



# The problem is usability -- not findability

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# Findability is not the most important problem

- Everyone “finds” through Google and similar services
- But that doesn’t make the scientific literature equally usable to all
- Not everyone can establish the trustworthiness and authority of information resources
- Not everyone can distill or synthesize the knowledge one is seeking into a usable form



Microscope, Optical elements by Claude-Siméon Passemant, ca. 1750

# Academic and professional researchers have numerous advantages

- They are the intended audience of scientific publications
- They have knowledge of the field and of key research institutions and authors
- They have knowledge of which publishers and journals are more trustworthy, selective, high quality
- They have expertise in critically reading the literature in their fields
- They have access to general search and discovery tools such as citation indices (Web of Science, Scopus, etc)
- They know to use specialized search and discovery tools such as Medline, Embase, and DistillerSR.

# Academic & professional researchers are not intended beneficiaries of public access

- Nelson Memo: the intended beneficiary is “the American public” and the goal is to “allow all Americans to benefit from the returns on our research and development investments without delay”
- The American public is typically not the intended audience of scientific papers and publications
- Instead, the American public seeks access to scientific literature for other purposes
- One common use case particularly with respect to biomedical literature is as, or to advocate for, a patient trying to learn about a medical condition.

# A personal example

- Loved one facing a complex medical decision
- Searched the literature for information on their condition
- Found dozens of scholarly articles suggesting a bevy of different (contradictory) recommendations
- The article they liked best was a report of half a dozen cases from a hospital in western China -- anecdotally interesting but of little systematic value
- Upshots:
  - Great benefit from discovery and access even under embargo
  - Great confusion from a lack of scientific/medical literacy

# The American public needs usability

- Many of the most important use cases are not for raw access to the scientific literature
- At a minimum, this literature needs annotations indicating trust and authority for general public use cases
- More ambitiously, we need public access to high-quality regularly updated synthesis and distillation for the use of patients, their loved ones, and advocates
- For other topics with popular interest, from climate change to infectious diseases, there is vast misinformation and popular distrust in science. New approaches are needed to scientific communication.



Thank you

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