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**Book Section:**

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## **Chapter 12.**

### **Conclusion**

#### **Introduction**

The final chapter will consider the evidence from the previous 11 chapters and try to summarise where the future of altmetrics and associated developments lie. As with the rest of the book, the chapter aims to give the reader a realistic view of developments, benefits and pitfalls that information and library professionals face when contemplating new ways of incorporating technology into their work processes. The chapter aims to give the reader a picture of the here and now and how the future holds many possibilities but also uncertainties.

The ideas and changes captured in these chapters are like so much published research that is supported by LIS professionals, that it is a work in progress. By the time this title is released altmetrics will be just over half a decade old. In relation to the creation of the web that is about one fifth of its history. The web has existed roughly for one generation but has changed the lives of many demographic groups, academics being one of them. No one could have predicted what the web would look like five years ago and it is virtually impossible to say what it will look like in the future. Even with complex computer modelling applications we are still unable to accurately predict the weather beyond five days, predicting what the web will be like in five years is much, much harder. Yet there is one thing we can say about the current state of research publishing and communication, with regards to adoption of web and social technologies; that it is in its greatest state of flux and change in living memory. The evidence from this book and other similar titles is that the academic community has a whole been slow to adapt to the opportunities brought about by the Internet. Universities and research centres were quick to make themselves visible on the web in the early 1990s but beyond that there has been inertia, or certainly confusion over which areas to focus on. Other industries including the arts, media and even pornography have seen the value in spreading their content across the web in easily accessible formats. Academic content is no less important or interesting to online communities, the biggest problem remains two-fold. Firstly confusion over which technologies and platforms to use, in addition the creation of learning initiatives. Secondly the cultural issues around change, and adoption of new ways of communicating and measuring research which takes many academics away from their comfort zone.

Leading much of the change and technology adoption within academia, altmetrics, open peer review, and big data we are seeing is being championed by PhD students or early career researchers. Many of these champions who started platforms such as Mendeley, Altmetric.com, Figshare and Impactstory saw that academia was stagnating within a technology lead economy. The old methods of scholarly publishing, measurement, sharing and communication were no longer fit for purpose. As a result we are in the midst of a rapid and exciting period of change. This change will have winners and losers, some of the old dinosaurs of academic publishing may become extinct in our working lives. Whilst on the other hand we will also see many small academic web start ups burn brightly for short periods before falling by the wayside. How we communicate and measure research by the end of this decade will be very different from how we did it at the start.

What we can say about the web is that it will continue to change and diverge into specialist areas, some of which will not always be for the better. Technology will continue to embed itself within academia regardless of resistance. The web is the greatest agent of change within academia but it still needs people and reason for it to be positive. It is a case of not whether but when we will see a paradigm shift in how the research community embraces the new forms of web wholesale. Digital advocates such as Baroness Martha Lane Fox who co-founded Lastminute.com believes that the future of society is underpinned by a wholesale uptake of the Web, it might not just happen just yet. With more digitally native students forging careers in academia it should follow that research and how it is communicated and measured will in time be one ecosystem with many arteries underpinned by technology and the web. LIS professionals have always adapted to change in one way or another, they are conversant in knowledge and information systems that wax and wane with the times. Altmetrics is one such system, and with it comes a wealth of challenges, but more importantly opportunities, it comes down to whether LIS professionals want to take advantage of them.

### **Opportunities if you take them**

If we consider how academics carry out their work, whether it be in an office, lab or out in the field, they are now totally reliant on the web. If they were given restricted use of the web their work would be impacted negatively, yet for many academics they are self-imposing limitations upon how they engage with the web as part of their research process. Of course, as identified in this book, many are not aware of what is out there with regards to tools that aid scholarly communication and measurement. This is where the LIS professional has a part to play and more notably an opportunity to take. Naturally there will be no call to arms, and given that LIS professionals are often-stretched capacity wise, massive change is unrealistic. However, many LIS professionals are involved in initiatives that are closely aligned to altmetrics. Certainly Altmetric.com spotted that connection with their tools created specifically for librarians. Also many LIS professionals have the right set of skills to engage with the academic community. Firstly they are often embedded within the academic community as knowledge and support experts. Many are adept trainers and communicators, and treat their roles as a vocation with the aim to support colleagues in every which way possible. Altmetrics, as with MOOCs, big data, open access and peer review are opportunities and exciting ones at that. This is what LIS professionals must see them as, rather than barriers, problems and just more stuff to manage. Naturally engaging with any new way of working brings with it problems, learning curves, being out of your comfort zone and additional workload. For those willing and able they could present an extra skill to an already diverse set of talents within the LIS community. Many have already engaged with altmetrics, it is not a new thing to them, but for the majority of the academic community it is still incredibly early days. The opportunities are two-fold, firstly the LIS professional develops their own technical and communication skills, they make themselves more valuable to the institution. Secondly, help a huge knowledge-based workforce adapt to the changes happening within academia. It is important to remember that just because academics do not engage in social networks, media and altmetrics that they are necessarily not willing, they may not realise there is support to learn about them. As we know, that support from LIS professionals is finite, whereas the demand from academics and research students could at times feel infinite. Therefore some of the tools and ideas covered in this book may go some way to stretch those resources further. As with any modern instructional support, whether that be staff or students the best solutions are those that reduce duplication and repetition. The use of instructional videos, blogs, documents within virtual learning environments could be as useful to academics as they are to students if used correctly. Whilst face to face tuition will always be an effective and core process for instruction, it is important that such as liaison and specialist LIS professionals be aware of their limits.

