*The related CoRR challenges of credibility and censorship*

# The Dilemma of Credibility vs. Speed

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## Abstract

*CoRR's implicitly constrained but officially open acceptance policy for submitted papers raises concerns about both censorship and credibility. To avoid refereeing incoming papers yet still help readers assess their merits, CoRR could use coordinated public comments and ratings in the manner of some online auctions and booksellers.*

***H.3.7 Digital libraries****—online publishing, information retrieval, document management*

***Keywords****—-credibility, censorship, research evaluation*

I applaud the CoRR committee for their efforts in not only setting up a rapid-access system, but for looking to expand the service. Most of their decisions seem logical, reasonable, and consistent—truly a feat to be admired when coming from a committee. The members of the committee are worthy of praise.

Yet there is one seemingly minor issue that they quickly glossed over, yet which is an issue of extreme importance when it comes to publishing and distributing information. That issue is the combined questions of credibility, validity, and censorship.

## The Credibility Problem

Specifically, Halpern states that the criteria for publication include "…anyone from a university, government research lab, or industrial research lab. Others may also submit upon request, with some minimal argument that they are engaged in research. This filter was put in place to make it easier to reject 'crackpot' physics papers."

Yet he also says that nobody who has wanted to post a paper has been prevented from doing so, and also admits that the overall policy may have to be revisited in the future. I believe that they would be wise to revisit this policy now instead of waiting.

Every publication, whether printed or online, constantly balances the question of speed versus credibility. Most print-based publications, especially those printed by professional organizations, tend to make credibility a very high priority, and thus sacrifice speed to a certain extent. They want time to review a submission, perhaps to have it "refereed" by others who are already considered experts in the field. The last thing they want is to publish an article later deemed to be "crackpot" science.

Yet the question of credibility raises a difficult issue. Thomas Kuhn, in *The Structure of Scientific Revolutions* (1962), explains how even the most seemingly progressive scientific communities tend to become entrenched and relatively static, and, over time tend to guard their cherished beliefs and turn a deaf ear to new ideas. The more revolutionary a new idea is, the less likely it is to be seen as credible and more likely the author is to be viewed as a "crackpot." This is logical and virtually unavoidable, as any great revolutionary leap will fall outside of the established order, and thus be a threat to those who live within (and profit from) the existing belief system.



ACM Journal of Computer Documentation, 2000,24:60-63
 ISSN 1527-6805

Any magazine seeking to retain its credibility will therefore tend to protect its credibility in the eyes of the scientific community it serves by publishing papers that agree with or otherwise fit within established beliefs, or, at most, which represent minor, evolutionary steps instead of major revolutionary steps. In other words, credibility, over time, tends to become equated with stasis instead of progress.

This bias could not be more clear than in Halpern's statement of who can submit without approval: people from universities and major government and industry research labs. In other words, The Establishment. Those who are already In Control. It is a selection mechanism based not on any level of validity of the content involved, but rather upon whether you are already part of the "in" crowd. Thus we can see that the committee also believes, at least to some extent, that credibility is a significant issue for CoRR.

Yet this need for credibility has led them into a trap. They have, perhaps unwittingly, chosen to give the appearance of control and credibility where it does not, in fact, exist. Anyone, crackpot or not, can register a virtual domain name with an "edu" extension and thus bypass the software controls. Or they can save the trouble by appealing directly to the committee, which will publish with only "minimal argument" on their part. Halpern does not tell us what that means, but does admit that no submission has actually been denied. Thus, for all intents and purposes, there is no control whatsoever over what is submitted, there is only the appearance of control.

So we end up with a major contradiction. The committee tacitly admits that they think CoRR should have some control and some level of credibility, and they have listed controls which would seem to limit submissions to apparently credible sources, yet the controls are 100% ineffective. So we have to wonder—why have the appearance of controls at all? The clearly false appearance of credibility may actually reduce the credibility even more than if there were no controls at all, for it appears that the committee may be intentionally trying to fake credibility that does not exist.

Indeed, I am actually most bothered by this idea of controlling only the "crackpots." There is an underlying assumption here that we are so educated and enlightened in this modern day that there need be no concern that we would be censoring truly brilliant thinking. Crackpots are so obviously wrong that nobody with any sense would waste even a moment's thought on their claims.

But, of course, that's what people said when Columbus claimed the earth is round. Crackpot! He'll sail right off the edge! Anyone can see with his own eyes that the world is flat. Round indeed! What a crackpot.

In fact, almost every great visionary was resoundingly ridiculed for his or her beliefs. Gallileo. Columbus. Edison. We could name dozens and dozens of them.

