

Spaces of argumentation and their interaction: the role of media in public discussion

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Meaningful, Useful and Legitimate Information in Decision Making
Paris

4-5 December 2023

What and why?

- Origin of the questioning is linked to the very loud discussions on media and social media about Science during covid crisis
- *Puzzling* situation where the discussions are clearly not exchanges of rational arguments
- >> Led to an hypothesis on the reason why the argumentative discussion can turn frantic
 - In formal models agents usually assumed to share the same 'logic';
 - In real world diverse groups share public spaces, each with their own beliefs, information, values, intentions, analytical capabilities etc.
- >> Project : we need to understand the dynamic of argumentation in such a setting to then model it.

Observations

- 3 case-studies: Hot Coffee, HCQ and Climate change
- They are different because of the space and time of discussion
 - One is a legal case and the others are about knowledge building - the only one with an end is the legal case
 - One scientific case concerns issues that have been discussed for years and had several cycles of publicity - the other one is more of a one-shot
- Their similarity is that they are translated in the *mediatic space* which defined the proof standards and some individuals seemed to have a clear desire to lead the opinion towards a conclusion (but we do not explore the question why the opinion could be important in this case, which is not trivial)

The hot coffee case ☕

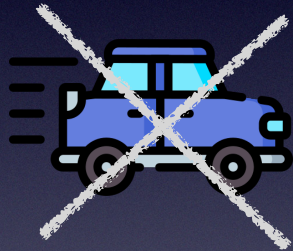


In 1992, 79-year-old Stella Liebeck bought a cup of takeout coffee at a McDonald's drive-thru in Albuquerque and, while in the car, spilled it on her lap. She sued McDonald's and a jury awarded her \$2.9 million in damages for the burns she suffered.

The facts



but



but



- Cup between her knees => coffee spilled on her lap. Sweatpants => kept coffee against her skin;
- Burns over 16% of her body, 6% were third degree. Hospital for a week => skin grafts. Two years to recover.

The trial


- Liebeck tried to settle with McDonald's for \$17,000 and requested change hot coffee policy. McDonald's declined and offered \$800;
- The jury awarded \$200,000 in compensatory damages (reduced to \$160,000) + **\$2.9 million** in punitive damages (reduced by more than 80% by the judge). The parties settled out of court (probably \$500,000).


Other restaurants served
at 150°

Coffee not just “hot,” but
dangerously hot

McDo coffee served at 180°-190°.
Liebeck’s surgeon, D. Arredondo: if liquid at
that temperature makes contact with skin for
more than a few seconds “If you’re lucky, it
will produce second-degree burns. If you’re
not as lucky, you will get third-degree or full-
thickness burns requiring skin grafting and
surgery.”

Secret doc (?): very hot to reduce n. of free refills

 "McDonalds had a really, really strong reason for why they brewed their coffee at the temperature they did. It was an industrial standard based on the maximum extraction of the flavor in the maximum holding temperature."

 Liebeck should have removed her clothes immediately + her age (older people's skin is thinner and less resistant to injury).

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Statistically insignificant considering the billions of cups of coffee sold annually

Between 1983 and 1992, more than 700 people complained because they were burned by hot coffee at McDonalds.



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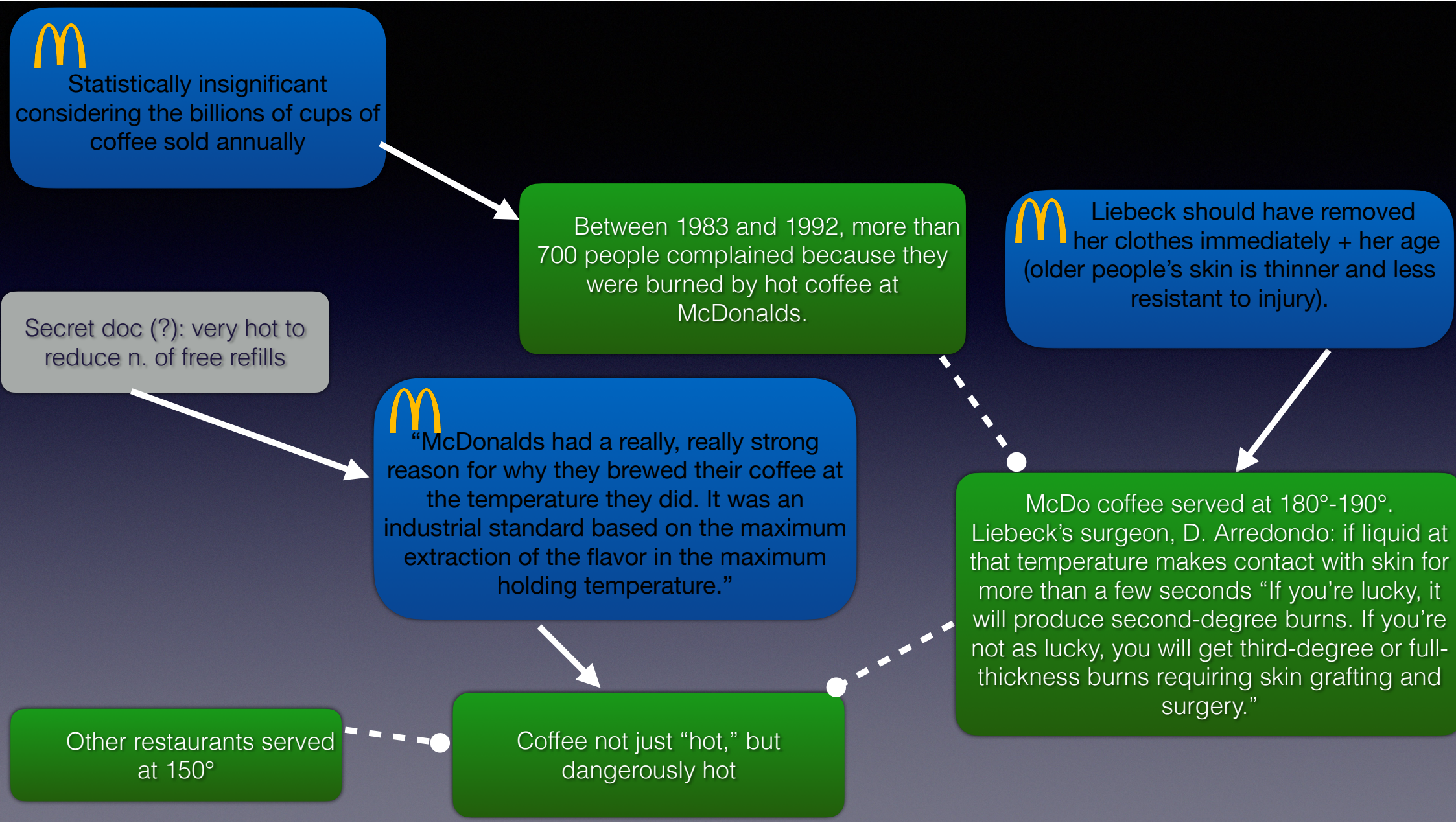


