

Do scientists know how to cite their peers?

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Science is often portrayed as an objective and neutral endeavor. However, it is, in fact, permeated by moral and epistemological disputes. Rather than representing a homogeneous or entirely consensual field, scientific practice is marked by divergences that reflect different worldviews, values, and interests. These disputes extend beyond technical issues to encompass ethical and political questions—such as which knowledge is validated, which voices are heard, and which research agendas are prioritized. For example, evidence suggests that women are significantly less cited than men (Dworkin et al. 2020; Teich et al. 2022; see also Derks et al. 2025). Similarly, citation patterns reveal a strong concentration in the Global North, particularly in historically colonizing nations (see Albuquerque et al. 2024; Culotta et al. 2024). These disparities reflect broader inequalities in academia. Gender-based citation gaps may result from implicit biases, differences in professional networks, and systemic barriers to leadership and recognition in research. Likewise, the concentration of citations in the Global North is shaped by colonial legacies, funding disparities, language barriers, and the dominance of major academic journals in wealthier nations.

Scientific citations have been widely used as a metric to evaluate and measure the impact, influence, and visibility of research within the academic community. Beyond their role in assessing scholarly contributions, citation patterns provide a valuable model for analyzing the historical, economic, and ideological contexts of scientific production. By examining who gets cited, which regions and institutions dominate citation networks, and how knowledge flows across different academic spheres, it is possible to uncover underlying power structures, systemic biases, and the broader sociopolitical dynamics shaping scientific discourse. This underscores the importance of citing accurately and equitably, ensuring that diverse perspectives and con-

tributions are properly recognized in scientific discussions.

Ideally, citations should be an objective choice, grounded solely in the relevance of the referenced work to the advancement of knowledge. Yet, upon closer examination, the reality is far more intricate. The decision to cite a specific author or study may be influenced by factors that extend beyond epistemological relevance, such as collaboration networks, theoretical affinities, institutional pressures, or even strategies for academic legitimization (see Erikson and Erlandson 2014). For example, even if a scientist is recognized as honest and benevolent, and their ideas are coherent and well-founded, those ideas might still be dismissed due to the beliefs or prejudices held by other researchers (see Blancke 2022). This subjective barrier hinders the true integration of ideas and the consideration of divergent or conflicting approaches.

A study conducted by Bruton et al. (2024) explored ethical standards and citation practices among researchers funded by U.S. federal agencies. The authors distributed a questionnaire to 257 academics, examining the norms they considered ideal, the behaviors they observed in their peers, and the practices they personally followed. The findings revealed that although researchers endorsed high ethical ideals, both their own actions and those of their colleagues often failed to meet these standards. Interestingly, participants tended to view themselves as more ethical than others. By analyzing various scenarios, the study identified three categories of questionable citation practices: (1) strategic citations, aimed at boosting publication prospects or personal metrics; (2) negligent citations, involving insufficient verification of cited material; and (3) blind citations, in which relevant details about the gender or race of cited authors are ignored. This gap between ethical ideals and actual practices highlights the need for specialized training programs

to enhance citation behavior in academia (Bruton et al. 2024). In our view, these programs may be a naïve response if the structures that sustain the problem are not questioned. Citation behavior is merely the surface of deeper power structures (see Albuquerque 2024).

As editors of scientific journals, we have the opportunity to review numerous submitted articles, playing a crucial role in shaping which studies and authors gain visibility and recognition. Our decisions regarding manuscript selection, peer review processes, and journal policies can either reinforce existing hierarchies or foster a more inclusive and diverse academic landscape. By prioritizing a broader range of perspectives, ensuring fair review practices, and encouraging the citation of emerging and underrepresented scholars, we can help reduce biases and foster a more equitable distribution of scientific influence. Here, we are addressing epistemic justice and equity in scientific production and recognition. However, this does not mean compromising scientific rigor in any way.

One notable observation is the tendency toward insularity. Many authors limit themselves to engaging with data and publications from researchers within their own countries or narrowly defined academic circles. Although there are contexts in which this focus is justified—such as studies centered on local realities or endemic issues—this practice is not conducive to the broader advancement of science. Scientific progress depends on engaging with divergent ideas and alternative perspectives, which compel researchers to reevaluate their hypotheses, theories, and methods. When scientists open themselves to different viewpoints, they enrich their work and contribute to the construction of more robust and universal knowledge.

However, when insularity becomes habitual, it leads to harmful isolation. Research produced within a particular country or by a specific group may cease to engage with contemporaneous developments in other parts of the world. This epistemic closure not only limits the impact and relevance of the work but also deprives researchers of the benefits that arise from broader, diversified dialogue. Some scientific journals, perhaps to give space to all voices, often invite reviewers from the same country or geographic region as the authors of submitted manuscripts. Inadvertently, this practice may reinforce insularity by limiting the circulation of knowledge among researchers within the same epistemic bubble. How, then, can we balance the appreciation of local perspectives without compromising the global circulation of knowledge? As authors, editors, and reviewers, we must reflect on this challenge and seek ways to address it effectively.

