

This article contains supplemental information... or not

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The first part of the title to this commentary, or a variation thereof, is commonplace in most published articles these days. If one were to look back historically at when the phenomenon of “supplemental information” began, it appears that it was sporadically introduced around the turn of the century about a decade ago. At that time, only a few journals adopted the idea of including additional information with the online version of an article. Indeed, the inclusion of supplemental information with published articles seems to correlate with the increased dependence of accessing a journal online. But if one were to ask the questions: who started this phenomenon and are there uniform guidelines as to what and how much should be included in this online inclusion, the answers are not readily apparent. In fact, the answers may lie in the answer to the question: why do we have supplemental information to begin with?

An informal survey of editors of some high-impact journals indicates that the impetus for supplemental information came from the editorial boards and not from submitting authors. That is, authors were not looking for a way to include more information but editors wanted to see this, or at least a redistribution of the material they perceived as relevant. Many journals, for financial considerations, restrict word or character counts on their articles. In an effort to allow authors to maximize the data they are presenting, many journals allow detailed experimental procedures to be included in a supplemental information file. One editor of a prominent journal suggested that much of the material in the supplemental information is the result of author rebuttals to reviewers' comments or questions. Since there is increased online access, and supplemental information is never found in print-form, this represents a means of increasing transparency by showing all readers (or those who choose to access the online version) the responses of the authors. In addition, in data-rich fields such as genomics and proteomics, including all of the raw data in the main body of an article is simply not possible and such data is often included in supplemental information. Finally, some authors include still-shots of live-cell imaging in the articles and, in the interests of both transparency and completeness, include the full movie in supplemental information. These are certainly justifiable uses of this online section of an article.

However, over the past few years it seems that supplemental information has evolved other uses, particularly by authors and journal reviewers. This stems from the fact that the costs associated with supplemental information are minimal since it

is never printed. So reviewers tend to ask for additional material that could not easily be included in the main body of the article and authors have increasingly used this section to add additional information that, in some cases, may not be publishable on its own but can find a home in this “free data” section. How many of us have experienced the frustration of printing an article, sitting down to read it, only to find the phrase “see supplemental figure X” which was not printed since it is not attached to the body of the article. To remedy this, some journals have started to include links to an “extended version” of an article that includes supplemental information. But they are still careful to have a PDF file of the main article separate. It would appear that to not have such a PDF file would acknowledge that there is important data in the supplemental information section that may have been better included in the article itself. Further complicating supplemental information is the fact that there are no firm guidelines between journals to allow this information to be searchable, as a title, abstract or text-word currently are in PubMed. Finally, there is a measure of “good faith” among scientists that appears to have been lost by the inclusion of certain pieces of data in supplemental information. This is highlighted by the fact that some journals do not even allow the phrase “data not shown” in an article anymore. The implication seems to be: If you did it, show it.

With the launch of *Cellular Logistics*, there is an opportunity to produce a journal where the articles are truly “stand-alone” as they were just over a decade ago and to restore the trust that pervaded scientific literature for centuries. The journal asks that two criteria be met by the authors: (i) the results must be supported by the conclusions and (ii) the conclusions must add new information to the field. The articles should be truly stand-alone with respect to the data and conclusions. That is, if it is important enough to support your conclusions, it should be included in the main body of the article. If not, then it should be left out or it can be listed as “unpublished data” in the Discussion. Of course the reviewer has the option to ask that it be included in the manuscript. Although subject to change with time, the guidelines for supplemental information for *Cellular Logistics* are:

1. Supplemental information cannot contain additional results. However, papers reporting structural data can submit Tables related to data collection and refinement in this file.
2. Supplemental information can contain details of experimental protocols but sufficient detail must still be provided in the main body of the article to allow other investigators to repeat any experiment, assuming they have the proper background in the method.

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3. Tables are permitted as long as they pertain to experimental methods (eg. strains, oligonucleotides, plasmids).

4. Movies can be included.

5. Supplemental information with figures related to control experiments can be submitted with the original or revised manuscript but will not be posted on the journal web site. In this instance, the use of supplemental information is to convince the reviewers that such controls have been suitably performed and providing this information is at the discretion of the submitting authors or at a reviewer's request.

6. Reviewers may request that some material in the supplemental information file submitted with the manuscript be included in the main body of the manuscript. If space does not allow, then a reviewer must indicate to the editor why such

material needs to be shown. In this case, inclusion in the supplemental information file may be granted. It should be stressed that the onus is on the authors to include the material and remain within journal limitations by modifying existing figures and/or writing.

It should be mentioned that *Cellular Logistics* embraces the policy adopted by other journals to discourage the use of "data not shown" in support of conclusions. This type of data, if not needed to support the present conclusions, can be used in a speculative manner in the Discussion.

Clearly, authors will have to be judicious in deciding what to include in a manuscript and to think twice as to whether inclusion enhances an article or not. This is not necessarily a bad thing.

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