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After the verdict, Liebeck became the old lady who spilled coffee on herself and got millions, a joke on late night shows and used by politicians to push for a tort reform that would limit “frivolous lawsuits”.



Susan Saladoff's documentary *Hot Coffee*, 2011

Media as an (over)simplifying filter

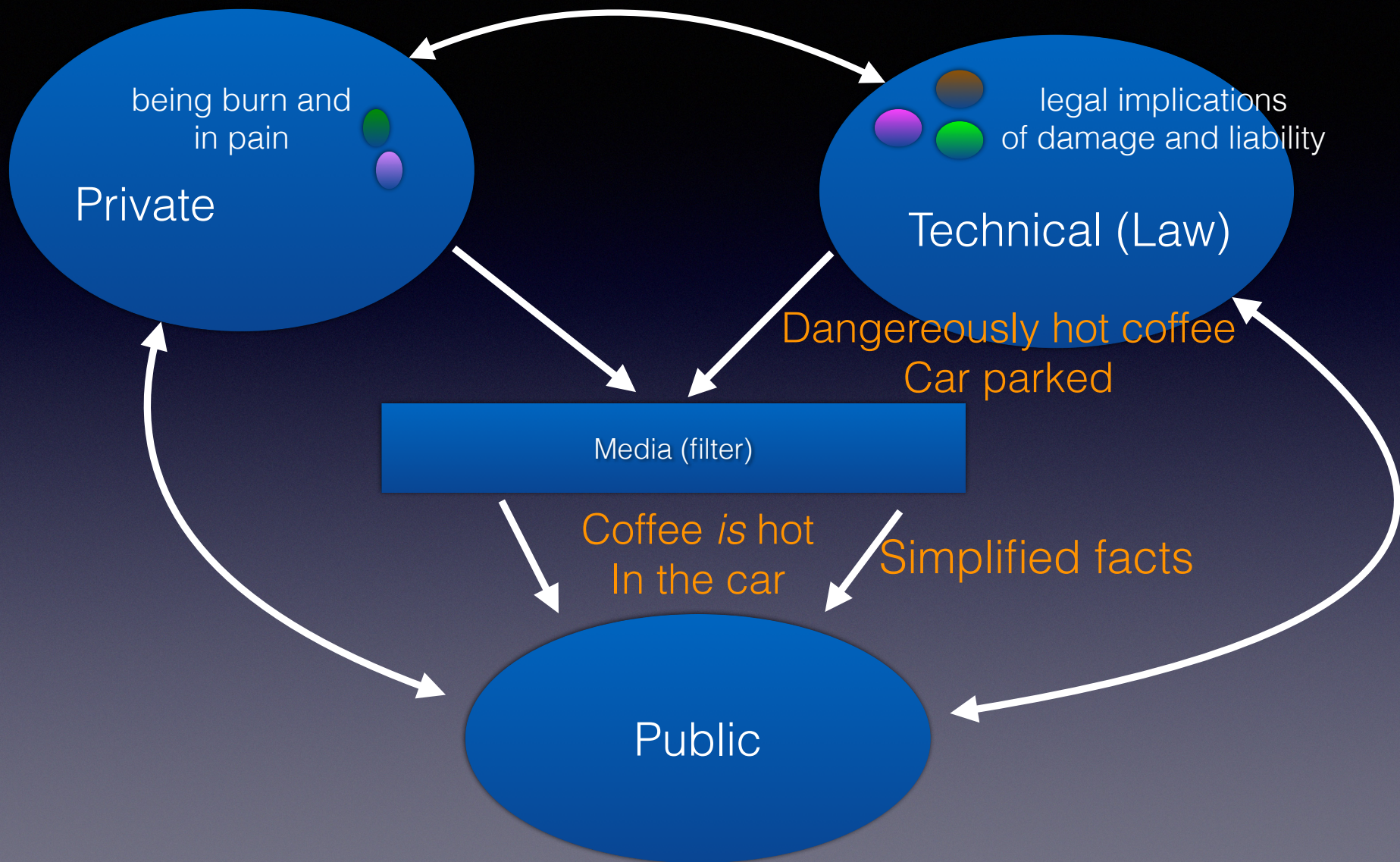


John Llewellyn (Professor of Communication at Wake Forest University): “697 words in the Albuquerque Journal became 349 words in the Associated Press and became as few as 48 words in various renderings by major metropolitan newspapers. 48 words can’t explain a lot. And then woman, coffee, millions sounds like a ripoff, not like a logical consequence of a thoughtful trial.”



Zombie and clones arguments

- McDonalds has been cast in the public mind as the victim;
- Liebeck still seen as the greedy old woman => Arguments repetition makes them stronger (forbidden in formal models) (**clones**);
- John Llewellyn: “Very much like urban legends, it is a very compelling story. Once everybody decides what is true about something and the media has been sort of an echo chamber for it, then how do you deal with the fact that they might be wrong?”





(March 2020)
HCQ+Az => Reduction viral load
when given at first symptoms



Donald J. Trump ✓
@realDonaldTrump



HYDROXYCHLOROQUINE & AZITHROMYCIN, taken together, have a real chance to be one of the biggest game changers in the history of medicine. The FDA has moved mountains - Thank You! Hopefully they will BOTH (H works better with A, International Journal of Antimicrobial Agents).....

♥ 101K 7:13 AM - Mar 21, 2020



💬 49.1K people are talking about this





Raoult commits an *insufficient sample fallacy* (the evidence is insufficient)



Randomised controlled clinical trials (RCT) are the gold standard: it must be used to prove the treatment [*Argument from established rule*]



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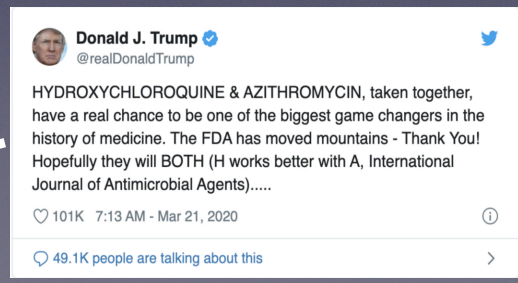


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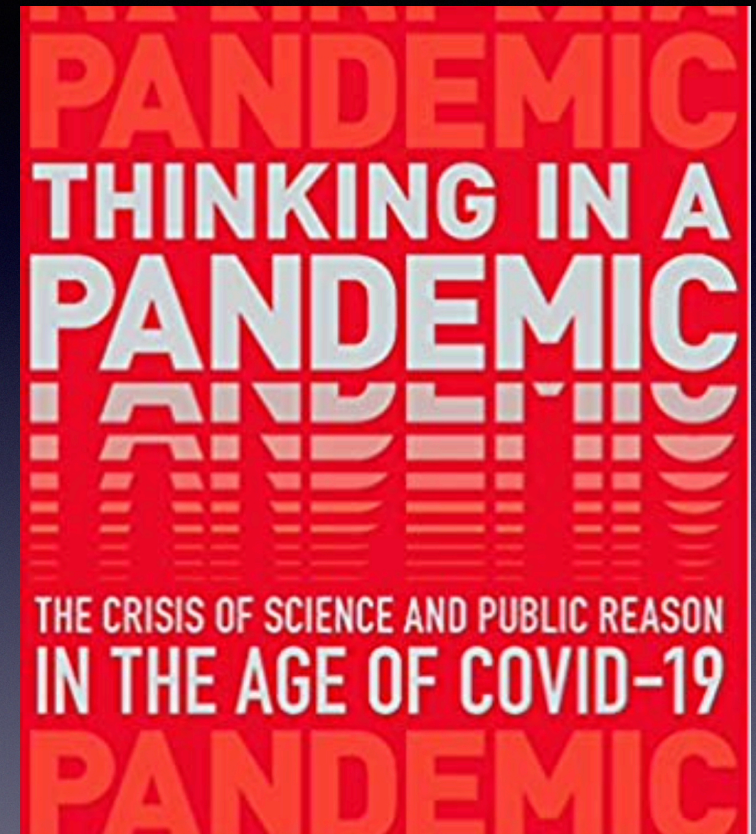
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- Two competing notions of *good evidence*:
 1. Public health epidemiologists: “methodologically liberal and pragmatic” => use diverse kinds of data;
 2. Clinical epidemiologists: evidence-based medicine (EBM) => “gold standard evidence from randomised controlled trials (as opposed to mere data), and counsel inaction until a certain ideal form of evidence—Evidence with a capital E—justifies intervening” (M. Lipsitch);
- We call (2) *administrative view*
- *Science and public policy*: in science when things go wrong is good (you revise your theory) vs. not so in politics (there is a risk)



