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PAGANINI NON RIPETE

WHO ENGAGED FIRST?

Ciao, We often blame **journalists**, **social media**, and **politicians** for distorting science. But new **evidence** suggests the **problem** may start earlier, in **scientific papers** and **university press releases** themselves. That matters because, in public health, a small **exaggeration** at the beginning of the chain can become a very large policy conclusion at the end.

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Key Takeaways

- **Scientific distortion** can start before the **media**. Causal claims may already be overstated in **papers and academic**

press releases.

- In public health, **small exaggerations can have large consequences**. Associations can become headlines, political narratives, and eventually regulation.
- **Scientific responsibility** starts at the source. **Researchers** must clearly distinguish what the evidence shows from what it cannot prove.

WHAT HAPPENED A new **Nature Human Behaviour study** analysed 194,631 cross-sectional studies and found that 46.3% used **causal language in their titles or abstracts** - language that the study design **cannot adequately support on its own**.

- The phenomenon has also increased sharply over time.

This is not entirely new. A landmark **BMJ study** followed health research from scientific papers to university press releases and then into the media. When **press releases exaggerated causal claims**, 81% of related news stories contained similar exaggeration. When press releases did not, the figure was only 18%. And here is the interesting part: **exaggeration was not associated with greater news coverage**.

WHY IT MATTERS **Scientists often blame the media** for distorting science. **What if the distortion starts with scientists themselves?**

- **This is not an accusation of dishonesty**. Neither study shows that scientists exaggerate deliberately for citations, funding, careers or political influence.
- But science does not exist outside society. **It has incentives too**: publications, citations, funding, personal visibility, institutional recognition and policy impact.

The question is therefore not whether scientists are acting in bad faith. It is whether **our scientific ecosystem gives greater value to results that appear clearer, stronger and more causal than the evidence actually allows**.

- "X is associated with Y" is cautious.
- "X causes Y" travels much further.

FROM CORRELATION TO REGULATION This matters enormously in **public health, nutrition and prevention**.

Think about ultra-processed foods (UPFs), sugar, meat, alcohol, palm oil, obesity or front-of-pack labels.
Much valuable research in these fields relies on observational evidence, associations and intermediate outcomes. That is not bad science.

The problem begins when the evidence is asked to say more than it actually says.
The chain can become:
association - causal claim - press release - headline - social media - political narrative - regulation
And uncertainty tends to disappear at every step.

Yet the further evidence travels towards regulation, the greater the scrutiny should become.
When the final step is a **tax**, **warning label**, **advertising restriction**, or **ban** affecting millions of individual choices, **we should demand more evidence, not less**.

- An association can be scientifically important.
- It is not automatically a mandate for government action.

WHO IS RESPONSIBLE? Scientists rightly demand that journalists report science responsibly.
But scientific responsibility starts one step earlier.

- Researchers have a responsibility to tell us what we know and what we do not know;
- what is association and what is causality;
- what the limitations are;
- and what conclusions the evidence can actually support.

That is not an argument against science. **It is an argument for better science**.
Science needs uncertainty, disagreement, and falsification. **Policy needs evidence**.

Neither is well served when correlation becomes causation because causation makes a better headline.
So before blaming the journalist, perhaps we should ask: **Who exaggerated first?**