

# You Get What You Pay For – In Paper Reviewing Just Like Everywhere Else

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# Let's Review the Basics

- Professors publish research (**mostly**) because it helps them get...
- lifetime employment (tenure) with **salary**
- promotion (higher prestige and higher **salary**)
- entries on their annual report and resume (= additional merit pay or **salary raises**)
- **fame**
- **good feelings about contributing to humanity.**



# What are the Problems?

- **Problem 1:** Some reviews are *objectively* not fair, not to the point, simply under-informed and *reviewers even contradict each other.*”
- **Problem 2:** Reviewers want to impose their style on authors. *It's my way or the highway.*
- **Problem 3:** More and more papers get published. Reviewers *don't notice problems* with papers. ***Bad papers get published.***
- There has been an increase in **retractions** in the top journals in recent years.



# Real Example of *Reviewer Contradiction*. Reviewer 1. 1/2016. Copy and Paste

... the paper suffers from a number of weaknesses, not least of which is the **lack of clear definition of the what might constitute errors, ambiguities or misalignments** between ontologies of different types, how these are related to semantic types and their definitions for the purposes of QA, and what are the actual QA strategies being proposed. **It should not be necessary for readers to go through X Y's dissertation to guess at which types of criteria are used to define errors**



# Reviewer 2. Same Paper. Copy and Paste from the Review

A huge concern is the clarify and the **length** of the paper. **The paper is quite long.**

