

science+business media

Publishing Scientific Research

Jacco Flipsen, PhD MBA – Editorial Director Life Sciences @ Springer



Philosophical Transactions - the world's first science journal

- In 1662, the 'Royal Society of London for Improving Natural Knowledge' was granted a charter to publish by King Charles II.
- On 6 March 1665, the first issue of *Philosophical Transactions* was published under the visionary editorship of Henry Oldenburg, Secretary of the Society.
- The first volumes of what was the world's first scientific journal were very different from today's journal, but in essence it served the same function; namely to inform the Fellows of the Society and other interested readers of the latest scientific discoveries.
- As such, Philosophical Transactions established the important principles of scientific priority and peer review, which have become the central foundations of scientific journals ever since.

THILOSO THICAL TRANSACTIONS: GIVING SOME THE PRESENT Undertakings, Studies, and Labours OF THE IN MANY CONSIDERABLE PARTS OFTHE R L D. Vol I. For Anno 1665, and 1666. In the SAVOY, Printed by T. N. for John Martyn at the Bell, a little with out Temple-Bar , and Fames Allestry in Duck-Eane, Printers to the Royal Society. FIGURE 2: Title-page of Philosophical transactions of the Royal

[Society, vol one.



Agenda

- Why should you publish?
- Trends in STM Publishing: publication rates
- What is the status of scholarly publications in Southern Africa?
- What has the University of South Africa published on SpringerLink to date?
- All about Journals
- All about Books
- All about Open Access
- All about Springer



Why should you publish?

- Present new and original results or methods, exchange ideas, communicate with peers.
- Advance (not repeat) scientific knowledge, enhance scientific progress.
- Grant writing, research funding.
- Recognition and career advancement.
- Personal prestige, satisfaction and enjoyment.
- Credibility of results.

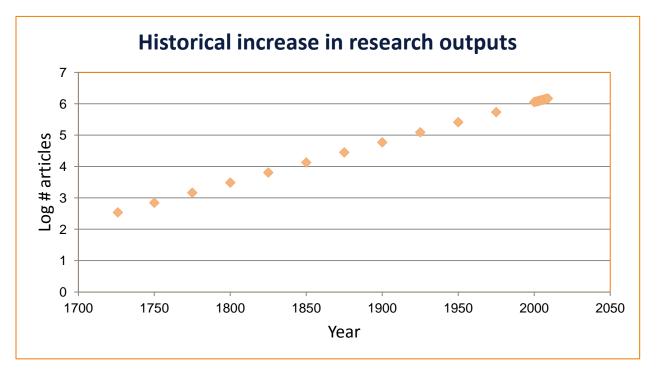
Why not just blog about it?

- Scientific publishing = driving progress.
 - Quality control
 - Professional publishing services (Abstracting & Indexing for example)
 - State of the art technology
 - Global marketing, global visibility



Trends in STM* Publishing: publication rates

- The number of articles published since 1726 shows an exponential increase averaging at around a 3% increase per annum.
- Based on data published in Jinha, A. E. (2010). "Article 50 million: An estimate of the number of scholarly articles in existence". Learned Publishing 23 (3): 258–263.

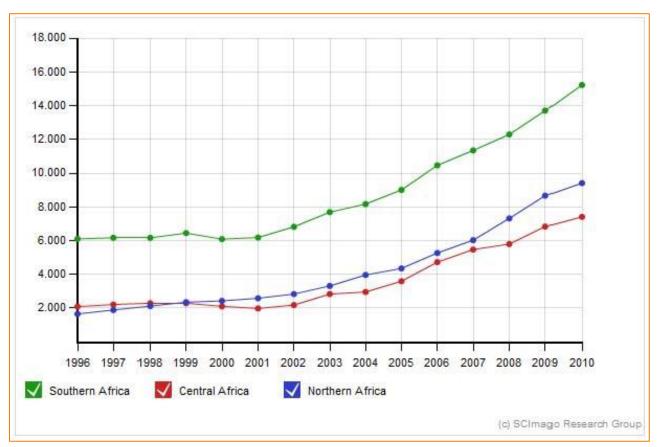


* STM = Science, Technology, Medicine



What is the status of scholarly publications in Southern Africa?

Research output (citable documents) is growing in Africa, mostly in Southern Africa.

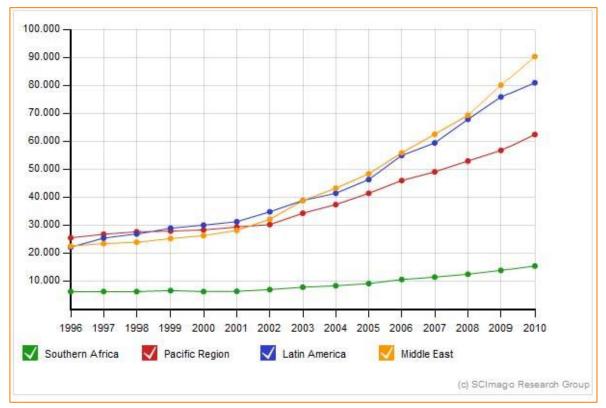


Source: http://www.scimagojr.com



What is the status of scholarly publications in Southern Africa? (cont.)

