What is impact and how might we measure it?

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Opening argument

• Most of what we know as ‘impact’ is rooted in technology of 40-50 years.
• The ‘fit for purposeness’ comes from our knowledge of what metrics look like, and how we derive concepts of impact.
• Three stages of existing metrics:
  - Discover / index
  - Count
  - Interpret
• The combination of dis-satisfaction from some, familiar comfort for others and legacy IP must indicate a vulnerability to disruption
Is altmetrics the revolution?

- Five years old
- Great interest
- Increasing use
- Some criticisms:
<table>
<thead>
<tr>
<th>Overview</th>
<th>Citations</th>
<th>Scholarly Activity</th>
<th>Scholarly Commentary</th>
<th>Mass Media</th>
<th>Social Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data from Scopus, SciVal, Mendeley, Altmetric.com</td>
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</tbody>
</table>

**Citation Count**: 82

Cited by in Scopus

**Field-Weighted Citation Impact**: 69.47

**Citation Benchmarking**: 99th percentile

Compared to Medicine (all) articles of the same age and document type

**Mendeley**: 111 Readers

**Mass Media**: 39 Items

**Blogs**: 12 Posts

**F1000Prime**: 2 Reviews

**Twitter**: 132 Tweets

**3 Other sources**: 29 Mentions

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**Engagement highlights**

- **Scholarly Activity**: 125 readers from 2 sources
  - Mendeley: 111 Readers
  - Top Discipline: Biological Sciences
  - Top Demographic: Ph.D. Student
  - Save to Mendeley

- **Social Activity**: 161 mentions from 4 sources
  - 132 tweets from 127 accounts
  - 1 Reddit post from 1 account
  - 12 Facebook posts from 11 accounts
  - 16 Google+ posts from 14 accounts

**Benchmark highlights**: Based on 125 readers from 2 sources

Compared to Medicine (all) articles of the same age and document type

**All Scholarly Activity**: 125

99th percentile

**All Social Activity**: 161

99th percentile

View all Social Activity
Altmetrics is (mostly) too small (at the moment?)

Data from Mendeley, Scopus and Altmetric
What do we know about altmetrics?

• Scholarly networks don’t show the same discipline variation that citation does.
• Citation rates are still accelerating after 1 year of publication, social network activity is over.
• Scholarly networks have a reasonable correlation with citation, but there is virtually no correlation between other altmetrics and citation.
• Users of scholarly networks have readership, sharing, reference motivations, as well as citation.
• Twitter is highly focussed on a small number of publications (to make sense of the data, you have to use a log-log scale – appears to be a double power relationship at the top end)
• Mendeley is the biggest data source for scholarly activity, and the richest (demographics, discipline, location, groups)
The distribution of social activity for papers (2.4M)
Altmetrics is not the revolution

• Altmetrics is an incremental step (an important one!)
• The same paradigm: search, count, analyse
• But without the benefit of 40 years research
The secret life of the citation

• Citations are great – and counting means a lot.

But…

• *Where* is the citation coming from? (Introduction? Methodology? Conclusion?
• *Why is it coming?* What is the sentiment of the citing paper?
• *Who is it coming from?* Is the citing author / paper / journal … important? Senior? International?
Concluding thought

- Altmetrics and citation analysis show similar patterns: we focus on the simple (and leave the complex to the bibliometricians, the altmetricians, the specialists, the academics…)
- But the imperative to ‘make simple’ means we have to stretch for meaning
A move from counting to measuring

- The technology that supports massive networks of connected documents exists – not just scholarly but all digital documents that contain scholarly thoughts
- Timeline – 10 years
- Once built, the properties of a network can be measured
- We can describe the impact on the shape and size of the network, the complexity of the network, the speed of the network
- We can describe the context of the disruption
- We can visualize it and report it – simply
- Search – count – analyse
- Connect – measure – understand
Thank you (and come to the theatre in Oxford!)

- December 15-19
- [www.111theatre.co.uk](http://www.111theatre.co.uk)
- I’m directing 😊