

Making an impact

How Altmetric tells researchers more about their work

Founded in 2011, Altmetric is the data and metrics tool that begins to measure the impact of research from the moment it is published, allowing researchers to see how, why and where their work is being used, discussed and expanded upon. CEO Kathy Christian told us how Altmetric works, why it is so important and who is already using it.

When researchers publish a new study, beyond traditional citations, how do they know who is reading their work? Their research might be featured in news stories, reviewed on blogs or tweeted about. Their findings might have a swift and direct impact on clinical decisions, or other projects at institutions around the world. But, short on time, how would a scientist go about answering these questions without spending days trawling search engines and sites?

Altmetric is a tool that does all of the above for you; it is a record of attention, measure of dissemination and indicator of influence and impact. In this interview with Altmetric CEO Kathy Christian, *Research Outreach* found out how Altmetric measures research impact and why this is so important for researchers (and everyone else!).

What's the story behind the foundation of Altmetric?

Altmetric, as we know it today, was established by our founder, Euan

Adie, in 2011. However, the concept of Altmetric really originated with a product Euan launched while he was still at the University of Edinburgh, called Postgenomic. Euan was one of a few bioinformaticians in a genetics lab and spent a lot of time in online journal clubs on different bioinformatics blogs, picking up recommendations for articles to read. This prompted the idea that instead of manually reading the blogs he could instead automatically track all of the bioinformatics blogs he could find, and



Kathy Christian is CEO of Altmetric.

then identify which research papers were being discussed the most – and read those.

The first version of Altmetric came a few years later in 2010, and was heavily inspired by Postgenomic. Euan entered the product into a competition run by Elsevier and won a small cash prize, which was just enough to start working on it full-time. Shortly thereafter, Digital Science funded Altmetric as a full-fledged company. The aim of Postgenomics was to help understand which research papers to spend time reading and while that is certainly one use of the current Altmetric,

Due to COVID-19, there has been a remarkable increase in the amount of research being discussed – with an average of about 800,000 mentions per week.

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Altmetric focuses on non-traditional attention to research. What does that mean?

When we talk about 'non-traditional attention' in the context of Altmetric, we're actually referring to a couple different concepts. The first concept is attention to non-traditional research outputs and the second is non-traditional attention to all outputs.

In terms of the former, historically, academia has really only focused on the activity and discussions around peer-reviewed journal articles. However, in addition to there being outputs other than peer-reviewed journal articles (e.g. books and book chapters) there are also a large number of other outputs that researchers create both in the process of generating their primary piece of research (article or book) and to help better communicate the outcome of their research (preprints, data sets,

clinical trials, presentations, posters etc). At Altmetric, we aim to track all of these outputs and only require that the items have a persistent identifier of their own.

In terms of the latter, traditional attention to all outputs is likely a bit more obvious to most readers. Non-traditional attention essentially includes all attention that is not a traditional citation, this would include mentions in newspapers, on social media, Wikipedia, policy documents, patents, etc.

Overall, we want to provide as comprehensive a picture as possible of the attention and engagement that is occurring for all the various outputs that are produced in the research process.

How do you track what the general public, practitioners or policy-makers have to say about certain research?

We work with two great big lists; the first is a list of all the places that research lives (on publisher sites, university repositories, preprint



Early version of Altmetric (top) and how it looks today (right).

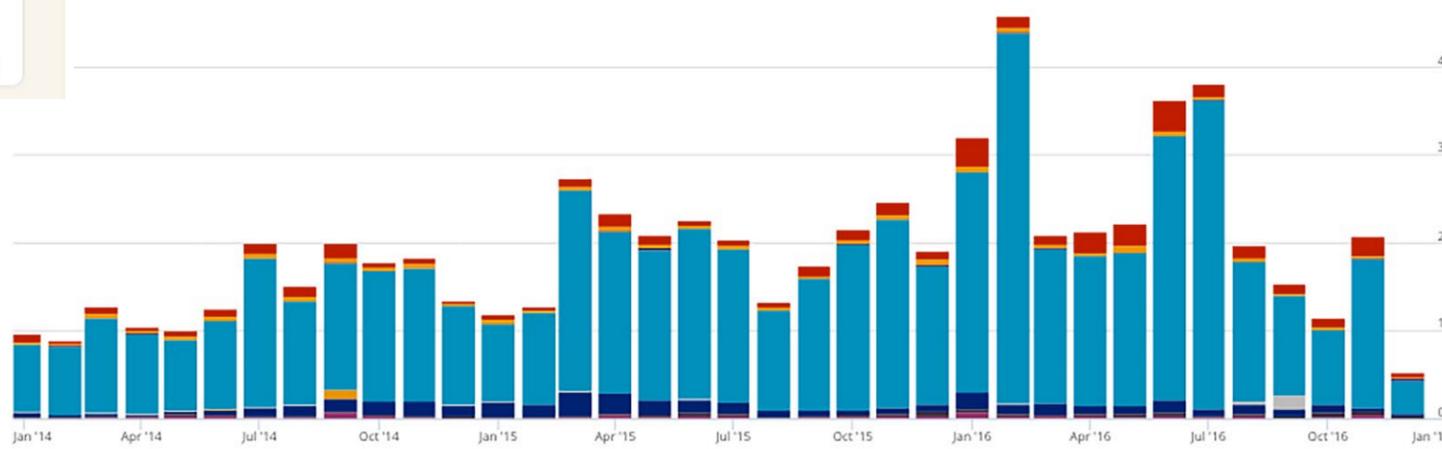
repositories, aggregator sites etc); the second is a list of the places where we know research is being discussed (news sites, Twitter, policy documents, Wikipedia, patents and more). Our systems are constantly combing through the places where research is discussed to uncover links back to the places where research lives. By doing this, we're able to collect all of the various mentions of a single piece of research and display them all together for a user to see.