The growth rate of the Southern African research output is falling behind the other regions,
 where a steeper growth curve can be seen, starting in 2002.

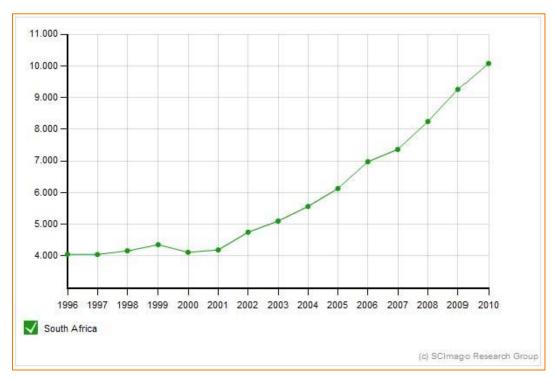


Source: http://www.scimagojr.com



What is the status of scholarly publications in Southern Africa? (cont.)

- In the Southern African region South Africa is by far the main producer of citable documents.
- Growth of the research output in South Africa took off in 2002 and has increased since with an average of 10% per year.



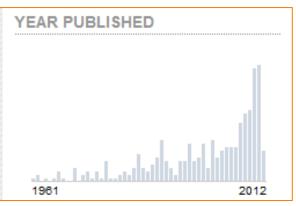
Source: http://www.scimagojr.com



What has UNISA published on SpringerLink to date?

- When we enter "University of South Africa" in AuthorMapper (<u>link</u>), we come to 337 documents on SpringerLink (publications with Springer and BioMed Central).
- 254 journal articles / 83 book chapters.
- Most articles from H. Fiedeldey (right).
- Main subjects Physics and Mathematics (below).
- Publications with Springer /BioMed Central have been growing steadily (below).





Fiedeldey, H. (22)

Sofianos, S. A. (16)

Dube, Themba (13)

Heidema, Johannes (11)

Romm, Norma (10)

Shapiro, Alexander (9)

Higgs, Philip (7)

Swanepoel, Konrad J. (7)

Bharuth-Ram, K. (6)

Britz, Katarina (6)

Lipperheide, R. (6)

Merwe, Jan H. (6)

Sherry, G. C. (6)

Biljon, Judy (5)

Browne, Michael W. (5)

Kotzé, Paula (5)

Nell, Victor (5)

Pretorius, Laurette (5)

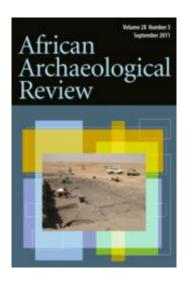
Renaud, Karen (5)

Sofianos, S.A. (5)

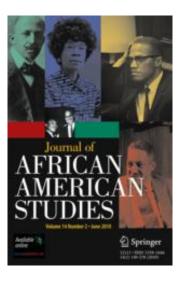
Sun, Yanxia (5)

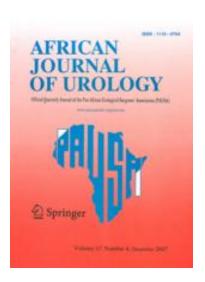


Selection of journals on SpringerLink







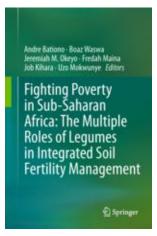


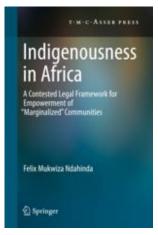
- African Archeological Review
- African Journal of Cancer/Journal Africain du Cancer
- Journal of African American Studies
- African Journal of Urology
- Journal Africain d'Hepato-Gasroenterologie
- Afrika Matematica



Selection of recent eBooks published on SpringerLink







Poul Rohleder Leslie Swartz Seth C. Kalichman

Leickness Chisamu Simbayi

HIV/AIDS

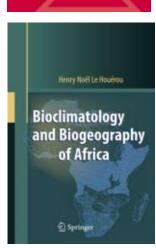
in South Africa

Springer

25 Years On





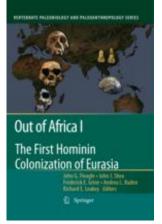


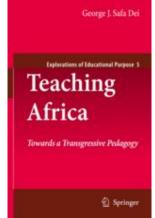
Language Policy

in Post-Apartheid

South Africa

and Nation-Building







Topics: All about Journals

- Before you start
- Types of journals
- How to structure your article
- How to choose the right journal
- When you submit
- Submission considerations ethics
- How to improve your chances of getting accepted
- Language editing with Edanz
- Impact Factor
- What is peer-review, why is it important and how to deal with the feedback
- Your article is published when it appears 'Online First'
- Some good advice



Before you start

- Define your research questions / hypothesis.
- "The origin of a research investigation is typically a moment of insight" (Justin Zobel) Trust your instincts and if you think a topic deserves attention then take it forward.
- **To write = to read**. Research the topic, check out what is currently being published. What are the 'hot' topics, the emerging areas, the key themes, the relevant conferences and so on.
- Make the decision about where to submit your paper before you complete your paper. That way
 you can ensure that the content and style follow the Aims & Scope of the journal.



