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# PROS AND CONS OF OPEN ACCESS JOURNALS: PAYING TO READ OR PAYING TO PUBLISH?



crea

Consiglio per la ricerca in agricoltura  
e l'analisi dell'economia agraria

# SCIENCE must be open to all

even the most remote researcher (or citizen!) must be able to access a scientific article

this is the consideration behind the tendency of public research funding agencies (EU first of all) to “force” researchers to publish their results in **open-access journals**, or pay to ensure that articles are freely readable

*everything seems good, but is it really true?*

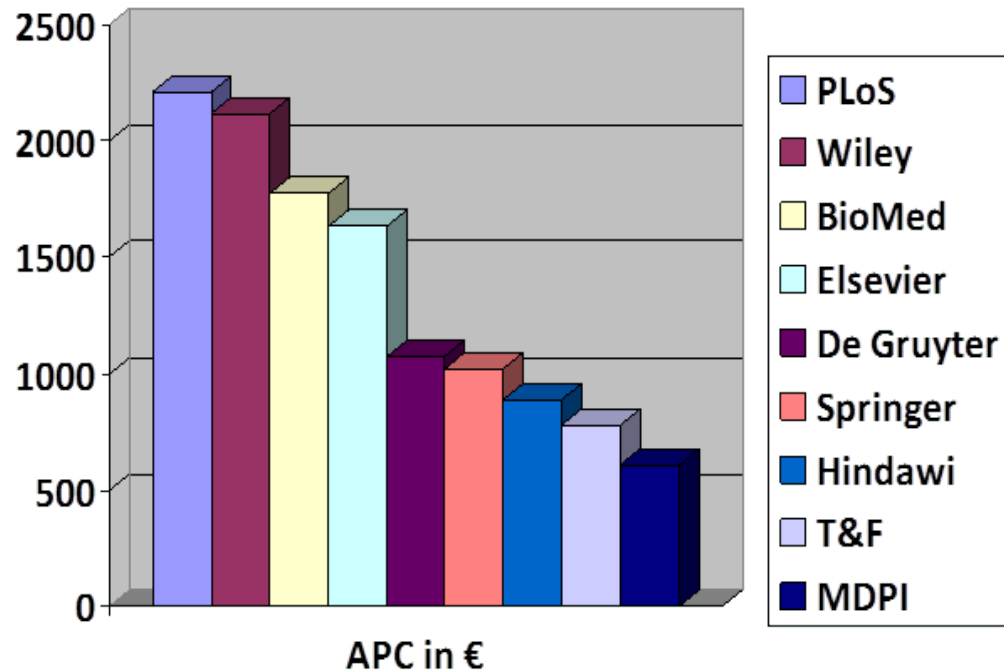
## the publishing market

- ✓ the scholarly publishing market is an ‘intermediated market’, with researchers acting as both producers and main consumers of published research, while the purchase of content is typically undertaken by academic libraries
- ✓ the **market for scholarly journals is worth some €10 billions per year**, with scientific, technical and medicine publications accounting for the vast majority of this figure
- ✓ currently, the value of the **open access market accounts for 5%** of the global journals market, while the proportion of immediate open access content is substantially higher, at **almost 20% of global articles**



## few big players in the scholarly publishing industry

while scholarly publishing is a global market with over 5,000 journal publishers, **five commercial publishers account for more than 50% of all articles published**



*average APC Prices converted to € from other currencies for comparison  
(excluding journals that waive 100% of their charges)*

- the big players in the publishing industry, e.g. [Elsevier](#), [Springer](#), [Wiley](#) and [Taylor & Francis](#), have all embraced [Open Access](#), albeit to varying degrees

*..... they seem to see [Open Access](#) as a business richer, in the long run, than subscriptions*

## the historical way to open access (OA)

1. in the 1990s when **journals created by individual scientists as an alternative to subscription-based journals were dominating OA scenario**: they were not considered by most academics, since there were doubts about both the sustainability of the journals and the quality of the peer review (usually not indexed in the Web of Science)
2. a **second wave consisted of transformation of some established subscription journals, mainly owned by scientific societies, in OA journals** (i.e. these publishers decided to make the electronic version of their journals freely accessible)
3. the **third wave of OA journals was started by two new publishers, *BioMedCentral* and *Public Library of Science* (PLOS)**: they pioneered the use of article processing charges (APC) as the main means of financing professional publishing of scientific journals
4. **fully commercial (and, unfortunately, even “predatory”) publishers have entered in the OA market**, whose value is currently approaching €500 millions per year

