

3rd Symposium on Activity-Based Modeling

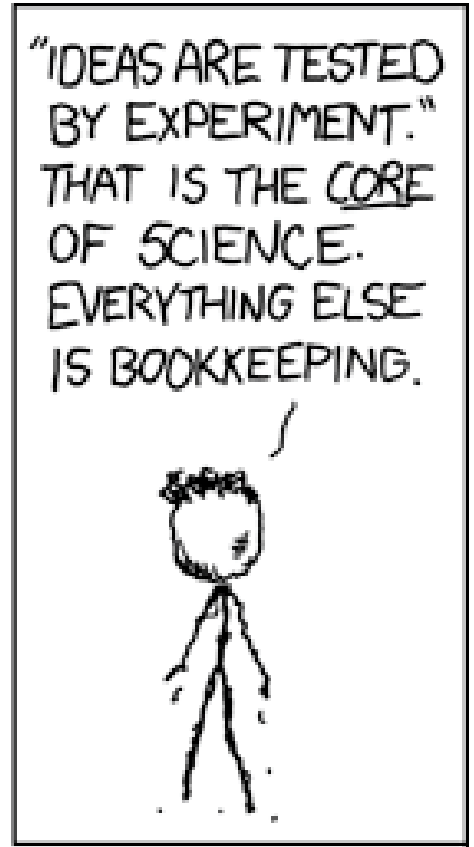
Raitenhaslach, Germany, December 2024

On credibility

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Credibility, reproducibility & testing

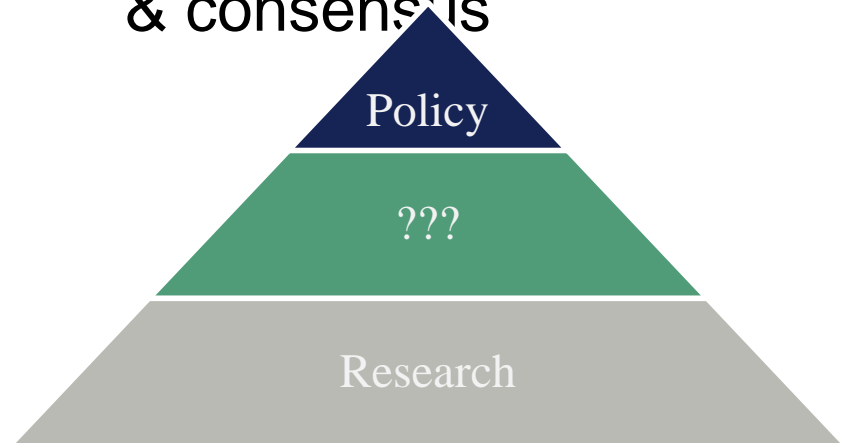
Greg

- Benchmarking scenarios → credibility

“Yes, and...”

Joan

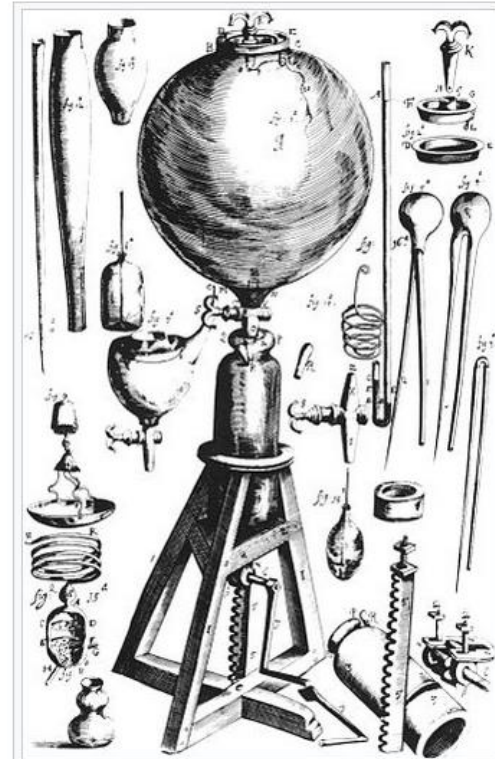
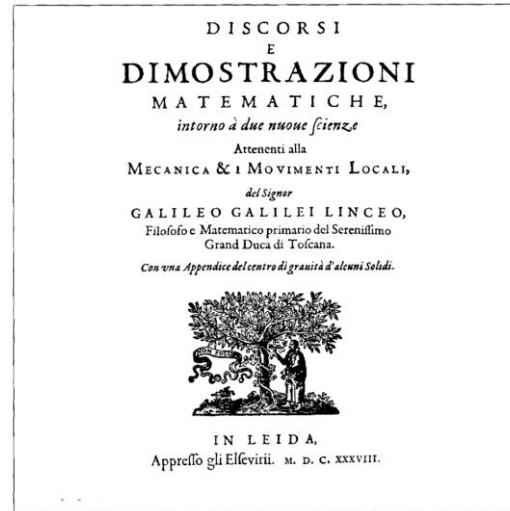
- Open science + benchmarking sandbox → progress & consensus



Some History

Starting in the 17th Century, scholars began to articulate community-level components to ensure the validity and credibility of science. These include:

- Data recording and sharing
- Reproducibility
- External review

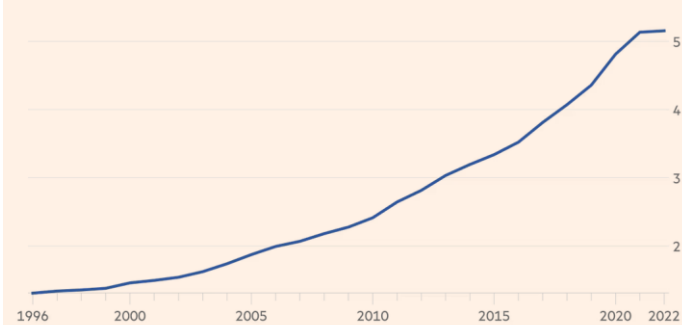


Boyle's air pump was, in terms of the 17th century, a complicated and expensive scientific apparatus, making reproducibility of results difficult.