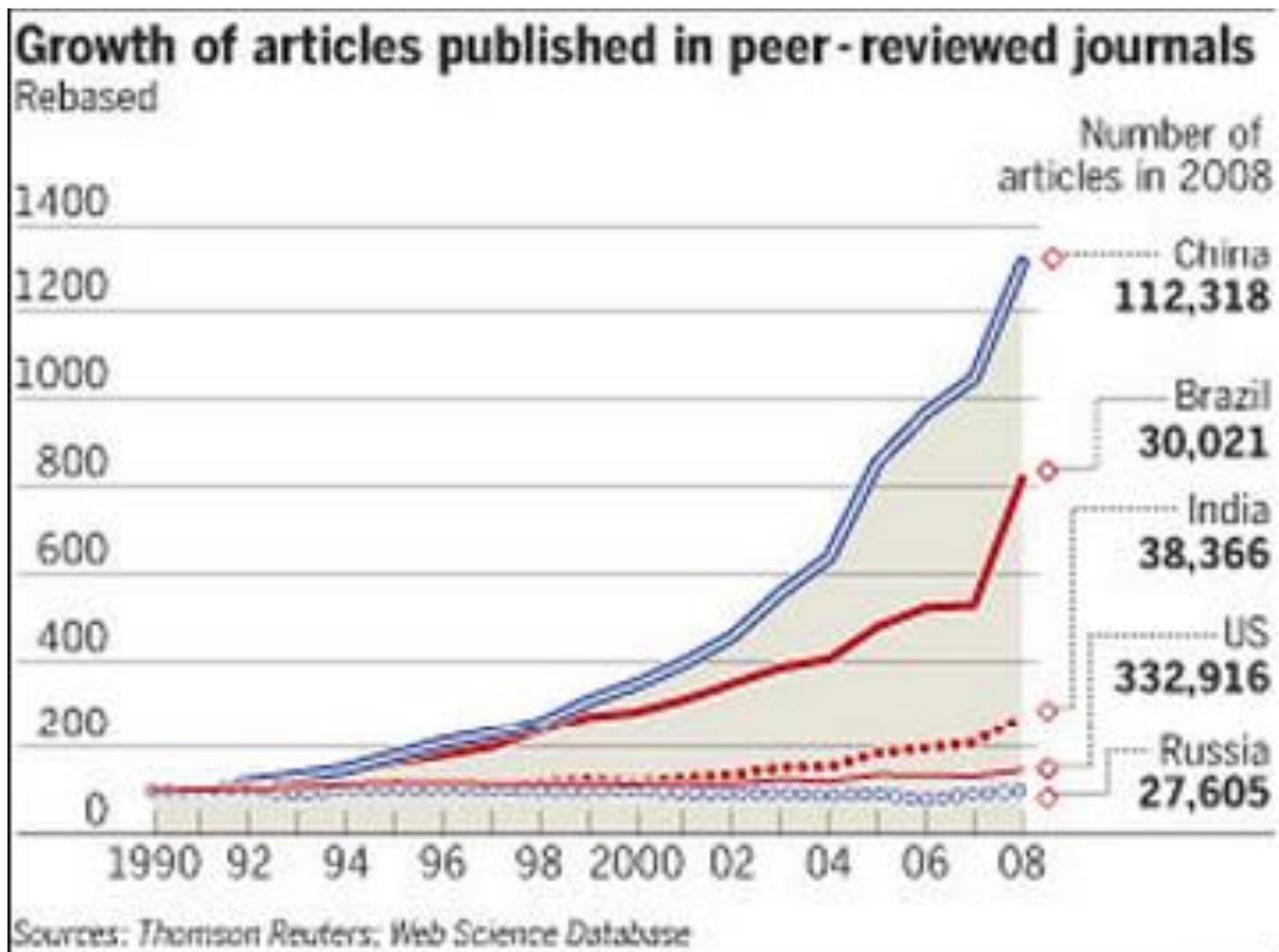


## Problem 2: “My Way” says the Reviewer

- **Copy Paste From Reviewer:** Latin abbreviations are used freely in the middle of sentences, when ideally they ought to be reserved for use at the beginning of parenthetical expressions.
- **Copy Paste From**  
*<http://www.quickanddirtytips.com/education/grammar/ie-versus-eg?page=2>*  
Finally, I tend to reserve i.e. and e.g. to introduce parenthetical statements, but it's also *perfectly fine* to use i.e. and e.g. in other ways.



## Problem 3: More and More Papers Get Published



# Problem 3 Corollary: More and more *Bad* Papers Get Published

- Why Has the Number of Scientific Retractions **Increased**? *R. Grant Steen, Arturo Casadevall, Ferric C. Fang*. PLOS One, July 8, 2013.
- Top 10 most highly cited retracted papers  
<http://retractionwatch.com/the-retraction-watch-leaderboard/top-10-most-highly-cited-retracted-papers/>



# Highly Cited Papers that were Retracted from Top Journals

- SCIENCE (2005, 2001), LANCET (1998, 2003), PLANT JOURNAL (2003), BLOOD (2001), BMC EVOLUTIONARY BIOLOGY (2015), EMBO JOURNAL (1998), CANCER RESEARCH (2005), CELL (2015),
- Why did the **Reviewers** not Notice Problems before the papers were published?