- Analgesics ▶
- Antiandrogens ▶
- Azvadine
- Bromhexine
- Budesonide
- Colchicine
- Conv. Plasma
- Curcumin
- Famotidine
- Favipiravir
- Fluoxamine
- Hydroxychloro...**
- Ivermectin
- Lactoferrin
- Lifestyle ▶
- Melatonin
- Metformin
- Minerals ▶
- Molnupiravir
- Monoclonals ▶
- Naso/orophar.. ▶
- Nigella Sativa
- Nitazoxanide
- Paxlovid
- Quercetin
- Remdesivir
- Vitamins ▶
- More ▶
- Other 

HCQ for COVID-19

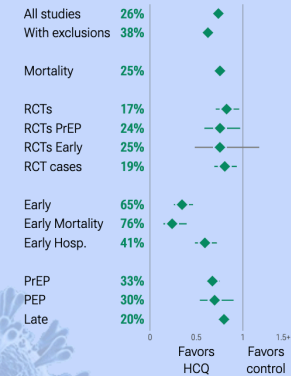
414 studies from 8,611 scientists

535,832 patients in 58 countries

Statistically significant lower risk for **mortality, hospitalization, recovery, cases, and viral clearance.**

65%, 20% lower risk for early and late treatment CI 54-74%, 16-24%; 38, 267 studies


25% lower risk in **9 early treatment RCTs** CI -18-52%
76% lower **mortality** in **16 early treatment studies** CI 60-86%





560 HCQ COVID-19 studies, 437 peer reviewed, 414 comparing treatment and control groups. Late treatment and high dosages may be harmful, while early treatment consistently shows positive results. Negative evaluations typically ignore treatment delay. Some *In Vitro* evidence suggested therapeutic levels would not be reached, however that was incorrect [Ruiz]. Recent: [Rabe Flynn Mohd Abd Razak Brouqui Scirocco Souza-Silva Meeus](#). HCQ/CQ was adopted in all or part of 42 countries (57 including non-government medical organizations). Submit updates/corrections.


Search HCQ All



- Nov 27
Covid Analysis
HCQ for COVID-19: real-time meta analysis of 414 studies
Early treatment shows 65% [54-74%] lower risk with pooled effects in 38 studies. Results are similar for higher quality studies and for peer...
- Nov 22
Rabe et al., BMJ Open, doi:10.1136/b...
Impact of SARS-CoV-2 infection on patients with systemic lupus erythematosus in England pr...
29% fewer cases (p=0.22). Retrospective cohort of 6,145 SLE patients showing lower incidence of COVID-19 for patients receiving HCQ/CQ...


 At the moment, the priority is to treat patients. Others can prove that the protocol works (medical practice vs. research).


