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◆ Commentary

Public post-publication peer review needs due process: accountability, expertise and fairness in the PubPeer era

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Abstract

Public post-publication commentary is one route through which concerns about published research may be raised. PubPeer is a website for public post-publication comments concerning matters such as image presentation, figure consistency, statistical analysis, methodology, data reporting and interpretation. Published studies and formal retraction notices show that concerns raised after publication have, in some cases, preceded corrections, retractions or further journal investigation; these outcomes do not establish the accuracy of every comment, validate the website, or demonstrate the adequacy of its governance arrangements. When public comments are circulated to journals, institutions, funders, collaborators or employers, they may acquire consequences before the underlying concern has been independently assessed. This perspective critically examines the due-process implications of that transition, including evidentiary status, anonymity, expertise, high-volume commenting, moderation, reputational language, external amplification, persistent online visibility and institutional reliance. It argues that public comments should be treated as alerts requiring independent assessment, not as findings of misconduct or evidence in themselves. The article distinguishes documented observations, hypotheses for future empirical investigation and normative policy proposals. It does not infer the motives, competence, coordination, funding, institutional support or production methods of any commenter. A typology of comment types, a journal workflow and governance proposals are presented. The article does not

confer endorsement, legitimacy or institutional authority on any platform. Its purpose is to identify safeguards required when comments hosted by a privately governed website become editorially, institutionally or reputationally consequential.

Key points

- Public post-publication commentary is one route through which concerns about published research may be raised, but comments should be treated as alerts requiring assessment rather than as formal findings or misconduct verdicts.
- PubPeer is a website for public post-publication comments. Its comments may influence journals, institutions, funders, collaborators and author reputations before formal evaluation has occurred.
- PubPeer states that it does not scientifically review comments and generally retains threads after author responses or journal corrections; these policies warrant transparent status labelling, reasoned moderation and independent reconsideration of consequential decisions.
- Not all post-publication comments have the same evidentiary status; technical alerts, methodological critiques, interpretive disagreements, integrity signals and reputational claims require different expertise and verification.
- High-volume and cross-field commenting presents questions for future empirical research concerning distribution, expertise, comment production, quality control and institutional influence; volume alone does not establish coordination, motive or reliability.
- Journals and institutions should assess the underlying evidence, not simply the existence or circulation of a public link, before contacting authors or initiating formal procedures.
- The article proposes procedural safeguards for assessing public comments, including evidence verification, appropriate expertise, meaningful author response, careful moderation, transparent reasoning and proportionate action.

Introduction

Scientific publication does not end when an article is published. Errors, image irregularities, statistical concerns, duplicated materials, interpretive overstatement and other problems may become visible only after publication. Questions about a published article may therefore be raised by readers, specialists, editors, institutions or public websites. PubPeer is a website for public post-publication comments. The PubPeer Foundation describes it as an online platform for post-publication discussion, and its commenting guidance refers to facts, logic, publicly verifiable information and a polite, neutral and factual tone (PubPeer Foundation, n.d.-a; PubPeer Foundation, n.d.-b). Comments on the website concern matters such as image presentation, figure consistency, methodology, statistics, data reporting and interpretation. The website and its comment archive have also been examined in scholarship concerning online post-publication activity and institutional handling of publicly raised concerns (Caron et al., 2025; Ortega, 2022).

Publicly posted comments may draw attention to matters that journals or institutions subsequently examine. However, the accuracy, completeness and editorial significance of an individual comment

require independent evaluation. Journals vary in how they receive, document and assess post-publication concerns, and formal handling requires a defined procedure rather than reliance on public visibility alone (COPE Council, 2021; Hardwicke et al., 2022; ICMJE, 2026c). A public comment is not equivalent to a journal correction, an institutional investigation, a legal judgement or a formal finding of misconduct. As PubPeer comments become visible to editors, universities, funders, employers, collaborators and media outlets, they may affect author reputations before independent assessment has taken place. This risk is especially important when comments are anonymous or pseudonymous, made at very high volume, circulated across disciplinary boundaries, amplified outside the platform, or expressed in language that may imply dishonesty, misconduct or collective wrongdoing. In such cases, post-publication critique may move from scientific alert to reputational consequence without a clearly defined procedural pathway. The central issue is the authority that comments hosted on a privately governed website may acquire despite the absence of platform scientific review or formal adjudicative status. This Perspective critically examines PubPeer's governance implications. It does not call for prohibition, but it does not treat the website's existence, reach or stated aims as evidence of legitimacy, reliability or institutional authority. It examines the procedures required when public comments are used by journals, institutions, funders or other parties in decisions that may affect publications or identifiable researchers. Its central argument is that public comments should initiate assessment rather than replace it.

This Perspective distinguishes among three forms of statement: documented observations supported by cited sources; analytical questions or hypotheses requiring empirical investigation; and normative governance proposals. It does not infer the motives, competence, coordination, funding, institutional support or production methods of any named, pseudonymous or anonymous commenter. Discussion of high-volume commenting identifies questions for future research and platform governance; it does not present conclusions about particular accounts or about PubPeer activity as a whole. Likewise, the safeguards proposed in this article are policy recommendations whose feasibility and effects require empirical evaluation.

