

# A Short History of Scientific Publishing

**Consortio Universitario de la Comunidad de Madrid**

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**(Southern Europe, Russia & Northern Africa)**

# Early Scientific Publishing

- Original reports of data/theory
- Assert priority
- Correspondence between scientists (dialogues, books/scrolls, letters)
  - Decimal system (China < 1000 BC)
  - Zero as a number (India < 450 BC)
- Emperor Qin's book burning 213 BC
- Hellenistic: Alexandria's "Legal Deposit Law" 200 BC
- The "accident" of Julius Caesar 48 BC
- (Maya science: Bishop Diego de Landa 1562)
- Europe: "Linking" between monasteries with donkey transport

## Scientific Publishing (Early Innovations and Financing)

- Paper making technology (China 105)
- Movable-type printing (China 1040)
- "Gutenberg" printing technology (Korea <1403)
- Silver & gold from America (1492-)
- The two first scientific journals (1665)
  - Philosophical Transactions (London)
  - Journal des Savants (Paris)

LE  
JOURNAL  
DES  
SCAVANS

Du Lundy V. Janvier M. DC. LXV.

Par le Sieur DE HEDOVILLE.



A PARIS,

Chez IBAN CVSSON, rue S. Jacques, à l'Image de S. Iean Baptiste.

M. DC. LXV.

AVEC PRIVILEGE DV ROY.

(1)

Numb. 1.

PHILOSOPHICAL  
TRANSACTIONS.

Munday, March 6. 1667.

The Contents.

*An Introduction to this Treat. An Account of the Improvement of Optick Glasses at Rome. Of the Observation made in England, of a Spot in one of the Belts of the Planet Jupiter. Of the motion of the late Comet predicted. The Heads of many New Observations and Experiments, in order to an Experimental History of Cold; together with some Thermometrical Discourses and Experiments. A Relation of a very odd Mousstrous Calf. Of a peculiar Lead-Ore in Germany, very useful for Essays. Of an Hungarian Bolus, of the same effect with the Bolus Armenus. Of the New American Whale-fishing about the Bermudas. A Narrative concerning the success of the Pendulum-watches at Sea for the Longitudes; and the Grant of a Patent thereupon. A Catalogue of the Philosophical Books published by Monsieur de Fermat, Counsellour at Tholouse, lately dead.*

The Introduction.

**W**HEREAS there is nothing more necessary for promoting the improvement of Philosophical Matters, than the communicating to such, as apply their Studies and Endeavours that way, such things as are discovered or put in practise by others; it is therefore thought fit to employ the *Press*, as the most proper way to gratifie those, whose engagement in such Studies, and delight in the advancement of Learning and profitable Discoveries, doth entitle them to the knowledge of what this Kingdom, or other parts of the World, do, from time to time, afford, as well

A

of

PHILOSOPHICAL  
TRANSACTIONS:  
GIVING SOME  
ACCOMPT  
OF THE PRESENT  
Undertakings, Studies, and Labours  
OF THE  
INGENIOUS  
IN MANY  
CONSIDERABLE PARTS  
OF THE  
WORLD.

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*Vol I.*

For *Anno* 1665, and 1666.

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In the SAVOY,  
Printed by T. N. for John Martyn at the Bell, a little with-  
out Temple-Bar, and James Allestry in Duck-Lane,  
Printers to the Royal Society.