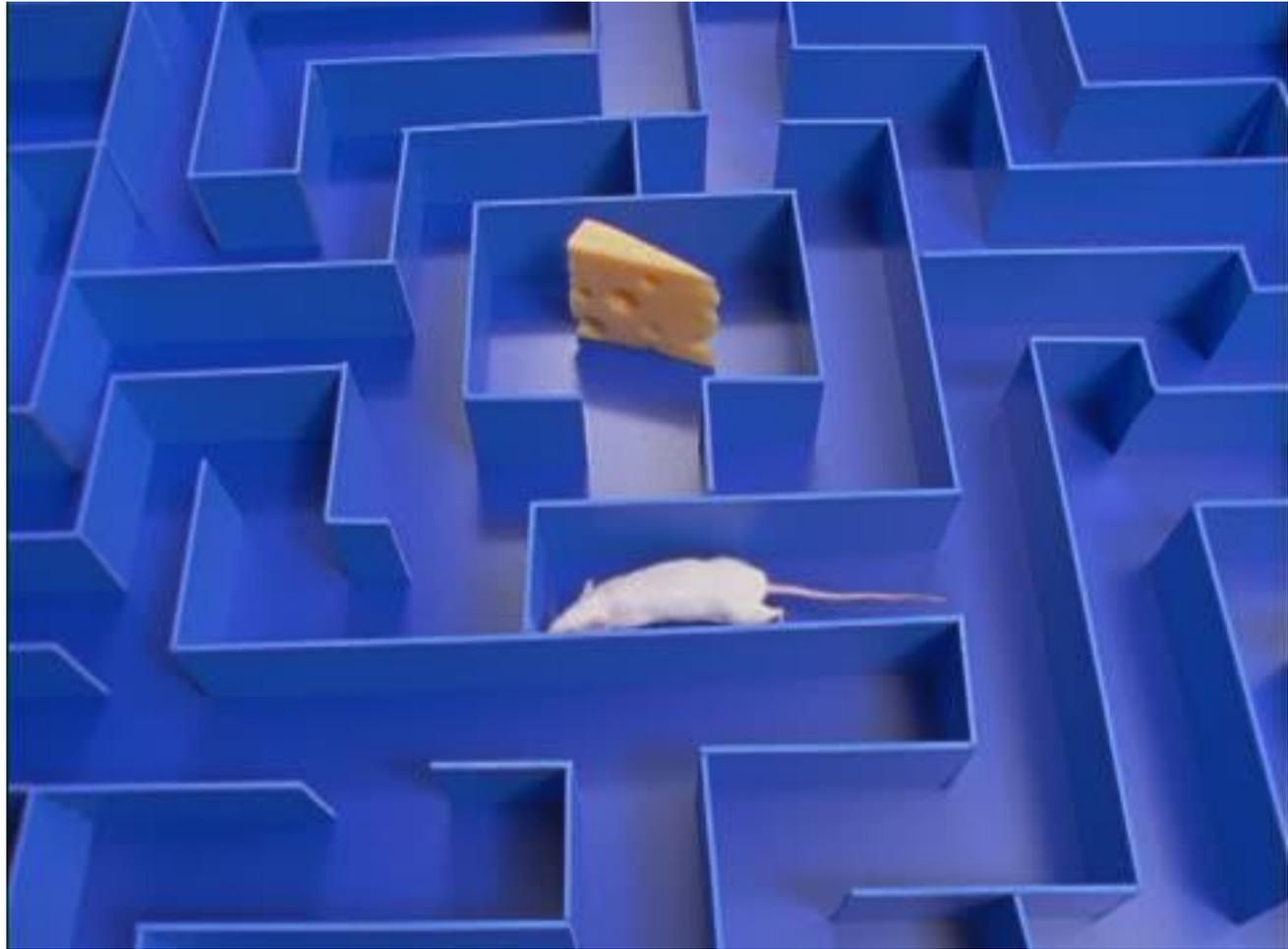


# Just for Fun... Citations of those 10 papers AFTER Retraction

- 868, 382, 103, 228, 46, 18, 106, 299, 44, 109
- Did the reviewers of the *citing papers* notice that the papers were citing retracted papers?



# Let's Talk about Reward Structures...



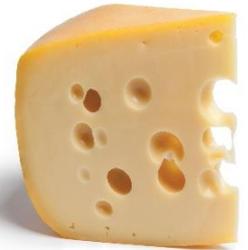
# Grants

- A professor writes a proposal to a federal funding agency such as NSF, NIH.
- These proposals are peer reviewed.
- *IFFFF* the proposal is accepted (funded) then the professor [typically] gets:
- Money for a PHD student.
- Summer salary
- Conference travel and/or equipment money
- Rewards from the university (sometimes money, honor, maybe tenure, promotion)



# Journal Papers & Conference Papers

- *IFFFF* the paper gets accepted then the professor gets:
- One more entry in her/his resume
- Rewards from the university (usually honor and, if relevant: tenure and promotion).
- Typically a single paper does little though. Many papers are needed.
- A small step toward fame.