Types of journals

- Traditional academic research journal Main venue for primary research, rigorously peerreviewed.
- **Letters journal** Rapid communication of interim work, peer-reviewed, a good way to get very new and ongoing research initially published.
- Review journal Covers current trends, usually peer-reviewed, contains some commissioned material.
- Professional journal / magazine Mainly review and how-to articles, lots of commissioned material, heavily edited but not necessarily peer-reviewed.



How to structure your article

- **Title** This will be read first and most. Does the title reflect the content of the paper? Keep the title short and to the point.
- Authors correct spelling / consistency in affiliation
- **Abstract** Summarize the objective and the results of your research in 75 to 200 words. Whoever reads your paper should be able to tell at a glance what the article is about and what the outcome is. What are the key take-aways for your paper. Do not include anything that is NOT in your paper.
- **Keywords** The synonyms relevant as search terms in e.g. Google. Ideally they are not words from the title because the words in the title are automatically used as keywords already.
- Introduction Explain (1) why the research was conducted, (2) what methodology was employed,
 (3) why you chose your particular methodology, and (4) how the methodology accomplished the hypothesis set out in your abstract.
- Methodology This should be written clearly and concisely so that someone who wanted to conduct similar research would know exactly what it was that you did.



How to structure your article (cont.)

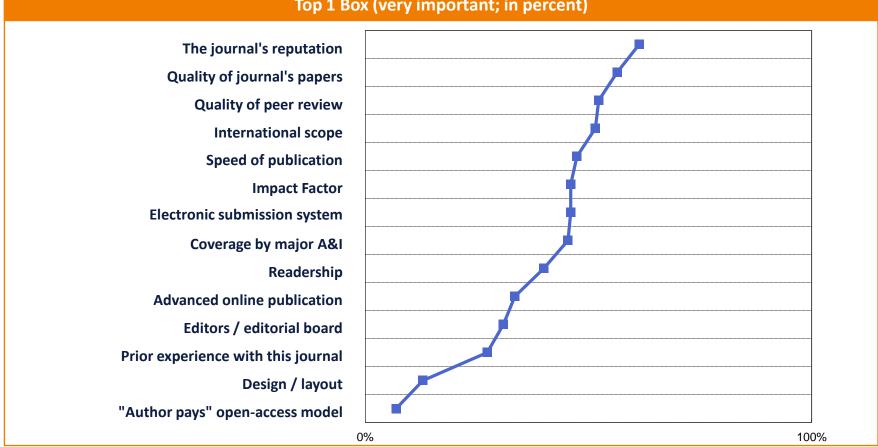
- Analysis / results Present the results clearly and carefully.
- Discussion Discuss the project results here. If the results were not what you were expecting,
 this is where you can provide insights or speculations as to what happened and/or what you could
 have done differently.
- Conclusions Write down your conclusions.
- Acknowledgements Acknowledge the people and institutions that have made your research possible (grants, etc).
- References Properly cite your referenced material; use the style of the journal.
- Supplementary materials List any supplementary materials, appendices.



How to choose the right journal?

How important are the following factors for you when deciding to submit a manuscript to a particular journal?

Top 1 Box (very important; in percent)



(N = 19,220 respondents, 5-point rating: 1=very important to 5=not important at all) Results 2009



How to choose the right journal (cont.)

- Read the journal product page and READ THE JOURNAL.
- Talk to your colleagues /peers about their experiences with journals you are considering.
- Make use of the expertise of your Library staff.
- Check out the websites of research groups and researchers (collaborating / competing) working in your research area, and see where they have been publishing their research.
- Is an Impact Factor Important to you? Or are you more concerned about usage/visibility?
- Follow the references in your own paper. Where were the original papers published and read? Check publisher sites, you can often find useful information in the 'for authors' section.
- Avoid journals with no clear submission and reviewing process.

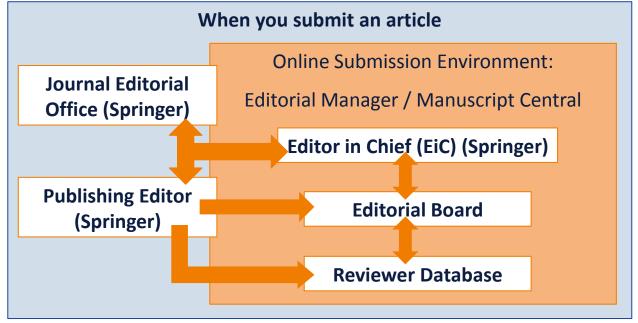


When you submit

- Prepare a cover letter which explains why you think your paper falls within the scope of the
 journal and which outlines the paper's originality end/or significance: Unique Selling Points (USP).
- Read the guidelines for the journal very carefully and make sure that you conform to these.
- Decide what model you want for disseminating your paper: Traditional / Open Access.