*Presented by the Author May. 30<sup>th</sup> 1667.*

## Scientific Journals (Modern Era)

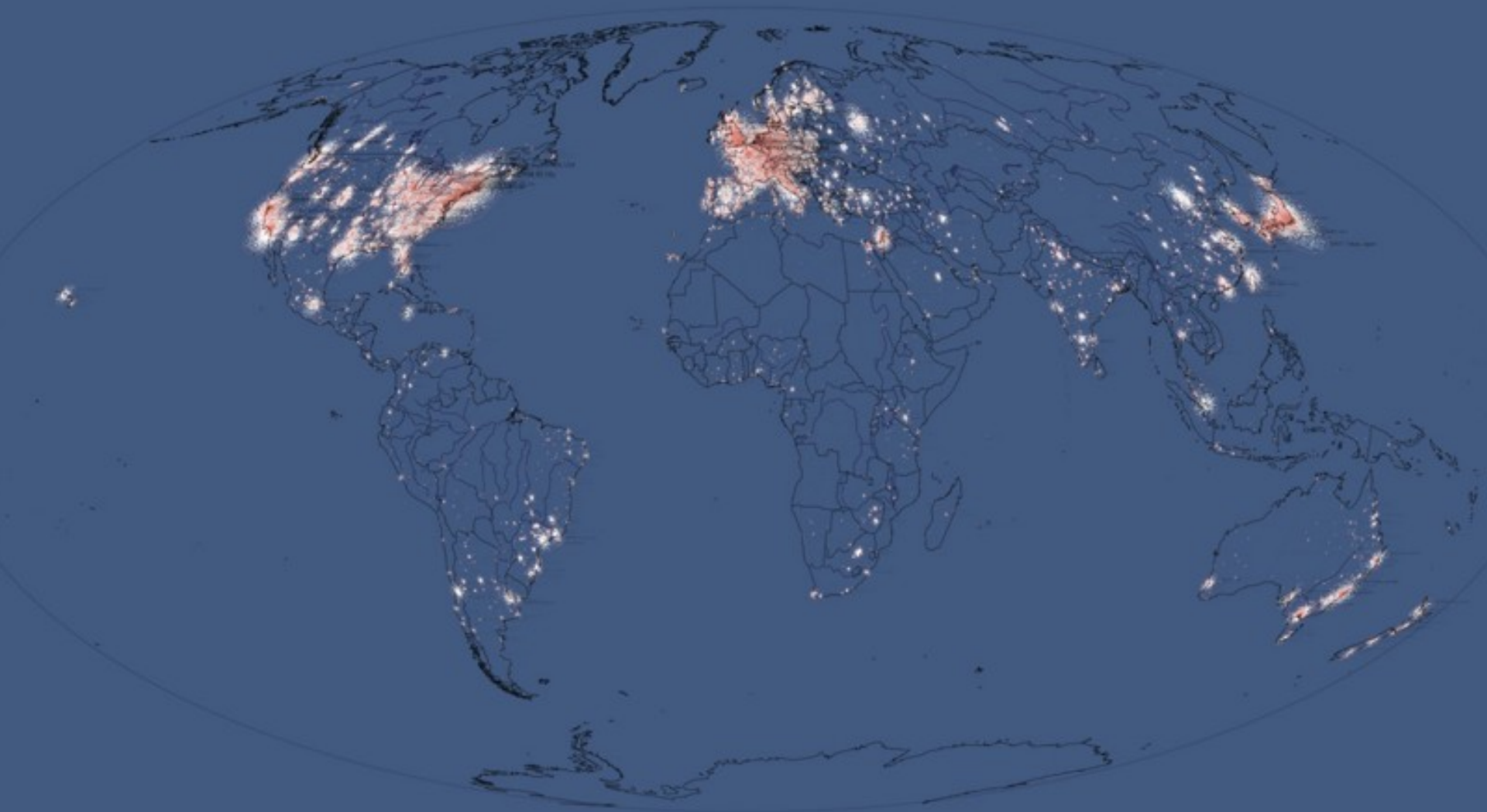
- Acceleration around 1760
- Since then: doubling every 15-20 years
- (Springer 1842. Politics, agriculture, mathematics)
- 1880: articles often 200-300 pages
- 1920: research split up in many short articles
- Now over 120.000 journals/report series
- Approx 19.000 peer reviewed
- 1.2M peer reviewed articles/year, by 2000 publishers, read by 12M scientists
- 1969 – Internet (Cerf et al)
- Enquire Within Upon Everything (1856)
- ENQUIRE-WITHIN on Norsk Data Sintran III (1980)
- First proposal by Tim Berners-Lee (1989)

## Going from paper to online (continued)

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- Robert Cailliau/TBL names WWW (1990)
- First Browser – NeXT (1990)
- Line mode browser released on IBM VM/CMS (1990)
- SLAC server (1991)
- (1991 – arXiv at LANL)
- 26 servers world-wide (1992)
- Mosaic for X (1993)
- First Swedish web server (May 1993)
- First Swedish library web server (November 1993)
- Over 200 servers world-wide (1993)
- (SpringerLINK 1997)