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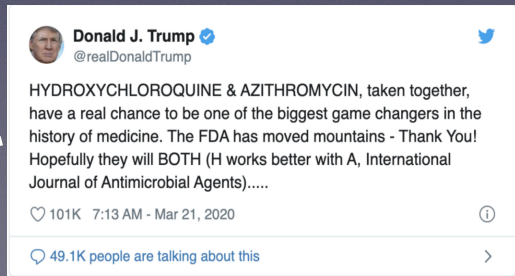
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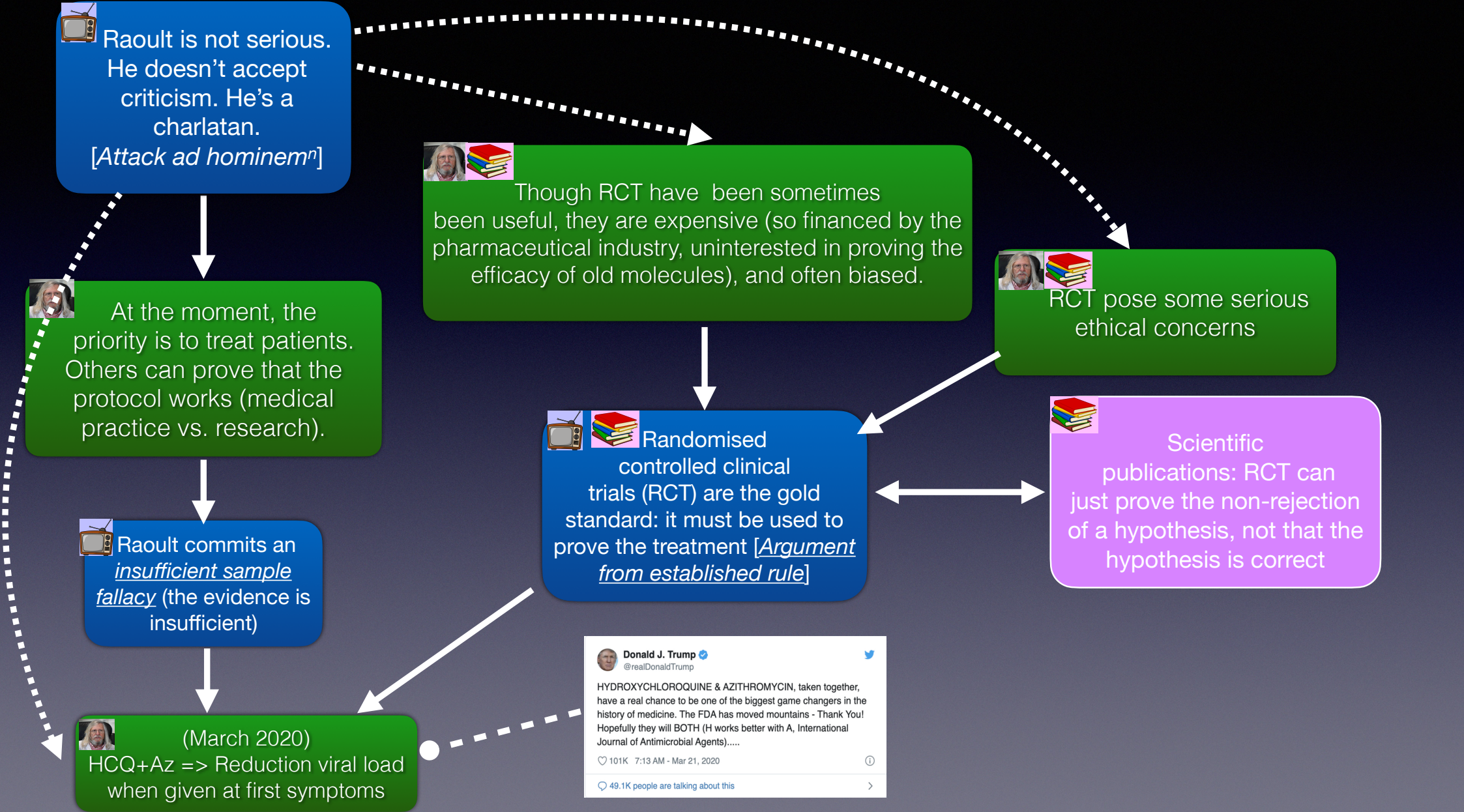
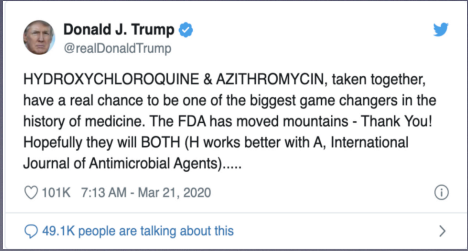
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His h-index is suspicious because very high [Attack ad hominemⁿ]

He's a climate change sceptic [Attack ad hominemⁿ]

....


Tests at IHU [Assimilation + ad hominem]



Money issues IHU [Assimilation + ad hominem]

Lancet gate [General proof discussion]


Interview of his daughter [ad personam]

