Should the academic community found an international quality certification organization to take scientific publishing away from the commercial publishers ?

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Writing is an enemy of science

Plato, *Phaedrus* 275a-b: Il mito di Teuth

For this invention will produce forgetfulness in the minds of those who learn to use it, because they will not practice their memory. Their trust in writing, produced by alien signs (*allotrioi typoi*) which are no part of themselves, will discourage the use of their own memory within them. You have invented an elixir (*pharmakon*) not of memory, but of reminding; and you offer your pupils the appearance (*doxa*) of wisdom, not true wisdom, for they will read many things without instruction and will therefore seem to know many things, when they are for the most part ignorant and hard to get along with (*syneinai*), since they are not wise, but only appear wise (*doxosophoi*).

Printing is an enemy of science

Lutero, Warning to the Printers (1545)

...others are instantly reprinting (our translation) and are thus depriving us of our work and expenses to their profit, which is a downright public robbery and will surely be punished by God / and which is unworthy of any honest Christian. It is not for my own sake, though, that I am concerned since it was freely that I received and freely that I gave it, and I ask for nothing in return: Christ my Lord has repaid me for it many hundred thousand times over. But this I must lament about avarice, that these greedy and rapacious reprinters are handling our work carelessly. For, seeking only their own profit, they don't care much about the accuracy of what they are reprinting, and it has often happened to me when reading their reprinted text that I found it so full of errors that in many places I couldn't recognize my own work and had to correct it from scratch.

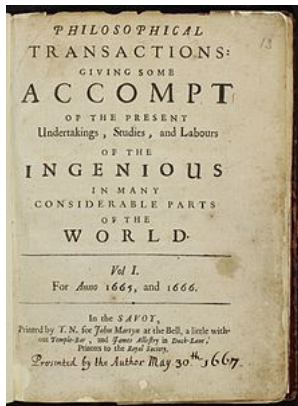How to put under control media becoming more powerful than our message?

- ▶ Plato: writing and the danger of *doxosophia* ("knowing that" without "knowing why")
- ▶ Luther: printing and the danger of usurpation (printed books emancipated from their authors because of "creative" unauthorized reprints)

Plato: people count more than papers

Slow science: in a manuscript culture, documents cannot survive and last without people copying, reading, studying and commenting them.

▶ freedom of texts

▶ promotion of knowledge communities (Academy)

Phil. Trans.: a "social registry of scientific innovation"

Open peer review:

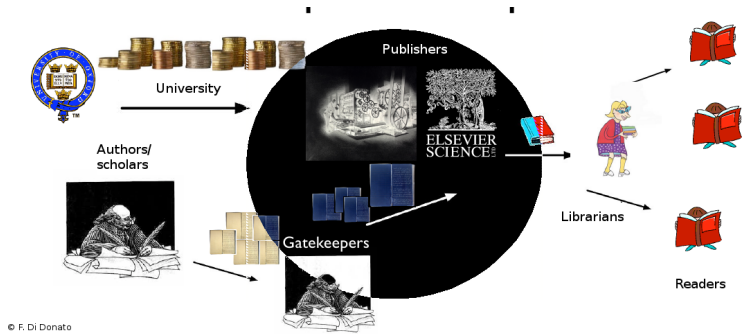▶ presentation
▶ perusal
▶ (registration)
▶ publication

[Johns, 2009, 61]

A more formal solution, but still built on people

Science as a process, rather than as a product [Johns, 2009, 69]

"The point of the Royal Society's reading regime was never to *eliminate* disputes like those through which Newton prospered. On the contrary, it was meant to generate them. **The intent was to produce fertile engagements between people** who thought differently and who might otherwise have had no common ground on which to meet. The Society's civility served first to bring this about, and then to limit and manage the resulting disagreements."