NEVER submit your paper to more than one journal at the same time, that would be violating

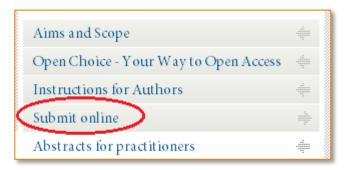
Publishing Integrity.



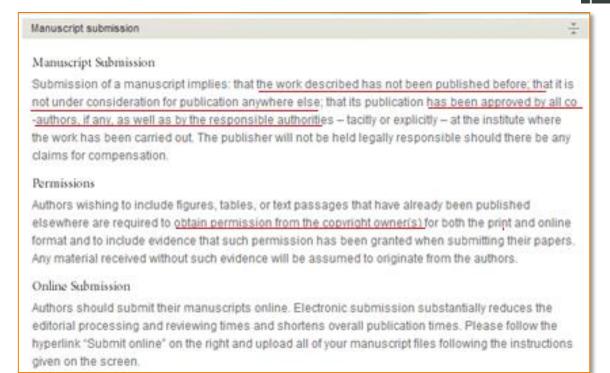


Submission considerations - ethics

- The work described has not been published before.
- It is not under consideration anywhere else.
- Publication has been approved by co-authors and responsible authorities.
- Permissions obtained from copyright owners.









How to improve your chances of getting accepted

- Make sure that the message of your paper is very clear, and that it is very clear in the abstract.
- Is the content important and is it offering something new?
- Is your paper really relevant to the scope of the journal to which you are submitting?
- Check the publication times of the journal you are considering. Does it have a huge backlog of papers? If so, why? (Poor or high rejection rate? Bad management? Issues with the reviewers?)
- Plan your research and writing to meet the quality assurance criteria that the editors and the reviewers of the journal have requested.
- Make sure that the science that supports your research is valid and supports your conclusions.
- Work on your writing style. Clear and concise is good. If English is not your native language, ask a
 native English speaking colleague to proofread your paper.
- Hone your skills by reviewing papers of colleagues. This will help you form a strong framework for your own research writing.



Language editing with Edanz

- Edanz is an external company, independent of Springer. Using an editing service is neither a requirement nor a guarantee of acceptance for publication. Edanz will charge authors directly for these language polishing services, please visit their website for more information (<u>link</u>).
- Edanz works with expert scientific editors; English editing for scientists, by scientists.
- Edanz aims to provide services to raise your chances of acceptance and to ensure clear communication of your research.
- Edanz can help you with:
 - language editing, development of your abstract and with writing an effective cover letter
 - advise on your journal selection
 - an expert scientific review of your manuscript (similar to a peer review) before you submit to your target journal



Impact Factor

• There is much debate over Impact Factors in the scientific community, particularly with regard to the fairness of the system. However, there is no doubt that an Impact Factor is seen as a benchmark of quality of the journal in many academic communities.

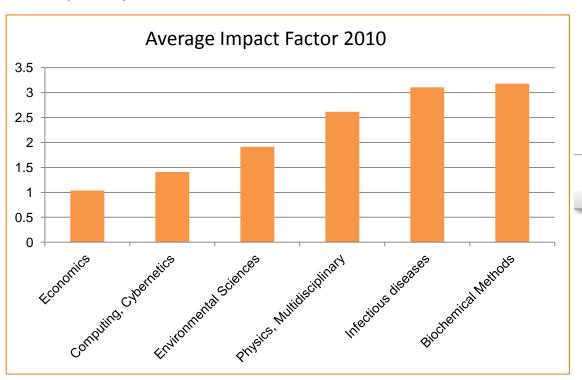
Formula:

- ISI Impact Factors are calculated from monitoring about 8,000 journals.
- SCOPUS Impact Factors are calculated from monitoring about 16,000 journals.



Impact Factor (cont.)

- Invented by Eugene Garfield in 1960 (registered and patented).
- First Impact Factor launched in 1975.
- Discipline specific.





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Impact Factor (cont.)

- What is the amount of usage the journal gets? What is the visibility?
- Does the journal deal with a HOT topic? Is the research area fairly new?
- What is the relative amount of scientists that write (and cite) in the research area?
- Does the subject lend itself to citations? Sometime an Impact Factor can simply be inappropriate.
- Do other factors influence the formula? Impact Factors can go up and down because the number of issues published in one year changes.



