

Back to the roots: reimagining scientific evaluation of research without peer review

The peer review system, once a noble aspiration, now lags behind the accelerating demands of modern science. This opinion piece calls for a decisive departure from that peer review system and advocates for a return to a more accountable, editorially driven model of scholarly evaluation. Scientific editors – already vested with decision-making authority – should no longer outsource their judgement to external referees. Instead, they must reclaim their rightful role as the primary arbiters of scientific merit. Too often, editorial judgement is diluted by ritualized consultation, where peer review delays innovation, rewards consensus and obscures responsibility. I argue for a future in which academic editors decide independently, sign their decisions and are recognized – publicly and professionally – for the intellectual stewardship they provide. By linking editorial work to scientific databases such as Web of Science, Scopus and Google Scholar, we can incentivize rigour, transparency and accountability. This model would not erode scientific integrity but elevate it, replacing bureaucracy with responsibility. It is time to shed the cloak of anonymity and return authority – and credit – to those best positioned to shape the scientific record; the academic editors themselves.

Keywords

publishing standards, scientific integrity, editorial policies

Introduction

I should begin with an observation that is so plain and so self-evident but nevertheless might strike as heretical; the modern system of peer review, though well-intentioned, has calcified into an ecclesiastical orthodoxy ([Horta & Jung, 2024](#); [Kelly et al., 2014](#)). What began as a mechanism to uphold scientific rigour has increasingly become associated with delays, flaws and systemic limitations ([Tennant & Ross-Hellauer, 2020](#)). In an era defined by advances in generative artificial intelligence, accelerated drug discovery, real-time molecular diagnostics and urgent global health challenges, the peer review system remains largely aligned with practices of a slower, simpler and long-departed era ([Aczel et al., 2025](#)). Why does this persist? Not from necessity, but from tradition.

Historically, peer review was not the corner-stone of scientific publishing – as it is often regarded today with a kind of procedural dogma – but a relatively recent construct ([Csizsar, 2016](#); [Hosking, 2025](#); [Spier, 2002](#)). In early scientific journals, publication decisions rested with academic editors and their trusted circles, without formal external review ([Burnham, 1990](#); [Castillo, 2012](#); [Drozdz & Ladomery, 2024](#)). Editorial discretion was the gatekeeping mechanism. A striking example of editorial discretion comes from 1905, when Max Planck, as editor of *Annalen der Physik*, approved the publication of groundbreaking papers by the then-obscure Albert Einstein ([Hoffmann, 2008](#); [Spicer & Roulet, 2014](#)). Ironically, a few decades later, Einstein would react angrily to peer review, taking offence when one of his own manuscripts was critiqued by an anonymous reviewer without his approval ([Kennefick, 2005](#); [Lalli, 2016](#)). Einstein's ideas, radical at the time, were not filtered through external peer review. Rather, they were assessed – and championed – by a discerning editor willing to take intellectual risks ([Nature Editorial, 2003](#)).



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2 This model persisted well into the 20th century. For example, when Watson and Crick submitted their paper on the DNA double helix to *Nature* in 1953, it was accepted based on editorial recommendation, not peer review and, later on, the *Nature* editor John Maddox remarked that the paper 'could not have been refereed; its correctness is self-evident' (Maddox, 2003). It was only in the decades following World War II that peer review became widely adopted, driven by a surge in manuscript submissions, the expansion of publicly funded research and increasing demands for formalized, standardized evaluation processes (Baldwin, 2018; Berg et al., 2024). What began as editorial judgement evolved into editorial deference. Today, academic editors – though officially empowered – are often constrained by the perceived authority of peer reviewers, whose assessments may be delayed, inconsistent or biased (Resnik & Elmore, 2016). The result is a system that privileges process over purpose and consensus over editorial vision.

