

Supplementary Information: should I stay or should I go?

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On August 11, the Journal of Neuroscience published an Announcement Regarding Supplemental Material by Editor-in-Chief John Maunsell. In it John Maunsell announces that the journal in November will stop accepting supplementary material in article submissions. The announcement has lead to an extensive discussion in the science blogosphere with a number of relevant posts listed below^[1]:

- *Drugmonkey*: Yay! J. Neuroscience Agrees with Me that "Supplementary Material" is BS and Ruining Science!
- *Juniorprof*: Journal of Neuroscience is getting rid of supplemental data
- *Stanford Neuroblog*: Wanted: Primary Figures for Publication. Auxiliary Material Need Not Apply.
- *john hawks weblog*: Down with supplements
- *Christina's LIS Rant*: Supplemental materials or no?
- *Christina's LIS Rant*: More questions about supplemental materials
- *Book of Trogool*: Disrupting with data
- *petermr's blog*: Supplementary Data must be published somewhere to validate the science
- *Micro World*: Where I disagree with Drugmonkey ...
- *The Scholarly Kitchen*: Ending the Supplemental Data "Arms Race"
- *Research Remix*: Supplementary Materials Is A Stopgap For Data Archiving

The main arguments against supplementary information are that it overburdens reviewers (and in turn authors), and it counteracts the concept of a self-contained research report. The main argument for supplementary information is that sometimes essential information can't be provided within the context of a journal article (e.g. video, large datasets), especially in those journals that still have print editions. Several blog posts emphasized that supplementary information is particularly important to provide the research data with the article. I think that Heather Piwowar's post is the best discussion of the relevant issues.

I'm obviously two weeks late with this blog posts, but I have been on vacation, and I'm only slowly catching up with all the interesting discussions that have

happened while I was away. I think the discussion of supplementary information is very important, because it really is a discussion of our concept of a scientific paper. And this concept is changing rapidly for many reasons, including the push to mobile platforms, and the wish by many to publish multimedia files (e.g. 3D structures) and research data with a paper.

Phil Bourne: Beyond the PDF.

It appears to me that we haven't talked much about supplementary information, and it really has been something everybody was doing out of necessity, without too much thinking about many of the issues, including standard formats, problems for users finding and storing this supplementary information, and copyright issues.

Most journals have (often similar) instructions regarding supplementary information, e.g.:

- *Supplementary Information is peer-reviewed material directly relevant to the conclusion of a paper that cannot be included in the printed version for reasons of space or medium.* – Nature
- *Although BMC Medicine does not restrict the length and quantity of data in a paper, there may still be occasions where an author wishes to provide data sets, tables, movie files, or other information as additional information.* – BMC Medicine
- *Supplemental Information may include additional control data, validation of methods and reagents, primary data, nonprintable media files, or large data sets. It can also include detailed information regarding Experimental Procedures, including materials (oligonucleotides, plasmids, strains, etc.).* – Cell
- *We strongly encourage authors to include such things as videos, 3-D structures/images, sequence alignments and data sets that are very large, such as those obtained with microarray hybridization experiments.* – J Biol Chem
- *We encourage authors to submit essential supporting files and multimedia files along with their manuscripts. All supporting material will be subject to peer review.* – PLoS ONE
- *Science does not accept as supporting online material HTML files including JavaScript or other scripting languages or Cascading Style Sheets, PowerPoint presentations, and TeX or LaTeX files.* – Science
- *Instead of appearing in the printed version of the journal, supporting information is posted on the PNAS Web site at the time of publication. SI is referred to in the text and cannot be altered by authors after acceptance.* – PNAS
- *The amount of online-only material should be limited and justified. Online-only material should be original and not previously published.* – JAMA

The announcement of the Journal of Neuroscience will hopefully initiate a broader discussion of the usefulness and best format of supplementary information. The most interesting aspect for me and several of the bloggers discussing the

announcement is the publication of the research data associated with a paper. For now supplementary information is often the only place these data can be published, but there are many reasons why this is not the best idea in the long run.

[¹]: This is a perfect example for why we need better systems to track blog posts relating to an article. We have Nature Blogs, Streamosphere or UberVu (and probably others) but they are far from perfect.