Impact of Book publishing
Findings from Bookmetrix data in past years

Martijn Roelandse
Head of Publishing Innovation
@mathein
Let’s start with a couple of questions…

- Who has authored a (scholarly) book or chapters?
- ...and knows how many citations, downloads and altmetrics it has?
- ...and did it count in your university assessment / funder evaluation?
My story so far…
The measurement of ‘quality’
The rise of mega-journals and devaluation of IF

- Launched June 2006
- Biology and Medicine
- Rejection rate: 15%
- Jan 2012: Article 30,000 published
- 2010 Impact Factor: 4.351

Average citations per article for different disciplines, showing that citation practices differ markedly. Data from Thomson Scientific [Amin-Mabe 2000].
Research dissemination channels are changing rapidly to accommodate the increasing volume of scholarly literature.

- 26,362 Public policy references
- 39,229 Post-publication peer-reviews
- 23,976,890 Social media shares
- 1,042,462 Wikipedia citations
- 414,719 Blog posts
- 670,860 Mainstream news stories

A research output is mentioned online every 1.8 seconds.

That’s an average of 47,000 new mentions a day.

Around 15,000 unique research outputs are shared or mentioned online each day.
Which article made a bigger impact?

- Article with many citations
- Article widely discussed in the social web
- Article with lots of downloads
- Article discussed on CNN
Metrics and Research Evaluation
Research evaluations were once bespoke and performed by peers…

...but now research evaluations are done now routine and reliant on metrics

http://www.nature.com/news/bibliometrics-the-leiden-manifesto-for-research-metrics-1.17351
External forces are driving change

Part 3 Section 3: Impact template and case studies (REF3a/b)
Definition of impact for the REF
140. For the purposes of the REF, impact is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia (as set out in paragraph 143).

Changed Research Evaluation in:
• UK
• Netherlands
• Australia

2003: Berlin Declaration
2012: San Francisco DORA
2015: Leiden Manifesto
2015: The Hague Declaration

“There is a pressing need to improve the ways in which the output of scientific research is evaluated by funding agencies, academic institutions, and other parties.”
San Francisco Declaration on Research Assessment
Journals are well covered but what about books?
A shift from “recognition through being published” to “we need to see evidence and data” over the past 2 years.

The old paradigm:
Can I order the book at my local bookseller?
Is it on Amazon?
Can the library get it?
Is there an ebook?

The new paradigm:
How many downloads?
Does it have a DOI?
Is it on Scholar?
Can it be cited?
Will Scopus index it?
Open Access?
As an **author** I have **no idea** what the **actual impact** is of my book

**No recognition** for my book from **faculty**, **university administrators** or **funders**
These 2016 books made an impact.
In 2016.
Our books are very much alive and used in academia, just like before.

Of those published in 2016 – **11,000 books across SN** – we had 0.91 citations on average per book. For online mentions – or altmetrics – we had on average 4.5 mentions per book.

25% of our 2016 books have been cited once or more within this year

42% of our 2016 books have been mentioned online once or more in this year
These 2017 books made an impact.

In 2017.

Our books are very much alive and used

- 31% of our 2017 books have been cited once or more in 2017
- 47.5% of our 2017 books have been mentioned online once or more* in 2017
  *33% have had even 3+ mentions!
Open Access books

http://www.springernature.com/gp/open-research/journals-books/books/the-oa-effect
As a publishing editor, I would like to encourage authors to write more books by showing reliable metrics.
And so it began…
Bookmetrix pulls together information about the attention paid to, use of and impact of books.

Books benefit hugely from new ways of looking at attention & impact.
Traditional citation databases underestimate the impact of books

On average 20 citations per book
Cited half life 20 - 30 years

10.81 citations per article
Source: Thomson Reuters’ Essential Science Indicators database, 2000 - 2010

N= 107,313 English language titles, citation data from CrossRef
An often heard question in the academic realm:

“How many citations do you have?”

