

Transparency and reuse of data

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Key Points

- **Sharing 3D files**
Can be used to share research with people who don't have access to the physical data, like fossils.
- **Open science for all**
Open research is allowing people outside of very small circles in academia to access scientific papers.
- **Transparency encourages reuse**
Sharing data allows researchers to be transparent with their research and encourages reuse.

About Joseph

I'm a vertebrate paleontologist and I focus predominantly on looking at dinosaur fossils but also any kind of vertebrate remains that maybe aren't as flashy. I look at everything from full skeletons all the way down to broken teeth. I try to use this to reconstruct behaviour and understand how fossils are formed.

3D digitisation

I've been trying to utilise 3D digitisation a lot more in my research. It's part of this promotion of open data. If I can laser scan or CT scan a fossil I'm doing research on and include that in the manuscript or link it with figshare, it allows people who are reading the paper who can't go study the fossil themselves to have a 3D file that they can work with. With 3D printing becoming more and more popular and lower cost, it's another way of disseminating research and results. A lot of these fossils are kept in locked cabinets in museums, which is for their own

protection and to ensure that they can be accessed by people in the future, but as long as the institution is okay with it, I'm happy to share any 3D data that I can. It's the closest thing you can get to actually accessing some of these materials.

I heard about figshare through some colleagues who were starting to do this before I did. They were sharing big data, both their raw data for manuscripts, as well as their supplementary figures. When you look at a traditional print journal, you can't put 3D data on a page in the same way. Traditionally, when reading a manuscript in a print journal, it'll tell me to go to a website and download the extra files. That's easy enough to do, I guess, but by having an online journal like PeerJ or PLOS ONE and being able to just click and automatically be taken to figshare where this 3D file is housed and do everything without having to change interface, makes it much more accessible.

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UWO-VPC-2013.002-Allosaur tooth shed

Open source research

I’ve been using figshare a lot more lately - with the changes going on with how scientific manuscripts are published, we’re seeing a huge increase in open source, online publications, which I think is fantastic. It’s allowing people outside of these very small circles in academia to actually access scientific papers. By having open source platforms in a lot of these journals, it’s a great way to disseminate your research. With figshare, it allows me to share even more material with everybody, and I like that there’s some control over that. In the past, I’ve used it for things like sharing large files with colleagues, but I will also publish a manuscript in a journal and I’ll include a lot of figures and data in that, but figshare allows me to post the raw data. So, if someone wants to replicate the study, they can. It’s much more accessible than having to go through a paywall that you might see at some other kinds of journals.



UWO-VPC-2013.003-Camarasaur tooth rooted

Transparency in research

figshare has changed the way I share my research a little bit because I think science in general over the years has gotten into a very close, comfortable area where no one thought others were going to dig into it too much. But now, with things like figshare and other platforms that allow for this kind of sharing, you can be a little more transparent. So, it hasn’t changed research in a more grueling way or in a bad way - I think, if anything, it’s promoted more transparency.

You’re not stuck behind a paywall trying to get access to some of this data. If the authors are willing, they can just freely put it out there. I think some of the journals like PeerJ and PLOS ONE have been really good about promoting figshare as an example of where you can store supplementary data for free. It has changed things a little bit. It certainly has also changed the accessibility and the speed at which research can be done. Not by leaps and bounds as it still takes a long time to do this stuff, but you don’t have to manually type in everything you read in a journal into a spreadsheet. You can just transfer it over. There is some labour intensity which has been relieved, which is really nice.

Get in touch:

figshare.com

info@figshare.com