# Peer reviewing - making the process democratic, open and fair

Ludger Hofmann-Engl
The Link Schools, London

submitted to e-KCPR 2006, July 2006

## 1. Introduction

When I accepted the invitation to contribute to the International Electronic Symposium on Knowledge Communication and Peer Reviewing: e-KCPR 2006, I first had thought to contribute to it in a more academic fashion, tracing its origin and relating its exiting form to such an ontogenesis. However, as I thought about the issue longer, I realized that the issue at hand is a highly political issue and hence a political approach to it seemed to be more appropriate.

The author of this contribution has experienced peer-reviewing for almost a decade, both as a peer-reviewer and as an author being peer-reviewed. While the majority of his papers have been accepted, there were three instances where his work has been fiercely rejected. The author has reviewed around 20 papers of which he too rejected some. We will now enter a debate about the issues involved in peer-reviewing.

## 2. The four main problems about Peer-reviewing

The first issue is that it is not always easy to locate a reviewer. This is the case for a number of reasons, but time seems to be the most important one. Most academics are quite busy and hence find it difficult to commit themselves to an additional burden in terms of peer-reviewing. If, however, an academic begrudgingly agrees to take on such a task, it will be, as said begrudgingly, and hence the reviewer approaches the paper in question with a negative attitude. A further issue is the expertise of the reviewer. The author must admit that this is an experience which he is unfortunately very familiar with. Out of the number of peer-reviewers the author has been reviewed by, there has not even been a handful of reviewers who were experts enough to produce a reliable report. Quite frequently, those reviewers were not familiar with the more recent literature and in one interesting instance, the author was informed that some of his references were unaccessible and this, although a simple google search produced all of those *obscure* references. When the author replied to the *action letter* by saying that it is not acceptable that a reviewer had not made use of the internet and this in the 21st century, he was informed that he was now considered being arrogant (*Musicae Scientiae*, 2004). Lack of competence appears to be replaced by a variety of tools including a) ad homine attacks, b) denying the author's competence (in the author's case done so by *Music Perception*, 2002), c) criticising the references by claiming that important references have been omitted (in the case of the author done so by *Music Theory Online*, 2004), d) that the standard of language is too poor (that seems to be happening all the time) and e) claiming that the paper does not address any new issues. When beening asked to review papers for ISMIR, the reviewers are asked to rate their own competence. However, the author doubts that the majority of reviewers will produce an honest judgment about themselves. We conclude this paragraph by summarizing that there are four main

issues in respect to locating adequate reviewers:

Reviewers

1. seem to have no or little time and do not want to commit to peer-reviewing
2. seem to approach papers with a negative attitude
3. are often enough not competent to make appropriate judgments
4. use tools to run a paper down

So the question is, how this system could be improved, because quite clearly - at least this is the experience of this author - the system is not fair?

## 3. Tackling the issues

The answers to this question are not particularly complicated but, so the author suspects, will not be welcomed by the majority of institutions and researchers. There are three particular aspects which need improving and these are *accountability*, *incentives* and *standardisation.*

### 3.1. Accountability

A reviewer who approaches a paper with a negative attitude and uses the above named tools in order to *run the paper down*, does relieve her/his frustrations but does not help to further the knowledge of the fellow scientist nor the advance of contemporary science.

A major issue here is, that generally peer-reviewing is anonymous and the reviewer is not accountable for her or his actions. This means that there are no controls whatsoever, putting the reviewer into an omnipotent position.

Now, in no area of our contemporary society is such a situation tolerated or supported. A sales person has to wear a badge bearing her or his name, a judge in our legal system has to identify her or himself and so does a politician whether on a local or government level. Even a student at University has the right to complain if (s)he feels that (s)he has been treated unfairly during an examination. However, when we come to the highest level of academic endeavour, all controls are stripped away. Surely, this is not acceptable within a modern society.

This means, reviewers have to reveal their identities and an appeal system has to be put into place. If then, for instance a reviewer is to be found to produce unfair reviews in several instances, a penalty system has to be put into place (e.g. banning this academic from future reviewing).

