

From the reading:

But why is authorship such a provocative issue? The "publish or perish" culture of science places enormous value on how many papers you've authored and in which journals those reports appear. In short, authorship has become "scientific currency." And as such, it is a major factor in key decisions, such as who gets hired and who gets grant money

Real differences between group/discipline practices.

- Some disciplines just publish “group” papers where author order is not so important. Indeed, perhaps the authors should just use: Professor X Group
- Who gets to be an author of a paper as it pertains to the use of someone’s else’s infrastructure or instrument?
- How is an individual within some group or consortium efforts and contributions to the project measured in some way that qualify them for authorship?

Two important questions

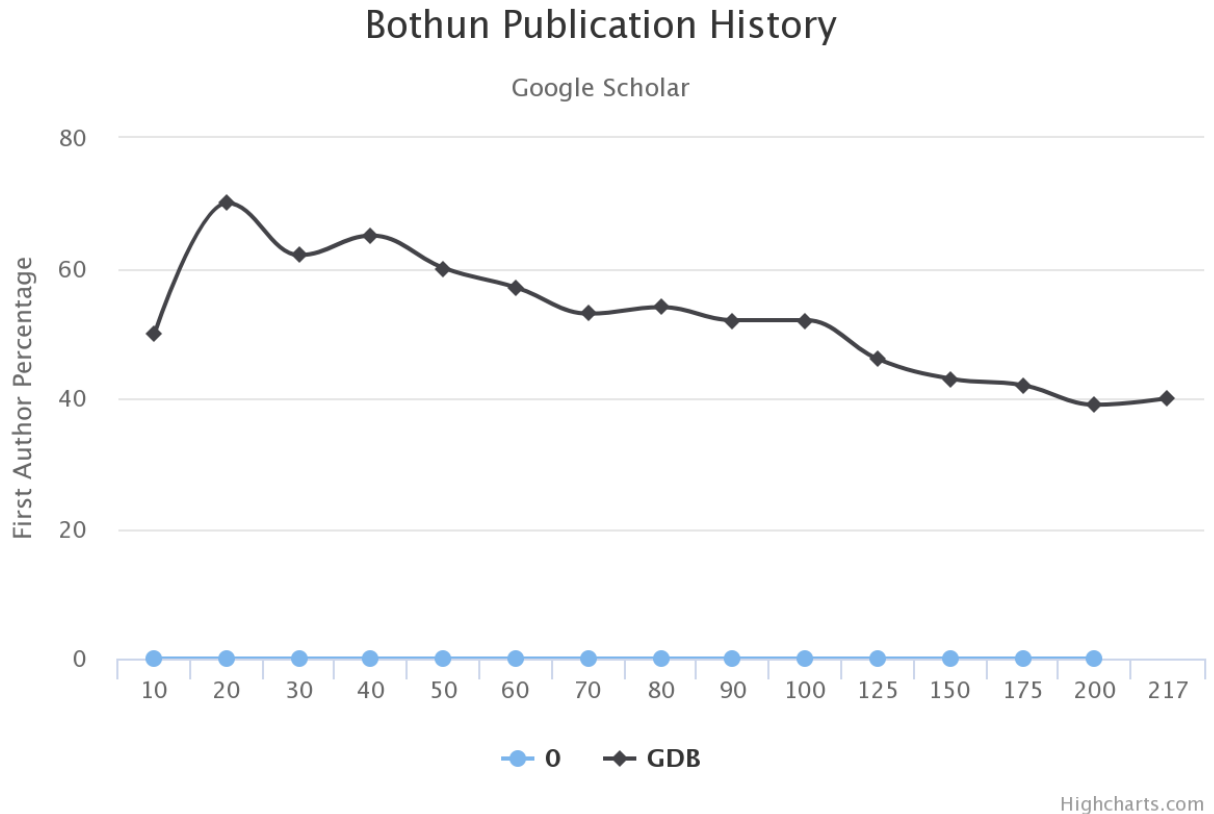
How many graduate students do you list as authors on a PRL paper given the high prestige of this journal?

Are graduate students simply employees? Legally – yes; Ethically – no.

Most importantly, these issues really matter in the context of what constitutes a PI (is the PI the originator of the idea or is the PI the main funding source) and where they are academically in their career.

In general, any junior faculty needs to establish themselves via first authorship on paper in “perceived impact journals” in order to properly play the game of academic advancement. While there are important questions about the ethics of this, they seem to pale in comparison to the current and long-standing reality of this game. As shown below, I had to play this game as well.

Here is a snapshot of my first authorship relative to total number of papers published.



Features:

- First 10 as mostly a graduate student within some group; three first authorships – small papers on individual results within the group
- 10-30 As hybrid postdoc/research faculty at Harvard (just meant I could teach as a postdoc) – **This is when I want first authorship (1981-1983)**
- 30-60 Caltech years (1983-1986)
- 79 = Tenure at Michigan (1989)
- 129 = Promotion to Full at pub over 14 year Post Graduate period

- Deadwood now: ~95 pubs since Full over a 24 year period. First authorship percentage somewhat maintained due to more **single author (crackpot) papers**
- Note that I have produced about 30 PHD students, in various fields, over my official 33 years of academic positions that allowed such capacity – about 25 of them remained the field of their PHD – **this is not necessarily good.**

From the APS Survey:

1. **Perceived impact factors:** *The only real answer to the ethics problem is for tenure review boards to stop rewarding the Science/Nature/PRL culture above all else.*
2. **Style over substance?** *Our scientific community promotes the search of the surface and superficiality [to the] detriment of content and deepness.*
3. *Many breaches of ethics arise from the pressure to publish ...* **What breaches?**
4. *The researcher ... will be judged [by] the number of articles, and the corresponding journal names, appearing on the CV. He or she will not be judged [by] the work spent on each paper, how many backup checks were performed to confirm the results, and so on. High number of papers, in highly ranked journals, is what builds a career.... The recent sad events [show] that it is for many people more*

important to publish spectacular results than to publish true results. Kind of an extreme view.

The end result is that most of these graduate students in this survey regard science as kind of an elitist field where one can gain prominence over one's completion by publishing in the right places.

Lastly, we spend some time on the issue of Open Access journals and the relation between the Public and the scientist.

Advantages of OA:

1. Faster sharing of data and idea than traditional journals → indeed this is the principal motivation for the LANL archive
2. No pay wall barriers so in principle the public has better access, not that they give a shit.
3. **An ethical consideration:** research that is publicly funded should be made freely available to the public who paid for it for reasons of accountability
4. OA publications can inform and promote public discussion; is a scientist then ethically obligate to publish a form of their research in this forum?
5. Commercial **journals** have the potential to profit unfairly from the unpaid labor by academic researchers, but I doubt

this is much of an issue in the physical sciences but seems to be a real issue in medical journals.

6. The publishers of traditional journals require that authors sign over the copyright of the published articles to the publisher, arguing that they bear the cost of producing and making the article available. This was once an issue but now anyone can make a Web Page.