'It was only ... following World War II that peer review became widely adopted'

Thus, despite its longstanding role in scientific publishing, peer review often persists more by tradition than by demonstrated effectiveness (Irfanullah, 2025). While it is intended to ensure quality, prevent misconduct and confer credibility, recent years have seen mass article retractions and replication crises across multiple disciplines (Balafoutas et al., 2025; Ioannidis, 2005; Taros et al., 2023; Van Noorden, 2023). The peer review system that claims to filter brilliance has too often filtered boldness instead (Campanario, 2009). Crucially, it is not that academic editors lack authority. They have it. But they have grown deferential – habitually outsourcing their judgement to peer reviewers, whose opacity too frequently conceals bias, inconsistency, or mere haste (Holst et al., 2022). The current process increasingly fails to meet the needs of key stakeholders – including authors, the broader scientific community and, ultimately, the public. It may no longer be sufficient to describe the peer review system as flawed; it may now be more accurately characterized as obsolete.

The priesthood of anonymity

Peer reviewers function with considerable authority yet often operate anonymously and without formal accountability. Additionally, most reviewers receive no formal training, no compensation and little recognition for their efforts. Peer review is often conducted alongside demanding professional obligations – including research, teaching and administration – and is frequently treated as a secondary task, despite its critical role in the dissemination of scientific knowledge (Phuljhele, 2024).

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It is estimated that peer reviewers spend a median of five to nine hours per manuscript (Aczel et al., 2021). As a result, years of research – encompassing study design, experimentation, analysis and writing – are often evaluated in a matter of hours by individuals whose assessments remain frequently anonymous and largely unexamined. This raises concerns about the depth and consistency of such evaluations. Moreover, the opinion of a single reviewer can significantly delay or derail a manuscript's progression, particularly when reviews are either excessively critical or insufficiently engaged. In an era where timely dissemination of scientific knowledge can have real-world implications, including consequences for public health, it is worth questioning whether such a system – dependent on limited, anonymous input – is appropriate. Especially when journal editors, who ultimately hold decision-making authority, may defer too readily to reviewer recommendations without exercising independent evaluation.

It is worth noting that some have proposed open peer review – as in signed reviews, published reviewer reports and transparent editorial decisions – as a remedy for the opacity and bias of traditional peer review models (Ross-Hellauer & Görög, 2019; Wolfram et al., 2020). While such reforms rightly aim to increase accountability, they have not resolved the deeper structural problems (Bianchi & Squazzoni, 2022). Transparency alone does not ensure rigour or quality. Open peer review systems may still suffer since reviewers

3 may become more cautious or politicized when their identities are public ([Ross-Hellauer & Horbach, 2024](#)). Others may be discouraged from offering frank critique, especially when junior scholars must review the work of senior figures ([Henriquez, 2023](#)). The recent publication – and retraction – of questionable articles in open-review publishers illustrates that disclosure does not prevent flawed decisions ([Frontiers Editorial Office, 2024](#); [Owens, 2024](#)). At best, open peer review reformulates the problem; it does not resolve it.

The great irony: academic editors who decline their authority

Scientific journals' academic editors are, in principle, the stewards of scientific publication – entrusted with curating quality and safeguarding the integrity of the scientific record. They hold the formal authority to accept or reject manuscripts. However, in practice, this authority is often diminished through routine deference to external peer reviewers. Editorial decisions frequently become interpretations of reviewer consensus rather than acts of independent judgement. Editors, particularly in high-volume journals, may find themselves functioning more as coordinators of commentary than as evaluators of scientific merit. This presents a fundamental paradox; those best positioned to exercise informed editorial discretion often step back from that role, relying instead on anonymous assessments that may vary widely in quality and rigour.

'Editorial decisions frequently become interpretations of reviewer consensus rather than acts of independent judgement'

Academic editors are typically established researchers with in-depth expertise in their respective fields. Despite their qualifications, they are frequently tasked with administrative functions – such as managing reviewer assignments, resolving conflicting feedback and communicating delays – than with exercising independent scholarly judgement. While their authority remains intact, it is often under-utilized. Scientific publishing is not a democratic process, nor should it be governed by consensus alone; it relies on informed, expert evaluation. Given their expertise, academic editors are well-positioned to make direct and accountable decisions regarding manuscript merit. The current peer review system risks diminishing the role of the editor to that of a facilitator. Rather than reimagining editorial authority, the field must reaffirm and fully utilize it.