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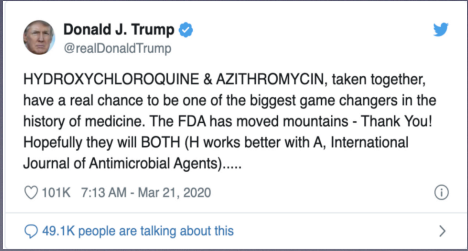
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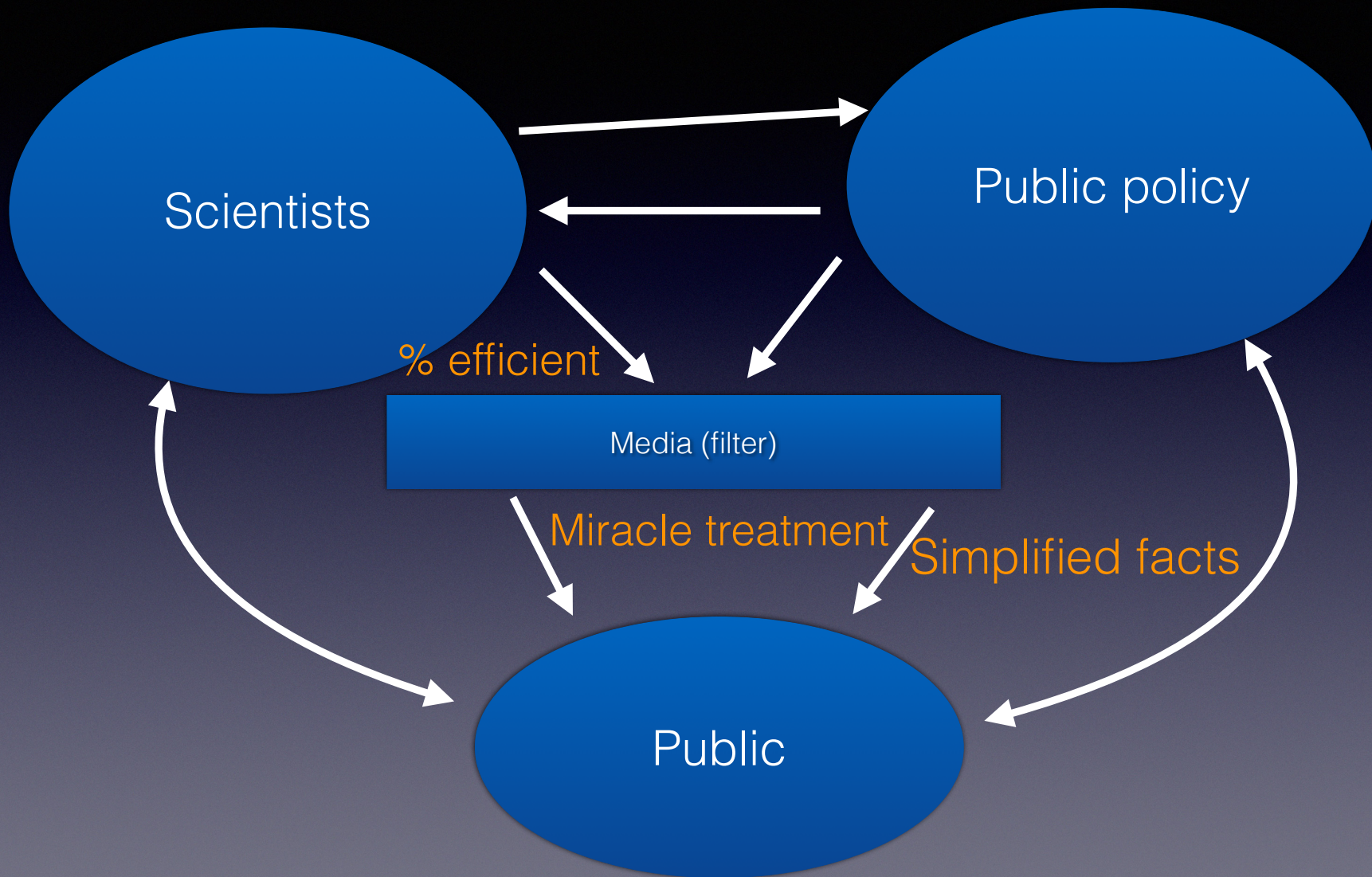
