. One of the first major initiatives of the CCCM was campaigning against the [Kyoto Protocol](#) through the [Global Climate Coalition \(GCC\)](#), an industry group active from 1989 to 1997 that opposed efforts to reduce greenhouse gas emissions and operated out of the offices of the [National Association of Manufacturers](#), the largest manufacturing association in the U.S. The George W. Bush administration ultimately [credited](#) the GCC for influencing its decision to not ratify the Protocol.

The GCC’s [website](#) disseminated explicit climate denial, claiming that “many climate experts caution that it is not at all clear yet that human activities have begun to warm the planet or how bad greenhouse warming will be when it arrives.” Even at the time, many of GCC’s [members](#) had known for decades that burning fossil fuels causes global warming, making this statement an outright and deliberate lie. For example, the American Petroleum Institute (API), a major trade association for the oil and gas

industry and a GCC member, has known about climate change [since 1959](#) and has spent years [questioning climate science](#) and [blocking climate legislation](#). A 1998 API [memo](#) states, “Victory will be achieved when average citizens ‘understand’ (recognize) uncertainties in climate science.” Additionally, [Exxon](#), a member of both the API and the GCC, conducted “[breathhtakingly](#)” [accurate](#) climate research starting in [the late 1970s](#) before becoming a major force in the spread of [climate denial](#). Meanwhile, other oil companies like [Shell](#), [Total](#), [BP](#), [Chevron](#), and [Eni](#) have also known about the climate risks of burning fossil fuels for decades, and instead of championing the transition to renewable energy, they also chose to sow doubt about the reality of climate change to maintain the carbon economy and maximize their [profits](#).

What are mis- and disinfluencers?

[Disinfluencers](#) (disinformation influencers) and misinfluencers (misinformation influencers) use social media platforms to publicly, routinely, and often intentionally persuade others to believe false claims, in some cases profiting from their online content. Disinfluencers disseminate content that they know to be false or inaccurate in order to confuse or deceive others. In contrast, misinfluencers may genuinely believe the misinformation they are spreading but nonetheless have a profoundly [negative impact](#) on the public. Ordinary social media users who privately or occasionally spread misinformation with minimal impact on other people’s views and actions are not considered mis-/disinfluencers.

Some mis-/disinfluencers may be affiliated with the climate change counter-movement, but many are independent actors seeking to earn money or public attention by posting inflammatory content, since [divisive](#) and [outrage-ridden](#) posts tend to generate greater engagement on [social media](#) platforms. Nevertheless, the fossil fuel industry benefits from the climate mis-/disinformation disseminated by mis-/disinfluencers because it further undermines public support for climate action.

It is common for mis-/disinfluencers to disseminate multiple forms of mis-/disinformation and hate speech. [Research](#) led by the Institute for Strategic Dialogue and CASM Technology has confirmed that people who repeatedly post climate mis-/disinformation online often spread false claims across multiple subject areas. These repeat offenders often embed discussions of climate change within the larger “[culture wars](#)” discourse, thereby exposing wider audiences to climate mis-/disinformation.

What tactics does the climate change counter-movement use?

Lobbying and advertising

The climate change counter-movement frequently obstructs climate legislation through lobbying activities. A [2018 study](#) by Dr. Robert Brulle found that fossil fuel interests [outspent](#) environmental organizations ten to one on climate lobbying in the United States from 2000 to 2016. Additionally, the CCCM [heavily invests](#) in advertising in order to sell fossil fuel products and improve the reputation of the industry among both policymakers and the general public. Fossil fuel industry [advertisements](#) often contain [climate disinformation](#), such as greenwashing.

Greenwashing

[Greenwashing](#) is “the act or practice of making a product, policy, activity, etc. appear to be more environmentally friendly or less environmentally damaging than it really is.” CCCM actors, especially companies that need to maintain their [social licenses to operate](#), often [greenwash](#) themselves and their products. For example, [Natural Allies for a Clean Energy Future](#) is a front group that seeks to [greenwash methane gas](#) and has conducted a significant amount of [advertising](#) on Facebook and Instagram in recent years. Natural Allies [asserts](#) that “replacing coal with natural gas is the best way to cut emissions, reach climate goals, and power our future reliably, cleanly, and affordably.” This claim may sound compelling and even pro-climate but is nonetheless untrue; methane gas is a fossil fuel that is incredibly [harmful](#) to both the environment and human health, and transitioning away from fossil fuels to [renewable energy sources](#) is necessary to avoid the worst impacts of climate change. Natural Allies’ claim also demonstrates that greenwashing is often used in “[fossil fuel solutionism](#),” which is a [discourse of delay](#) that wrongly argues that fossil fuels can contribute positively to climate solutions. Fortunately, corporate greenwashing has [faced further scrutiny](#) in recent years.