The author is aware that there is a cost issue involved just as much as there is an organisational issue, but we will address these issues further down.

### 3.2. Incentives

The issue discussed in 3.1. will have a negative effect on academics to be prepared to work as peer-reviewers. Not only that they do not receive any incentive for their work and have to give up

spare time, but on top of it, they will under the proposal put forward by this author be accountable for their actions. Generally, there are a number of incentives which attract attention such as status, time off or money, but in terms of peer-reviewing all three could be made use of.

3.2.1 Status Incentive

If peer-reviewing was to be done by revealing one's identity, a system would be created whereby a hierarchy based upon merits was to evolve. This is, there would be famous reviewers and infamous reviewers and it would be an academic achievement to belong to the first class. Peer-reviewing thus would become integral and recognized part of academic activities.

3.2.2 Time incentive

Clearly, at the moment, an academic will have to dedicate her or his spare time to peer-reviewing which adds an extra burden to the work load without any reward nor any recognition. However, if the university system was to be changed so that, in analogy to a sabbatical research year, peer-reviewing was to be part of the normal activities of an academic with time allocated for this kind of work, a further incentive would be created whereby an academic would not consider peer-reviewing an extra burden but an integral part of her or his academic life.

3.2.3 Monetary Incentive

While not all academics, like the author of this contribution, are part of a university structure - and hence incentive 3.2.2 and to some extend incentive 3.2.1 are not applicable to such academics -, monetary incentives would be an incentive to any academic regardless of their position. Quite possibly, following Maslow's motivational triangle, monetary incentives might generally be a stronger incentive than 3.2.1 and 3.2.2.

**3.3 Standardisation**

Not only that every academic discipline has its own standards or non-standards but the same is true for every journal and every conference. Hence, some standardisation is not only desirable but inevitable, if a fair peer-review system is to emerge eventually.

Some issues of standardisation will have to do with *use of language*, *form and structure, originality, relationship to existing work* and *relevance.*

3.3.1 Use of Language

Quite possibly, there is not one international conference or international scientific journal left where the main or the exclusive language is English.

Now, according to the experience of the author, it is a common place to reject or diminish the value of a paper by claiming that the usage of English is inappropriate (if the author is not incorrect, this argument is particularly used by USA scientists and not so much by UK scientists). Clearly, someone who's first language is not English, will produce - at least in most cases - a text which might contain grammatical errors or expressions which seem awkward up to a point where the text might be rendered ineligible. It is important to remember that we are talking here about science and not literature and hence as long as a text is somewhat clear, it does not matter whether

it is good or bad English.

There is a fine line between rejecting a text because it is difficult to read due to some incompetence on a language level and rejecting a text because it is ineligible. Hence, some standardisation is necessary. The author makes the following suggestion:

If a reviewer feels that the text is ineligible, the reviewer should be required to state three explicit examples where the text is so wrong that it is not understanable.

3.3.2. Form and Structure

A text which omits vital information (e.g. captions to an equation or unlabeled graphs and tables) ought to be rejected or at least the author of such a paper requested to resubmit such a paper. Additionally, papers which make use of information which is not standard knowledge (this is, information which is not text book knowledge) without stating where this information can be obtained (either in form of papers, CD-Roms or online) ought to be rejected as well.

The author admits that these are harsh criteria, but according to the experience of the author, there is a great number of papers "floating about" which are utterly ineligible because they fail to fulfill these criteria. The author would go so far as to claim that up to 50% of the papers presented during conferences are of this type and waste the time of fellow researchers.

It is particularly helpful, if a researcher presents a type of new model or computation, to illustrate such models and computations via an example. The author recommends that researchers should be encouraged to furnish their papers with examples where possible and failing to do so should not necessarily lead to the rejection of the paper but it should be held against such a paper.

