WHY PUBLISH DISCUSSIONS AND AUTHOR RESPONSES TO PAPERS PUBLISHED IN THE *JOURNAL OF CAVE AND KARST STUDIES*?

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In the last issue of the *Journal of Cave and Karst Studies* (April 2005; vol. 67, no. 1), two discussion articles (Barton and Pace, 2005; Davis, 2005) of a previously published paper (Hunter *et al*., 2004) were published. Responses by Hunter *et al*. [this issue] are also published. A question that some readers may be asking: Why is it necessary to include discussions and author responses in the *Journal of Cave and Karst Studies*?

Allowing for the development and publication of a discussion article in the *Journal* furnishes readers with different perspectives on the published research. By affording individuals the opportunity to publish discussion articles of previously published papers, it is then also necessary that the original authors be given an opportunity to respond.

Many top-rated peer-reviewed journals include provisions for comments or discussions of previously published articles to also be published for the benefit of their readers. Publishing these discussions allows for the correction of errors possibly included in the original paper, publication of additional insights gleaned from the original paper, and possible suggestions for future research based on the original research.

The publication of author responses to discussions is equally important. Ideally, responses would be published in the same issue as the discussion article so that readers can get both perspectives immediately, but this is not always feasible. An author-produced response to a discussion article allows for the correction of potential errors contained in the discussion, additional overlooked insights by both the original paper's author and the discussion author, or just acknowledgment of the discussion article's value.

The notion that the purpose of a discussion article might be to correct errors in a published paper might suggest a problem with the peer-review process. Peer-review does not necessarily mean that a paper has been thoroughly examined to ensure scientific "perfection," which is unrealistic. Rather, peer-review does ensure that the basic research concepts, methods, and conclusions are sound and reasonable.

In general, readers of scientific literature generally assume that when an article is published in a peer-reviewed journal it means that someone has checked the data and perhaps even replicated how the data was collected and analyzed, checked the equations used and calculations made, and checked that the stated conclusions are fully supported by the evidence presented (McIntyre, 2005). But peer-review does not guarantee any of this, especially because many, if not most, journal editors and reviewers work as volunteers.

The net effect is that influential papers can continue to be quoted for years without the data or methods ever being fully evaluated, let alone independently checked, even as future research projects or policies are developed based on the previous work. Publication of discussions of papers will not ensure that any errors contained in the original work will subsequently be caught and corrected. However, it is perhaps more probable that the errors will be caught by someone who has some related expertise in the subject matter and who has conducted a more in-depth analysis and prepared a discussion article of the original work.

Overall, it is believed that publication of discussions and responses will be good for karst science in general and the karst community at large. By regularly publishing discussions and responses, the science will necessarily improve as prospective authors become more careful in their research and presentation. In addition, controversial concepts brought out by the discussions and responses may lead to new directions for research and study.

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