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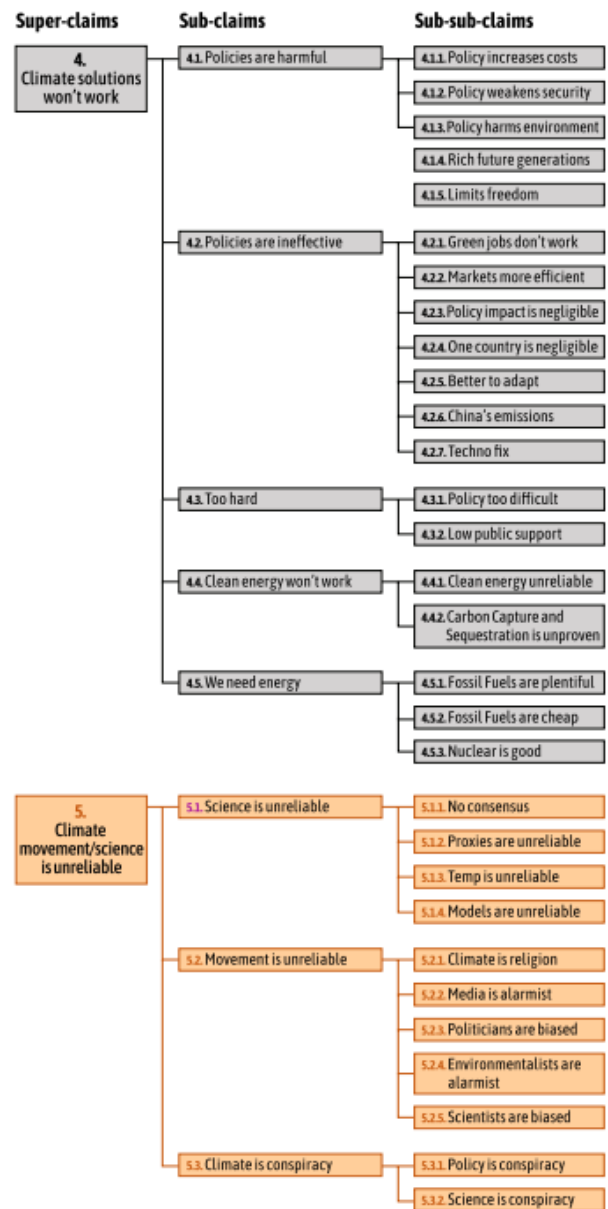
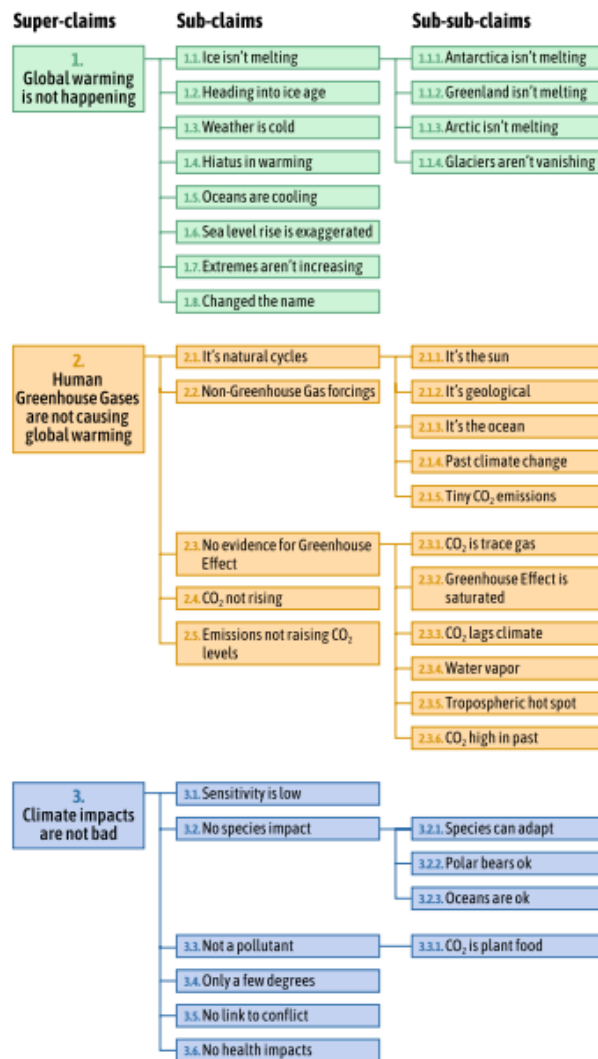
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