Functions and evidentiary limits of post-publication commentary

Conventional pre-publication peer review has recognised limitations. Reviewers usually work under time constraints, may not have access to raw data or original image files, and cannot be expected to detect every error, inconsistency or presentation problem before publication. Questions may consequently be raised after publication by readers with different disciplinary, methodological or technical backgrounds.

Journals differ in how they enable and document post-publication criticism. Hardwicke et al. (2022) reported barriers to the cultivation, documentation and dissemination of post-publication critique across leading journals. External websites are one of several routes through which concerns may be communicated. The existence of such a route does not establish the accuracy, relevance or completeness of an individual comment. The evidentiary limits are clear. A public comment is an alert, not an adjudication. It may be accurate, partially accurate, incomplete, misunderstood, overstated or wrong. PubPeer's published guidance refers to facts, logic and publicly verifiable information, while also stating that comments are not scientifically reviewed by the platform and are not warranted as true (PubPeer Foundation, n.d.-a; PubPeer Foundation, n.d.-b). Readers, editors and institutions must therefore evaluate each comment on its underlying evidence rather than its

visibility. This distinction is fundamental for due process. Examination of published work requires openness to criticism, but responsible editorial or institutional action requires proportionality, appropriate expertise and independent assessment. A visible comment should not become a reputational verdict merely because it is public, repeated, linked or circulated. The evidentiary object should be the underlying scientific concern, not the existence of a PubPeer thread or the number of times a link has been shared.

For journals and institutions, the appropriate response is neither dismissal nor automatic escalation. Concerns raised through public websites should be triaged and evaluated under defined editorial and publication-ethics procedures. Guidance from the COPE Council and the International Committee of Medical Journal Editors (ICMJE) addresses author contact, correction, expression of concern, retraction and institutional involvement where warranted (COPE Council, 2021, 2025; ICMJE, 2026c). The procedural principle is that a public comment may initiate assessment but should not replace editorial or institutional judgement. Documented outcomes associated with post-publication concerns

Documented editorial outcomes provide context for the due-process argument. Bik et al. examined 960 papers published in *Molecular and Cellular Biology* and identified 59 papers containing inappropriate image duplication; the subsequent journal process resulted in 41 corrections, five retractions and 13 cases in which no action was taken (Bik et al., 2018). This study shows that concerns identified after publication can lead to different editorial outcomes and that correction, rather than misconduct inference, may be the appropriate response in many cases.

Formal notices also document cases in which publicly posted concerns preceded journal investigation. For example, a 2020 *Journal of Neuroscience Research* retraction notice stated that figure concerns had originally been raised on PubPeer and that the journal subsequently investigated whether the figures could be validated (*Journal of Neuroscience Research*, 2020). The evidentiary conclusion in such a case derives from the journal's investigation, not from the public comment alone.

The available evidence also cautions against generalisation. Davidson et al. studied 500 COVID-19 randomised trials and found public post-preprint or post-publication comments for 74 trials; comments identified issues that the authors could readily address in 46 trials, but the authors concluded that this route had limited effectiveness in identifying the full range of methodological and reporting problems (Davidson et al., 2025).

These findings support neither blanket dismissal nor automatic acceptance of public commentary. They support independent assessment of the underlying scientific issue. These examples are included to address counter-evidence, not to attribute institutional authority or reliability to PubPeer. They show only that a public comment can become one input into a later journal process. The evidentiary basis for correction, retraction or no action remains the journal's independent examination and the underlying scientific record. Conceptual framework: from alert to consequence

One way to examine the governance problem is to treat public post-publication commentary as a pathway rather than a single event. PubPeer presents itself as a website for post-publication discussion, while also stating that readers must evaluate comments for themselves and that the platform does not conduct a formal scientific review of those comments (PubPeer Foundation, n.d.-

a). A comment may begin as a technical observation or interpretive concern but later move through public visibility, searchability, third-party circulation, journal attention, institutional attention, author response, editorial outcome and longer-term reputational consequence.

This pathway matters because public visibility can create institutional and reputational pressure before the underlying concern has been independently assessed. A comment that begins as a narrow alert about an image, figure, method or interpretation may later be interpreted by others as evidence of unreliability, negligence or misconduct. Caron et al. show that PubPeer-derived concerns can become relevant to institutional research-misconduct processes, illustrating how public online critique may move into formal administrative settings (Caron et al., 2025). The risk is therefore not only that a comment may be wrong, but that an unresolved or preliminary concern may acquire practical consequences simply because it is public, searchable, repeated or circulated.