# GEOGRAPHIC MAP: WHERE SCIENCE GETS DONE





## Journal publishing is changing

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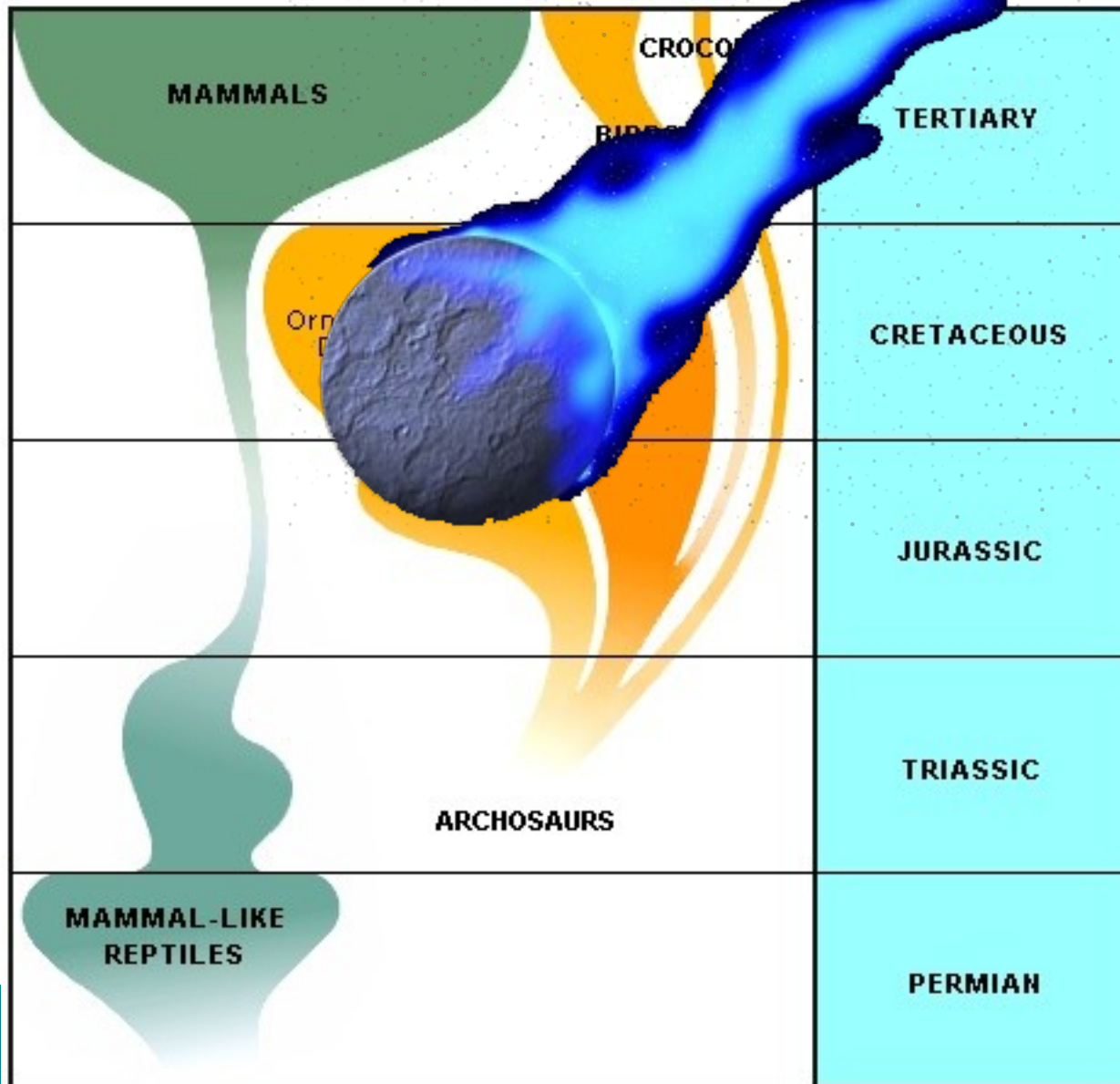
- from print on paper to print on line
- from individual libraries to consortia
- from subscriptions to licences
- from individual titles to collections
- from journals to articles