While traditional citations primarily show engagements between academics, tracking non-traditional attention sources allows us to gain insights into how the broader community – practitioners, the public, policy-makers, funders – are engaging with research, what they're saying about it and why.

From a researcher's perspective, which situations can Altmetrics be useful for?

There are potentially endless uses for Altmetric data, particularly when considering the use cases at the organisational level - publishers, funders, universities, etc. (learn more about those uses [here](#)). The primary uses for individual researchers generally revolve around providing evidence of the impact of their work for promotion and tenure (P&T), grant applications, applying for new positions etc, but there are also a couple of additional common use cases.

The ultimate goal of researchers is for their research to have a meaningful impact on the world. From an academic perspective 'impact' can be considered



Non-traditional attention includes all attention that is not a traditional citation, such as newspaper articles, social media posts, Wikipedia, policy documents, patents and more.

to be tangible change and benefits to society or academia, but they can take a very long time to accrue. It can also be extremely challenging to find evidence of the impacts. This is where Altmetric comes into play.

Unlike impact or even citations, which can take years to develop, Altmetric data can be available as soon as research is published. Researchers can use Altmetric data to demonstrate early evidence of potential future impact even for recently published work. Altmetric data can also serve as a sort of virtual breadcrumb trail to help researchers find impact. A tweet, a blog or a news story by an organisation about a piece of research can provide the critical link to impact.

Mentions in policy documents are the attention source that researchers

tend to find most helpful. Having your research cited in a policy document, particularly if your research is driving a new or revised policy, is one of the strongest indicators of potential impact. However, unless the researchers themselves have been involved in creating the policy document, there is very often no way of knowing that your research has been used.

Altmetric mentions data can be a very effective way of identifying researchers who are active in the same areas of research. As all of the mentions data in Altmetric (tweets, blogs, Reddit) link back to the platform where the mention originated, it can be very easy for researchers to contact one another and go on to establish collaborations. Finally, the timeliness of Altmetric

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Thought Leader

discussion about this topic, and can it be enhanced?

Not surprisingly, we have seen a remarkable increase in the amount of research being discussed in 2020. In the six months prior to the COVID-19 pandemic, we were seeing about 500,000 mentions about research per week, in the past months we've seen an average of about 800,000 mentions per week. The quality of that public discussion is a great question and, like so many topics relating to COVID-19, there is a mountain of research to be done to understand what has been happening and also how to assess it.

Do you encourage scientists to be more engaged in communicating their findings or refine their outreach strategy?

We are very aware of the pressures on a researcher's time so it's important that their time is used wisely. We encourage researchers to consider the impact they wish to achieve with their research and then focus on identifying and understanding the audiences and channels that are relevant to supporting them in achieving that impact, and to focus on those.

Can Altmetric be integrated with other smart tools, from the Digital Science family or beyond?

Yes – within the Digital Science family of tools, we have integrations with several of our great sister companies. For Symplectic Elements, Dimensions, Figshare and Readcube, users are able to see Altmetric data within the platforms via our [Altmetric Badges](#). Additionally, for Symplectic Elements, Dimensions and Figshare we reveal some of their data in the Altmetric platform.

However, at Digital Science, we aim to be tool agnostic so that our users are able to use our tools alongside other tools and products they may already have in place, regardless of which company produces those tools. The Altmetric Badges are compatible with essentially any website and the Altmetric Explorer integrates with the primary CRIS (Current Research Information Systems) products used by universities.

Research relating to COVID-19 has received a lot of public attention. What do you think of the quality of public

One of the challenges we've all experienced with COVID-19 is that with so much information being produced at such a blistering pace, it has been hard to figure out which new data to believe and how to adjust our actions and decisions accordingly. We've also had issues with research being published, impacting decisions and plans, only to then be retracted. Something we think about at Altmetric is how the attention data we collect might help make people more aware of potential flaws, inconsistencies or errors with specific pieces of research before the findings start to get traction and have a potentially negative impact.

Here at Altmetric, we are looking forward to seeing what additional exciting innovations will come out of this challenging time and also investigating how Altmetric can play a role in improving the communication of research. If you have any ideas or suggestions, we'd love to hear from you!

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