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### *Letter to the editors*

### **Missing references and citations at Google Scholar**

Citation counts are often interpreted as measures of the impact or influence of academic work, and they have arguably become more significant in the competitive job market.<sup>1</sup> Google Scholar is perhaps the most commonly used tool among scholars for measuring their citations, perhaps because it tends to be the most generous, including also number of false positives.

Unfortunately, a problem specific to *Bioethics* arises when Google Scholar indexes citations. Apparently, Google Scholar often treats many papers published in *Bioethics* as though they contain no references at all. Consequently, actual citation counts for many papers published in this journal are missing from Google Scholar's metrics and thus from the scholars' profiles.

Let me give some examples. In 2017, *Bioethics* published an article of mine on abortion and ectogenesis<sup>2</sup> that was subsequently critiqued by Perry Hendricks<sup>3</sup> and Christopher Kaczor<sup>4</sup>, among others. As is often the case, the critiques appeared in the same journal as the critiqued paper, *Bioethics*. To date, Google Scholar does not recognize Kaczor's paper as citing my article (though it does recognize Hendricks'). In fact, Google Scholar treats Kaczor's paper as if it contains no references whatsoever—for instance, it cites Alberto Giubilini and Francesca Minerva's (in)famous

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<sup>1</sup> This does not mean that citation counts should matter or that they always do. Some grant funders for example, specifically, instruct their reviewers *not* to take citation into account when evaluating the merits of the applicant.

<sup>2</sup> Räsänen, J. (2017). Ectogenesis, abortion and a right to the death of the fetus. *Bioethics*. 31(9), 697–702.

<sup>3</sup> Hendricks, P. (2018). There is no right to the death of the fetus. *Bioethics*. 32(6), 395–397.

<sup>4</sup> Kaczor, C. (2018). Ectogenesis and a right to the death of the prenatal human being: a reply to Räsänen. *Bioethics*. 32(9), 634–638.

after-birth abortion paper<sup>5</sup>, but this citation is not visible on Google Scholar. All of this can be discovered using Google Scholar's "search within cited articles" feature.

The issue is not limited to a specific paper. A recent editorial by Udo Schuklenk<sup>6</sup> cites my guest editorial on sexual loneliness<sup>7</sup> and the aforementioned infanticide paper (among others), yet Google Scholar misses all of these citations. Sudenkaarne et al.<sup>8</sup> also cite my editorial, but Google Scholar does not recognize it. Similarly, a paper by Nir Eyal and Bridget Williams<sup>9</sup> cites my paper on the identified-lives bias<sup>10</sup>, among others, but none of these citations appear on Google Scholar. That is because, for unknown reason, Google Scholar thinks the papers by Schuklenk, Sudenkaarne et al. and Eyal and Williams do not include references at all. While sometimes references and citations will eventually be indexed by Google Scholar, many remain missing years later. This problem appears specific to *Bioethics* due to its unique style of referencing.

*Bioethics*, unlike many other Wiley journals, uses footnotes without a reference list at the end of the article.<sup>11</sup> By contrast, another leading journal in philosophical bioethics, the *Journal of Medical Ethics*, published by the Institute of Medical Ethics and the BMJ Group, uses endnotes, while a smaller journal in the field, *Theoretical Medicine and Bioethics*, published by Springer, provides a reference list at the article's end. I have recently published papers in both of these journals<sup>12</sup>, which

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<sup>5</sup> Giubilini, A., & Minerva, F. (2013). After-birth abortion: why should the baby live? *Journal of Medical Ethics*. 39(5), 261–263.

<sup>6</sup> Schuklenk, U. (2024). Protecting controversial thought: Editing *Bioethics* in the age of social media facilitated outrage. *Bioethics*. 38(8), 665–666.

<sup>7</sup> Räsänen, J. (2023). Sexual loneliness: A neglected public health problem? *Bioethics*. 37(2), 101–102.