Woke-washing

Woke-washing is the performative [appropriation](#) of [social justice](#) terminology and progressive values to bolster the reputation of a company, industry, or other entity.

Some CCCM actors such as fossil fuel industry front groups and trade associations have used woke-washing in an attempt to justify the fossil fuel industry's continued existence, despite the many harms that it causes. For example, [Energy Citizens](#), a front group of the American Petroleum Institute, made a [Facebook post](#) in February 2023 in honor of U.S. Black History Month in order to woke-wash the group's reputation. The claim that "Energy Citizens proudly celebrates Black natural gas & oil workers" is hollow and misleading, given the fact that Black communities in the U.S. are disproportionately impacted by the [extreme weather events](#) and [air pollution](#) that the fossil fuel industry [greatly exacerbates](#).

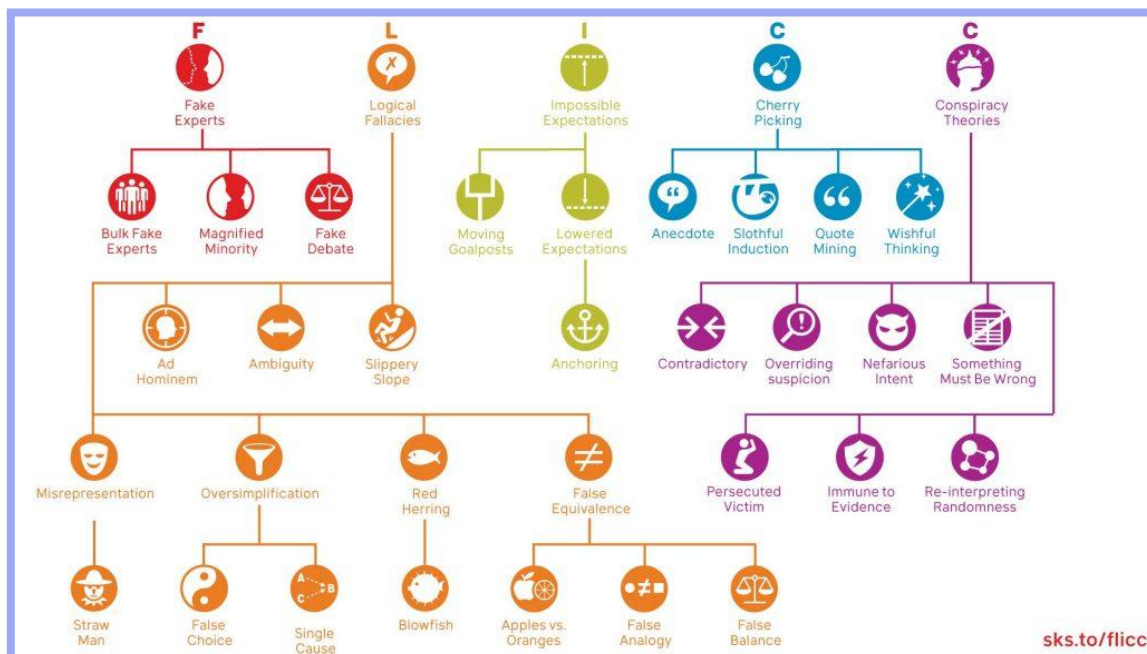
Astroturfing

The CCCM also uses the tactic of astroturfing, [defined](#) as "organized activity that is intended to create a false impression of a widespread, spontaneously arising, grassroots movement in support of or in opposition to something (such as a political policy) but that is in reality initiated and controlled by a concealed group or organization (such as a corporation)." Fossil fuel industry astroturf groups may seem like independent advocacy organizations at first glance; many of these groups even have names that strongly imply they are citizen-led. However, these groups are actually funded by fossil fuel interests and are usually run by PR professionals. These groups are often anonymously funded in order to conceal their true backers, and they usually engage in lobbying and advertising on behalf of the fossil fuel industry. Another example of an astroturf group besides Energy Citizens is [The Empowerment Alliance \(TEA\)](#), which was launched in 2019 with help from the PR firm HDMK in order to undermine the Green New Deal and promote methane gas.

Rhetorical techniques of science denial

Cognitive scientist [Dr. John Cook](#) identified 36 rhetorical techniques and sub-techniques frequently used by science denialists. The five main strategies are I) utilizing fake experts; II) using logical fallacies; III) setting impossible expectations; IV) cherry picking; and V) spreading [conspiracy theories](#). [Cherry picking](#), or "carefully selecting data that appear to confirm one position while ignoring other data that contradicts that position," [can be](#) a form of [paltering](#), which is the technique of using true claims in a misleading way. One notable example of cherry picking is the false claim that global warming has paused, which has been [fact-checked numerous times](#).