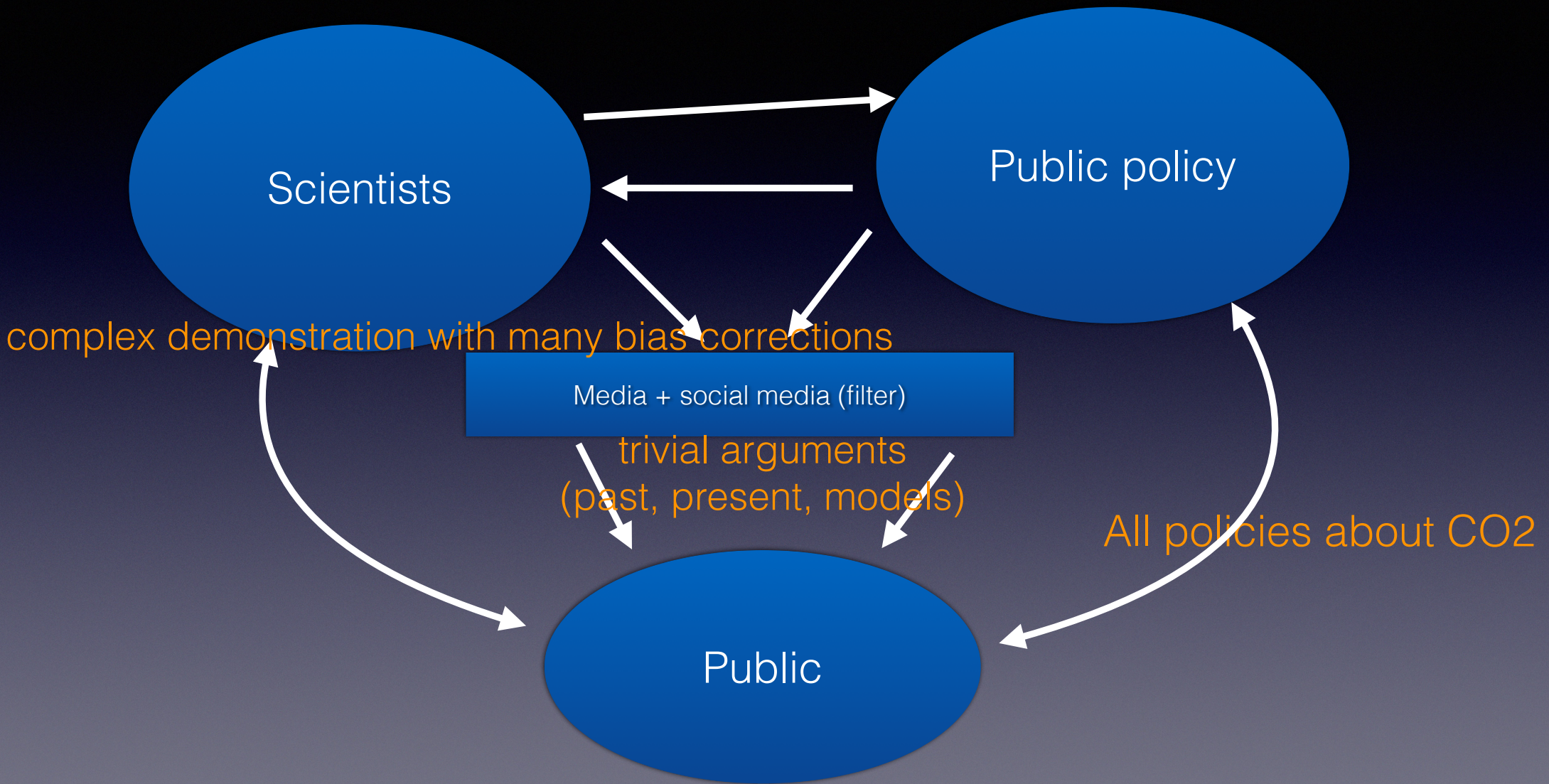
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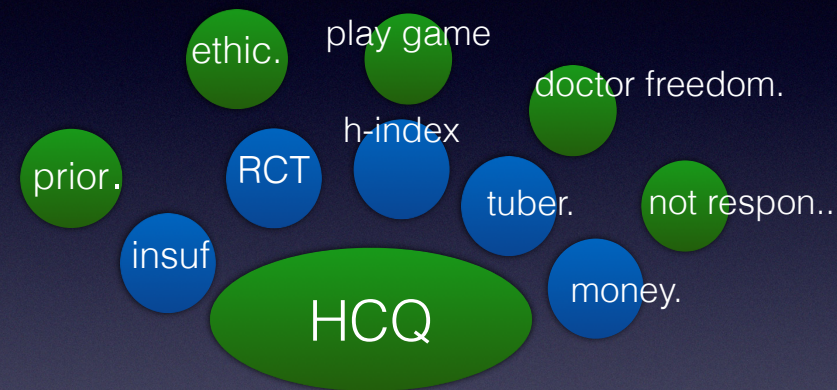
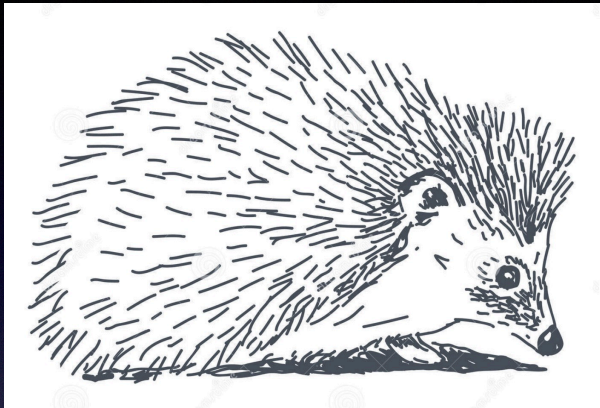