### **Change is afoot**

There is no doubt that there is a great change happening in academia, and technology is the allowing this to happen. If we consider MOOCs, open access, open peer review, big data and altmetrics they all have great potential and are all underpinned by the web and associated technologies. That word 'impact' will continue to reverberate across academia and how we value and measure research and its impact will become increasingly important. For researchers and universities pushing their content and messages into the ether there needs to be some kind of feedback loop. This is where altmetrics has a big part to play and is already being picked up by many institutions, funding bodies and individuals.

It is important to remember at this point that the technology should never drive change as with learning technologies and the need for a pedagogy to apply it to. There needs to be clearer reasons why researchers embrace new ways of working using technology and the web. They need to be clearly set out, and built where possible on evidence, but with much innovation it comes from a gut feeling or by following trends. There lies the rub, that with new technologies and ways of working there is sometimes little or no evidence, just gut feeling or a sense of adventure. At some point researchers will have to consider engaging with some of the technologies that Web 2.0 has brought us. That might be academic social networks, cloud-based reference management, Twitter, blogs or even altmetrics. Failure to do so could leave individuals, institutions even nations drastically lagging behind their peers and competitors. Setting up a ResearchGate or Piiirus profile is a start, but it means very little if you fail to upload content or connect with peers. In this case there is much truth in the saying, you only get out what you put in.

### Conclusion

Despite the rapid changes taking place in academia, with altmetrics being a part of that, we have to be realistic about what we can achieve for now. That said, we should also be open to a multitude of possibilities that technology can bring us. It is easy to pick holes with the existing publishing model, citations, the Impact Factor, H Index and peer review. This is a system that is entrenched within the research community and one that could change beyond recognition should academia be brave enough to take the leap. That said, most proponents of altmetrics and open peer review have never favoured wholesale change, and we do face the prospect of jumping out of the frying pan into the fire. By first accepting that the current methods of measurement, communication and sharing are deeply flawed then we can start to look where to improve on them. That, however, is not going to happen overnight, or in the next year, and probably next decade, it is too big a problem with too many competing agendas.

Altmetrics should be considered as alternative indicators, and open peer review as a valuable way of communicating and assessing research quality. With the right checks and balances in place better use of these innovations can improve scholarly communication and collaboration. Like two geographical tectonic plates clashing together it would be conceivable to think that the old and new can come together to form a whole new academic landscape. In five years time it is very likely we will see a very different web and a myriad of new research technologies built upon it. How academics and LIS professionals chart that new landscape we can only wait and see.

### Key Points

- Altmetrics are not a replacement for traditional metrics such as impact factor and citation counts
- Where possible, altmetrics should be considered as alternative indicators to scholarly communications and reach.
- Altmetrics are not necessarily an indicator of research quality.
- The development of altmetrics and scholarly communications will continue to evolve, it is likely we are at just the very beginning of this era of digital academia.
- Those engaging with the web and altmetrics as part of their research work flow are more likely to benefit with regards to successful impact. In addition discover where their research is being shared, discussed and repurposed.

- Employing altmetric and scholarly communication tools can make LIS professionals and researchers more tech savvy, and in the long run potentially more valuable to digitally driven institutions.
- There is still much confusion as to the growing number of academic web platforms and which ones are the best to use by academics. LIS professionals can help academics navigate their way through the myriad of tools available to them.
- LIS professionals have much to gain by embracing altmetrics and other scholarly communication tools and becoming experts on how to best use these tools.

## Web Resources

Altmetrics - A Manifesto: <http://altmetrics.org/manifesto/>

Altmetric.com Blog: <http://www.altmetric.com/blog/>

Altmetrics Conference: <http://www.altmetricsconference.com/>

Altmetrics - What they are and why they should matter to the library and information community: <http://www.cilip.org.uk/blog/altmetrics-what-they-are-why-they-should-matter-library-information-community>

Digital Science's Blogs: <https://www.digital-science.com/blog/>

HEFCE Review of Metrics in research assessment: <http://www.hefce.ac.uk/rsrch/metrics/>

Impactstory Blog: <http://blog.impactstory.org/>

Jobs.ac.uk Digital Academic Blog <https://blogs.jobs.ac.uk/the-digital-academic/>

LSE Impact Blog: <http://blogs.lse.ac.uk/impactofsocialsciences/>

## Further Reading

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