

# Future Perspectives: Publishing Integrity Oversight in Scholarly Societies

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In an era when scientific communication is under heightened scrutiny, the integrity frameworks of scholarly societies are facing significant transformation, particularly in the research output space. From plagiarism in large language models (LLMs) to conflicts of interest, societies are navigating an evolving landscape of ethical challenges. Publishers play a pivotal role in countering skepticism and fostering public trust through rigorous ethical oversight.<sup>1</sup> Scholarly societies and publishers must therefore adapt their integrity practices to the evolving landscape of research publishing, ensuring their structures can address modern ethical challenges effectively. By examining recent changes and upcoming shifts in ethics structures, we can better understand how publishers are adapting to ensure accountability, bolster detection and intervention methods, and address enterprise-level risks.

## Detection Techniques

As the authorship landscape grows increasingly complex, societies of all sizes must adapt to uphold scientific integrity. Large societies with publication ethics frameworks already in place, or those that self-publish, may need to prioritize investments in advanced tools for detecting plagiarism,

paper mill activity, figure duplication for reuse, and data falsification. This includes leveraging software for missing citation detection and artificial intelligence (AI)-driven systems designed to flag anomalies like text generated by LLMs.<sup>2</sup> For smaller societies with limited resources for developing publication ethics infrastructure or those partnered with external publishers, investing in detection software may not be feasible. In these cases, societies must rely on their publishing partners to develop and implement enhanced integrity tools while focusing internally on bolstering editorial training and raising awareness about ethical publishing practices.

One concern for editors is that tools to find data manipulation or generative AI/LLM content lag behind the abundant programs and techniques for writing and creating research material.<sup>3</sup> Manuscript submission and peer review workflow systems should incorporate a range of detection tools into their platforms as well (Figure). As these new tools are developed and deployed by scholarly journals, editorial staff must actively monitor the reports and verify all flagged results, which can add considerably more time to the publishing process. Some tools on the market today have low success rates, or worse, return editors with false positives. Eventually there will be commonplace detection methods, software, and training, but as the market scrambles to catch up, the task of managing, tracking, and whistleblowing falls squarely on those on the frontlines of the peer review process.

All societies, regardless of size or existing infrastructure, must remain vigilant against emerging threats posed by technological advancements that bad actors might exploit. Forums like the Committee on Publication Ethics (COPE) provide valuable spaces for sharing best practices and discussing trends in identifying and addressing misconduct. Encouraging collaboration and transparency between organizations is critical to staying ahead of these challenges. Additionally, the increasing emphasis on open data and metadata as trust signals<sup>4</sup> highlights the need for accessible and interoperable data to further strengthen the integrity of scholarly publishing.

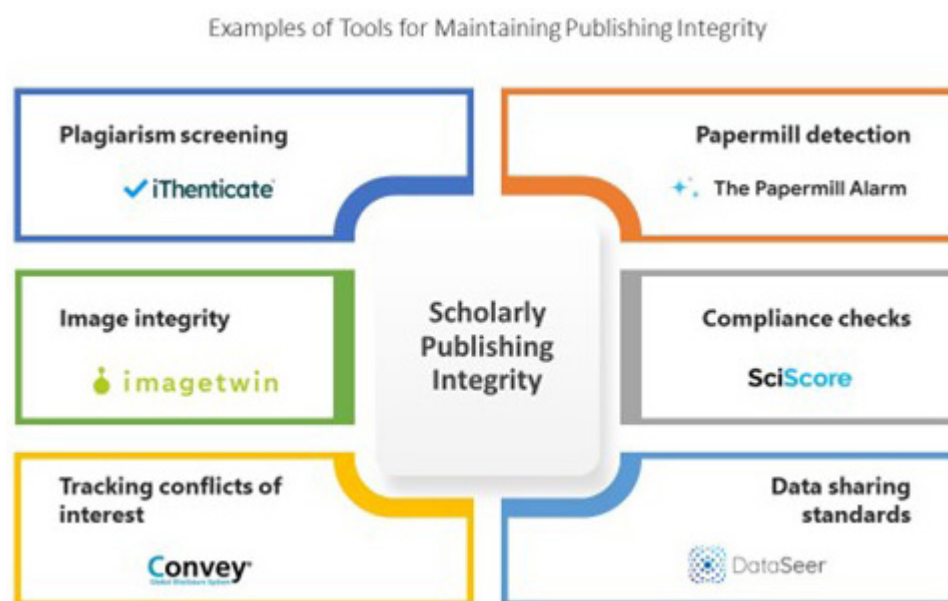
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*This article was originally presented as the 2024 CESSE webinar “Safeguarding Science: The Role of Integrity Oversight in Scholarly Societies.”*

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<https://doi.org/10.36591/SE-4801-07>

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**Figure.** Examples of tools for maintaining publishing integrity. The tools mentioned are provided as examples only and do not represent endorsements by the authors or their organizations.

