



INTERNATIONAL ASSOCIATION OF SCIENTIFIC, TECHNICAL & MEDICAL PUBLISHERS

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# Open Access and Publishers

**Michael A Mabe**

*Chief Executive Officer, STM*

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*Visiting Professor in Information Science at the University of  
Tennessee (Knoxville) and City University (London)*

[mabe@stm-assoc.org](mailto:mabe@stm-assoc.org)

# What is “stm”?

- International, not-for-profit trade association for
  - STM (scientific, technical, medical) publishers of research journals, monographs and reference works
  - scholarly research publishers generally
- Members are
  - Not-for-profit learned societies and university presses and commercial publishers
  - Some US-based members include
    - AAAS, ACM, AIP, ACS, AMA, APA, APS, ASCE, ASCO, CUP, Highwire, IEEE, New England Journal of Medicine, OUP, University of Chicago Press, Nature Publishing Group, Wiley-Blackwell, Elsevier, Springer, Taylor & Francis, Thomson Science (ISI)
  - Responsible for
    - nearly **two-thirds** of annual journal articles output and over **half** of all peer-reviewed, active journal titles
    - tens of thousands of monographs, reference works and abstracting services

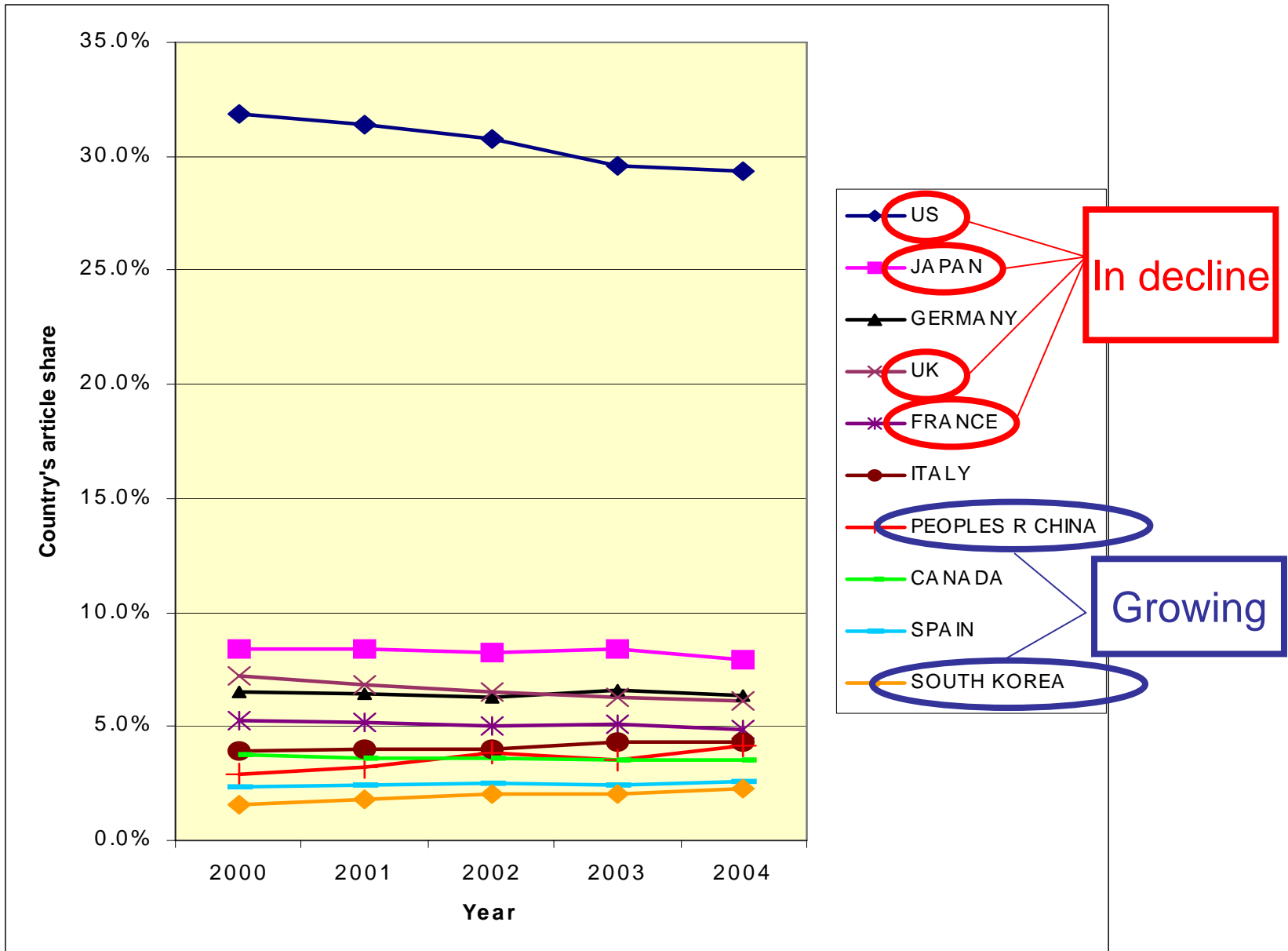
*stm*

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# STM Journals are

- Global in scope and use
  - International in authorship and international in readership