<sup>8</sup> Sudenkaarne, T., Browne, T. K., & Kendal, E. (2023). Toxic masculinity: A neglected public health problem. *Bioethics*. 43(7), 565–587.

<sup>9</sup> Eyal, N., & Williams, B. (2023). When offering a patient beneficial treatment undermines public health. *Bioethics*. 37(9), 846–853.

<sup>10</sup> Räsänen, J. (2023). ICU triage decisions and biases about time and identity. *Bioethics*. 37(7), 662–667.

<sup>11</sup> Wiley publishes a number of journals in philosophy and bioethics, including *Journal of Applied Philosophy*, *Journal of Social Philosophy*, *Hastings Center Report*, *Nursing Philosophy*, *Noûs*, *Philosophy and Phenomenological Research*, *Pacific Philosophical Quarterly*, *European Journal of Philosophy*, *Analytic Philosophy*, *Ratio*, *Southern Journal of Philosophy*, *Metaphilosophy* and *Theoria*. Only three, *Bioethics*, *Developing World Bioethics* and *Philosophy and Public Affairs*, uses footnotes for their references. I have not looked into whether the problem exists also with the two other journals.

<sup>12</sup> Räsänen, J. (2023). Should vegans have children? Examining the links between animal ethics and Antinatalism. *Theoretical Medicine and Bioethics*. 44(2), 141–151; Smajdor, A., & Räsänen, J. (2025). Is pregnancy a disease? A normative approach. *Journal of Medical Ethics*. 51(1), 37–44.

have generated considerable discussion. In these cases, all the citations to these papers of mine appear correctly in Google Scholar—because the discussions appear on the pages of the *JME*, and *TMBE* rather than at *Bioethics*.

I have tried to find a pattern explaining why Google Scholar recognizes references from some *Bioethics* articles but not others, without success. It does not seem to matter if the article is open access or not, if the first reference appears on the first page or later. The type of article, or whether the citing author has a Google Scholar profile does not matter either. Even with references free of typos, Google Scholar sometimes simply misses all references in articles from this journal. Although I have not identified a definitive pattern, it is clear that missing citations relate to *Bioethics*' referencing style. To my knowledge, this issue does not affect other journals that use different referencing style, though it could affect its companion journal, *Developing World Bioethics*, that also have references in footnotes.

I want to emphasize that this issue is not limited to my own articles. There are plenty of examples of articles published in *Bioethics* that are cited in other *Bioethics* articles but are not recognized as such by Google Scholar.<sup>13</sup>

Unfortunately, individual scholars have little control over correcting missing citations. It is not possible to add missing citations to Google Scholar manually. Google Scholar does not disclose how it indexes citations and provides no mechanism for direct feedback. However, potential authors may care about their citation counts and thus they might submit their most innovative work elsewhere if they perceive the issue disadvantage, making it in the journal's and publisher's interest to address this problem. More than that, if Google Scholar is missing many citations from a specific journal, other indexing services might do the same. If that is the case, the journal's public citation metrics may be lower than they should be—another concern for the editors.

A potential solution would be for the journal to change its referencing style. *Bioethics* could adopt a citation style similar to that of the *Journal of Medical Ethics* where references appear as endnotes at the end of the article rather than in footnotes. Alternatively, the journal could include an

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<sup>13</sup> For instance, Hendricks, P. (2019). Even if the fetus is not a person, abortion is immoral: The impairment argument. *Bioethics*. 33(2), 245–253, is also missing citations that appear in *Bioethics*. On the other hand, there are highly cited papers, such as Savulescu, J. (2001). Procreative beneficence: Why we should select the best children. *Bioethics*. 15(5-6), 413–426, where many citations are visible on Google Scholar—though I am sure even for this paper, there are *Bioethics* articles that cite it which are not reflected on Google Scholar.

alphabetical reference list at the article's end, as used by *Theoretical Medicine and Bioethics*. While neither change would make already missed citations from published papers visible to Google Scholar, it would likely solve the problem for future publications.

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