



# Its Up To Us

Ethics, Incentives and the Public Value of Science

Arthur Lupia, University of Michigan  
Vice President of Research & Innovation

# Outline

1. A Structural Change
2. We Need to Talk...
3. It's Up to Us

# 1. A Structural Change



# Our shared endeavor

Advance understanding.

Empower people.

Improve quality of life.

Save as many lives as possible.

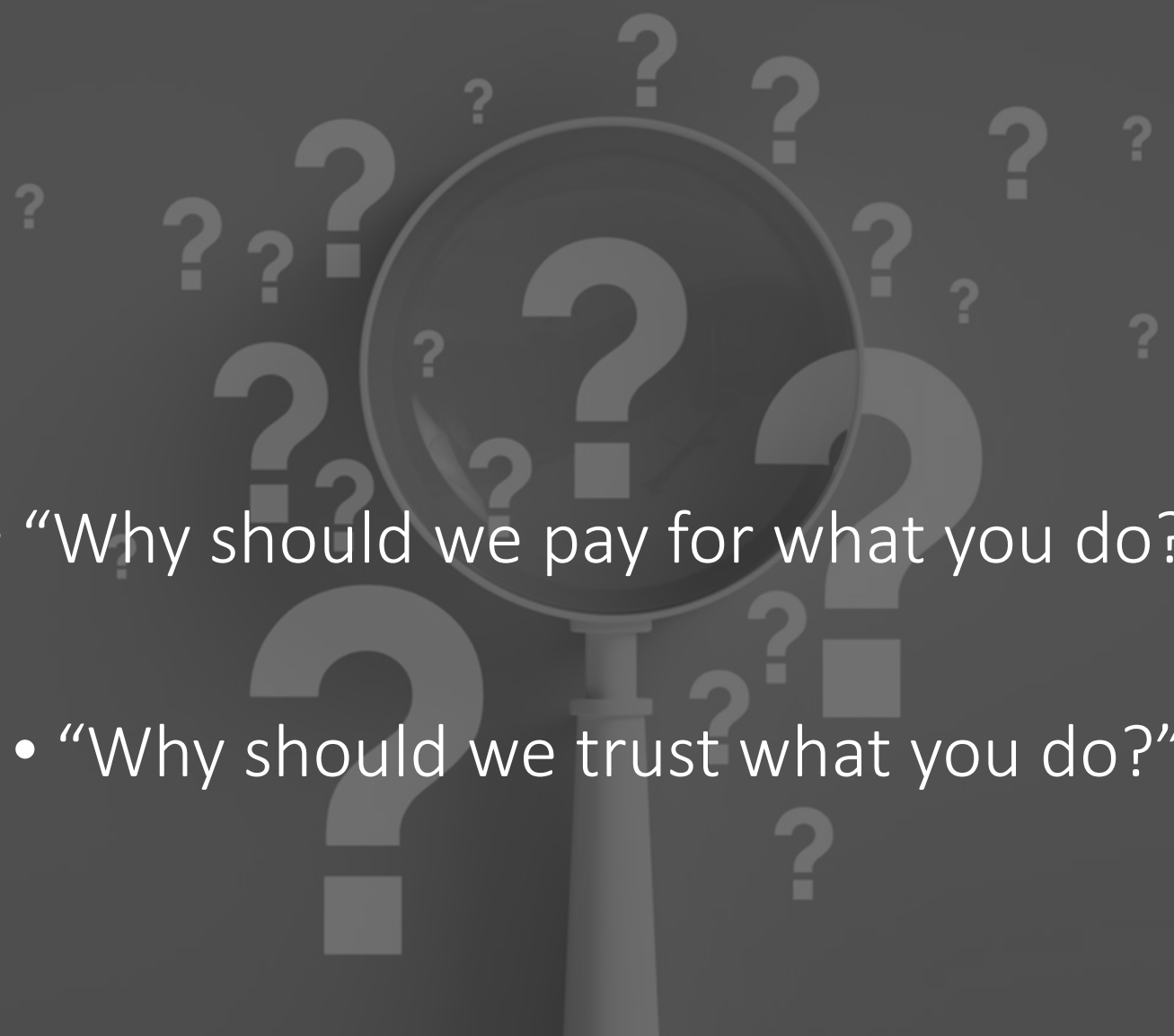


Grande Chroniques de France, 14<sup>th</sup> C



**Information,  
once scarce,  
is everywhere.**

<http://static.guim.co.uk/sys-images/Guardian/Pix/pictures/2013/7/23/1374573546005/Pile-of-smart-phones-008.jpg>

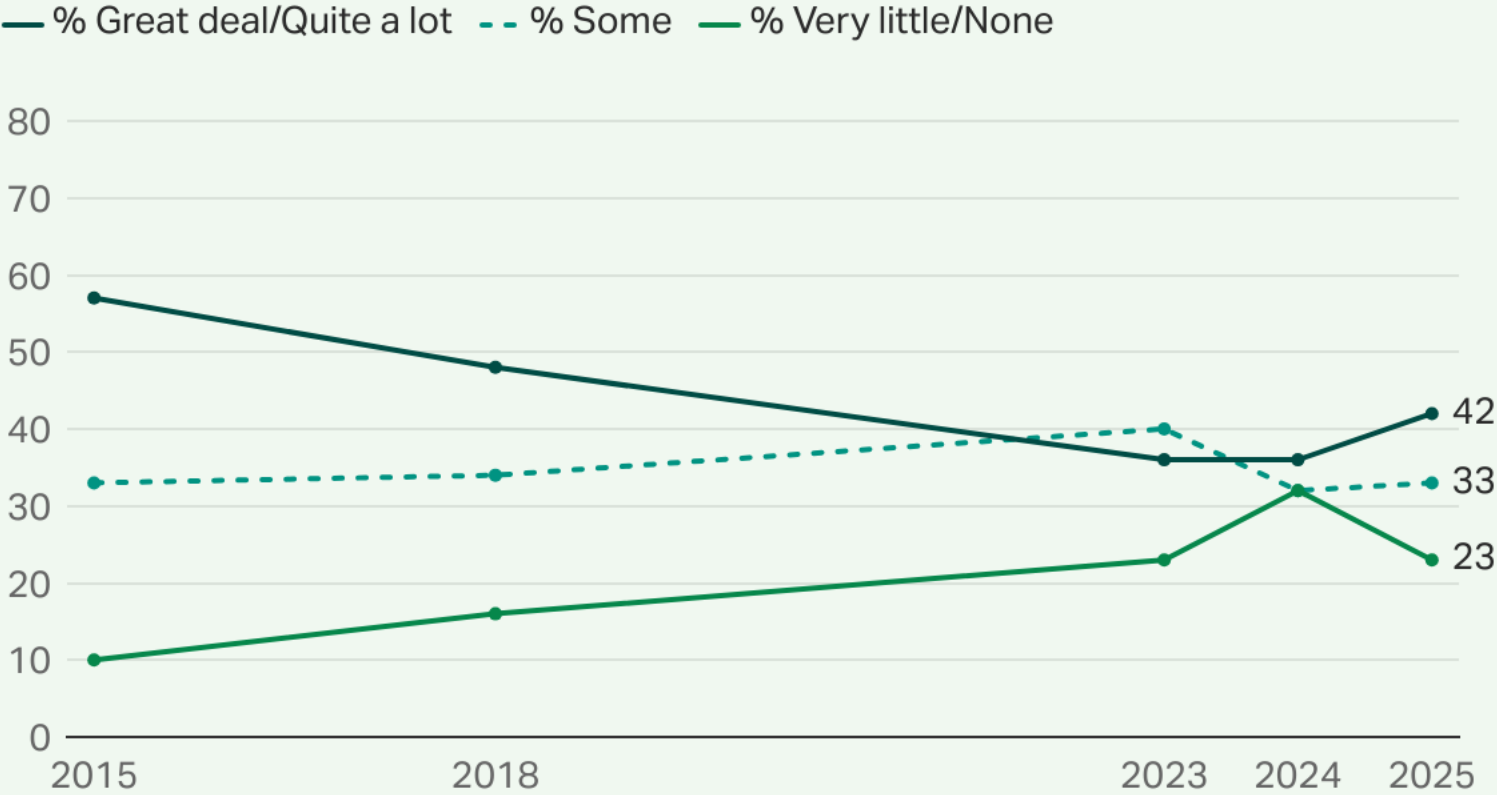
- 
- “Why should we pay for what you do?”
  - “Why should we trust what you do?”