# four pathways to OA for scientific articles

- ✓ **gold-APC**: publication in journals that make all of their content OA via payment of an article publication charge (APC), and do not rely on subscriptions
- ✓ **gold-hybrid**: articles within a subscription-based journal are made open access, typically on payment of an APC to the publisher or through an offsetting agreement
- ✓ **open access archiving** (so called *green OA*): the practice of archiving a version of an article for free public use in an institutional (e.g. moodle UNITUS) or subject repository (usually after an embargo period, e.g. 12 months)
- ✓ **gold no-APC**: publication in fully open-access journals which do NOT charge an APC



## *APC fee may be paid by the author, the author's institution, or their research funder*

- ✓ academic publishers have widely varying levels of fees, **from under €500 to over €3000**
- ✓ journals with high [impact factors](#) from major publishers tend to have the highest APCs
- ✓ **mean APCs are approximately €1,500 (gold-APC) and €2,500 (gold-hybrid)** (currently, average subscription revenues are double this, at €4-5,000 per article)
- ✓ **APC does not guarantee that the author retains copyright to the work**, or that it will be made available under a [Creative Commons license](#)



# OA in the framework of research projects

- ✓ governmental funders, especially in Europe, and several non-governmental funders have foreseen that, as of 2020, the results of research they fund **must be published only in fully open-access journals**
- ✓ in recent years, the relative volume of **OA peer reviewed research articles has grown at a much faster rate than the increase in total annual volume** of all peer reviewed research articles
- ✓ .. but **policy interventions in Europe have been not sufficient to deliver the goal of immediate open access by 2020**, nor to significantly improve market competitiveness (evidences indicate that **growth in the OA market has slowed in recent years** to 10-15% per annum, but a growth rate of 25% every year since 2014 would be needed for the majority of content to be immediate OA by 2020)





## paying to read or to publish?

- **APCs shift the burden of payment from readers to authors**  
(or their funders)

*.... no longer pays the reader, but the writer, which is rather strange: think about going to the bookstore, buying a book and sending the bill to the writer ....*

(Borghetti, 2019)

- the major concern is that **if a publisher makes a profit from accepting papers, it has an incentive to accept anything submitted**, having a negative impact on the perceived neutrality of peer review rather than selecting and rejecting articles based on quality
- in principle, this concern might be remedied by charging for the article peer-review rather than article acceptance (but almost none publisher does it)



- the writer (researcher) will pay, but in reality it will not be so: ultimately, **the agencies that finance the research will always pay or the institutions to which the researchers belong**

(thus, in the end, what differentiates gold-APC from gold no-APC? .....the publishing market!!!)

- shifting publishing costs towards authors rather than readers is likely to **increase expenditure for the most research-intensive institutions**

## APC not for everybody...

- ✓ should OA scenario become general (all open-access journals with APC mandatory), **researchers from a disadvantaged area could read, but they would have trouble publishing**
- ✓ journals could reduce or remove APCs in such cases, but these are always concessions to be negotiated on a case by case basis
- ✓ so, unless discounts are available to authors from Countries with low incomes or external funding is provided to cover the cost, **APC could exclude authors from developing countries or less well-funded research fields from publishing in open access journals**
- ✓ on the other hand, **under the traditional model, the prohibitive costs of some journal subscriptions already place a heavy burden on the research community from developing countries or less well-funded research fields**



## the OA corruption?

→ payment for OA publication could be a financial incentive for journals to publish more and more articles (and - eventually – to lower peer-review standards)

- ✓ in some ways this argument can apply as much to the current subscription-based system as publishers often justify price increases on the grounds of an increase in the number of journal articles published
- ✓ OA journals managed by (some) **commercial publishers** (predatory?) **have very largely increased the number of published articles**  
*Beall J., 2012. Predatory publishers are corrupting open access. Nature 489, 179.*
- ✓ OA “megajournals” publish more than 10.000 (some even more than 30.000) papers a year



who read them?

**so-called “special” issues of OA journals:** *in many cases, just big money for predatory publishers*

- **special issues of journals** mean big money for gold (author-pays) OA publishers: **many OA journals have so many special issues each month (usually over 10!)**
- the special issue guest editor typically invites his contacts and colleagues to contribute papers for special issue on a topic, and they all have to pay author fees to the publisher
- in this way, the guest editor acts as an uncompensated agent for the publisher, and the publisher benefits financially from the guest editor’s professional and personal relationships
- often potential authors are also “selected” by untargeted emails based on general lists



## *my experience*



- ✓ in the last years, I have received many invitations from publishers to serve as guest editor (some my PhD students have received some of these invitations too!!!) - **I have never accepted to guest-edit for commercial OA journals**