Figure 1 summarises the proposed due-process framework for public post-publication comments. The framework conceptualises a public comment as the beginning of a procedural pathway rather than as an endpoint. A concern may originate as a technical alert, methodological critique, interpretive disagreement or integrity signal, but its consequences may expand as it becomes visible, searchable, circulated to third parties, reviewed by journals or institutions, and linked to author responses or editorial outcomes. The framework therefore distinguishes between the public visibility of a comment and the evidentiary assessment of the underlying concern. This distinction is important because PubPeer comments are not scientific reviews by the platform itself and should be evaluated by readers, editors and institutions on the basis of the underlying evidence (PubPeer Foundation, n.d.-a). It is also consistent with publication-ethics guidance that concerns about published work should be handled through appropriate editorial procedures, including author contact, independent assessment, correction, expression of concern, retraction or institutional referral where warranted (COPE Council, 2021, 2025; ICMJE, 2026c). The movement of PubPeer-derived concerns into institutional research-misconduct processes further illustrates why public critique requires procedural safeguards once it becomes consequential (Caron et al., 2025). The framework therefore rests on one central principle: public comments should trigger assessment, not replace assessment. This is especially important when comments are anonymous or pseudonymous, made at high volume, cross disciplinary boundaries, contain potentially reputational language, or are circulated outside the platform before journal or institutional review. In these situations, stronger safeguards are needed to prevent online visibility from functioning as an informal verdict.

The framework clarifies how a public comment may be translated into a fair procedure. Where journals or institutions choose to consider publicly posted concerns, they should require specificity, independent evidence verification, appropriate expertise, proportionate action, meaningful author response and clear documentation of whether the concern was resolved, corrected, disputed or formally substantiated.

Figure 1. Conceptual framework for public post-publication comments, risk points and due-process safeguards. The figure shows how a public comment may move from initial posting to wider visibility, third-party circulation, editorial or institutional attention, author response, formal outcome and possible reputational consequence. Risk points include unverified interpretation, opaque moderation, expertise mismatch, undisclosed production processes, accusatory language and

persistence of unresolved or superseded concerns. Proposed safeguards include specificity, independent evidence verification, appropriate expertise, reasoned moderation, meaningful author response, transparent outcome recording and contextualisation of resolved, disputed or corrected concerns. A typology of public post-publication comments

One weakness of current debate is that PubPeer comments are often discussed as though they all have the same evidentiary status, although a technical observation about apparent image similarity differs from a methodological critique, an interpretive disagreement, an integrity signal or a reputationally harmful allegation. Treating these different forms of critique as equivalent risks either overstating weak comments or underestimating serious concerns. This distinction is supported by existing work on PubPeer. Ortega showed that PubPeer comments can be classified according to content, topic and function, and that the platform is used for different kinds of post-publication discussion rather than a single uniform type of critique (Ortega, 2022). PubPeer's own guidance also implies a distinction between acceptable evidence-based comments and inappropriate speculation, personal remarks or unsupported allegations, because comments are expected to rely on facts, logic and publicly verifiable information and to maintain a polite, neutral and factual tone (PubPeer Foundation, n.d.-b). A typology is therefore necessary for due process. It helps readers, journals and institutions identify what kind of claim is being made, what expertise is required to evaluate it, what level of evidentiary support is available, and what procedural response is proportionate. A comment that identifies a possible duplicated image panel may require access to original image files and technical assessment. A comment that challenges statistical modelling may require methodological or statistical expertise. A comment that implies misconduct or dishonesty requires especially careful handling because its reputational consequences may exceed its evidentiary basis.

Table 1 proposes a practical typology for evaluating public post-publication comments. The typology is not a proposal to prohibit commentary. Its purpose is to prevent category errors: technical alerts should not automatically become misconduct allegations, interpretive disagreements should not be treated as data-integrity findings, and reputational claims should not substitute for evidence. This approach is consistent with publication-ethics guidance that concerns about published work should be assessed through structured editorial procedures and proportionate responses (COPE Council, 2021, 2025; ICMJE, 2026c).

Table 1. Proposed typology of public post-publication comments and recommended handling

Comment type	Typical content	Evidentiary status	Expertise required	Recommended handling
Technical alert	Possible duplicated panels, repeated images, splicing, figure inconsistency or data-presentation irregularity	Preliminary observable concern; not a finding by itself	Image-screening or technical expertise; field context may still be needed	Verify source files, request author clarification and avoid wider inference until assessed
Methodological critique	Sampling, controls, model choice, experimental design, statistical approach or analytical assumptions	Interpretive and method-dependent; may reflect error, limitation or disagreement	Discipline-specific methodological, statistical or experimental expertise	Consult relevant experts and distinguish methodological disagreement from demonstrable error

Comment type	Typical content	Evidentiary status	Expertise required	Recommended handling
Interpretive critique	Overstatement of conclusions, clinical relevance, biological mechanism, theoretical framing or external validity	Context-dependent judgement	Field-specific expertise and knowledge of the relevant literature	Evaluate claims against data, literature, article scope and stated limitations
Integrity signal	Possible plagiarism, paper-mill pattern, data manipulation, undeclared reuse, fabricated elements or systematic irregularity	Potentially serious, but still not a formal finding	Editorial, technical, integrity and subject-specific expertise	Conduct independent journal assessment; consider institutional referral only if evidence supports escalation
Reputational or personal claim	Language implying dishonesty, criminality, conspiracy, collective wrongdoing or targeting of identifiable authors, groups, institutions or countries	High reputational risk; weak evidentiary value unless carefully evidenced	Not appropriate as ordinary scientific critique without strong, specific and verifiable evidence	Moderate strictly; require neutral phrasing, specificity, evidence and meaningful opportunity for response

PubPeer comments as alerts, not verdicts

Public comments should initiate assessment rather than replace it. PubPeer hosts comments concerning published work, but those comments are not equivalent to formal editorial review, an institutional investigation or a finding of misconduct. The platform's published guidance refers to facts, logic, publicly verifiable information and neutral wording, while also stating that comments are not scientifically reviewed by the platform (PubPeer Foundation, n.d.-a; PubPeer Foundation, n.d.-b).