What is peer review, why is it important and how to deal with the feedback

- Peer review is a process of self-regulation. When you submit an article, other experts in the field evaluate your article, your research and methodology, to determine if your paper is suitable for publication.
- Peer review is employed to maintain a high quality standard of published papers and to provide credibility.
- Nearly every manuscript requires revisions, often two or three revisions.
- If you receive reviewer comments for re-submission, ACT on them.
- Consider peer review feedback as advice to help you improve your article. Do NOT take offense.
- Minor revision does not guarantee acceptance after revision. Address all comments carefully.
- Do not be disheartened if you receive a rejection. It may be that the journal you submitted to simply has a high rejection rate.





Your article is published when it appears 'Online First'

- Once the article has been accepted and is ready for publication, it will immediately be published online.
- This is called 'Online First'. The article has a DOI number (a Digital Object Identifier) and can now be read and cited. For example: **DOI:** 10.1007/s10681-012-0632-1
- What the article does not yet have are page numbers and an issue number. This will only be assigned once it is included in the next available or appropriate issue.
- Once the issue has been compiled it will be published in print.

Article workflow

Manuscript	Typesetting &	Proof to author	Proof	Published
accepted	Author Forms	(and editor)	correction	OnlineFirst

Issue workflow

Select available	Compile	Publish issue	Print and
OnlineFirst articles	issue	online	distribute issue



Some good advice

- Starting a paper three days before a deadline, while results are still being generated, in a NONstarter..
- Give yourself TIME to reflect, write, review and refine.
- Give others a chance to read / review your work and provide valuable feedback.
 - Get a reader's point of view
 - Find a good writer / editor to critique your writing
- Be selective, and realistic to which journal you would like to submit.



Questions about Journals?



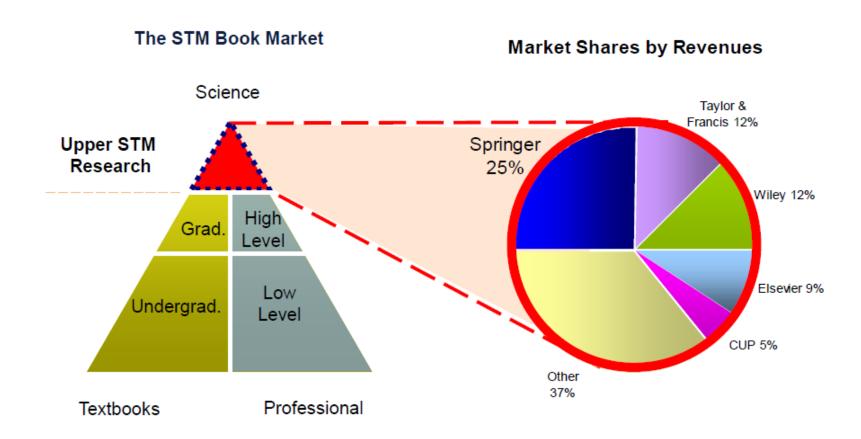


Topics: All about Books

- Science, Technology and Medicine (STM) book market
- Different types of books
- Unique to Springer
- When you publish your book with Springer
- eBooks on SpringerLink
- eBook downloads by Geography
- The importance of eBooks in Scientific Publishing



Science, Technology and Medicine (STM) book market





Different types of books

- Monographs
 - Single author, high quality, niche subject: long shelf life
- Contributed volume
 - Editor(s), multiple chapter authors: long shelf life
- Proceedings
 - Proceeding are collected papers from a conference: short shelf life
- Textbooks
 - Written for a specific higher education course: high usage
- Reference Works, Encyclopedia, Handbook or Atlas
 - Comprehensive and complete: tertiary literature
 - Often A-Z format

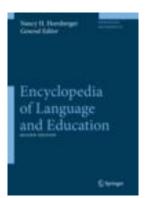


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 - Between 50 and 125 pages
 - Organized in focused subject series
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 - Books series publishing only the "best of the best" theses
 - Internationally top-ranking research institution nominate their best thesis annually for publication in the series
 - If the thesis is published in the series, the author is rewarded a cash prize equivalent to € 500
- SpringerReference (<u>link</u>)
 - Dynamic platform with updates, much like WikiPedia (but peer reviewed)
 - Final Reference Work on SpringerLink and available in print



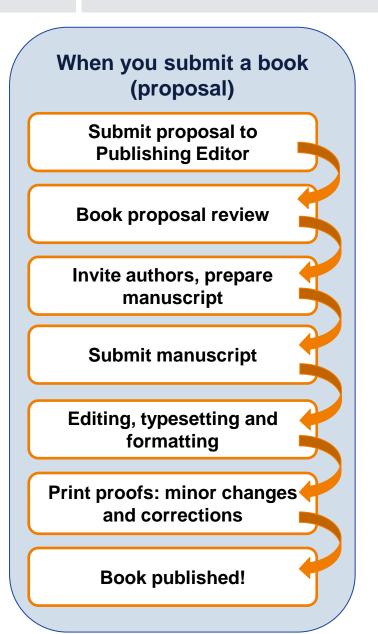






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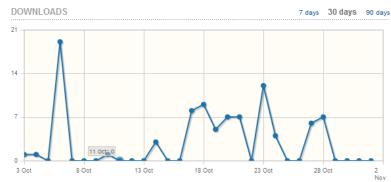
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- Indexed by Google, Scopus and many more.
- Chapter level approach, with Digital Object Identifier (DOI) and chapter level abstract.
- Electronic Supplementary Materials (ESM) such as videos and classroom exercises.





