

The Merchants of Confusion

Communication tactics that manipulate audiences to dispute emerging or established scientific knowledge

Warning:
Do not imitate



The one-sided Litigators

Manipulating through "**Information asymmetry**"

Information asymmetries pose a risk for opportunism in business, management and human relationships ([Bergh D., 2018](#)). Media manipulators can **hijack information asymmetries in public understanding of science** by providing only one-sided and select examples or anecdotes in support of false claims or hypotheses. This works because we tend to rely on a cognitive bias known as the availability heuristic to evaluate a claim's merit ([Tversky & Kahneman, 1973](#))

A related tactic is to pronounce the (supposed) **absence of any counter-evidence as evidence for a claim**, which might mislead individuals to accept *prima facie* implausible claims or not reject them to preserve cognitive consistency ([Vu L., et al., 2023](#))



The slippery slope Scaremongers

Manipulating through "**Hyperbolic Horror**"

A slippery slope argument claims an initial action will trigger a series of other events and lead to an extreme or undesirable outcome. However, these arguments are **often fallacious because they imply inevitability, causality and necessity** between individual stages.

Media manipulators use slippery slope arguments to **instill horror in their audience by presenting (hypothetical) extreme consequences as inevitable** ([Jefferson A., 2014](#), [Nikolopoulou K., 2023](#)), thereby abusing our inherent aversion to loss or perceived threats at the expense of logical reasoning ([Lerner & Keltner, 2001](#)). Shared fears can also be abused to guide collective behaviors, socially reinforcing false beliefs about risks ([Kasperson et al., 1988](#)).



The false-cause Fabricators

Manipulating through "**Illusory Patterns**"

Humans have an innate desire to understand causality. Our pattern-recognition ability evolved to help us understand and predict our environment, but also imbued us with a **tendency to overfit data to patterns**, and perceive connections between random things ([Eyre S. et al., 2008](#), [van Prooijen, 2017](#)).

Media manipulators can abuse this predisposition to **prompt us to falsely attribute causal relationships to events that correlate in time, or take advantage of our desire to shape scattered facts into coherent stories** ([Taleb, 2007](#)). Collective memories and shared narratives can also amplify these false causalities, especially if they align with broader cultural stories or beliefs ([Wertsch JV., 2021](#), [Erlil A., 2022](#)).



The exclusionary Scotsmen

Manipulating through "**Special Pleading**"

When confronted with scientific information that contradicts our beliefs, we experience discomfort and cognitive dissonance ([Harmon-Jones et al., 2009](#)). To resolve these contradictions, we often fall into **special pleading** ([Dim Y., 2018](#)) by setting different standards for different arguments to unjustly reject inconsistencies.

Media manipulators can foment special pleading with appeals to purity, identity or moral credentialing of their in-group. By **claiming that "no true scientist" would ever act or speak in a dissenting way to their beliefs** ([Manninen TW, 2018](#)), they aim to assert their group's moral superiority ([Monin & Miller, 2001](#)) and give citizens **license to disregard or devalue** inconvenient counterexamples.



The "Strawman" Architects

Manipulating through "**Misrepresentation**"

We have an innate tendency to view members of out-groups as more similar to each other than members of in-groups ([Quattrone & Jones, 1980](#), [Judd et al., 1991](#)). We also judge probabilities through a **representativeness heuristic by comparing an event to a prototype or stereotype** that we already have in mind ([Gilovits & Savitsky, 2012](#), [Balía S., 2015](#))

Media manipulators play into these tendencies by **treating the complex positions of out-group members as if they are monolithically simple and representative of a flawed or extreme stance**. These oversimplified strawmen arguments are more easily processed ([Kahneman, 2011](#)) and can be pompously debunked to persuade and reinforce "in-group" solidarity ([Harwood J., 2020](#)).



The *ad populum* Propagandists

Manipulating through "**Desire to Belong**"

We often do things because many other people are doing them, regardless of our own beliefs or supportive evidence. This bandwagon effect ([Bindra S. et al., 2022](#)) is innate to social beings influenced by pressures and norms of groups, from wisdom of the crowd ([Surowiecki, 2004](#)) to social proof ([Cialdini, 1984](#)).

Media manipulators abuse our tendency to look to others by **appealing to the popularity of an unsubstantiated position** ([McCrew BW., 2018](#)) or taking advantage on the individual's fear of being isolated or ostracized ([Williams KD et al., 2022](#)). A related tactic is to **invoke common practice or tradition** to asserts that a premise must be right because people have always believed or practiced it ([Michaud N., 2018](#)).