When a journal receives a public comment, it should identify the precise concern, review the underlying material, match expertise to the claim and determine whether author clarification is required. COPE and ICMJE distinguish editorial action on the reliability of the literature from institutional determination of research misconduct (COPE Council, 2021, 2025; ICMJE, 2026c). A correction or retraction may be required without a misconduct finding, and a public allegation does not itself establish that threshold.

Authors should therefore receive the journal's own clearly formulated question rather than only a link to an online thread. The communication should specify the image, data, method, text or interpretation at issue; the material requested; the applicable editorial process; and the possible range of outcomes.

Caron et al. describe how PubPeer-derived concerns may enter institutional research-misconduct processes and create substantial administrative demands (Caron et al., 2025). Once a public comment becomes institutionally consequential, evidentiary review, jurisdiction, confidentiality, an opportunity to respond and a reasoned outcome become necessary. The evidentiary object is the underlying scientific issue, not the existence, repetition or circulation of the public comment. A

concern becomes stronger when the evidence is stronger, not when the link is more visible. Figure 2 presents the proposed evidence-threshold pathway.

Figure 2. Revised evidence-threshold pathway for public post-publication comments. Public visibility appears at the lowest level and does not constitute evidence by itself. Movement towards editorial correction, retraction or institutional finding requires progressively stronger evidence, appropriate expertise, independent assessment and recorded reasoning.

Anonymity, accountability and asymmetry

Anonymity or pseudonymity may reduce fear of retaliation for junior researchers, technical specialists and others who raise concerns about senior or institutionally powerful researchers. Evidence from research-integrity settings supports the relevance of that protection. Olesen et al. found that lack of identity protection was among the reasons respondents gave for remaining silent about suspected misconduct (Olesen et al., 2019). Fear of retaliation is therefore a documented consideration in reporting decisions, but it does not establish the accuracy, expertise, independence or procedural acceptability of an anonymous allegation. Anonymity also creates procedural asymmetry because the criticised author is normally identifiable while the commenter may not be. Historical data from the United States Office of Research Integrity illustrate both sides of this issue: Price reported that anonymous complainants accounted for 8% of 986 allegations; only 13 (4%) of the 357 formal cases arose from anonymous complaints, and one of those 13 resulted in a misconduct finding (Price, 1998). Anonymous status neither validates nor invalidates a concern; the substance and supporting evidence remain decisive.

The proposed response is not compulsory de-anonymisation. It is stronger procedural control around specificity, evidence, tone, moderation, conflict screening and author response. Where identity must remain protected, an accountable institution or platform should still be able to verify relevant expertise and interests confidentially.

This asymmetry is particularly important when anonymous or pseudonymous comments become consequential beyond the platform. A comment that begins as a public observation may later be forwarded to editors, institutions, funders or employers. At that point, the anonymity of the critic may remain protected, but the author may face professional consequences, reputational suspicion or requests for explanation. This is why anonymous public critique should be treated as a reason for careful assessment, not as a substitute for evidence-based editorial or institutional judgement.

Where anonymity is retained, governance must address the resulting evidentiary and procedural asymmetry. Public disclosure of legal identity is not the only form of accountability: a platform can withhold identity from readers while still applying confidential conflict checks, expertise review, documented moderation, correction procedures and a reviewable complaint process. Anonymity should not remove evidentiary, procedural or organisational accountability.

High-volume commenting as a subject for empirical research

High-volume commenting may be examined as a platform-level distributional feature rather than as a characteristic from which conclusions about individual commenters can be drawn. Ortega's

analysis demonstrates that PubPeer activity can be studied empirically in relation to comment volume, disciplinary distribution, content and prolific-user patterns (Ortega, 2022). However, the available evidence does not establish the motives, competence, production methods, funding, coordination or quality of any particular account. Comment volume alone is therefore an insufficient basis for evaluating either reliability or influence. A highly active account may publish accurate, inaccurate or mixed observations, just as a low-volume account may do. The evidentiary quality of each comment must be assessed independently of the account's visibility or posting history.

High-volume activity nevertheless presents questions for future research because searchable comments may be circulated to journals, institutions and other third parties. Relevant empirical questions include whether activity is concentrated across particular subjects, whether technical observations extend beyond the area of competence required for interpretation, how frequently comments are corrected or disputed, and whether high-activity accounts receive different moderation or amplification outcomes.

These questions should be investigated using reproducible platform-level data, transparent sampling methods and predefined measures. They should not be answered through inference from selected account names or manually recorded search-result counts. The present article therefore treats concentration and high-volume activity as research questions rather than as findings about individual commenters or PubPeer as a whole.