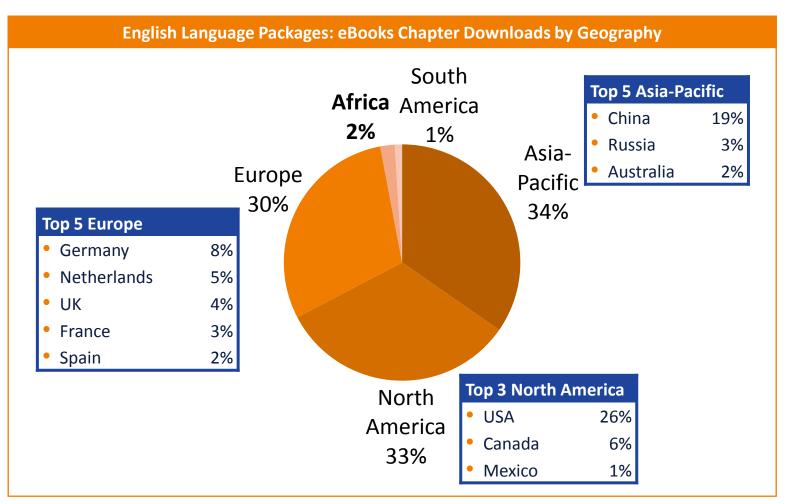




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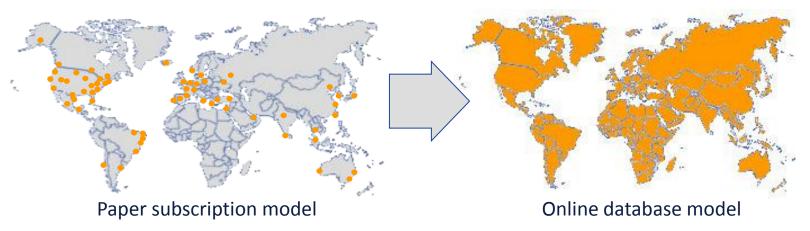


Source: Coremetrics, Jan-Sep 2010, includes usage of all eBooks and Protocols, Germany without usage of German language titles



The importance of eBooks in Scientific Publishing

Reach printed version vs the online version



Advantages for:

Libraries

More content/service

Higher usage

Better tracking

Preservation

Researchers

Easier to search

Easier to cite

24/7 access

Remote access

Authors

Online first

Wider distribution

Global readership

More citations

Publishers

Lower distribution costs

Better marketing efficiency

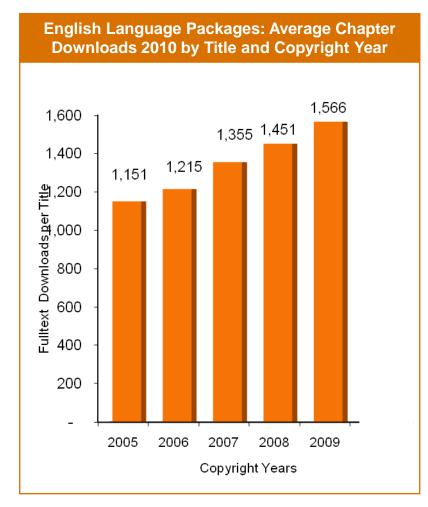
New markets



The importance of eBooks in Scientific Publishing (cont.)

After some studies in co-operation with a number of universities, we can now confirm and support the following four hypotheses about eBooks:

- eBook usage is much higher than anticipated.
- eBooks are used differently and in addition to print.
- Availability and discoverability are key determinants of eBook usage.
- eBooks have a long 'shelf' life.



(Data adjusted for abnormal usage spikes due to massive downloading)



Questions about Books?





Topics: All about Open Access

- What is Open Access?
- The success story of Open Access
- Open Access by subject
- Open Access in Southern Africa
- Open Access vs Traditional Publishing
- Where to publish Open Access
- Open Access at Springer / BioMed Central
- No barriers to publishing



What is Open Access?



