

Should First Authors Be Responsible for Scientific Misconduct?

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Scientific misconduct is a common topic of debate in the academic world. Scientific publications are often the target. Plagiarism, ghost writing or problems with the [peer review process](#) are all problems that highlight the clash between research ethics and scientific misconduct. Any of these can [lead to retraction of papers](#) and damage to the reputation of science.

Some studies have suggested that ghost authors are common in large clinical trials. Ghost authors are researchers who contribute to a research article but are not listed as authors. There is also the problem of fake co-authors. This is when someone lists people as co-authors on their paper who are not actually involved at all. A researcher might choose to [add names of co-authors](#) from a more well-known institution or with a better publication record.

So, who should be accountable for the content of a [research paper](#)? Should it be all the listed authors? The PI? Or perhaps the publisher? However, a recent study argues that the first author has overall responsibility.

Are First Authors Responsible for Their Article?

An intriguing new study in *PLOS One* says that first authors are responsible for the content of their paper. The authors, Katrin Hussinger and Maikel Pellens, note that organizations currently have different guidelines. Some state that each author is only responsible for their own contribution. Others say that all authors have joint responsibility. This can be confusing for researchers and for those [tasked with seeking out scientific misconduct](#).

So, why should first authors take responsibility for the whole article? Because, according to the study, they are most likely to be the source of any misconduct.

The authors studied 80 scientific misconduct investigations carried out by the US Office of Research Integrity. They found that first authors are 38% more likely to be responsible for misconduct than middle authors. The corresponding author was 14% more likely to be the source of misconduct. The corresponding author is often also the first author, but may be the senior author or another researcher.

Interestingly, the senior author was no more likely to [have committed misconduct](#) than anyone else.

The Role of the First Author

First authors are often, but not always, the person who leads the research. They may be the one who creates the study and carries out most of the practical work. Sometimes, the first author [is a more junior researcher](#). They carry out their study with the help of more experienced scientists.

The last author is usually the senior scientist, or PI. They might lead the research group the first author belongs to. Their role in the project varies. They could make a large contribution, or simply offer guidance.

The middle authors are usually listed in order of their contribution. Their role in the study would be less than that of the first author. They might provide expertise in a specific area, or supply data or other resources.

The first author normally has the largest day-to-day role in the project. Therefore, it follows that they are most likely to be [linked with any misconduct](#).

Should First Authors be Guarantors?

The authors of the *PLOS One* study say that, as first authors are more likely to be the source of misconduct, they should be accountable for the whole paper. They would act as a kind of “guarantor.” This would encourage first authors to check all contributions to their paper. If misconduct was spotted, the first author would take responsibility. This approach “is highly likely to not miss catching the author responsible.”

However, some scientists disagree. They argue that it is very difficult for first authors to find out whether their co-authors are guilty of misconduct. For example, if a co-author supplies data, the first author may be unable to check it. Instead, they must trust that their co-author is honest. This is why it is vital to [investigate the whole team](#) if a paper shows signs of misconduct.

Dr Daniele Fanelli, of the London School of Economics, goes further. He says that to hold the first author responsible for the actions of their co-authors is ethically and legally wrong. “Only whoever has knowingly lied, cheated or stolen should be punished,” he says.

Professor Malcolm MacLeod, of the University of Edinburgh, suggests another option. He believes the senior author, or PI, should be responsible. This is because the first author is often less experienced. “If the first author is “cheating”, it’s reasonable to expect that the senior author [would] have noticed,” he says.

Why do First Authors Commit Misconduct?

The authors of the *PLOS One* study point out that first authors get the most credit from a paper. This gives them more reason to commit misconduct with the goal of getting the paper published. The same applies to the corresponding author. The senior author, who is already ahead in their career, has less reason to commit misconduct.

Middle authors tend to receive the least credit for a paper. Yet, under current guidelines, they would receive the same punishment for misconduct as the first author. This means they have the least incentive to commit misconduct.

Identifying Misconduct

Focusing a misconduct investigation on the first author – at least to begin with – could save money. However, most researchers seem to agree that investigations should be thorough. Authors who are [aware of misconduct in a study](#) but take no action could also be identified.

Hussinger and Pellens stress that it is unfair to punish innocent people for the actions of others. These people would likely suffer damage to their career and reputation. This is

why the focus should be on first authors, as the data shows they are more likely to be linked to misconduct. But will this help to reduce misconduct? Or could it discourage junior researchers from being first authors?

What do you think? Should first authors take full responsibility for their paper? Or should all authors share responsibility? Please share your thoughts with us in the comments below.

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