# Global Trends in Research

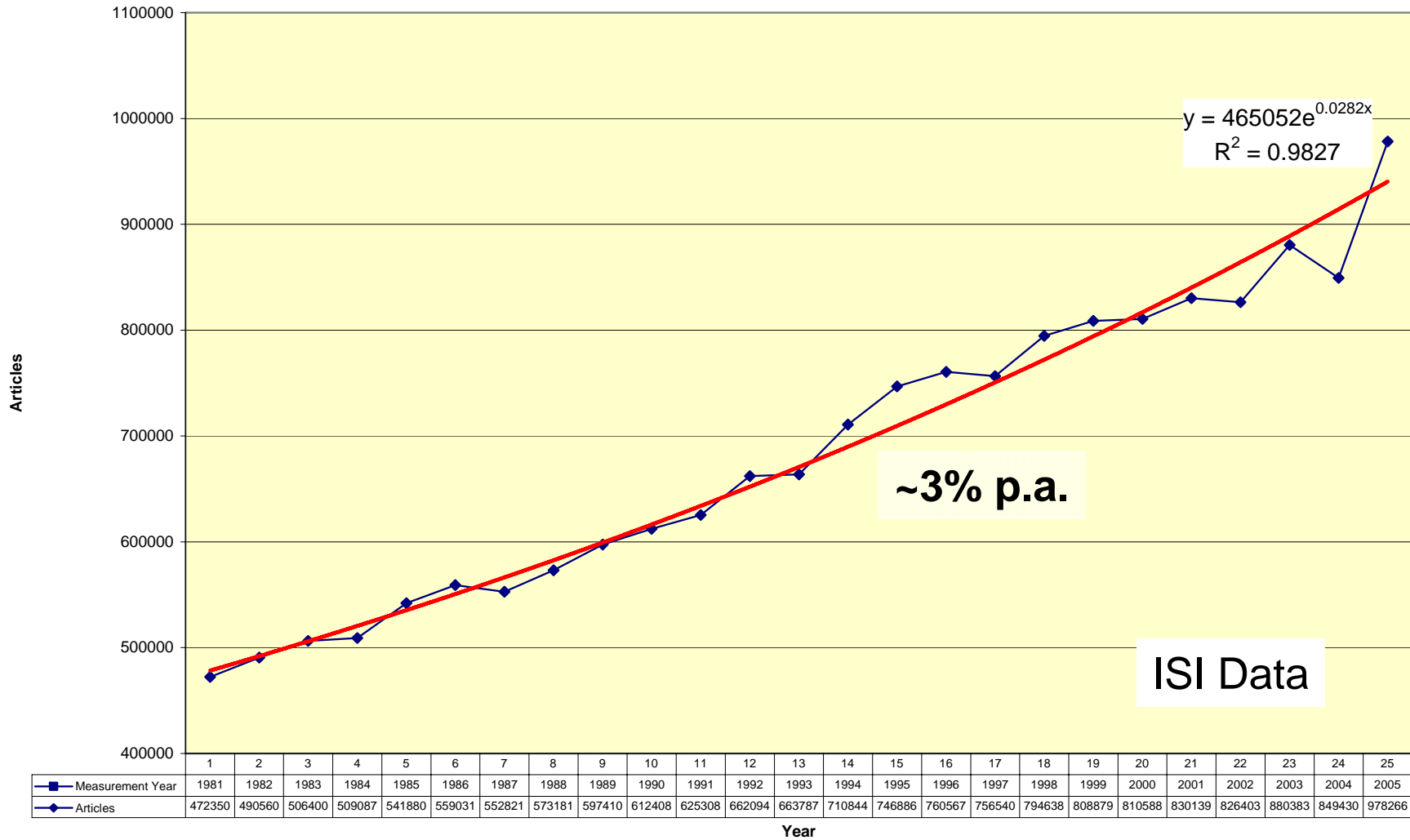


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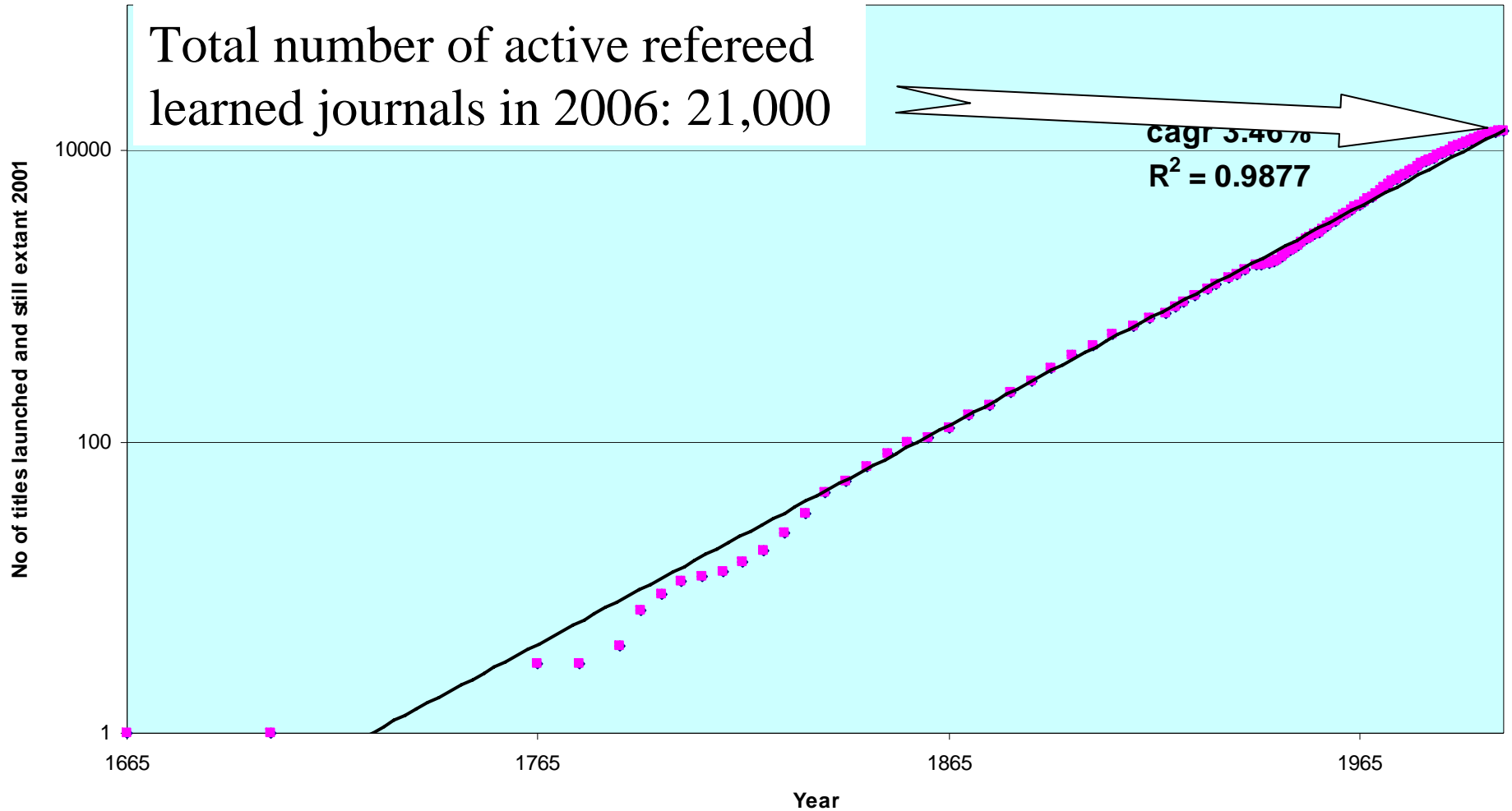
- Global in scope and use
  - International in authorship and international in readership
- Growing in size and number
  - Annual article growth ~3%
  - Annual increase in active peer reviewed journal titles ~3.5%
    - Both driven by worldwide increase in number of researchers more than any other factor

