

Will scholarly journals perish?

Will scholarly journals perish? This is a question that has puzzled me for years.

The introduction of online journals has resulted in the inevitable recession of print journals. The uprise of the open access journals has been changing the structure of scholarly journals ceaselessly. What keeps turning over in my mind is the open access of clinical trials data. What would the bigger picture be if open access to clinical trials data became the mainstream?

It is interesting that with the primary bottleneck being the availability of open data, the Big-data Clinical Trial (BCT) seems to stay where it was in spite of the increasingly popularity of “Big Data” among scientists. It has due to the fact that the fact that without open data, a statistical analysis is restricted to a particular area (or several areas). Even with big enough data, the study can only be termed as “research with big data sets” rather than “big data research”, which are totally different concepts. Big Data is constituted by a plurality of dimensions. On one hand, for an individual (e.g., a patient), the relevant data covering his/her disease course is large enough; on the other hand, for the entire population, as more as individuals (e.g., patients) are expected to be included, to contain all the elements just like the “universe set” in set theory; by doing so, scientists expect to carry out the so-called clinical studies in real-world settings.

Why do real-world-based clinical trials so appealing? It is understandable that there is a likelihood that the results and conclusions will be altered in studies targeting the same issue using the same research method with the sample size changed. Indeed, the probability of such a likelihood is quite high. In many top journals, it is a common phenomenon that some authors tend to validate the results of one study in another population using the same research method. However, if the results are “validated” in one population, it only means that they are “repeatable”. Will the results also be repeatable in the second, third, and populations beyond? If the attempts are not extensively iterated as they should be, this “validation” is, in a sense, equivalent to self-deception.

When clinical research data is open accessed, we can easily integrate data from multiple centers for statistical analysis and meanwhile “validate” the results in multiple populations. If this is the case, then another question arises: can everyone easily publish his/her results/papers in high-profile journals such as the *New England Journal of Medicine*? My answer is NO.

When the open access to clinical research data becomes mainstream, it will be easy to have access to a constantly updated database on the Internet. Simply by clicking on a button, we could obtain the statistical results of the most current data. Another click would display the validation results based on a specific population. The database would be updated at regular intervals (e.g., 1 month or 1 day), and the statistical results would likely also be changed accordingly. At that time, the question may change to “would any researchers publish their findings in a journal?” Well, even if someone is still keen to write such articles, journals may be reluctant to publish them because of the indefiniteness of the findings with the risk of being overturned at anytime.

Eventually here it comes the serious question: will scholarly journals perish? My answer is still NO. In what way then can scholarly journals continue to be relevant?

During my Business Administration course, my teacher distributed to us an article from the Case Study column of the *Harvard Business Review*. In this highly respected journal, articles in this column often present one case first, followed by the comments from two experts. These comments could either support or oppose each other. My teacher asked us to study the case, read through the comments and then form our own point of view on the case. He encouraged us to interpret the case from different perspectives independently, which I found to be a fairly practical exercise.

Thinking of this course brought up a possible answer to me. When the open access to clinical research data becomes mainstream, the entire publishing industry, especially the publication of “scholarly journals”, would eventually experience revolutionary change. It may no longer focus on rigid and cold outcomes but would surely shift focus towards the reflection on problems, the update of insights, and the integration of science and arts.

AME Medical Review Series is a product born of this new mentality. As an attempt, we decided to invite international experts to provide their views on a specific topic to share their insights with more clinicians with the aim that this will ultimately benefit more patients. The first chosen topic for the series is the currently controversial one: conventional surgery versus

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stereotactic body radiotherapy for the early stage lung cancer. As the first book to the series, we hope it will give you a glance of the coming changes.

The book series will be written by a group of individual experts who are willing to contribute medical reviews and comments for those readers who are specially interested in clinical research and medical reviews. While the book in your hand may be about a difficult subject, we do hope we have presented it in an accessible manner. We would be overjoyed if it can, in any way, bring you thought and inspiration.

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