

# Should authorship on scientific publications be treated as a right?

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## ABSTRACT

Sometimes researchers explicitly or implicitly conceive of authorship in terms of moral or ethical rights to authorship when they are dealing with authorship issues. Because treating authorship as a right can encourage unethical behaviours, such as honorary and ghost authorship, buying and selling authorship, and unfair treatment of researchers, we recommend that researchers not conceive of authorship in this way but view it as a description about contributions to research. However, we acknowledge that the arguments we have given for this position are largely speculative and that more empirical research is needed to better ascertain the benefits and risks of treating authorship on scientific publications as a right.

Disputes about authorship attribution and order are common in science.<sup>1–5</sup> Although these disagreements are often resolved civilly, they can lead to lingering hostility, antagonism and various forms of misconduct.<sup>5</sup> Evidence also suggests that authorship disputes may be settled in ways that undercredit under-represented minorities based on race and gender or researchers who are easily exploited due to their lower academic rank or other factors.<sup>6–12</sup> Studies have also shown that practices widely regarded as unethical, such as honorary authorship (ie, naming someone as an author who has not made a significant contribution to the research), may be due to confusions about authorship criteria or pressures in the research environment that lead to manipulation of authorship for purposes other than fair allocation of credit.<sup>13–15</sup> To avoid these sorts of problems, scientists and ethicists have recommended that researchers should discuss authorship matters at the beginning of a research collaboration and throughout the research process as needed.<sup>6 16–18</sup>

Sometimes researchers explicitly or implicitly conceive of authorship in terms of moral or ethical rights to authorship when they are dealing with authorship issues. We have observed or are aware of several types of situations that treat authorship as a right:

- ▶ Negotiating authorship, for example, promising authorship to a researcher in exchange for performing specific experiments or analyses or providing research materials or data.<sup>19 20</sup>
- ▶ Waiving authorship, for example, explicitly agreeing not to be an author on a paper to resolve a dispute or because one disagrees with the paper's findings.<sup>10</sup>

- ▶ Trading authorship, for example, giving authorship to someone in exchange for a favour or to pay a debt, or agreeing not to be the first author on a particular paper related to a research project with the understanding that one will be the first author on another paper related to the project.<sup>15 18 21</sup>

While the language of rights plays an essential role in the law and jurisprudence and is frequently used to frame ethical issues, we are concerned that this manner of speaking may not be an appropriate way of handling questions related to authorship on scientific publications. Could rights terminology encourage attitudes or behaviours that undermine the integrity of scientific research? We believe this may often be the case, but that more empirical research is needed to fully answer this question. In this commentary, we will consider some reasons why using the language of rights in scientific authorship matters may interfere with the ethical conduct of research.

## WHAT ARE RIGHTS?

Rights protect or promote interests related to welfare, property, personal freedom, political participation or other important values. Rights may be construed negatively as rights to be left alone, or positively as rights to obtain or control something or participate in some activity.<sup>22 23</sup> For example, the right to life can be construed negatively as a right not to be killed unjustly or positively as a right to have something necessary for life, such as food, shelter or healthcare. Intellectual property rights, including, possibly, authorship rights, are positive rights because one can have intellectual property only by means of cooperation with other individuals who provide the means necessary to obtain intellectual property and control it.<sup>24 25</sup>

Rights are sometimes called 'trump cards' because they place obligations, duties or demands on other people that must be satisfied unless there is a good reason not to. For example, a person's right to life obligates other people not to kill that person unless they have an acceptable justification, such as self-defence.

Rights can be inherently related to one's status as a person or citizen or acquired by various means, such as an informal agreement, written contract, government grant or relationship.<sup>22</sup> For example, the right to vote is an inherent right held by all adult US citizens, but patent rights are only held by those who are granted a



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patent or purchase these rights, and parental rights are held by those who become a parent.

Rights may be legal, moral (or ethical)<sup>i</sup> or both.<sup>ii</sup> <sup>22</sup> For example, the right to financial compensation from the breach of a contract is a legal right, the right to be treated with decency is a moral right, and the right to life is a legal and, according to many, moral right.<sup>26</sup> In our commentary, we will focus on moral rights related to authorship and take no position on the potential legal implications of our views.

Some theorists argue that moral rights are *sui generis* (or foundational) normative claims that require no further justification, while others argue that moral rights are derived from other values or duties, such as respect for human dignity, justice or utility.<sup>26–30</sup>

### POTENTIAL BENEFITS OF TREATING SCIENTIFIC AUTHORSHIP AS A MORAL RIGHT

Before examining the potential harms of treating authorship on scientific publications as a right, we would like to acknowledge that this way of speaking may have some potential benefits for researchers and research institutions.

First, because rights protect or promote individual interests, using rights to frame authorship issues in science could help to secure those interests and prevent people from being treated unfairly. For example, a person who believes they have a right to authorship on a paper based on their contribution to a research project could play this moral ‘trump card’ to protect their interests related to professional recognition and credit. Members of the research team who do not want to grant this person authorship would need to provide an appropriate justification for refusing to do so, such as the person’s failure to meet authorship criteria adopted by the journal the team is submitting the paper to. If the person seeking authorship is a graduate student, technician or other researcher with lower status than the other members of the team, they may appeal to their authorship rights to ensure that they receive fair treatment.

Second, because rights are legalistic concepts, treating authorship as a right may help to leverage institutional resources, such as the compliance office, ombuds office and legal counsel, which researchers may want to take advantage of when dealing with authorship and other research integrity issues. Many institutions encourage researchers to enter into written collaboration agreements, especially when working with scientists from other institutions. Collaboration agreements address authorship, data access and sharing, intellectual property, and other issues.<sup>18 31 32</sup>

### POTENTIAL RISKS OF TREATING SCIENTIFIC AUTHORSHIP AS A MORAL RIGHT

While there may be some potential benefits to treating authorship on scientific publications as a right, adopting this linguistic framework has the potential to undermine the integrity of research.

