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Some scientists publish more than 70 papers a year. Here's how—and why—they do it

By **Michael Price** | Sep. 12, 2018 , 12:25 PM

Like Stephen Kings of academia, some researchers are unusually prolific publishers, appearing as an author on as many as 72 scientific papers a year—or about every 5 days. John Ioannidis, a statistician at Stanford University in Palo Alto, California, wondered whether some of them were gaming the system. So he and colleagues dove into the academic journal database Scopus and identified 265 "hyperprolific authors" between 2000 and 2016, finding that their ranks had increased 2.5-fold since 2001.

Ioannidis's group was able to make contact with 81 of these scientists. **Few abided by what are supposed to be strict guidelines for determining who receives authorship credit on a paper**, the team reports today in *Nature*. Ioannidis discussed the repercussions of his findings with *Science*, as well as what he thinks can be done to fix things.

This interview has been edited for clarity and length.

Q: Why would someone want to be an author on so many papers?

A: In some cases, it's the fear of publishing or perishing, or a desire to win more grant money. But in other cases, there are more direct financial incentives. China, for example, gives its researchers cash for publishing, especially in influential journals, and perhaps as a result, it also hosts a disproportionate number of hyperprolific authors. This cash could be many times one's salary. It's not just publish or perish; it's publish and flourish.

Q: What are the rules for paper authorship?

A: In most scientific disciplines, there are strict criteria that you need to contribute to the paper in some way. That could mean actually writing it, coming up with the idea for the study, performing an experiment, and/or helping to interpret the results. You also need to see the final version and agree with it. Obviously, this doesn't seem to be possible with the type of prolificness we see currently in many disciplines.

Q: Do some disciplines have more hyperprolific authors than others?

A: About half of the authors we found were in the medical and life sciences. A few things are going on here. One is that the norms of these disciplines seem to either encourage, or at least condone, adding your name as an author even if you weren't substantially involved. Another is that some fields like epidemiology collect large amounts of data and dole out their analyses one paper at a time, allowing authors to rack up a large number of publications from a single project.

Q: Are hyperprolific authors gaming the system?

John Ioannidis JOHN IOANNIDIS

A: I don't think they are doing so with ill intent. It's more that the standards have become lax within many fields. When cardiologists become directors of major clinical and research centers, for example, they can see their authorship go up 10-fold. Their names get embedded in what their center produces. It's a norm that field has adopted, even though it doesn't necessarily meet rigorous authorship standards.

Q: Why is it such a big deal if some authors stretch the definition of authorship?

A: There are two main reasons we have authorship: credit and responsibility. I think both are in danger. In terms of credit, if you have a system that is very vague, idiosyncratic, and nonstandardized, it's like a country with 500 different types of coins and no exchange rate. And in terms of responsibility, it also raises some issues about reproducibility and quality. With papers that have extremely large numbers of contributors, is there anyone who can really take responsibility for all that work? Do they really know what has happened?

Q: How did the hyperprolific authors justify their habits?

A: They are thoughtful, and they acknowledge the issue. The pressure to publish or perish, or to win administrative funding, contributes to an environment where the rules get softened. Plus, if you're offered authorship, will you say no? Some people may even feel offended that you've turned them down. So we need to think of solutions at the systematic level, rather than at the level of singular people.

Q: How can the system be improved?

A: The biggest thing is we need more transparency, and to try to reach some agreement as a scientific community on who is getting credit for what. Journals could, in theory, try to set a standard. Systems that track authorship might experiment with fractional credit: If you publish with more authors, you get a smaller fraction of the credit.

We also have to demand that contribution descriptions become more accurate. It's ridiculous to see 524 authors listed as having written a paper. Did most of them just contribute a comma or a period? We need a system that better recognizes and gives credit for the real work those scientists are doing.

Q: Are you hyperprolific?

A: I'm not reaching the productivity peaks of the scientists included in this analysis, but I do consider myself someone who publishes lots of papers. I think my peak is around 50 in a single year. This means there are around 30,000 people who have higher peaks than me, out of about 20 million scientists who have published at least one paper.

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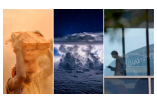

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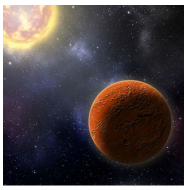

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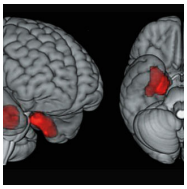

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