# Reviewing a Journal Paper



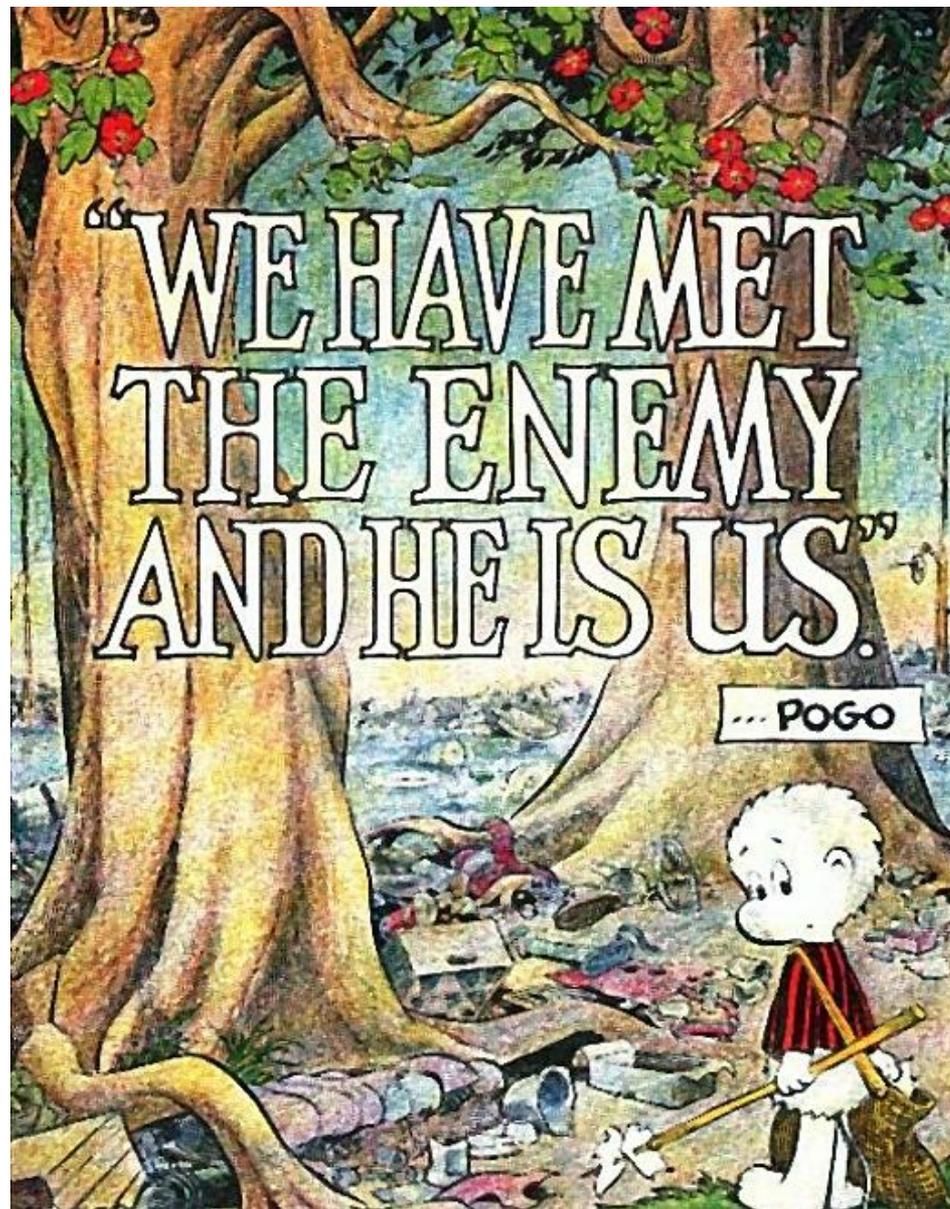
- *IFFFF* a professor reviews a journal paper he gets:
- Pretty much ... *nothing*.
- At best, early knowledge of other people's research.
- And a line in her/his resume as reviewer that is ignored by every tenure committee I know. (I know few.)



# A Rational Professor

- A rational professor who has
  - a grant deadline,
  - a conference paper deadline or
  - great results for a journal paper and
  - a paper review deadline **on the same day**
- will schedule her/his *oh so limited* time ...
- ... in what way?
- Any guesses?
- *With less time the quality of reviews suffers.*





# What is the Solution? Part 1

- **Pay Reviewers**
- This will also make them more responsible.
- Pay journal editors!
- Because they are professors too.
- They have even more work.