First, conceiving of authorship as a right may encourage unethical authorship practices in science. For example, waiving authorship rights could lead to ghost authorship if the person who has waived these rights has made a significant contribution to the research and they meet other authorship criteria.<sup>18</sup> Trading or negotiating authorship can lead to honorary authorship if authorship is granted to a person based prior agreements or reciprocal arrangements that have little to do with the significance of the person’s contribution. Ghost and honorary authorship are unethical because they allocate credit unfairly, are dishonest, and can erode research accountability.<sup>18 33</sup>

An extreme form of unethical authorship behaviour is the buying and selling of authorship, which has occurred in China, Russia and other countries. An undercover investigation by *Science* magazine in 2013 found that 27 Chinese companies were offering to sell authorship on publications indexed in the Science Citation Index.<sup>34</sup> The companies charged authorship fees ranging from S\$1300 to US\$26 300, with the highest fees for first authorship in publications published in high-impact factor journals. The companies brokered deals between scientists who wanted to sell authorship and those who wanted to purchase it. In some cases, journal editors also benefited financially from these deals. In most cases, scientists would add an author to a paper after it had undergone peer review and had been accepted by the journal but prior to publication.<sup>35</sup> The research integrity website Retraction Watch has also reported on Russian, Iranian and Latvian companies that offer to sell authorship.<sup>36 37</sup>

Although various economic and institutional pressures are largely to blame for the commercialisation of authorship, treating authorship as a right may contribute to this practice by leading researchers to think of authorship as a form of intellectual property that can be bought, sold or traded like copyrights or patents rights. While it is possible to treat authorship as a right without ascribing intellectual property rights to authorship, treating it as a right makes it more likely that one will treat it as a form of property, especially if it is viewed as transferrable and negotiable.

Second, thinking of authorship as a right may contribute to unfair treatment by encouraging individuals to view authorship as something that must be negotiated with limited consideration for the value of their contribution. Negotiations are likely to yield unfair treatment of certain researchers in precarious positions because of their career stage, job security, gender or race. Even after publishing innovative work in their fields, research conducted by underrepresented groups (such as women and racial minorities) tends to be undervalued.<sup>6–8 10–12 38</sup> Postdoctoral fellows in the USA are often non-residents on short term visas that rely on their supervisor’s support to stay in the country, which may limit their ability advocate for their interests during negotiations.

Third, viewing authorship as a right may make it more difficult to resolve authorship disputes than viewing it as something else, such as a description of one’s contributions to the research.<sup>39</sup> Other theorists have argued that the language of rights has detrimental effects on political and moral debate because it pits individuals against each other. If an issue is framed as ‘my rights’ versus ‘your rights’, then it can become intractable unless one is prepared to prioritise some rights over others, which creates winners and losers. We suggest that the same thing can happen in science if authorship disputes are framed in terms of rights. Researchers who decide not to fight for their ‘rights’ may agree to waive authorship to settle or avoid a dispute. In other words, individuals who contribute marginally to research but can effectively defend their ‘rights’ may receive more credit than those who contributed substantially to the research but are ineffective negotiators.

<sup>i</sup>Some theorists distinguish between ethics and morality. Ethics, on this view, refers to the behavioral norms of a group or profession, whereas morality refers to social norms or personal judgments of right and wrong. We do not find this distinction to be helpful because these norms frequently overlap and interact so that most questions involving human conduct are both ethical and moral.<sup>27</sup> Also, non-experts often use these two terms interchangeably, without drawing any distinction between them.<sup>42</sup> Accordingly, we will treat ethics and morality as roughly equivalent for the purpose of this commentary.

<sup>ii</sup>Some argue that moral rights are inherently political, but we will not engage that debate here.<sup>28 43</sup>

## CONCLUSION

Given the aforementioned problems for research integrity that may arise from treating authorship on scientific publications as a right, we recommend that researchers not conceive of authorship in this way but view it as a description about contributions to research. To assign credit fairly and promote accountability, researchers should use various methods of acknowledging contributions to their work. Those who are named as authors are individuals who have contributed significantly to the research, while others may be acknowledged but not named as authors.<sup>18 40 41</sup> What counts as ‘significant’ depends on various contextual features of the research, including disciplinary standards and journal policies. Authorship is not negotiated, waived or traded, but is formed based on a careful consideration of how different members of the team have contributed to the research.

Empirical research does suggest that authorship agreements can decrease tension regarding meeting deadlines for early-career researchers.<sup>40</sup> Although these agreements are useful tools for planning research collaborations, they should not be understood as creating a right to authorship or a contractual agreement that cannot be changed. Authorship agreements should not override or contravene research norms. An agreement that assigns credit unfairly or undermines accountability should not be honoured simply because it is an agreement. For example, if a researcher ‘waives’ authorship because they do not expect to make a significant contribution to a paper, this agreement should not be upheld if it turns out that they do. Likewise, agreements to ‘trade’ authorship should also not be honoured if the recipient of authorship has not made a significant contribution to a paper. Authorship should be granted based on what one has done, not on what one has bargained for or previously agreed to.

While we think that treating authorship as a right can generate significant problems for research integrity, we acknowledge that the arguments we have given for this position are largely speculative and not evidence-based. Although we have identified some potential problems for the integrity of research than can occur when authorship is treated as a right, we have not provided reliable data concerning how often these adverse effects occur or how they impact individuals, institutions, sponsors, or the scientific profession. Thus, more empirical research is needed to better ascertain the benefits and risks of treating authorship on scientific publications as a right, and we support efforts in this direction.

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