Expertise boundaries: technical screening versus scientific judgement

High-volume commenting makes the boundary between technical screening and expert scientific judgement especially relevant. Some concerns, such as duplicated image panels, repeated microscopy images, reused western blot bands, inappropriate splicing or figure-assembly irregularities, may be identified through visual comparison or image-analysis techniques. Such observations may identify a matter requiring examination even when the commenter is not a subject-matter expert in the disease, organism, clinical condition or experimental system under study. Empirical work has documented inappropriate image duplication in biomedical publications, but an observable similarity remains a preliminary matter requiring contextual assessment.

However, technical image screening is not the same as comprehensive scientific assessment. Scientific images require careful contextual interpretation, including attention to image acquisition, processing, compression, figure assembly, experimental replication and journal-specific standards for acceptable adjustment or presentation (Cromey, 2010; Rossner & Yamada, 2004). A visual similarity may indicate a genuine problem, but it may also require access to original files, metadata, experimental context and author explanation before any broader conclusion can be drawn. For this reason, technical alerts should be phrased as specific observations requiring clarification, not as determinations of misconduct or invalidity. This distinction becomes even more important when comments move beyond image-based observations. Some post-publication critiques concern sampling, controls, model choice, statistical analysis, biological interpretation, clinical relevance, theoretical assumptions, field norms or the strength of causal claims. These issues require discipline-specific expertise and cannot be evaluated through visual screening alone. A person may be highly competent in detecting possible image duplication while not being qualified to make broad judgements about the reliability of conclusions across unrelated fields.

PubPeer's published guidance itself requires facts, logic, publicly verifiable information and neutral wording. The same guidance acknowledges that some rejection decisions may depend on moderators' expertise and may be potentially arbitrary, and it notes that moderators may lack domain-specific knowledge in some citation disputes (PubPeer Foundation, n.d.-b). These admissions reinforce, rather than resolve, the need for explicit expertise boundaries, documented reasons and independent reconsideration of disputed decisions. Before relying on a public comment, a journal or institution must distinguish a preliminary technical observation from a broader scientific judgement. A technical alert might state that two panels appear visually similar and request clarification or original data. A methodological critique should explain the relevant design or analytical issue and identify the expertise needed for evaluation. A broader claim about article reliability, misconduct or invalidity should require stronger evidence, independent assessment and proportionate editorial or institutional procedure. This distinction separates technical observation from unsupported reputational judgement.

Process transparency in high-volume commenting

High-volume public commenting could, in principle, arise through several production models, including individual analysis, collaborative checking, externally supplied observations, technical screening or tool-assisted workflows. The present article contains no evidence establishing which, if any, of these models applies to a particular account. They are presented only as conceptual categories for future research.

The governance relevance of these categories arises when comments become editorially or institutionally consequential. Where feasible, process-level disclosure could help readers distinguish an individually prepared observation from a collaboratively checked or tool-assisted submission without requiring disclosure of a commenter's legal identity. Scientific publishing uses authorship and contributorship frameworks because responsibility can depend on knowing who performed particular tasks (Brand et al., 2015; ICMJE, 2026a). Public post-publication comments are not journal articles, and the analogy should not be overstated. Nevertheless, where comments are highly consequential, limited process-level information may help journals and institutions understand the nature of the submitted material.

Whether such disclosure would improve accuracy, fairness or interpretability should itself be evaluated empirically. The proposal is not to require de-anonymisation, but to examine whether a platform could distinguish individual, collaborative, externally supplied, tool-assisted or organisationally supported workflows where that distinction is relevant to quality control. Table 2 presents hypothetical production models solely to define future research and governance questions. It does not assign any model to a named, pseudonymous or anonymous account.

Table 2. Hypothetical production models for future empirical investigation

Hypothetical model	Description	Research and governance question
Individual analyst	One person identifies, interprets and writes the comment.	How should expertise limits, workload and quality-control practices be assessed?

Hypothetical model	Description	Research and governance question
Technical screening workflow	Visual, textual or data-presentation screening is used to identify a preliminary concern.	How should technical alerts be distinguished from broader scientific judgement?
Collaborative workflow	Several individuals contribute to identification, checking or interpretation.	What process-level contribution and quality-control disclosures are appropriate?
Externally supplied concern	A visible account posts or reformulates material initially supplied by another person.	How should source verification and responsibility for the final wording be documented?
Tool-assisted workflow	Software, templates, comparison tools or automated searches support detection.	How are false positives, context loss and independent verification addressed?
Organisationally supported workflow	Comment preparation occurs within employment, consultancy, a funded project or another organisational activity.	When should relevant organisational support and material interests be disclosed?

