

Cutting the Pie in a New Way - Towards a New Structure for Scientific Publication

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Abstract [en]: I propose a *neo-classical* structure for publishing and reviewing of scientific works. This proposal has the following characteristic components:

- Electronic “preprint archives” and other similar mechanisms where research articles are made publicly available without prior formal review are considered as true and full-fledged *publication* of research from the point of view of priority of results.
- Large parts of the reviewing process is done publicly and in the form of published review letters and other contributions to the scientific debate, rather than through anonymous and confidential review statements which dominate today. There is a switch from anonymous “pass-fail” reviewing towards *open reviewing* where the identity and the comments of the reviewers are made public.
- Since open reviewing happens *after* publication, rather than before, there is a second step where articles are promoted to “recommended” or “certified” status through the decision of a review committee. The requirements for certification are set at least as high as for the formally published journal articles of today, so that it counts like journal publication in a CV.
- Several techniques are foreseen for facilitating the selection process of the individual reader as well as for improving communication as such between researchers.
- One should accept that there are good reasons why there may be several articles (from the same author) presenting the same result. This suggests the introduction of a formal concept of a “result” which is represented by several publications, and to allow citations to refer to results rather than to some specific publication of the result.

I refer to this system as *neo-classical* because it assumes that peer review is done *openly* and *after* an article has been published. It is of course only proposed as a complement which can easily co-exist with the modern system, allowing each author to choose which of the two systems he or she wishes to use for a particular article.