# Consequences include the end of...

- Universities' 1000-year near monopoly on producing certain kinds of expertise.
- Widespread automatic deference to academics...
- Public willingness to write "blank checks" for expertise.

# Confidence in U.S. Higher Education

Please tell me how much confidence you, yourself, have in higher education — a great deal, quite a lot, some or very little?



"None" is a volunteered response. No opinion percentages are not shown.



**\$74,580**

**US Median Household Income, 2023 (Census Bureau)**

Photo Credits: AP/Sandy Huffaker,  
Joakim Edskilsen, Artur Verkhovestly/depositphotos.com

## 2. We Need to Talk...

# Today, many researchers have...

- Strong incentives to make claims that attract attention.
- Strong incentives to use technology to publish more papers.
- Weak incentives to explain how the discoveries emerged.

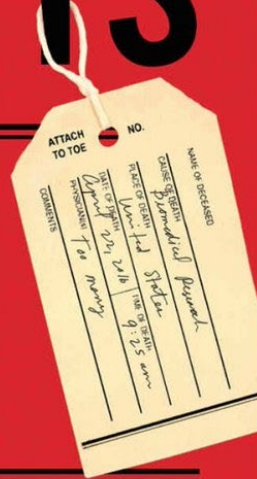
# RIGOR MORTIS

---

*HOW SLOPPY SCIENCE  
CREATES WORTHLESS  
CURES, CRUSHES HOPE,  
AND WASTES BILLIONS*

---

**RICHARD HARRIS**



# Individual Researchers Must Be Clear about



HOW WE CHOSE  
WHAT TO OBSERVE.



HOW WE CHOSE TO  
RECORD WHAT WE  
OBSERVED.



HOW WE CHOSE TO  
CATEGORIZE WHAT  
WE RECORDED.



HOW WE CHOSE TO  
ANALYZE WHAT WE  
CATEGORIZED.



HOW WE CHOSE TO  
INTERPRET WHAT  
WE ANALYZED.



HOW WE COULD BE  
WRONG.

# Lupia et al (2024) “Trends in US Public Confidence in Science & Opportunities for Progress.” *PNAS*.

- An overwhelming majority of the American public agrees on fundamental things that scientists *should be doing*.
- They disagree about whether scientists are actually doing them.

# Ethical Questions in the AI Era

Data Quality and Provenance

Model Explainability

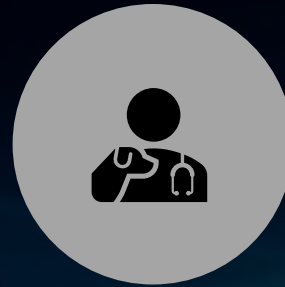
Replicability and  
Generalizability

The Meaning of Authorship

# Ethical Questions in a New Geopolitical Era



Oversight of Biological  
Materials



Vetting of Researchers  
and Visitors



Physical safety and  
security of facilities



Research-related training

# 3. It's Up to Us

Every day provides a  
new opportunity for us  
to empower people and  
improve quality of life.

**Let's seize it.**





# Its Up To Us

Ethics, Incentives and the Public Value of Science

Arthur Lupia, University of Michigan

Vice President of Research & Innovation