Note: These models are conceptual possibilities and are not findings concerning any named, pseudonymous or anonymous account. Inclusion in the table does not imply that any model is currently used on PubPeer. Potential interests and disclosure questions: a future

research agenda

The present analysis contains no evidence concerning the personal motivations of individual commenters and draws no conclusions about why any person participates in public post-publication commentary. Comment volume, anonymity or public visibility cannot independently establish motive, conflict of interest or improper purpose. Public commenting may occur in different professional, personal, organisational or technical contexts. The existence and significance of those contexts should be examined empirically rather than inferred. Relevant research could consider whether commenters have financial, professional, institutional, collaborative, competitive or advocacy-related interests that would ordinarily require disclosure in other areas of scholarly communication. The governance question is not why a particular individual comments. It is whether a website that permits consequential anonymous or pseudonymous criticism has proportionate conflict-screening and recusal procedures. Such procedures need not disclose legal identity to the public, but the platform should be able to assess relevant financial, institutional, professional or personal interests confidentially, document recusal where necessary and explain the applicable rule.

The broader publication-ethics system recognises that relationships and activities can affect, or be perceived to affect, scholarly judgement. ICMJE guidance requires disclosure and recusal where relevant interests may influence authors, reviewers or editors (ICMJE, 2026b). Public commenters occupy a different role, but analogous questions arise when their comments are used in formal editorial, institutional or employment-related decisions. Future studies could examine this issue through voluntary surveys, interviews, documented disclosure policies and reproducible analyses of comment patterns. Until such evidence is available, possible motivations, coordination, financial

benefit, personal disputes or organisational support should remain hypotheses and should not be attributed to particular commenters.

Moderation opacity, offensive language and reputational harm

PubPeer's FAQ states that moderation is intended to keep discussion factual, high quality and polite, and that anonymous comments and comments from greylisted accounts, appear only after moderation. The same FAQ states that comments are not scientifically reviewed, may still be wrong, and that some rejection decisions may be potentially arbitrary because they depend on moderators' expertise (PubPeer Foundation, n.d.-b). Moderation therefore controls access to public visibility without establishing scientific validity.

The public About and FAQ pages reviewed for this Perspective do not identify individual moderators, describe their disciplinary qualifications, publish conflict-of-interest or recusal rules, provide case-level reasons for acceptance, editing or removal, or describe an independent appeal mechanism (PubPeer Foundation, n.d.-a, n.d.-b). This absence of public disclosure does not prove that no internal procedure exists, but it prevents external examination of consistency, particularly where account categories create different moderation pathways.

The FAQ invites users to report comments and states that non-conforming comments may be edited or removed. However, it does not describe a reasoned outcome notice for the complainant or an independent reconsideration process. A report button, by itself, does not make moderation transparent or accountable.

Tone matters because public post-publication criticism can have consequences beyond the immediate scientific discussion. A comment may begin as a technical observation about an image, method, statistic or interpretation, but the language used to describe that concern can influence how readers, editors, institutions, collaborators and employers understand the author and the article. When criticism is public, searchable and potentially permanent, wording becomes part of the evidentiary and reputational environment in which the concern is interpreted.

PubPeer's FAQ states that comments should be based on facts, logic and publicly verifiable information and should use a polite, neutral and factual tone. It also states that misconduct allegations, personal comments and speculation about researchers' actions or motives are not acceptable, and that comments implying misconduct face a high moderation threshold (PubPeer Foundation, n.d.-b). These stated standards provide a benchmark against which the platform's actual moderation decisions can be examined.

The relevant question is whether public criticism remains within the limits established by its evidence. Direct or consequential claims require correspondingly strong verification, appropriate expertise and procedurally accountable handling. However, language that implies criminality, conspiracy, intentional deception or collective wrongdoing can move a discussion away from evidence and towards personal or reputational judgement. Words such as "fraudster", "liar", "criminal", "gang", "cartel", "mafia" or similar labels may create harm when applied to identifiable authors, research groups, institutions or countries without formal evidence and due process. Even

when a scientific concern is legitimate, disproportionate language may weaken the fairness and credibility of the critique.

The risk is amplified when comments move beyond the platform. Caron et al. describe how PubPeer-derived concerns can become relevant to research-misconduct proceedings and institutional administrative processes (Caron et al., 2025). In such settings, language originally posted in an online thread may be interpreted as an allegation or reputational marker. Tone is therefore not cosmetic: it can determine whether a comment is understood as a technical observation, a request for clarification, an implied misconduct claim or a public accusation. A fair system should therefore distinguish between evidence-based criticism and reputationally harmful wording. This does not require weakening scientific scrutiny. It requires matching language to evidence. A technical observation should be phrased as an observation. An unresolved concern should be described as unresolved. A possible irregularity should not be escalated linguistically into a judgement of intent unless formal evidence supports that step. This approach is consistent with publication-ethics principles that require concerns about published work to be handled through structured editorial and institutional procedures rather than through informal accusation (COPE Council, 2021, 2025; ICMJE, 2026c). A systematic language audit could examine how platforms, journals and researchers distinguish technical criticism from wording that creates reputational risk. Such an audit should not assume that any particular term is always inappropriate in every context. The relevant question is whether the language is directed at evidence in a paper or at the character, motives or identity of authors, groups, institutions or countries. Table 3 proposes a red-flag language framework for future empirical work and platform moderation. The consequences may extend beyond the researcher named in a thread. In an experimental study of science communication, Chinn and Hart found that uncivil presentation of scientific disagreement reduced attention to and acceptance of the research and was associated with broader mistrust of scientists and scientific methods (Chinn & Hart, 2022). That study did not examine PubPeer, but it provides evidence that public incivility surrounding scientific disagreement can affect perceptions of science. Accordingly, moderation of personal, mocking or accusatory language is relevant not only to individual reputation but also to how scientific disagreement is understood by non-specialist readers.