By only showing temperature data for a short timespan, disinformers distort the facts and argue that global mean temperatures have plateaued, when in reality they are still rising.



Dr. John Cook (2020)

Attacking leaders and experts

The CCCM also harasses environmental organizations, activists, leaders, and scientists. For example, while employed by Dow Chemical, the PR firm Ketchum hired a security company to spy on environmental groups like Greenpeace from the late 1990s until at least 2000. According to Mother Jones, this operation involved “pilfering documents from trash bins, attempting to plant undercover operatives within groups, casing offices, collecting phone records of activists, and penetrating confidential meetings.” Additionally, climate activists like Greta Thunberg and environmental leaders like Al Gore face frequent attacks, particularly from conservative pundits. Finally, many climate scientists have faced harassment from fossil fuel interests. These attacks erode public trust in scientific institutions, intimidate experts and activists into staying quiet, and waste victims’ time that could be better spent taking action on climate change.

Some CCCM actors also attack experts from other disciplines and try to discredit other scientific fields in order to reduce overall public trust in science and expert institutions. For example, the Heartland Institute has attempted to undermine the credibility of both climate scientists and Dr. Anthony Fauci, a renowned public health scientist.

How can we address climate mis-/disinformation?

Climate disinformation will exist as long as the CCCM continues to exploit [mainstream media](#) and [social media](#) and mobilize [billions of dollars](#) to block climate action. Fortunately, experts have identified several strategies for combating climate mis-/disinformation.

Online platform policies and government action

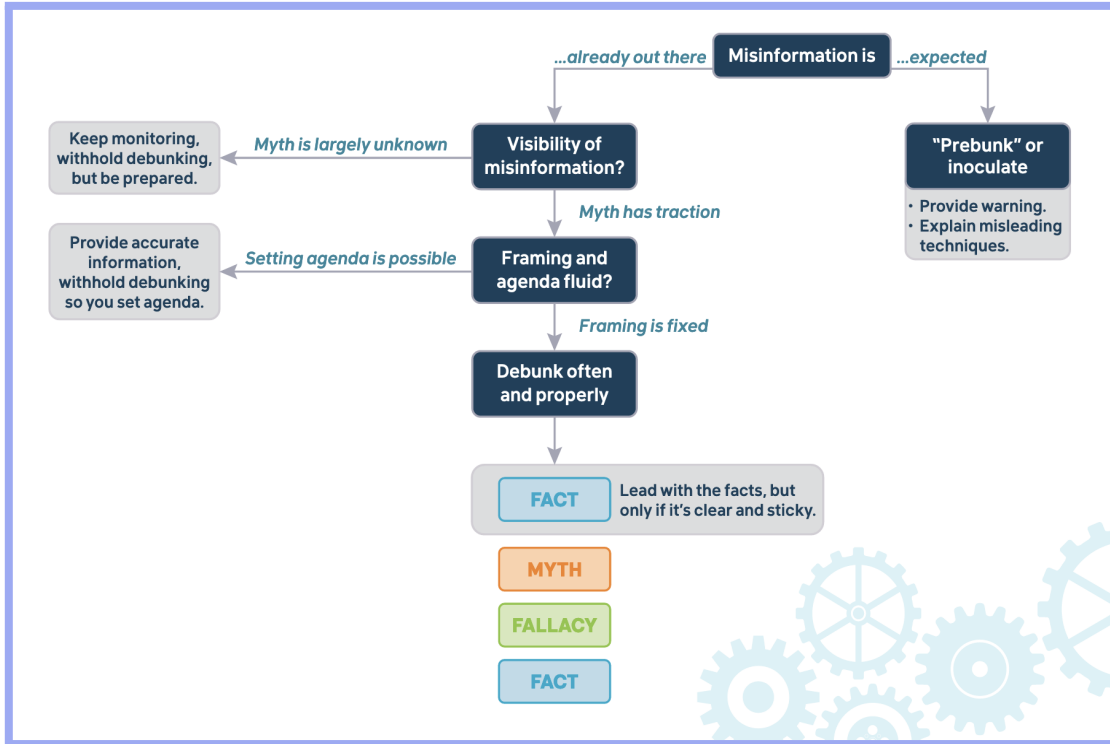
The CAAD coalition emphasizes the importance of systemic solutions to prevent the spread of mis-/disinformation. CAAD recommends that online platforms adopt [concrete measures](#) to address mis-/disinformation and encourages governments to [require](#) advertising technology, broadcast, publishing, and social media companies to adhere to those measures.

Prebunking

One way to address mis-/disinformation, proposed by [Dr. Sander van der Linden et al.](#), is inoculation or prebunking, or the practice of “pre-emptively protect[ing]... public attitudes about climate change against real-world misinformation.” Warning people about common climate mis-/disinformation narratives spread by politically motivated groups and preemptively refuting these claims can protect people from being deceived by falsehoods when they see them.