A proposal: radical editorial evaluation

What I propose is not regression, but reversion – a principled return to the roots of scholarly publishing. Let us retire the opaque machinery of peer review and empower academic editors to act not as facilitators of anonymous judgement, but as the final arbiters of scientific merit. Let them resume their rightful place as intellectual referees, scientific curators and accountable gatekeepers of knowledge getting the credit they deserve. While current subscription-based platforms such as Clarivate's Web of Science Researcher Profile (formerly Publons) allow editors to record their editorial roles, this recognition remains limited in scope – largely unconnected to the quality of editorial decisions – and is accessible primarily through institutional subscriptions, restricting broader visibility and utility ([Clarivate, 2025](#); [Stein et al., 2021](#)).

The proposed framework is both simple and scalable. Scientific journals would maintain boards of academic editors – active researchers with demonstrated expertise and achievements. In this proposed model, each manuscript would be assigned to a single academic editor, who would retain full responsibility for the editorial decision. While editors may consult colleagues or subject-matter experts as needed, the final decision would rest with them. To promote transparency, editorial decisions would be signed, publicly attributed and permanently linked to the published article. This approach would replace anonymous reviewer input with visible, accountable editorial judgement. By making editorial contributions transparent and attributable, the model encourages rigour, professional responsibility and scholarly recognition.

4 As authors are rewarded for what they publish, so too should editors be recognized for what they accept. Let a new academic currency emerge: the number of manuscripts evaluated, the impact of accepted work (citations, Altmetric Attention Scores (AAS)) and presence across Google Scholar, ResearchGate, Scopus and Web of Science with accolades and achievements as suggested in [Figure 1](#). Each editor would have a publicly accessible profile listing all documents they have handled, along with editorial impact metrics such as an editor-specific *h*-index, citation counts and AAS – which capture broader societal and policy engagement, not just scholarly impact. Academic editors whose decisions consistently align with high-impact, widely discussed or socially relevant work could be recognized through designations such as Highly Cited Editor or placement among the Top 1% of Editors. Importantly, editorial impact could also be evaluated through alignment with Sustainable Development Goals (SDGs) – which would help to ensure that editors are recognized for curating influential work and for advancing research that serves public and planetary well-being. Such a model would not erode rigour – it would elevate it. An academic editor who accepts flawed work will see their name tarnished. An editor who champions transformative science will earn the recognition their discernment deserves. This is meritocracy through visibility – and responsibility through credit.

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DATABASE NAME

Editor Name

List of documents edited



Highly cited editor

h-index based on the documents edited



Top 1% editors

Citations of the documents edited

Altmetrics

SDG impact

Figure 1. A proposed model for public recognition of academic editors. SDG: Sustainable Development Goal

Objections and their answers

Predictably, critics will object. They will invoke the spectre of bias – as if anonymity were a shield against prejudice rather than its perfect hiding place. Peer review is not immune to bias; it is saturated with it. Gender bias, institutional favouritism, citation cartels, confirmation bias – all flourish behind the curtain of reviewer anonymity ([Holst et al., 2022](#); [Lee et al., 2013](#)). In contrast, editorial evaluation offers a transparent and accountable alternative. Because editorial decisions are publicly attributed, they carry reputational consequences, creating a natural incentive for rigour and fairness. Unlike anonymous peer reviewers, editors are identifiable and professionally accountable for their evaluations.

Others will protest that science is too vast for academic editors to assess every manuscript alone. But this is a red herring. Journals already assign papers to subject-matter editors – experts with deep familiarity in their fields. Editorial boards can be broadened, specialized and diversified to meet disciplinary complexity. It is important to note that consultation would remain a valuable part of the editorial process. Editors could still seek input from subject-matter experts; however, such contributions would be acknowledged openly rather than anonymized. The goal is not to eliminate expertise, but to ensure that responsibility for the final decision remains clearly defined. Transparency in editorial judgement promotes clarity, accountability and thoughtful

'Transparency in editorial judgement promotes clarity, accountability and thoughtful decision-making'

5 decision-making. Anonymity should not be mistaken for objectivity, nor should consensus be equated with scientific validity.