So are we like the manager of the U.S. Patent Office, who said almost a century ago that "everything that can be invented has been invented"? Is our arrogance so great that we know, really know, without any doubt ever, that an idea is really, truly crackpot? How can we be so certain that we are so much smarter that those others? Wasn't it just a few decades ago that science claimed unequivocally that the electron is the smallest discrete piece of matter? Don't we now believe in quarks and mesons and other "sub-particles"?

## Alternative Solutions

I believe that the CoRR committee would do well to reevaluate its stance on credibility and censorship, and really discuss what their priority is. There appear to be two ways to go, toward or away from more control and credibility.

If CoRR wanted to provide the papers with more credibility as perceived by the existing scientific community, the committee would have to take steps to actually control the submission of papers. It would have to establish criteria, create review committees, and so on. Of course, with the number of papers CoRR handles, this would be a massive undertaking that would undoubtedly lead to delays longer

than those experienced with existing publications, thus defeating CoRR's primary goal of speedy publication.

The second direction would be to remove even the appearance of controls and simply allow anyone to post anything. Alas, this could lead to a different problem. Inherent in the formal review process of established publications is that the publication is reducing the chaff and providing us only with the wheat. For the most part, articles that don't add anything are less likely to be published.

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Because CoRR does not have this control, the amount of data a user must sort through grows at an astounding rate. After a while, no matter how well organized or indexed, there will be so many papers that it simply takes too long to find anything useful, so the searcher gives up, and instead goes back to relying on the magazines, because they essentially do this qualitative sorting for him. In fact, with the number of papers CoRR has right now, this may already be a problem.

But maybe there is a third option. Maybe there is a model that allows anyone to post a paper but still allows some form of assessment to occur without burdensome intervention by the CoRR committee. In keeping with the relatively informal level of control CoRR has now in order to facilitate rapid publication, perhaps CoRR would benefit from a somewhat informal level of "peer review" since, after all, peer review is essentially what journals use now to assess credibility of a paper.

In fact, two excellent models already exist for just such a system. At the risk of sounding like a crackpot myself, I would suggest that the committee consider aspects of both the ebay auction site and the Amazon book selling site. On ebay, every user (buyer or seller) can leave "feedback" for every other buyer or seller, and this feedback can be associated with a particular transaction. And each piece of feedback, good or bad, can have a short comment attached to it, as well as a short reply by the author. All of this information is available to all other users.

So, for example, if I see something for sale that looks interesting, I can immediately bring up the feedback ratings on the person selling the item. If the person has a lot of positive feedback, then I can bid with confidence, knowing that the odds are very good that I will have a pleasant transaction. If the person has received one or more complaints, I can choose to not even bid on the item. Or, I can look at the feedback received by the person making the negative comment to see if that person is himself credible or just a complainer.

They also have a nice search and sort model. From the home page, I can select categories and subcategories, and within a subcategory I can see all listings or just those within a certain timeframe. I can search by item, category, name of seller, price range, and so on. If I like the merchandise of a particular seller, I can list all of the current auctions by that person. And yet all of this is done automatically based on a simple form the seller fills out.

The Amazon site is similarly easy to use. I can search for a book by any number of methods, and once I find a certain book, I also am given a list of books that are related or have been purchased by people who also purchased the book in question. I can also leave a rating and my opinion of the book.

If the committee were to apply aspects of these two models to CoRR, they could significantly increase both the usability of their site and its credibility. Allow anyone, including "crackpots," to post papers. Then allow the community to review and rate the papers. The rating system can and should be extremely simple.

Quick ratings associated with authors and papers would allow a searcher to be far more

ACM Journal of Computer Documentation, 2000,24:21-24-

efficient in deciding whether to read a certain paper. For example, what if I did a search for papers on a certain topic, and 50 titles came up. Without the ratings, I have to rely on the title and the abstract, and still may miss good papers and waste my time on irrelevant ones. With a rating and brief-comment system, I would have another way to quickly see which papers had received high marks and why, and which had not and why.

This rating and short-comment system would provide the user with valuable information that could reduce the effort spent selecting papers, would increase the credibility of the system by identifying authors and papers generally accepted by the community to be good or bad, and would remove the need for, and questions about, censorship.

Again, the CoRR concept is an excellent one, and I heartily commend the committee for all its hard work, progress, and vision. However, I would encourage the committee to reevaluate its position on credibility and control of submissions, and encourage the committee to consider implementing some form of "peer evaluation" rating and comment system.

## References

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