## Intervention Strategies

Although detection is vital, timely and effective intervention is equally critical and often the most difficult part to standardize. Plagiarism cases can be relatively straightforward to address with ethical adjudication workflows. In contrast, cases involving data manipulation often require input and feedback loops from authors' institutions, leading to more complex timelines for publishers to take action. Furthermore, integrity bodies are having to constantly reevaluate how and when to act, often balancing reader transparency with author, editor, and whistleblower confidentiality. For example, scholarly societies are faced with increasingly delineating guidelines on when editors, external experts, or institutional authorities should be involved in cases. Some societies may choose to integrate a tiered approach where subcommittees of editors and/or designated members and staff evaluate cases and escalate them to external review if necessary. Such frameworks could prevent undue influence from stakeholders who may have conflicting interests. Complicating workflows further, some author disputes may result in the publisher handing off adjudication to the affiliation altogether, resulting in the publisher taking no action. To combat this procedural whiplash, societies should develop standard operating procedures to address postpublication disputes, ranging from issuing notes of concern to retracting articles.

However, intervention does not end with punitive measures. Publishers should prioritize training for editors and

peer reviewers to equip them with the tools and knowledge needed to detect data fabrication and citation manipulation. Educating them on identifying inconsistencies, statistical anomalies, missing ethical approvals, and improper citation practices is essential. Offering workshops, webinars, guidelines, and resources help editors and reviewers stay informed and diligent. Training can be tailored to the journal's specific needs, such as focused workshops for early career editors or addressing issues like plagiarism, paper mills, or image manipulation. Emerging topics, such as generative AI in scholarly publishing, may require a more structured approach to disseminate pertinent information effectively and promptly. Presenting these topics during editorial meetings and updating editors on publisher initiatives further reinforces this approach. Additionally, providing resources such as regular blog posts, updated FAQs, reviewer guidelines, and social media-friendly content like short educational videos can significantly support the peer review community. These efforts help maintain a positive environment, foster a growth mindset, and encourage continuous engagement within the peer review process. This proactive approach ensures research integrity, promotes transparency, and upholds the credibility of scholarly publications.

## Enterprise Risk Management

Beyond individual cases, the role of integrity oversight bodies extends to managing broader enterprise risks for societies.

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Challenges such as reputational damage, public skepticism, and the global nature of academic publishing require proactive strategies. Transparency in ethics adjudication is paramount for maintaining public trust, especially in an era marked by increased scrutiny of scientific findings, which necessitates clear and accountable decision-making. Scholarly societies are exploring innovative communication strategies, such as public-facing ethics policies and regular reports on resolved cases, making the process more transparent and accessible to the wider community. This transparency not only strengthens accountability but also ensures that ethical considerations are clearly communicated to both the public and the academic community.

The integration of ethics committees into the broader governance structures of societies<sup>5</sup> enhances their ability to preemptively address systemic risks. By positioning publication-related scientific integrity groups within the larger ethical framework of the society, these bodies can foster cross-functional collaboration and greater uniformity in handling ethical matters across the society. This integration helps bridge the gap between research integrity and other ethical concerns within the scientific community, creating a more cohesive and comprehensive approach to managing ethical challenges.

For example, integrating these groups with other committees, such as those overseeing membership standards or financial transparency, ensures that ethical considerations are consistent across all aspects of the society's operations. In the context of membership, this could involve setting clear guidelines for members to disclose conflicts of interest (COI) related to their research, funding sources, or affiliations. By working together, the ethics and the membership committee can ensure that any potential COIs—whether financial, personal, or professional—are disclosed transparently and managed appropriately. Additionally, these committees can collaborate on establishing ethics training for all members to help prevent inadvertent ethical breaches and to promote a culture of integrity across the organization. Another example could be involving the publication ethics group in discussions around membership eligibility criteria, particularly when there is concern that a member's prior unethical publishing behavior might conflict with the society's values. By embedding these scientific integrity groups within the larger governance structure, the society not only promotes consistency but also strengthens its ability to address systemic risks and ensure that ethical standards permeate all levels of society operations, from research to membership to policy.

## Conclusion

Scholarly societies must adopt actionable measures to address ethical challenges in publishing and strengthen the integrity of their research outputs. Key recommendations include:

1. **Invest in advanced detection tools.** Allocate resources for tools capable of identifying plagiarism, image duplication for reuse in figures, and AI-generated content. When applicable, societies should collaborate with publishing partners and systems to leverage these technologies.
2. **Develop standardized intervention protocols.** Establish tiered frameworks that define when and how to involve editors, external experts, or institutional authorities in ethical cases. Ensure consistency across all adjudication processes.
3. **Enhance education and training.** Provide tailored workshops and resources for editors and reviewers on emerging issues, such as generative AI and data fabrication, to promote vigilance and ethical rigor.
4. **Foster transparency and communication.** Develop clear policies to balance transparency with confidentiality and timely community incident reporting, thereby maintaining public trust and credibility.
5. **Integrate ethics into governance.** Ensure ethics committees are embedded within broader governance structures to enable cross-functional collaboration and address systemic risks proactively.

By taking these steps, scholarly societies can safeguard research integrity, uphold ethical standards, and build resilience against future challenges, ensuring that science continues to serve as a trusted foundation for societal progress.

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