Some context

Academic publishing has expanded rapidly

Total number of scholarly journal articles published per year (mn)



Source: Clarke & Esposito's Scholarly Journals Market Trends 2024 (<https://www.ce-strategy.com/reports/>). Data from Dimensions, an inter-linked research information system provided by Digital Science (<https://www.dimensions.ai>)
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HEALTH LAW, POLICY & MANAGEMENT

New Book Examines Effects of Anti-intellectual Thought on Science

Anti-Scientific Americans, by SPH Assistant Professor Matt Motta, expands upon his research into how anti-intellectual sentiment harms public opinion of science and damages policymaking that affects health.

Tech

The Broken Algorithm That Poisoned American Transportation

By Aaron Gordon August 24, 2020, 8:00am

Uber files

A global investigation revealing how Uber broke the law, duped police and regulators, and secretly lobbied governments across the world.

'Embrace the chaos'
A history of Uber's rapid expansion and fall from favour

The firm was one of the pioneers of the gig economy model but its operations soon caused a global furore

END Uber
#UberStrike
Uber

Global reaction How the leak prompted outrage across the world

The Uber files Uber broke laws, duped police and secretly lobbied governments, leak reveals

What are the Uber files? A guide to cab-hailing firm's ruthless expansion tactics



credibility

/ˌkrɛdɪˈbɪlɪti/

Dictionary

Definitions from [Oxford Languages](#) · [Learn more](#)

noun

noun: **credibility**

the quality of being trusted and believed in.

"the very public loss of credibility led to the demise of the magazine"

the quality of being convincing or believable.

"the book's anecdotes have scant regard for credibility"



2 : good enough to be effective

| a *credible* job

| ... does a *credible* imitation of a ballet student's exercises, as well as a flapper's Charleston.

— Dany Margolies



Other elements of credibility



- Can you prove it?
- Is it transparent, reproducible & reviewed?
- Are you an expert?
- Are you on my side?
- Does this fit in my world view?
- Does this put my social standing or self-perception at risk?

Threats to credibility



error noun

3 : something produced by mistake

| a typographical *error*

especially : a postage stamp exhibiting a consistent flaw (such as a wrong color) in its manufacture

4 a : the difference between an observed or calculated value and a true value

specifically : variation in measurements, calculations, or observations of a quantity due to mistakes or to uncontrollable factors

b : the amount of deviation from a standard or specification

lie noun (2)



Definition of *lie* (Entry 4 of 6)

1 a : an assertion of something known or believed by the speaker or writer to be untrue with intent to deceive

// He told a *lie* to avoid punishment.

bullshit 2 of 2 verb

intransitive verb

1 **informal + usually vulgar** : to talk foolishly, boastfully, or idly

2 **informal + usually vulgar** : to engage in a discursive discussion

transitive verb

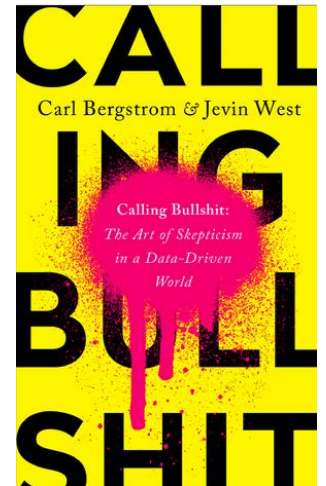
informal + usually vulgar : to talk nonsense to especially with the intention of deceiving or misleading



That is why she cannot be regarded as lying; for she does not presume that she knows the truth, and therefore she cannot be deliberately promulgating a proposition that she presumes to be false: Her statement is grounded neither in a belief that it is true nor, as a lie must be, in a belief that it is not true. **It is just this lack of connection to a concern with truth — this indifference to how things really are — that I regard as of the essence of bullshit.**

[Harry Frankfurt \(1986\) On Bullshit. *Raritan Quarterly Review* 6\(2\)](#)

1. Push for clarity and relevance.
2. Avoid cynicism



“If politicians seek to justify their choices solely because 'the science' told them to do it, they abandon a fundamental reason for modern politics. Political leadership includes building a sense of who 'we,' as a society, are, and what needs to be done together in the face of adversity or opportunity. Yes, how we act must be informed by the evidence and this is often independently produced by researchers. But it will also be informed by a values framework within which societal behaviours more or less align.”

Ling, T. Leading with the Proper Use of Scientific Evidence Is Better Than Hiding Behind It. RAND, 2020.

“Scientists should not fool themselves with the misconception that politics is dirty compared to the scientific enterprise, and they should therefore avoid the fight. Nor should scientists think that by standing back and letting the facts speak for themselves, they allow reason to prevail and proponents of flawed policies to wilt.”

Holt, R. AAAS CEO to Young Scientists: Speak Up. Keep Focused. Carry On. Motherboard, Dec 20, 2016.

“The answer is not to draw inward, but rather, to confidently, respectfully, and clearly explain the connection between scientific advancement and our economic progress, human wellbeing, and national security.”

Holt, R. Act for Science. Science, Vol. 355, No. 6325, 2017, pp. 551–551.



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