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## What is wrong with academic publishing?

by Nikola Milošević - Monday, February 22, 2016

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I bet that each PhD student and even older academics at some point though or came to the idea that something is wrong with academic publishing. It is not hard to come to that idea, especially if you were influenced a bit by open source and left wing ideas that knowledge should be accessible and free. In the real life, research is not accessible at all, unless you or your institution pays huge amount of money. It is same for journals and conferences.

If you want to go for conference, usually it works this way: You submit a paper. Your paper is peer reviewed by the academics who are supposed to be experts in the field of your research. They do paper reviews for free and sometimes they ask conference participants to review each others papers. Based on reviews your paper can be accepted or rejected. In case your paper is rejected because of some reason (I need to state that reviews do not measure quality of paper. They are supposed to, but you may be rejected based on the fact that your paper's topic is not aligned with the goals of the conference, there is reviewer bias, bad luck, etc.) your journey as contributor ends. You can still go to the conference as delegate, by paying participation fee (for international conferences in computer science and health informatics fees range from 300-600 euro) and you need to pay for trip and hotel in the city of conference for the duration of the conference. This may be fine for attendee, however, fees are ridiculous high. I have seen organization organizing conferences for around 20-30 euro per attendee with included lunch and drinks. I assume the rest is profit, apart from a fraction they may need to pay for editors. However, in case your paper is accepted, they will publish your paper in conference proceedings and you should present your paper (either orally or poster). However, even if you contribute to the conference, you need to pay participation fee. This never happens in industrial conference. If you are contributing to the industrial conference, organizers may pay you trip and hotel and you for sure do not pay participation fee. However, in scientific ones you still need to pay fee, you need to pay travelling cost, hotel... Usually this is paid by research funding, which is kinda ridiculous, but apparently people don't mind. Research money is public money and someone is ripping it off for a bit of publicity. If people would stop supporting scientific conferences with ridiculous fees, they would not present on these conferences, these conference would cease to exist. That I would actually like to see. I like conferences. They do have their purpose. People present their research to the wider audience and people network which may lead to potential collaborations. However, I think that even scientific conferences should switch to attracting more sponsors. In computer science there are many companies willing to provide funding for conference in return for publishing their logo at sponsors page. These sponsors would not affect the independence of the conference or community. This way, cost can go significantly down. I am not saying it should be free, but should not cost more than 50-100 euros or dollars.

A bit different story is with journals. If you want to publish your work at some peer-reviewed journal, you simiallary submit your paper, reviewers are academics who do the work for free. Once they accept your paper, you have usually choice to publish as open access or closed access. If you go for closed access, journal will charge access to your article between 15-50 euro. You will of course get nothing out of that money, they all go to the publisher, who today usually don't have even printing costs, since most of the accesses are online, through website. If you go for open access, you need to pay costs to the journal that would cost them if they publish article for free. The charge for open access is between 2000-5000+ euro. Again, if you have research funding this can be paid, out of the usually public money, so the people can access it. In UK open access is enforced by research funding bodies, so the research goes back to the people. However, if your government does not have money or do not want to spend it for publicizing your research, you will be hidden to the most of the people apart from the rich ones and these who work in institutions that pays millions of euros for access to journal papers.

There is a switch with introductions of preprint archives. They are called preprints, but a lot of papers there have been very influential and they are citable. Some authors stopped publishing in journals and they just upload papers to these archives. One of such archives is [ArXiv](#). There is no peer review, which is critiqued that they do not assure the quality of papers. However, if they introduce some kind of voting, rating and commenting for articles, it can make community driven approach for assuring quality of certain publications. Since reviewers are not paid, they won't be here paid as well. System will work in a same way, just we will bridge the need for publishers, which will bridge the need of fees for the access to the research publications. I don't know the best solution to introduce rating and commenting, but I have couple of ideas how it can be done and probably each computer scientist have who knows at least something about system design. We have technology and crowdsourcing is quite successful in many areas, so I don't see why it would not be in this if it is done properly.

Currently, publishers are earning money just for putting a paper on their website. They may do a bit of editing, but still they want you as author to make your paper super correct. They can reject your paper for spelling or grammar errors. So what is the point of having editors? I don't see it if you want 100% perfect articles from authors. Government do not provide enough money for the research. This is common complain in each and every country in the World. However, a lot of the money they provide is wasted on publication and conference fees. I believe this should be stopped.

Money is the problem that is mainly concerning me. However, there are some more issues with publishing we need to work. For example,

sometimes you need to allow author to respond to reviews and it can be assume that quite often they are not right. I had experience when they rejected my paper, which used machine learning to classify similes (figurative comparisons). The reviewer said that I made balanced dataset for training, while in reality data are not balanced, so I did learning wrong. However, this reviewer obviously did not know much about machine learning, since the model will be wrong if the dataset is not balanced. It is kinda basic machine learning theory knowledge. Who suffered his ignorance? It was the authors of the article whose paper was not accepted (this may be bold statement, since there were 3 reviewers and various other comments and suggestions, however, this one was very wrong). The editors of that conference (LREC) did not allowed authors to respond to reviews, which in this case was a bit problematic. However, reviewers have to be understood that they may not know everything, especially if your study is interdisciplinary and they don't have much time to do it (since they do it for free), they may be tired, pissed off because of something, etc. However, editors and conference organizers need to establish the just system. I believe that just system can be established with some communication platform, that will introduce crowdsourcing. In such platform bad reviews will be spotted by community and fixed.

We currently have a concept of bad papers, but we are lacking of concept of bad reviews. By bad review I mean a review that is not done properly, that lacked some background knowledge and because of that misjudged the paper. Bad review can be for both good and bad papers. We know that there are a lot of bad papers that passed peer review, while some good ones do not pass. This is due to the bad reviews. In system where people would be able to vote, rate and comment articles, everything will remain published, but it will by time gain the label of its quality.

We are loosing currently a lot of time, money and resources in science. The resources in science is not well managed, we need to find better solution for resource management in science. We need to overcome that some scientists spend 50% of time writing and editing their own paper, submitting and resubmitting it to various journals. Other slowdown of science is as well review processes that takes usually for months. Sometimes reviews and corrections takes more than year from the time the paper is submitted to the moment it is published. We are at least one or two years behind the state of the art in literature than we are in reality. This needs overcoming. Technology allows us to overcome this issues. I believe some strong lobbies would be quite angry, but it is time to adjust our progress and make it accessible and cheap for all.

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