Table 3. Proposed red-flag language audit framework for public post-publication comments

Language type	Example wording	Risk	Recommended moderation response
Technical description	"These panels appear similar"; "the same image may have been reused"	Lower risk when specific, documented and limited to observable features.	Permit only when the evidence is shown and the conclusion remains within what can be directly observed.
Unresolved scientific concern	"The figure may contain duplication"; "the data presentation requires clarification"	May be interpreted as a finding if uncertainty is not explicit.	Require supporting material, explicit uncertainty and a clear route for author response.
Implied misconduct	"This looks fraudulent"; "this appears fake"	Implies intent before competent assessment.	Reject or require reformulation as a specific, evidence-based observation.

Language type	Example wording	Risk	Recommended moderation response
Sarcasm or insinuation	"One might wonder how these authors found each other"; "an interesting coincidence"	Can imply coordination, motive or wrongdoing without stating a testable scientific concern.	Require the scientific issue to be stated directly and supported; remove personal insinuation.
Organised-crime metaphor	"cartel", "gang", "mafia", "mob"	Associates identifiable persons or groups with organised wrongdoing and can escalate reputational harm.	Reject or remove in ordinary scientific commentary; formal claims of coordination require precise definitions and evidence.
Personal accusation	"fraudster", "liar", "criminal", "scammer"	Targets character and may function as a public verdict.	Remove. Formal allegations should be sent with evidence to a competent journal or institution.
National or institutional targeting	Generalised claims about countries, institutions, laboratories or groups	Creates collective blame and may introduce discriminatory framing.	Reject generalisation; require article-specific evidence and avoid collective attribution.

External amplification and reputational pressure

Public comments may be circulated to editors, publishers, research-integrity offices, universities, funders, employers, collaborators or journalists. This transfer changes the context: a comment written for an online thread may be received as an allegation requiring institutional action.

Recipients may not know whether the concern has been independently assessed, whether relevant expertise was applied, whether the author responded, or whether the matter was corrected, disputed or resolved. Caron et al. describe administrative difficulties when anonymous emails containing PubPeer links are treated as possible research-misconduct allegations (Caron et al., 2025).

Journals and institutions should assess the underlying image, data, method, text or analysis rather than the social visibility of the link. Where a matter is corrected, rejected, resolved or formally acted upon, the resulting status should be recorded and communicated so that an earlier online concern does not remain the only visible account.

PubPeer's FAQ states that, in most cases, comments will not be removed even after an author provides a convincing reply and that threads will not be modified or removed because a journal publishes a correction. It also presents indefinite public accessibility as intentional (PubPeer Foundation, n.d.-b). These policies create status inertia: an initial comment may remain searchable even when later evidence changes its interpretation. A reply appended to a permanent thread is not equivalent to correction, adjudication or restorative action.

A proposed journal workflow for PubPeer-derived concerns

Journals play a central role in determining whether public post-publication comments are translated into evidence-based editorial assessment or into procedurally weak reputational pressure. Editors

should extract and assess the underlying concern rather than treat the existence of a PubPeer link as evidence. This approach separates public visibility from editorial judgement.

The starting point should be clear triage. When a journal receives, identifies or is sent a PubPeer-derived concern, the editor should first extract the specific scientific issue rather than treating the existence of the thread as the issue. COPE guidance on handling post-publication critiques emphasises the need to define and assess the critique, while ICMJE guidance on scientific misconduct, expressions of concern and retraction emphasises appropriate editorial procedures when concerns about integrity or reliability arise (COPE Council, 2021; ICMJE, 2026c). This means that the journal's first responsibility is to identify what exactly is being alleged or questioned: an image irregularity, statistical issue, methodological weakness, interpretive disagreement, authorship concern, plagiarism signal, data-integrity issue or possible misconduct concern.

The second step is independent evidence review. Editors should evaluate the underlying image, data, text, method or calculation rather than relying on the public visibility of the PubPeer comment. A public link may prompt preliminary editorial triage, but it should not substitute for independent examination of the underlying evidence. If the concern is technical, editors may need original image files, raw data, metadata or figure-preparation history. If the concern is methodological or interpretive, field-specific expertise may be required. If the concern suggests possible misconduct, the journal should proceed carefully and proportionately, recognising that misconduct determination usually requires institutional processes rather than informal editorial inference.

The third step is author contact. Authors should be contacted with the journal's own clearly formulated concern, not merely forwarded a PubPeer link. The editor should explain what issue has been identified, what evidence is being requested, what response is needed and whether the matter is being handled as a technical clarification, possible correction, unresolved concern or potentially serious integrity issue. This approach protects authors from being asked to respond to vague public suspicion while also allowing journals to obtain the information needed to assess the concern fairly.