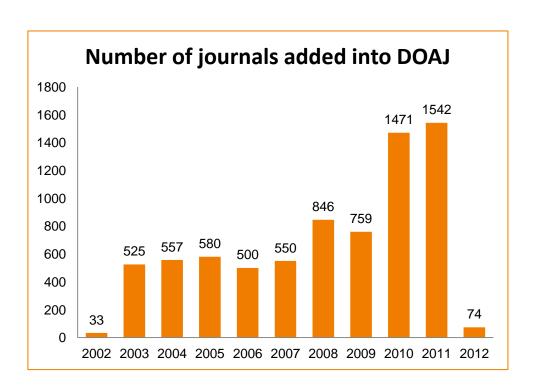
- The article is universally available, **Author pays**: FREE to the reader.
- Copyright remains with the author.
- Publication fee is paid by the author. In case of BioMed Central / SpringerOpen the fee can be
 - paid by the author (via research grant or other funding)
 - paid by a member institution (currently 379 institutions, in 42 countries have a membership with BioMed Central / SpringerOpen. (link) Check with your library!)
 - waived (economic hardship, invitation from EiC)
- Traditional journals request copyright is assigned to the publisher or journal owner, but allow
 - to use all or part of the work in other publications or for educational or research purposes
 - to post an electronic version on the final authors' version on the author's website and/or in an institutional repository

(note: different publishers have different policies!)



The success story of Open Access

- Directory of Open Access Journals (DOAJ) is hosted and maintained by Lund University in Sweden.
- There are well over 7,000 Open Access journals in the DOAJ database (link).



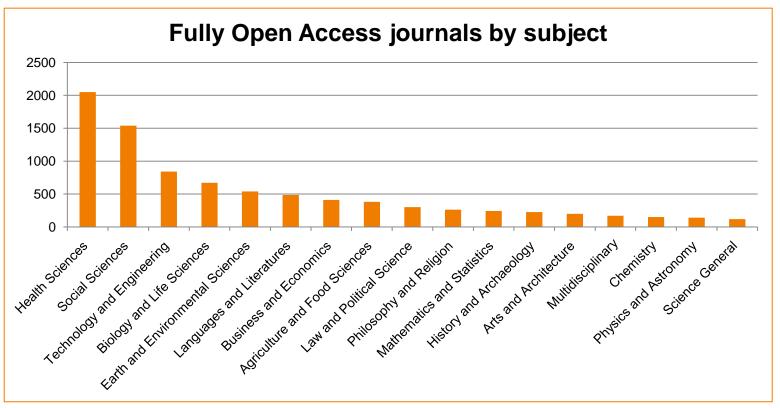


Source: http://www.doaj.org • date: January 25, 2012



Open Access by subject

- (Bio)Medicine was the field where Open Access rooted most naturally because of eg. the NIH.
- Most Open Access journals are still in Health Sciences, but other fields are catching up fast.

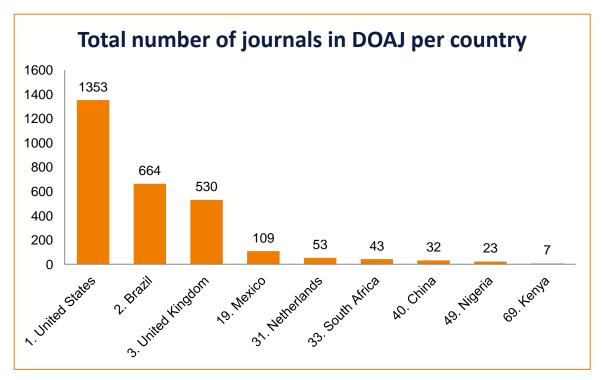


Source: http://www.doaj.org • date: January 25, 2012



Open Access in Southern Africa

- There are currently 43 Open Access journals from South Africa (<u>link</u>) in DOAJ, but none from Botswana, Lesotho, Namibia or Swaziland.
- South Africa ranks number 33 out of 117 countries in number of journals in DOAJ.



Source: http://www.doaj.org • date: January 25, 2012



Open Access at Springer / BioMed Central

- The Journal of Headache and Pain
- International Journal of Emergency Medicine
 a SpringerOpen Journal
- Applied Water Science a SpringerOpen Journal
 - Organic and Medicinal Chemistry Letters
 a SpringerOpen Journal

Psychology of Well-Being

a SpringerOpen Journal



- Gold Bulletin
 a SpringerOpen Journal
- Journal of Mathematics in Industry
 a SpringerOpen Journal
- Health Economics Review a SpringerOpen Journal

