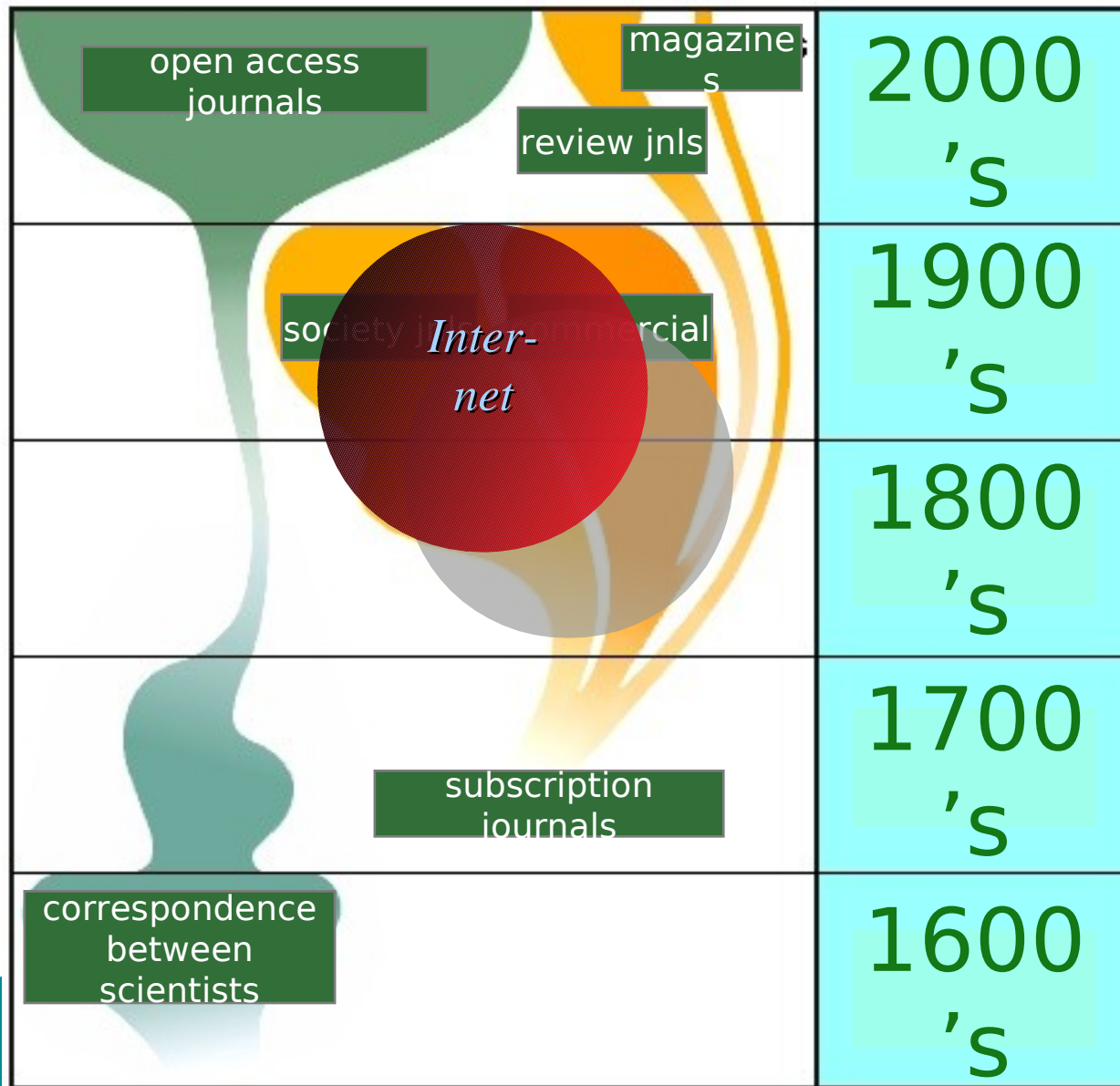
## Expectations are also changing

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- from selection to comprehensiveness
- from print to electronic
- from textual to multi-media
- from fast to immediate
- from browsing to searching
- from dissemination to formalization
- from reading to mining

Changes in expectations from users mean changes of the *environment* in which we can survive and thrive.





Darwin:

Not the strongest survive;  
not the most intelligent;  
not even only the most adapted  
but all those *not misadapted*



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# Gracias!