Generally, conferences or academic disciplines have their standards of presentation and a reviewer ought to check whether these standards are kept. The author recommends that small deviations ought to be accepted but if the deviations appear to be significant, the reviewer ought to state three examples where the author in question failed to work along those standards and rejection seems to be justified.

It goes without saying that incoherent thought, incorrect deductions, over-generalisations etc. are very strong criteria for rejecting a paper, but ought to be stated explicitly by the reviewer. It should be standard that common place statements and generalisations by the reviewer ought to be avoided.

3.3.3 Originality

As such this issue is a straight forward matter, however in practice it is not. Drawing on his own experience, the author recalls that quite frequently reviewers claim that a paper does not contain original material especially when it contains original material. The author wishes to give an example: As he worked towards his PhD, it was claimed by one of the examiners that his music psychological experiments did not contain anything new by referring to existing literature. However, as much as there had been links between the material as produced by the author and the existing literature, the material produced by the author was not only new but was in conflict with existing literature proving existing material to be at fault. Hence, the question: Why would a reviewer or examiner claim that original material was not original? Two simple answers come to

the mind of the author; firstly, scientists or people in general are reluctant to embrace a concept which is in conflict with existing beliefs and secondly, quite often a new idea is seen as a personal threat to the work of established scientists.

The question of how to avoid such bias is not quite so easy to answer, but accountability and the requirement to explicitly state how the originality of a paper has been compromised appear to be the most promising. This is, it should not be acceptable to simply state that a paper by so-and-so in so-and-so has already covered the issue, but close quotations ought to be required. It is too easy to say that so-and-so did the same thing in so-and-so in the year so-and-so.

Originality is a highly important aspect to any paper and hence it should be treated with the utmost care.

3.3.4. Relationship to existing work

This aspect has been covered in the sense by 3.3.3. Authors are required to related their material to the existing literature. If an author fails to relate her or his work to important contributions which would alter the outcome of her or his research, this will have to be taken very seriously and should be stated by the reviewer clearly stating the exact deficiency. In case that the outcome of research would be falsified if related to the relevant literature, the paper ought to be rejected. If the paper however requires modification, the author ought to be informed and be allowed to incorporate changes of this kind. If, however, a link to existing literature does not change the outcome but places part of the credit onto another scientist, the author ought to be required to make an amendment. Any literature which has not direct impact on the result and does not diminish the credits should be omitted.

3.3.5 Relevance

To estimate the relevance of a paper is very difficult. In case, it is a ground-breaking contribution, there is a good chance that its full relevance will become clear in time only. Hence, relevance ought to be a minor point when assessing the quality of a paper. Quite possibly, it ought to be considered only, if other aspects are doubtful.

The reader could well object to this statement that an original paper written on Shakespeare submitted to a conference on electronic data projection would obviously have to be rejected on the ground of its irrelevance, but in the experience of the author, such miss-submissions do not take place in reality.

## 4. Thoughts about the economical structure of peer-reviewing

Quite clearly, the author suggests that in order to improve the state of peer-reviewing incentives will have to be generated all of which are to be considered under economical constrains. Quite possibly the most important question is: Where is the money supposed to come from in order to create a peer-review system which is more democratic, open and fair? The answer to this question ought to be threefold. Firstly, registrations fees at conferences ought to include a certain percentage of money which ought to be allocated for the peer-reviewing process of the next forthcoming conference. Secondly, university and research laboratories ought to allocated some funding towards the peer-reviewing process and thirdly, papers which produce economical success (e.g. the development of a new drug) ought to require the beneficiary of the particular research to

put money back into the reviewing process (not quite dissimilar to the way royalties are being collected).

## 5. Conclusion

Drawing on his own experience, the author identified several shortcomings within the existing peer-review system. Shortcomings are of the kind that there are no incentives for scientists to commit to peer-reviewing, that the system is anonymous (which means that there is no accountability) and that there are no common standards set for the peer-reviewing process.

The author argued that by creating incentives, setting standards and requesting reviewers to be accountable for their reviews is quite possibly the only way forward in order to improve the peer-review system as it exists at the present time.

. .