# Article Growth 1981-2005

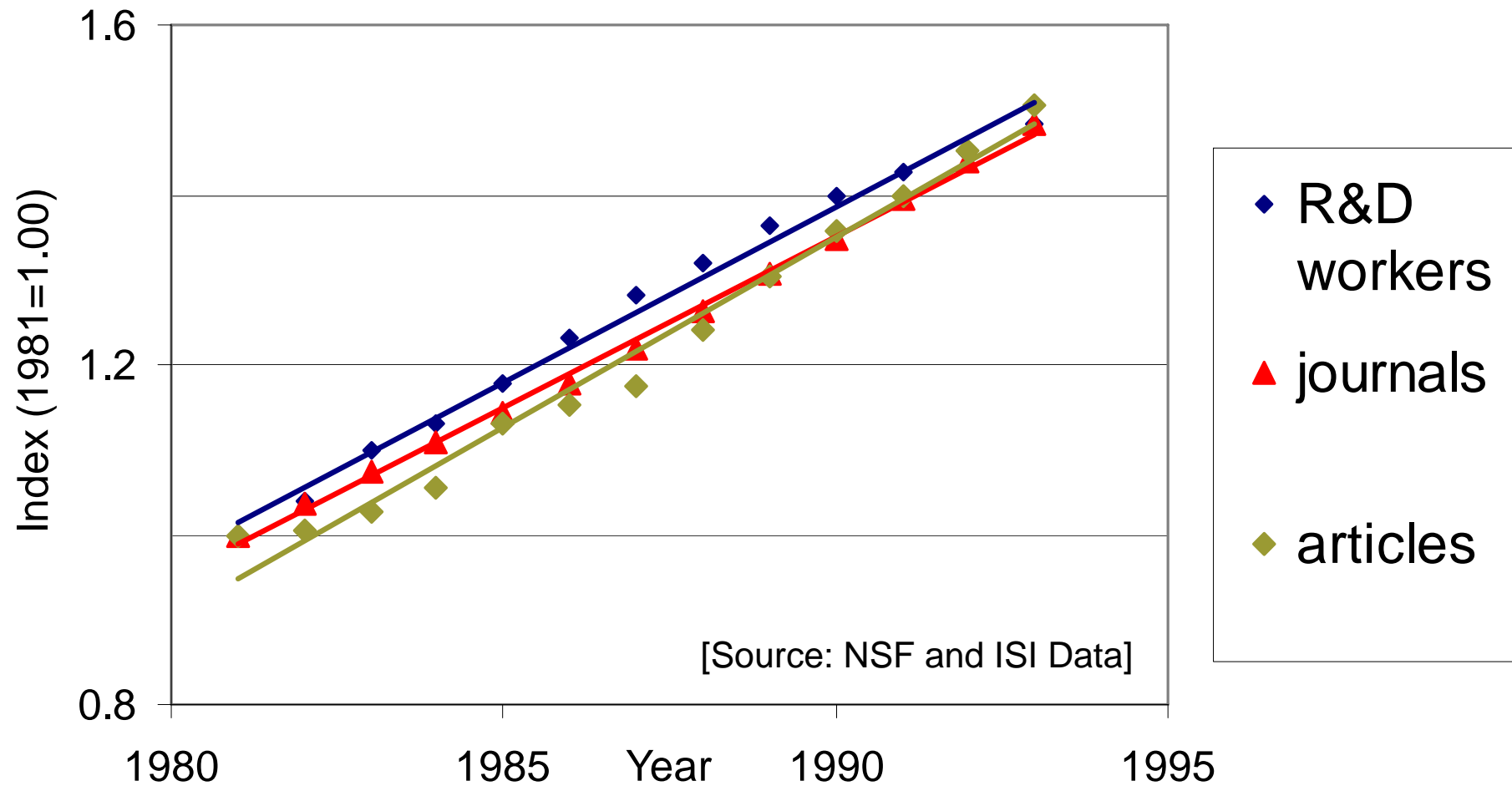


# Journal Growth 1665-2006

[Source: M A Mabe The number and growth of journals *Serials* 16(2).191-7, 2003]