At this point, I should acknowledge that scientific knowledge advances through a gradual convergence of understanding – a process often described, perhaps too comfortably, as ‘consensus’ (Thorp, 2025). Yet history reminds us that ‘consensus’, once established, has a tendency to harden. What begins as a shared framework can calcify into orthodoxy, rendering deviation not merely unfashionable but, at times, unpublishable (He & Chen, 2018). The proposal presented here does not presume that a single academic editor can undo the gravitational pull of ‘consensus’. Rather, I argue that visibility and attribution can temper the more exclusionary effects of such consensus. When editorial decisions are signed, publicly linked to published work and reputationally tied to the intellectual and societal impact of that work, academic editors would be incentivized. They are no longer rewarded for procedural conformity, but for discernment – for the willingness to recognize value even when it arrives in unfamiliar form. Such a system does not subvert consensus; it restores the conditions under which it may be meaningfully challenged.

The moral imperative

The true cost of peer review is not merely its slowness or inefficiency – it is the quiet erosion of scientific courage. The system does not merely delay publication; it disciplines thought. Young scientists, quickly attuned to its unwritten codes, learn not to write for clarity, originality or vision, but for defensibility. Manuscripts are crafted to pre-empt criticism, not to provoke discovery. Language is tempered, conclusions softened, novelty subdued – all to survive the gauntlet of anonymous judgement. Thus, vision is sacrificed on the altar of consensus.

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In a time of rapid and often unpredictable global change, the suppression of intellectual risk carries significant costs. Addressing today’s scientific and public health challenges requires not conformity, but bold and timely decision-making. Editorial leadership should reflect these demands. Academic editors must be prepared to take responsibility for their evaluations, not defer it to anonymous reviewers. The system should recognize and reward those willing to make difficult but necessary decisions with transparency and urgency. Continuing with a model that inhibits innovation and obscures accountability is not only inefficient – it is increasingly difficult to justify. There is a moral imperative to build an evaluative framework that encourages bold ideas, accelerates their dissemination and attributes both credit and responsibility to those entrusted with their publication.

Conclusion: credit and accountability for academic editors

In retrospect, the anonymous and open peer review systems may come to be viewed not as a definitive advancement in scientific evaluation, but as a well-intentioned experiment – an attempt at distributed judgement that, while motivated by noble aims, has revealed structural and systemic limitations. These challenges are no longer peripheral; they compromise the transparency, efficiency and integrity that scientific publishing requires. The solution lies not in incremental reform, but in a fundamental shift toward a model centered on accountable editorial leadership. Academic editors should be recognized not as intermediaries, but as expert scholars entrusted with the responsibility of shaping the scientific record. Their decisions should be transparent, attributed and integrated into academic indexing systems – such as Google Scholar, Scopus and Web of Science – not only to acknowledge their contributions, but to allow informed evaluation of editorial judgement. Elevating editorial accountability does not diminish scientific rigour; it enhances it. It replaces anonymous decision-making with visible responsibility, and passive facilitation with active stewardship. In doing so, we reaffirm the

‘The solution lies ... in a fundamental shift toward a model centered on accountable editorial leadership’

6 values that underpin credible science. Let us return to the roots – not to repeat history, but to renew its wisdom. Let the academic editors rise.

Abbreviations and Acronyms

A list of the abbreviations and acronyms used in this and other *Insights* articles can be accessed here – click on the following URL and then select the ‘full list of industry A&As’ link: <http://www.uksg.org/publications#aa>.

Competing interests

The author has declared no competing interests.

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To cite this article:

Sallam M, "Back to the roots: reimagining scientific evaluation of research without peer review,"

Insights, 2026, 39: 3, 1–8; DOI: <https://doi.org/10.1629/uksg.714>

Submitted on 2 June 2025

Accepted on 24 June 2025

Published on 10 February 2026

Published by UKSG in association with Ubiquity Press.