Insularity may signal limitations in academic training. Researchers who have not been exposed to a diversity of theoretical, methodological, and cultural

perspectives during their formative years may struggle to recognize the importance of engaging with global scientific production. In such cases, insularity is not a conscious choice but rather a consequence of an educational system that has not sufficiently encouraged openness to scientific pluralism. On the other hand, some researchers deliberately choose to prioritize works from their own country or group as a form of resistance against the academic hegemony of dominant global power centers—or simply as an expression of xenophobia.

Both interpretations—insularity as a limitation and insularity as a deliberate stance (whether a morally or epistemologically driven decision)—highlight the complexity of this phenomenon. On the one hand, promoting comprehensive, globalized scientific training is essential. On the other, it is equally important to recognize that insularity can serve as a legitimate strategy for contestation and the affirmation of distinct epistemological identities. The scientific community must reflect on these dynamics and strive to balance local and global dialogues while remaining attentive to the inequalities and conflicts that permeate knowledge production.

Citation, as we have seen, is not merely a technical tool but also an epistemological and political act. When authors cite previous works, they acknowledge those studies' contributions to the construction of knowledge and position their own ideas within a broader intellectual context. Conversely, when an approach purports to be innovative while deliberately ignoring significant previous studies in the field or related disciplines—whether due to ignorance, negligence, or an unfounded pretense of originality—it fails to fulfill this crucial role. The absence of relevant citations or a superficial engagement with existing literature not only weakens the argument but also suggests a disconnection from the collective process of knowledge production.

Ultimately, proper citation and respect for scientific dynamics are two sides of the same coin. Both reflect a researcher's commitment to intellectual integrity and the progress of knowledge. Comprehensive and appropriate citation not only strengthens the credibility of academic work but also contributes to the construction of a more inclusive, plural, and interconnected science. In contrast, pseudo-innovation—which ignores dialogue with existing literature—poses a threat to this ideal by reinforcing epistemological barriers and limiting the transformative potential of scientific research.

As a leading journal in ethnobiology, *Ethnobiology and Conservation* plays a pivotal role in shaping the field by determining which research gains visibility and influence. Through its editorial decisions, peer review processes, and publication standards, the journal ac-

tively fosters academic discourse and promotes diverse perspectives.

Recognizing the importance of diversity, inclusion, and equitable citation practices, *Ethnobiology and Conservation* has implemented several initiatives to address these issues. These efforts include renewing the editorial board to enhance gender and geographic balance, as well as promoting more inclusive citation practices that acknowledge contributions from under-represented scholars and regions

REFERENCES

Albuquerque UP (2024) **O Excesso de positividade e o sofrimento acadêmico: Transversalidades em Byung-Chul Han e Franco "Bifo" Berardi.** *Prometheus - Journal of Philosophy* 16(46). doi: [10.52052/issn.2176-5960.pro.v16i46.21423](https://doi.org/10.52052/issn.2176-5960.pro.v16i46.21423).

Albuquerque UP, Jacob MCM, Alves RRN (2022) **Celebrating the 10th anniversary of ethnobiology and conservation.** *Ethnobiology and Conservation* 11. doi: [10.15451/ec2022-08-11.27-1-4](https://doi.org/10.15451/ec2022-08-11.27-1-4).

Albuquerque UP, Alves RRN, Carmo RFR (2024) **Is there a neocolonial stance in ethnobiology?** *Ethnobiology and Conservation* 13. doi: [10.15451/ec2024-01-13.06-1-4](https://doi.org/10.15451/ec2024-01-13.06-1-4).

Blancke S (2022) **Science as a moral system.** *Synthese* 200:454. doi: [10.1007/s11229-022-03877-7](https://doi.org/10.1007/s11229-022-03877-7).

Bruton SV, Macchione AL, Brown M, et al. (2024) **Citation ethics: An exploratory survey of norms and behaviors.** *Journal of Academic Ethics*. Advance online publication. doi: [10.1007/s10805-024-09539-2](https://doi.org/10.1007/s10805-024-09539-2).

Culotta E, Chakradhar S, Ortega RP (2024) **Remapping science.** *Science* 385(6709):592–594.

Derks B, Manzi F, Van Laar C, et al. (2025) **Do not blame ‘queen bees’ for gender inequality in academia.** *Nat Hum Behav* 9: 227. doi: [10.1038/s41562-024-02100-6](https://doi.org/10.1038/s41562-024-02100-6).

Dworkin JD, Linn KA, Teich EG, et al. (2020) **The extent and drivers of gender imbalance in neuroscience reference lists.** *Nature Neuroscience* 23:918–926. doi: [10.1038/s41593-020-0658-y](https://doi.org/10.1038/s41593-020-0658-y).

Erikson MG, Erlandson P (2014) **A taxonomy of motives to cite.** *Social Studies of Science* 44(4):625–637. doi: [10.1177/0306312714522871](https://doi.org/10.1177/0306312714522871).

Teich EG, Kim JZ, Lynn CW, et al. (2022) **Citation inequity and gendered citation practices in contemporary physics.** *Nature Physics* 18:1161–1170. doi: [10.1038/s41567-022-01770-1](https://doi.org/10.1038/s41567-022-01770-1).

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