# Journals Track Number of Researchers





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- Growing in size and number
  - Annual article growth ~3%
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    - Both driven by worldwide increase in number of researchers more than any other factor
- Greatly valued by researchers
  - Tenopir and King
- Intensively used through electronic efficiencies
  - Estimated 1.5 billion fta's downloaded globally
    - Declining average cost per article downloaded
      - Estimated at less than \$4 and falling
  - Via national licensing, e licensing and big deals
    - Reductions in average journal prices *paid*
    - Reductions in expenditure on ILL and separates
    - Full public access as well where national licences agreed

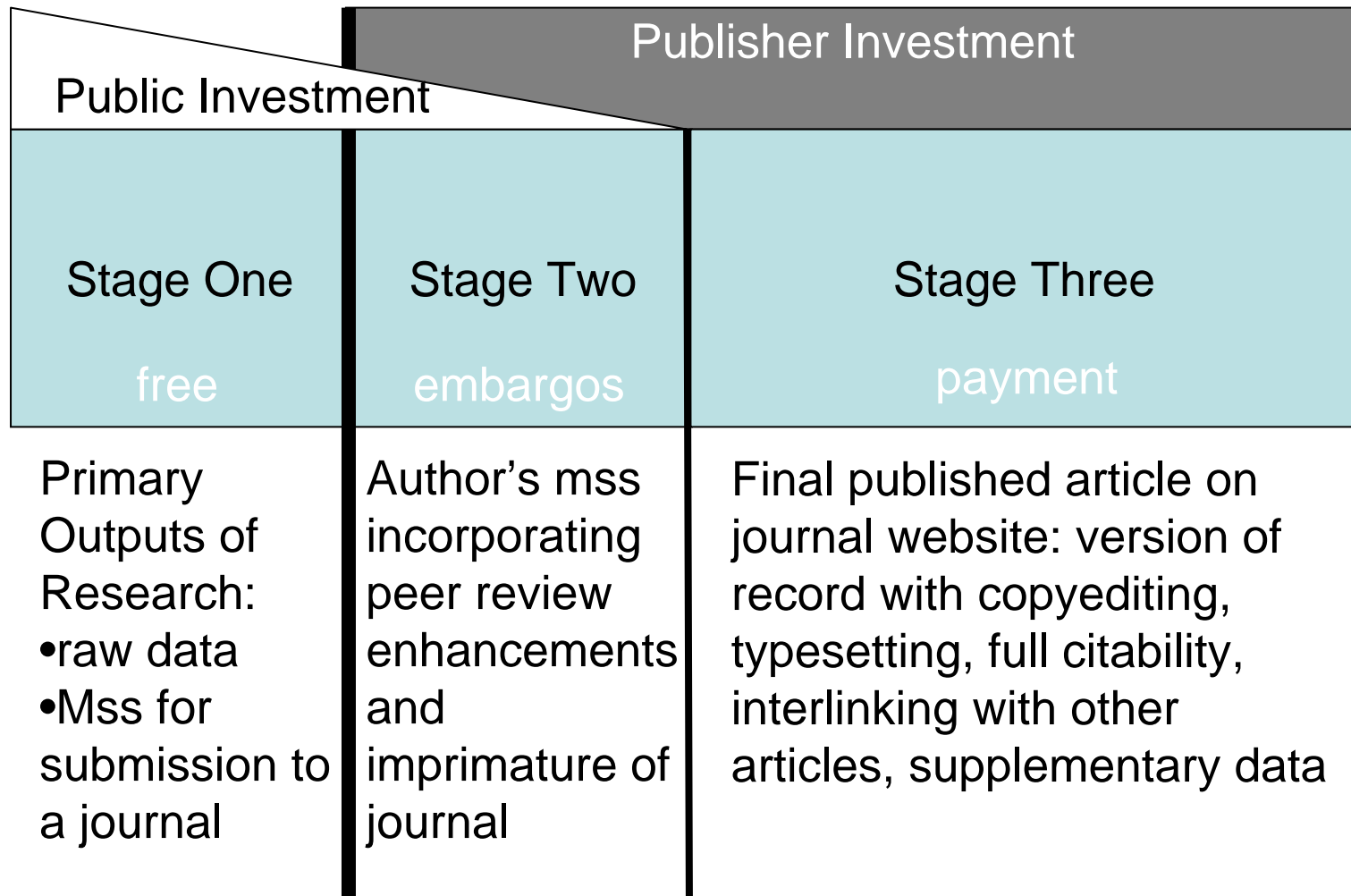
# Current Access Levels

- Excellent to good access to about 80% of journal materials for developed world
  - (Wellcome Trust presentation at European Commission meeting February 2007)
- Excellent free access to biomedical, agricultural and environmental literature for 114 developing nations
  - 3600 biomedical, 900 agrosience, 1800 earth and environment journals
  - Via **HINARI**, **AGORA**, **OARE** (stm funded initiatives with WHO, FAO, Yale University Library)
- US Public access to crucial healthcare articles
  - Via **PatientINFORM** (stm and PSP-AAP funded initiative)

# Open Access

- Publishers support the goal of the greatest possible access
  - Publishers' mission to maximise dissemination of knowledge in an economically sustainable way
- Neutral about business models
  - What works, works
  - Models must support and maintain academic freedom
  - Almost all STM members have some form of OA
- Primary research outputs, where publicly funded, should be freely available to all
  - Raw data arising from research and manuscripts for submission to journals describing that research

# Stages of Publication



# Open Access & STM Members

- Primary outputs of research (stage 1)
  - Raw data and draft mss
    - immediate and free
- Peer reviewed author's mss (stage 2)
  - Immediately through
    - Unsystematic author self-archiving on IRs
      - Romeo “Green”, most STM members
  - After an embargo period
    - Systematic deposit on subject repositories
      - Agreements with NIH, eg Elsevier etc

# Open Access & STM Members

- Final published articles (stage 3)
  - Immediately through
    - Full pay to publish
      - Eg Hindawi
    - Hybrid pay to publish
      - Eg Springer, Elsevier, Wiley-Blackwell, ACS etc
  - After a period of some months (6, 12 or more)
    - By journal model (specific titles)
      - Eg ASCO, IEEE, NEJM etc