### **I even no longer accept to do reviews for commercial OA journals:**

- some journals give 4–5 days for commenting on a paper as reviewer (quality?)
- when I try to encourage revision in reviews, you may get a "revised manuscript" 2-3 days later which you are then pushed to accept
- sometimes I highlighted potential plagiarism that the editors refused to consider
- **some publishers promise a voucher for a bulk of «well–done» reviews but then they provide the papers to be reviewed at random and, above all, they contact you less and less frequently as you get closer to having the voucher (i.e. «a mirror for larks»)**

on the whole, my impression is that commercial OA publishers see the Authors  
just as their "paying clients"

and the peer-review just as a nuisance standing between them and their APC fee

**I even no longer publish on commercial OA journals:** in my discipline there are sufficient journals in the "mid-range" that will eagerly consider good papers that have a normal peer review process and where you don't have to pay to play

✓ OA papers are cited significantly more than the global average across all scientific disciplines, the average citation increase is 30%



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- ✓ however, the effect is largely not caused by papers that are gold-OA (papers available for free directly from the publisher)
- ✓ the citation impact driven by OA publishing a research is caused by papers that are green-OA (the authors "self-archive" their work in a central repository, commonly an institutional archive or a public, discipline-specific repository)

## considerations & recommendations

- **market forces alone are not sufficient to deliver widespread access to scientific information** (there are clear indications that **the subscription market is not functioning effectively**, due to non-substitutability, excessive concentration, lack of transparency and perverse incentives)
- the virtual elimination of technical barriers to dissemination of scientific knowledge has coincided with growing recognition of its status as a global public good, BUT, on the other hand, **current open-access scenario has many shortcomings (e.g. invasion by predatory publishers)**

some suggestions:

- (i) push the **funding agencies to support** (i.e. pay for) **free access to the most significant papers** after their publication (scientific societies could play an important political role in this respect)
- (ii) at present, for free access there is **no need to resort to journals that apply APC mandatory**, especially if managed by groups clearly just oriented to business; rather, **use your resources to buy free access to your work on highly reputable journals**





✓ currently, stress the relevance of:

→ **no-APC OA journals**

(e.g.: *iForest*, *Annals of Silvicultural Research*, *Forest Systems*, *Annals of Forest Research*, .....)

→ **OA archiving** (so called *green OA*)

✓ stress the relevance of journals that require **public data repository**

→ funding agencies should support open publications in these journals: **this is one of the most important steps towards a truly open and credible science**

## new forms of OA (e.g. by **cross-subsidies mechanisms**)

to what extent would be possible to explore innovative **CROSS-SUBSIDIES** that could provide sustainability (and even profit) to OA publications?

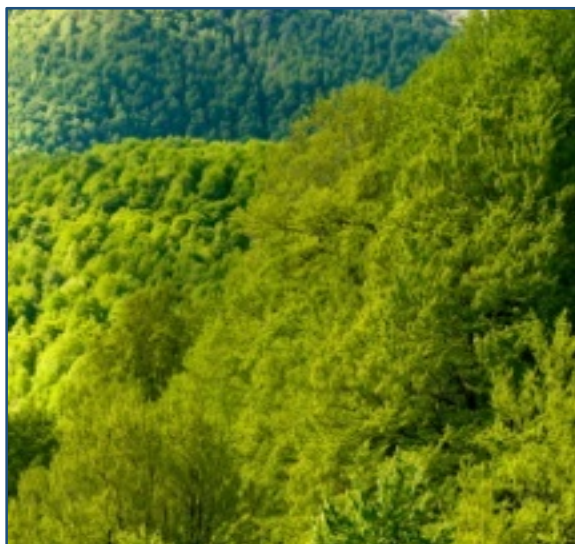
examples:

- in return to the free product or service provided the attention given can contribute to **enhance the visibility or the reputation of the provider** (taking into account initiatives such as Altmetrics or ImpactStory, which stress some of the additional 'knowledge currencies', i.e. visibility, influence, knowledge transfer, etc.)
- **paid products subsidizing free products**: paying later can subsidize free consumption now; alternatively, paying people subsidizing free people (i.e. by offering a *premium* and a *free* version): in both cases, the hope is that the free consumers will attract or bring with them paying consumers or that some fraction of the free consumers will convert to paying consumers
- the most common of the economies built around free is the three-party system: **a third party pays to participate in a market created by a free exchange** between the first two parties; **a well-known case is the advertising** but it goes far beyond that; media companies make money around free content in a variety of ways, from selling information about consumers to other companies; via subscriptions, direct e-commerce, etc.; the costs (i.e. of the media companies) are distributed and/or hidden enough to make the primary goods feel free to consumers (i.e. free newspapers)



the current transition will take a still unknown amount  
of time and efforts to distill proper OA into the  
academic and publishing world

*in the middle of difficulty lies opportunity* (A. Einstein)



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