Publications (and later citations) as proxies for scientific value
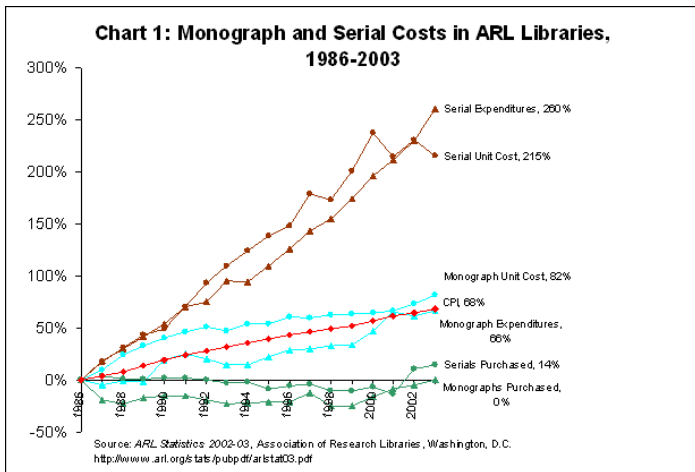

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Irresistible proxies

Can a container actually determine the quality of its content?

"A scientific work is a contribution generally published in a
"well-respected"/scholarly journal, i.e. a peer reviewed scientific journal"

Serials crisis

Chart 1: Monograph and Serial Costs in ARL Libraries, 1986-2003

If science is countable, it can be industrialized and monetized as well

▶ Bibliometric scores are calculated from closed and proprietary databases (Clarivate Analytics, Scopus)

▶ Universities and research institutions using bibliometric for assessment purposes cannot avoid to purchase them and to subscribe to the journals indexed by them,

▶ Publishers can raise their subscription prices *ad libitum*

A revolutionary proposal

- ▶ We do not need publishers any longer, to make our research public , because of the ICT revolution
- ▶ We need, however, people - scientists - to select and to evaluate it
- ▶ Instead of giving away a lot of money to publishers, let's found a scholarly organization to do it!

Between a rock and a hard place?

- ▶ How to avoid replacing an oligopoly with an oligarchy?
- ▶ How to select the members of the certification organizations?
- ▶ How to avoid the conformism due to centralization?

Some possible models:

- Athens: splitting power by selecting the certifiers by drawing lots and assigning them short mandates
- DOAJ: formal publicity and transparency check made by volunteers, mostly librarians
- ArXiv: horizontal endorsement system
- Credit rating agencies: not just one, but many competing authorities

Welcome (back) to the post-normal science world!

> *Vīta brevis,*
>
> *ars longa,*
>
> *occāsiō praeceps,*
>
> *experīmentum perīculōsum,*
>
> *iūdicium difficile*

"Facts uncertain, values in dispute, stakes high and decisions urgent"
Is it just politics?

James Hamblin (2020)

You're Likely to Get the Coronavirus
https://www.theatlantic.com/health/archive/2020/02/covid-vaccine/607000/

Immanuel Kant (1784)

Beantwortung der Frage: Was ist Aufklärung?
https://btfp.sp.unipi.it/dida/kant_7/ar01s04.xhtml

Lucio Russo (2008)

La cultura componibile

Stefano Bianco (2019)

Plan S e accesso aperto: fra principi, mercato e processi valutativi della ricerca
https://doi.org/10.15161/oar.it/23459

Alex Csiszar (2016)

Peer review: troubled from the start
http://www.nature.com/news/peer-review-troubled-from-the-start-1.19763

Richard Feynman (1966)

What Is Science?
http://www.fotuva.org/feynman/what_is_science.html

Jerome Ravetz (1971-1996)

Scientific Knowledge and Its Social Problems
https://tinyurl.com/yd9r4gsx

Adrian Johns (2009)

Piracy
http://kelty.org/or/papers/bookreviews/Kelty-JohnsReview.pdf

Wilhelm von Humboldt (1809)

Über die innere und äussere Organisation der höheren wissenschastlichen Anstalten in Berlin
https://edoc.hu%2Dberlin.de/handle/18452/5305

Silvio O. Funtowicz, Jerome R. Ravetz (2020)

Science for the Post-Normal Age
https://commonplace.knowledgefutures.org/pub/6qqfgms5/release/1

Roberto Caso, Maria Chiara Pievatolo (2017)

Valutazione di stato e libertà della ricerca: una riflessione filosofico-giuridica
https://btfp.sp.unipi.it/it/2017/05/libric/

Maria Chiara Pievatolo (2018)

Agorà o museo? Una proposta di legge per l'accesso aperto
https://btfp.sp.unipi.it/it/2018/09/agora-o-museo-una-proposta-di-legge-per-laccesso-aperto/

Julia Belluz (2019)

Research fraud catalyzed the anti-vaccination movement. Let's not repeat history
https://www.vox.com/2018/2/27/17057990/andrew-wakefield-vaccines-autism-study