# Some Issues To Be Resolved

- Full OA through pay-to-publish
  - Unclear if economically self-sustaining for full journal system in the long run
    - Works for Cairo-based Hindawi
    - BioMed Central still not breaking even after 7 years
    - PLoS initial grants used up, 66% increase to \$2500/paper still doesn't cover costs
  - Unintended consequences need careful management
    - Large research universities bear most of costs
    - Only 60% of authors research grant supported
    - 25% of authors from developed world
    - Corporate “free riders”
- Full OA through government subsidy
  - OK until support removed
  - Government control over who/what gets published?

# Some Issues To Be Resolved

- Voluntary deposit of peer reviewed author manuscripts (stage 2)
  - Low proportion of authors do it spontaneously (5%)
  - Some publishers have offered to do assisted deposit
- Mandated deposit of peer reviewed author manuscripts (stage 2) after embargo
  - Compulsion
  - One size fits all
  - Embargo periods too short
    - Parasitism



# Some Issues To Be Resolved

- Subject areas differ
  - Time for 50% and 75% of lifetime downloads:

• Life science	5 months	30 months
• Health	13 months	48 months
• Physics	14 months	54 months
• Chemistry	18 months	60 months
• Mathematics	26 months	78 months
• Social Science	29 months	72 months
  - Embargo at 6, 12, or 18 months may affect viability
- The “unfunded mandate” is opposed by all STM publishers
  - Compulsion to deposit at very short embargo without any compensating payment

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## Evidence

- Some physics journals already showing steep declines in downloads due to article availability on ArXiv
- Recent ALPSP study suggests cancellations if stage 2 copies available too soon after publication
- Recent Beckett & Inger study shows potential for rapid cancellation if 12 month embargos established as norm

# Conclusions

- Publishers' mission and OA goals are closely aligned
- Digital revolution has hugely expanded access within traditional models
  - Highest access to greatest extent of literature in history
  - Access for poorer nations and general public
- Almost all STM publishers have adopted open access in one form or another
- Need continued experience with OA models to understand the unintended consequence and sustainability issues
  - Continuing innovation
  - Forthcoming EC pilot
- Forcing too early public deposit of stage 2 peer reviewed articles, without any payment models, will endanger the journals and the peer review systems so necessary to give those articles scholarly authority
  - STM publishers oppose “unfunded mandates”

# References

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