# Paying Reviewers Needs to Become a **Part of Academic Culture**

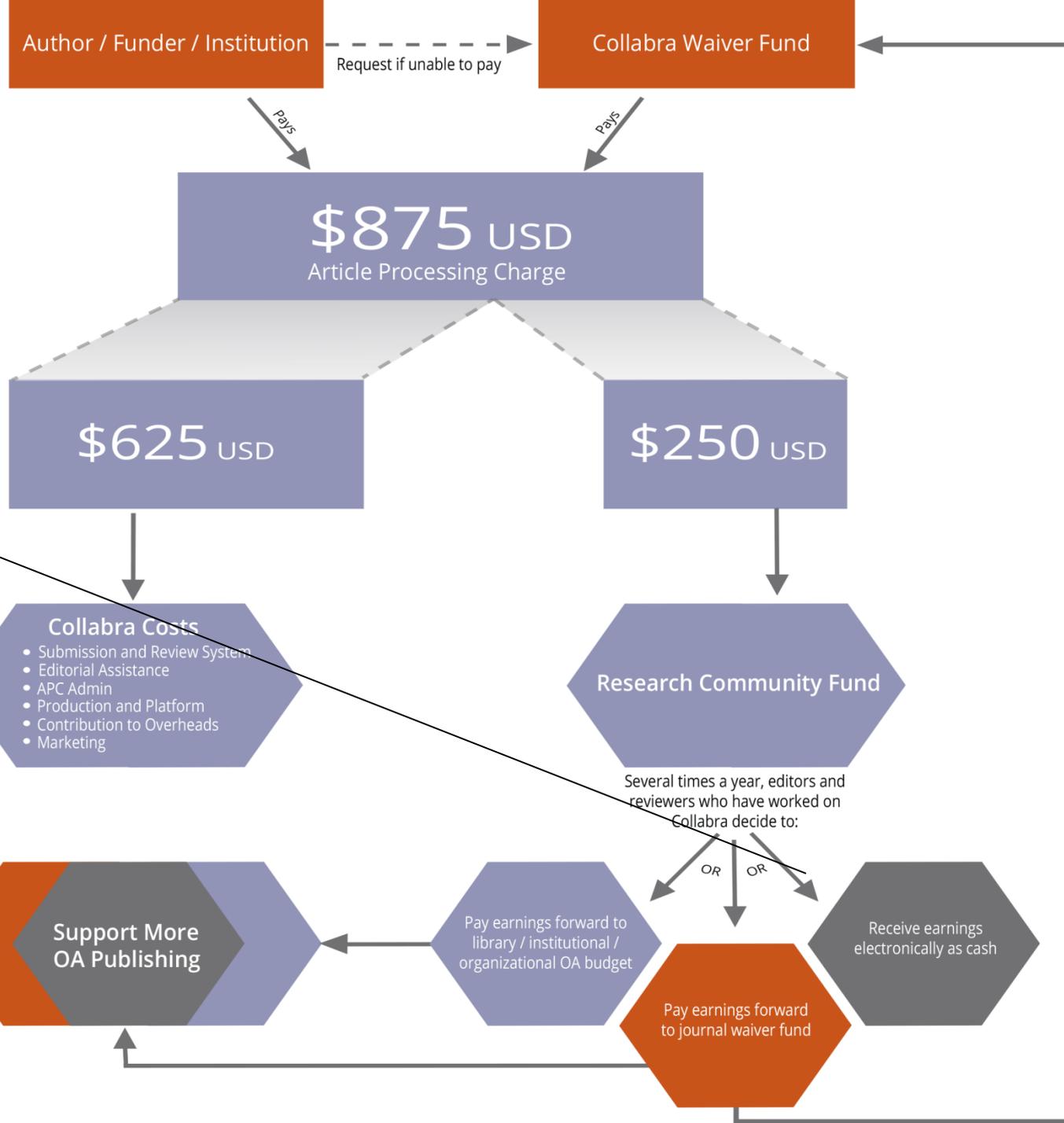
- No claim is made that this is an entirely new idea.
- Some organizations have tried paying reviewers.
- For example, **Collabra**  
<http://www.collabra.org/about/our-model/> has tried it.
- But it is *not* done by most journals.