Coan et al., 2021, Nature

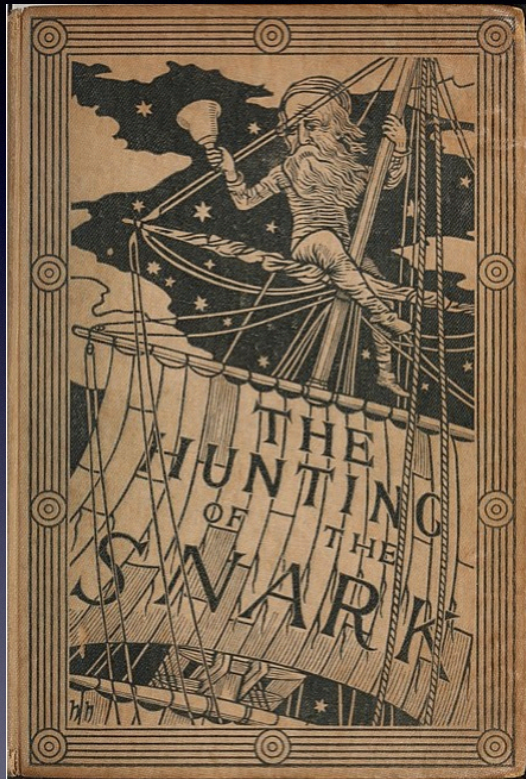


- The *repetition* of an argument makes an argument stronger (usually forbidden in formal models) (*clones*);
- *Ad hominem* attacks *all* the arguments made by that person (acceptable in some spaces: unreliable witness in court);
 - *Argument by assimilation*: Trump, climate change scepticism;
- *Shifting arguments*: When arguments chain, the topic may change (from HCQ to what science is/should be, to Raoult...), kind of departure from the issue in question (informal fallacy of *irrelevant conclusion* or *ignoratio elenchi*);
 - *Irrelevant argument*: Induce a different discussion, not a refutation
 - Media act as a *filter*: selection + (over)simplification > potential *deception*

- The *hedgehog argument*:



- Length of media argument chains 2
- Length of scientific arguments has no limit



*"Just the place for a Snark!" the Bellman cried [...]
"Just the place for a Snark! I have said it twice:
That alone should encourage the crew.
Just the place for a Snark! I have said it thrice:
What I tell you three times is true." [...]
The proof is complete,
If only I've stated it thrice."*

Next steps

- Framework where only *fewer* and *B&W* arguments are passed to another space:
 - cf. Baumann & Brewka (contraction trivial, just put arguments wished with no attacks) would boil down to science as revealed truth and consensual process;
 - Fuzzy logic + defeasible reasoning (A. Ciabattoni)
 - How does the feedback loop work: how scientists can answer to B&W arguments?
- *Clones and zombies*:
 - Clones => increase familiarity and higher acceptance rate
 - Clones and zombies two sides of the same coin: spreading of retraction news can be undermined by continuing diffusing false information by clones;
 - Can scientists select which information to pass to the media?

Conclusions

- Arguments dynamics from real cases
- Why construct a formal model?
 - to help improve the quality of arguments' dynamics
- Legitimate decisions as justifiable: what to do when different communities rely on different notions of proof?