Debunking

Another strategy for countering false claims is debunking, or the practice of clearly refuting mis-/disinformation after people have encountered it. Scholars including [Dr. Stephan Lewandowsky](#) and [Dr. John Cook](#) have developed best practices for when and how to properly debunk mis-/disinformation.



Dr. Stephan Lewandowsky et al. (2020), Page 8

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.

Dr. Stephan Lewandowsky et al. (2020), Page 12

Glossary

- ★ **Astroturfing:** “Organized activity that is intended to create a false impression of a widespread, spontaneously arising, grassroots movement in support of or in opposition to something (such as a political policy) but that is in reality initiated and controlled by a concealed group or organization (such as a corporation)” ([Merriam Webster](#))
- ★ **Cherry picking:** “Carefully selecting data that appear to confirm one position while ignoring other data that contradicts that position” ([Cook 2020](#))
- ★ **Climate change counter-movement:** The coordinated network of actors obstructing political action on climate change ([Brulle 2013](#)), also known as the **denial countermovement** ([Dunlap and McCright 2015](#))
- ★ **Climate (change) denial:** “The argument or belief that climate change is not happening, or is not caused by human activity such as burning fossil fuels” ([Cambridge Dictionary](#))
- ★ **Climate mis-/disinformation:** “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 publicises efforts as supportive of climate goals that in fact contribute to climate warming or contravene the scientific consensus on mitigation or adaptation” ([Climate Action Against Disinformation](#))
- ★ **Conspiracy theory:** “An explanation of historical, ongoing, or future events that cites as a main causal factor a group of powerful persons, the conspirators, acting in secret for their own benefit against the common good” ([Uscinski 2018](#)); “A theory that rejects the standard explanation for an event and instead credits a covert group or organization with carrying out a secret plot” ([Dictionary.com](#))
- ★ **Debunking:** The [practice](#) of clearly refuting mis-/disinformation after people have encountered it
- ★ **Discourses of (climate) delay:** “Policy-focused discourses” that “accept the existence of climate change but justify inaction or inadequate efforts” and “exploit contemporary discussions on what action should be taken, how fast, who bears responsibility and where costs and benefits should be allocated” ([Lamb et al. 2020](#))
- ★ **Disinfluencer:** A [term](#) that is short for “disinformation influencer” and refers to individuals who publicly, routinely, and often intentionally persuade others to believe

- false claims on social media, sometimes for profit, with the specific goal of confusing or deceiving others
- ★ **Disinformation:** False or inaccurate information deliberately aimed to confuse or deceive
 - ★ **Disinformer:** Someone who spreads disinformation
 - ★ **Grassroots activism:** Genuine “organized effort[s] undertaken by groups of individuals in a given geographic area to bring about changes in social policy or influence an outcome, often of a political issue” ([ThoughtCo.](#))
 - ★ **Greenwashing:** “The act or practice of making a product, policy, activity, etc. appear to be more environmentally friendly or less environmentally damaging than it really is” ([Merriam Webster](#))
 - ★ **Hate speech:** “Offensive discourse targeting a group or an individual based on inherent characteristics (such as race, religion or gender) and that may threaten social peace” ([United Nations](#))
 - ★ **Inoculation / prebunking:** The practice of “pre-emptively protect[ing]... public attitudes about climate change against real-world misinformation” ([van der Linden et al. 2017](#))
 - ★ **Lobbying:** “Activities aimed at influencing public officials and especially members of a legislative body on legislation” ([Merriam Webster](#))
 - ★ **Methane gas:** A fossil fuel also known by the industry [greenwashing term](#) “[natural gas](#)” that is [mainly composed of methane](#)
 - ★ **Misinfluencer:** A term that is short for “misinformation influencer” and refers to individuals who publicly, routinely, and often intentionally persuade others to believe false claims on social media, sometimes for profit, *without* the specific goal of confusing or deceiving others
 - ★ **Misinformation:** “False or inaccurate information” ([American Psychological Association](#))
 - ★ **Misinformer:** Someone who spreads misinformation
 - ★ **Nature-rinsing:** The “use of nature-evoking imagery to enhance the ‘greenness’ of [an organization’s] brand image on social media” ([Algorithmic Transparency Institute](#))
 - ★ **Paltering:** A tactic [often used by the oil industry](#) that involves the “active use of truthful statements to influence a target’s beliefs by giving a false or distorted impression” ([Harvard Business School](#))
 - ★ **Woke-washing:** The performative [appropriation](#) of [social justice](#) terminology and progressive values to bolster the reputation of a company, industry, or other entity