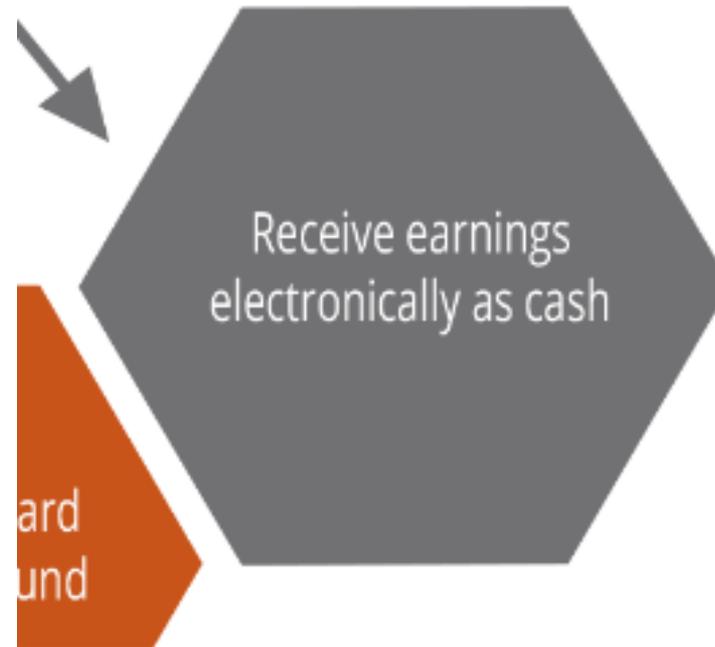


# Collabra Payment Model



# Collabra is Limited to Psychology





# Why should we Pay for Something that was Always Free? **Why Now?**

- Science is not the *Gentlemen's Club* it used to be.
- Now authors/professors are *evaluated* with Key Performance Indicators (KPIs), Citation Indices. H-Index. Google I-10index ...
- When everything is measured and *managed* and when measures are used for reward (and punishment) then every desirable behavior needs to be rewarded.
- Rewarded with the same “coin.”



# There are Precedents of Paying for what Used to be Free before

- Television used to be free-to-air.
- Most people are willing to pay for Cable TV or Satellite Dish TV.
- Or for Internet TV.
- Car radio is still free.
- Yet I get advertisements for Satellite Radio *every month*.
- **People are willing to Pay for Better Quality**



# For Followers of Malcolm Gladwell

- There are more and more new journals.
- High quality journals will need to *differentiate themselves*.
- Paying reviewers will be one differentiator.
- Once a few good journals start paying, we will reach a *tipping point*.
- Then it will be *pay or go out of business*.
- All “good reviewers” will only work for pay.



# What is the Solution? Part 2

- Allow authors to submit **expert testimony** refuting statements of journal reviewers.
- Authors should be sure the editor does not just forward their refutations to the reviewers.
- *Journals should not use and not pay reviewers who have been refuted repeatedly.*
- *Universities need to give professors credit for doing reviews in Tenure Evaluations.*
- **6 paid journal reviews = 1 journal publication.**
- (We can argue about the “six.”)



# Conclusions

- Researchers have no time to do reviews.
- Quality of publications is suffering.
- More and more retractions.
- **Solution:** Pay reviewers.
- Allow authors to submit expert testimony.
- Ensure that refutations are not forwarded.
- Journals should stop using and paying bad reviewers.
- Consider reviews as serious tenure items.



# Thank You

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# Aren't People Going to Game the System?

- Yes
- So what?
- There is no perfect system.
- We need to replace the current system with a better system.
- Remember, some people rejected the idea of the World-Wide Web? Because there would be dead links. Yes there are dead links. So what?