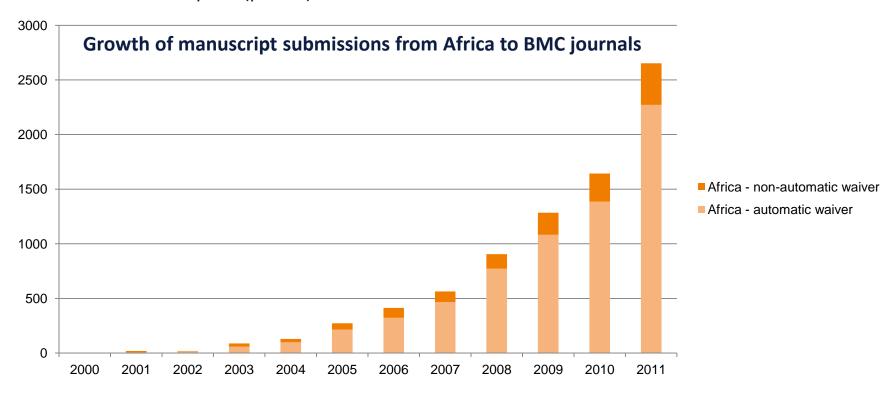






No barriers to publishing

- All African countries receive automatic waivers (hardship), except Algeria, Botswana, Equatorial Guinea, Gabon, Libya, Namibia, and South Africa.
- Authors can request (partial) waiver.





Questions about Open Access?





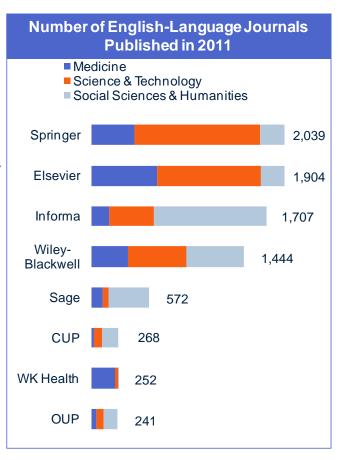
Topics: All about Springer

- Who is Springer and why publish with us?
- Springer THE largest scientific eBook Publisher?
- Springer for Authors
- Springer Author Academy
- Remember: Online tools to support you
- Language editing with Edanz
- Author Marketing @ Springer



Who is Springer..

- Springer is a global, leading, scientific publisher.
- Springer publishes over 2,700 journals.
- Springer is THE largest scientific **eBook** publisher in the world.
- 21.6% of all Nobel Prize winners are Springer authors.
- All winners of the 2011 Nobel Prizes in medicine, physics,
 chemistry and economics are Springer authors and editors.
- More than 5,500 employees worldwide, in 86 publishing houses, in 21 countries.
- Founded in 1842, we have 170 years of experience.



(English-language academic/scholarly journals only; Springer including BioMed Central, Springer Medicine and Springer Fachmedien)



.. and why publish with us?

- Springer is an e-first publisher; that means that your work published electronically first, print is available on demand. Your work is **immediately available worldwide**!
- Widest distribution in various formats
- Springer's standardized production processed have improved turnaround times for the publication of journals articles. An article takes, on average, only 20 days from acceptance to online publication.
- Our approach ensures that your work can be made available to as wide an audience as possible, through Springer's many partners.



Springer THE largest scientific eBook Publisher?

Says who?

- SpringerLink currently hosts over 50,000 eBooks.
- Springer Book Archive will add 70,000 100,000 titles in 2012.
- Book output to grow to 8,000 10,000 new titles per year by 2015.

What about our eBooks?

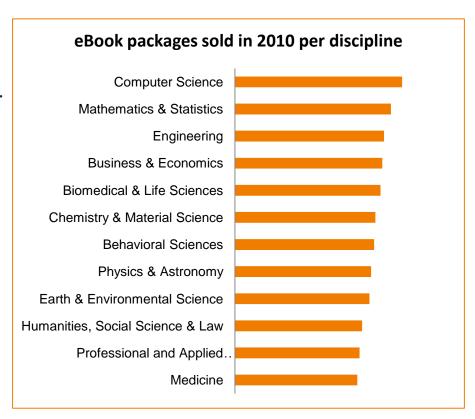
- Completely DRM free.
- Going forward, most eBooks (including much of the Springer Book Archives) will be available in ePub format for easy reading on any mobile device.
- The recently launched SpringerLink app (available on iTunes) makes 24/7 and remote access even easier.
- All books are published e-first and then printed on demand for those who prefer a printed version. This includes the Springer Book Archives, which means that books from 1846 will become available in print again.



Springer THE largest scientific eBook Publisher? (cont.)

Some 2010 statistics

- In 2010 we sold nearly 4,000 eBook packages, reaching nearly 25,000 institutions.
- 31% of the deals were made in the US, 25% in Asia Pacific and 44% in EMEA (including Africa).
- Looking at the packages sold per discipline, the numbers are fairly evenly spread (see graph).



Source: Springer Licensing Control Department January 2012



Springer THE largest scientific eBook Publisher? (cont.)

- Springer books are authored by top researchers, publishing quality scientific content. 'You are in good company' as we like to say.
- Your book will benefit from global, online visibility.

Will be universally accessible

YOUR BOOK

Will always

be in print

Will be available in many formats

- Your book will benefit from our involvement in publishing issues such as:
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- » Why is good writing important?
- » What do journal editors want?
- » Types of journal manuscripts

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- » Study design
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» How to choose a target journal

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PUBLICATION ETHICS

» Publication ethics

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PEER REVIEW

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Comments or Questions?

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