That depends on the platform! Let’s have a look…
Book trends: public policy, social media & news
Bookmetrix pulls together information about the **attention** paid to, **use** of and **impact** of books & chapters.
Bookmetrix 2.0 – some highlights

Biotechnologies for Plant Mutation Breeding - 2017

Editors: Joanna Jankowicz-Cieslak • Thomas Smith • Jochen Kudoh • Bradley J. Till. Editors

This book offers open access under a CC BY-NC 2.0 license. This book provides 19 detailed protocols on the use of induced mutations in crop breeding and functional genomics studies, which cover topics such as mutagenesis.

Downloads: 39.6K
Citations: 2
Reviews: 0

External vs in-book citations

External citations: 0
Number of times this book has been cited.

Internal citations: 62
Number of self-references within this book.

Purchase this book

Download from Springer
Here is your monthly report for the 10 publications that you follow.

**AJCC CANCER STAGING MANUAL**

The AJCC Cancer Staging Manual has seen the following activity in June 2017:

**CITATIONS**

- A unified approach for assessing heterogeneity in age/sex/ethnicity models using random effects
- Preoperative 18F-FDG-PET/CT vs Contrast-Enhanced CT to Identify Regional Nodal Metastases among Patients with Head and Neck Squamous Cell Carcinoma
- Gastrin-related tumour markers in pediatric and adolescent age: The Italian TINFO project experience
- Ablative effect in recurrent esophageal cancer treated with carbon ion radiation therapy: 2 case reports
- Extended Lateral Pharyngotomy for Selected Squamous Cell Carcinomas of the Lateral Tongue Base

**JOURNALS**

- Clinical and Pathologic Predictors of Survival in Patients with Squamous Cell Carcinomas of the Hypopharynx after Surgical Treatment

**BOOKS**

- Oncologic Imaging: Bone Tumors

**SOCIAL MEDIA**

There have been no mentions of this book on social media this month.

**DOWNLOADS**

This has been downloaded 298 times.

Data sourced from Altmetric.

**Mendeley Reader's by Country**

This book has 700 Mendeley readers (combined total for all chapters).

**Mendeley Reader's by Discipline**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Biological Sciences</td>
<td>273</td>
</tr>
<tr>
<td>Medicine and Dentistry</td>
<td>112</td>
</tr>
<tr>
<td>Chemistry</td>
<td>80</td>
</tr>
<tr>
<td>Biochemistry, Genetics and Molecular Biology</td>
<td>27</td>
</tr>
<tr>
<td>Pharmacology, Toxicology and Pharmaceutical Science</td>
<td>24</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
</tr>
<tr>
<td>Unknown</td>
<td>7</td>
</tr>
</tbody>
</table>

**Mendeley Reader's by Professional Status**

<table>
<thead>
<tr>
<th>Professional status</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>152</td>
</tr>
<tr>
<td>Student &gt; Ph. D. Student</td>
<td>144</td>
</tr>
<tr>
<td>Student &gt; Master</td>
<td>129</td>
</tr>
<tr>
<td>Student &gt; Bachelor</td>
<td>129</td>
</tr>
<tr>
<td>Researcher</td>
<td>98</td>
</tr>
<tr>
<td>Other</td>
<td>97</td>
</tr>
<tr>
<td>Unknown</td>
<td>56</td>
</tr>
</tbody>
</table>

**SpringerLINK Download Summary**

The combined chapter downloads for this book are 85,360.

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>24,498</td>
<td>23,878</td>
<td>22,978</td>
<td></td>
</tr>
</tbody>
</table>

Bookmetrix retrieves book and chapter metadata from Springer Nature, Atmerrcc and CrossRef, and then aggregates the associated book and chapter metrics from a variety of data sources. Read more.
Summary of the subject collection

Biomedical and Life Sciences

Our lives – and livelihoods – depend on the plants, animals, and microorganisms of this planet. The current extent and pace of environmental change, however, threatens our very way of being. At this point, our only hope is decisive action – a movement that must be informed by research in disciplines dealing directly with life. Biomedicine and Life Sciences provide us with just that. With applications in areas such as medicine, agriculture, and biotechnology, these fields are essential to maintaining and improving the quality of life on Earth.

The Biomedicine and Life Sciences eBook Collection brings together up-to-date resources from trusted authors working around the world in all aspects of life: from patterns of infectious transmission to processes responsible for the loss of biodiversity.

Results from year: 2016 ✓ 643 books

- Downloads: 6.67M
- Citations: 6.15K
- Reviews: 80
- Mentions: 4.83K
- Readers: 37.8K

Subject Collection performance

1%

Percentage of books in this Subject Collection that are cited more than the discipline average.

Collection Citation Performance

- 7.91 over 5 years
- 6.49 over 2 years

Top performing books in selected collection and year by downloads or citations

<table>
<thead>
<tr>
<th>Book type</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributed volume</td>
<td>67%</td>
</tr>
<tr>
<td>Monograph</td>
<td>17%</td>
</tr>
<tr>
<td>Brief</td>
<td>4%</td>
</tr>
<tr>
<td>Proceedings</td>
<td>2%</td>
</tr>
<tr>
<td>Graduate/advanced undergraduate text book</td>
<td>1%</td>
</tr>
<tr>
<td>Others</td>
<td>7%</td>
</tr>
</tbody>
</table>

Link out to SpringerLink

Subject collection details – future segue to further discovery

Collection Citation Performance

Distribution of book types within subject collection and year
Collection Citation Performance (CCP)

The total number of citations in 2016 to books published in 2014 and 2015 in a eBook collection

The total number of books published in the same eBook collection in 2014 and 2015

<table>
<thead>
<tr>
<th>Collection Citation Performance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.34</td>
<td>4.77</td>
</tr>
<tr>
<td>over 5 years</td>
<td>over 2 years</td>
</tr>
</tbody>
</table>
EXPLORE THE IMPACT OF YOUR BOOKS

Bookmetrix brings together a collection of performance metrics, helping you to see how your books are being discussed, cited, and used around the world.

Access to the Bookmetrix platform is currently limited to Springer staff only. Free details pages can be viewed via book pages on SpringerLink.

LAUNCH BOOKMETRIX PLATFORM

SPRINGER NATURE STAFF ONLY
There were 453 books and 9,649 chapters that matched your search.
Class of 2017 - Japan

**Primary discipline**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>926</td>
</tr>
<tr>
<td>Medicine &amp; Public Health</td>
<td>547</td>
</tr>
<tr>
<td>Engineering</td>
<td>533</td>
</tr>
<tr>
<td>Physics</td>
<td>440</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>368</td>
</tr>
<tr>
<td>Economics</td>
<td>329</td>
</tr>
<tr>
<td>Mathematics</td>
<td>289</td>
</tr>
<tr>
<td>Chemistry</td>
<td>253</td>
</tr>
<tr>
<td>Biomedicine</td>
<td>211</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>137</td>
</tr>
<tr>
<td>Business and Management</td>
<td>116</td>
</tr>
</tbody>
</table>
Class of 2017 – top authoring institutions

Number of authors per institution in 2017 books

Google My Maps

SPRINGER NATURE
<table>
<thead>
<tr>
<th></th>
<th>citations</th>
<th>downloads</th>
<th>mentions</th>
<th>readers</th>
<th>reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sci Japan</td>
<td>14,5</td>
<td>6585,2</td>
<td>3,5</td>
<td>21,8</td>
<td>0,1</td>
</tr>
<tr>
<td>Social Sci</td>
<td>11,1</td>
<td>8372,7</td>
<td>1,4</td>
<td>13,4</td>
<td>0,4</td>
</tr>
</tbody>
</table>
Thank you!

martijn.roelandse@springernature.com / @mathein
Further reading

- Oct 2016: Interview in Research Information article on Alternative Assessment
- Oct 2016: PCG published Increasing the Value of Scholarly Books
- Aug 2016: Time Higher Education to include books in University ranking
- July 2016: Review in Against the Grain – Altmetrics and Books: Bookmetrix and Other Implementations
- June 2017: Interviews in Research Information The Measure of Metrics
- March 2018: Interview in Research Information Bookmetrix: Demonstrating the power of books in academic research