The fourth step is response evaluation and proportional outcome. The author's explanation, original data, corrected files or rebuttal should be evaluated against the concern. Outcomes may include no action, correction, expression of concern, retraction, further expert review or institutional referral, depending on the strength of the evidence and the nature of the issue. COPE's retraction guidance and ICMJE recommendations both emphasise that corrections, expressions of concern and retractions should be used to protect the integrity of the scholarly record through appropriate procedures (COPE Council, 2025; ICMJE, 2026c). Finally, journals should consider public context where appropriate. If a concern is resolved, corrected, disputed or found unsupported, this status should be documented in a way that prevents misleading reputational effects. Caron et al. show that PubPeer-derived concerns can become administratively consequential for institutions, which reinforces the importance of a clear editorial record (Caron et al., 2025). A journal may examine a publicly raised concern, but any editorial action must be based on independently assessed evidence rather than the comment's online visibility, repetition or circulation. Table 4 summarises the proposed journal workflow.

Table 4. Proposed journal workflow for handling PubPeer-derived or public post-publication concerns

Step	Editorial action	Key question	Expected output
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Step	Editorial action	Key question	Expected output
1. Triage	Record the source and extract the exact scientific claim; do not treat the link itself as evidence.	Is there a specific, intelligible and potentially verifiable concern?	Triage note identifying the claim, source and evidentiary status.
2. Evidence review	Examine the underlying image, data, text, method or calculation independently.	Is there enough independently observable evidence to seek clarification?	Preliminary assessment stating what is and is not established.
3. Expertise matching	Consult image, statistical, methodological or subject experts where needed.	What expertise is necessary to interpret the concern in context?	Documented expert assessment and declared conflicts.
4. Author contact	Send the journal's own articulated concern rather than only forwarding a public link.	What exactly must the author explain or provide?	Confidential request specifying evidence, timeline and procedure.
5. Response evaluation	Assess the author's explanation, source files, corrections or rebuttal against the stated concern.	Does the response resolve, narrow or substantiate the issue?	Reasoned record distinguishing error, uncertainty, disagreement and possible misconduct.
6. Editorial outcome	Issue no action, correction, expression of concern, retraction, further review or referral as appropriate.	What action is proportionate to the independently assessed evidence?	Transparent outcome grounded in evidence and editorial responsibility.
7. Public context	Publish or link the current status where the concern has become publicly consequential.	How can the journal prevent a preliminary comment from remaining the only visible account?	Journal-controlled notice linking response, correction or final decision.
8. Restorative follow-up	Correct earlier communications when a concern is not substantiated or is materially narrowed.	Has prior circulation created continuing reputational or administrative effects?	Documented closure and notification to known recipients where appropriate.

Institutional responsibility and due process

Institutions should not act merely because a PubPeer link has been circulated. A public comment may justify preliminary triage, but institutional action requires a specific allegation, supporting evidence, jurisdiction, relevant expertise and procedural fairness. The number of comments or the prominence of a website does not determine whether the threshold for a formal process has been met.

Editorial assessment and research-misconduct investigation must remain distinct. A journal evaluates whether a publication is reliable enough to remain in the literature and may issue a correction, expression of concern or retraction without determining that an author committed fabrication, falsification or plagiarism. An institution investigates researcher conduct, normally using original records, interviews and formal procedural protections. A retraction is not, by itself, proof of misconduct, and a journal need not wait for a misconduct finding when the published record is demonstrably unreliable (COPE Council, 2024, 2025; ICMJE, 2026c; Wager & Kleinert, 2012).

A responsible institution should identify the exact concern, determine whether it concerns publication reliability or possible research misconduct, and assign it to the appropriate process. Technical uncertainty may require source files; methodological disagreement may require specialist review; and a sufficiently supported allegation of fabrication, falsification or plagiarism may require formal institutional inquiry.

Researchers should be told what evidence is being considered, what policy applies, what material is requested, who will decide the matter and what opportunity exists to comment on preliminary and final findings. If a concern is not substantiated, the institution should record that outcome and consider proportionate restorative action.

Minimum conditions before consequential reliance on public comments

The following minimum conditions should apply before journals, institutions, funders, employers or other parties rely on public comments in consequential decisions. These conditions do not validate the website hosting the comments or establish that its moderation, anonymity arrangements or commenters possess scientific authority. These safeguards are normative recommendations, not descriptions of established PubPeer practice, and their feasibility and effects require empirical evaluation.

The proposals are process-focused rather than identity-focused. They include specificity of the concern, evidence thresholds, comment classification, expertise matching, conflict-sensitive moderation, author response, reasoned decisions, status updates and independent review of consequential complaints.

Table 5 links recurring governance risks to proposed safeguards. The stronger the possible reputational or institutional effect of a comment, the stronger the justification for independent verification, documented reasoning and an opportunity for the affected researcher to respond. These proposals should be evaluated through comparative policy studies, moderation audits, user surveys and analyses of editorial and institutional outcomes.

Table 5. Proposed governance safeguards for consequential public post-publication commentary

Governance problem	Main risk	Proposed safeguard
Anonymous or pseudonymous criticism	The criticised researcher is identifiable while expertise and relevant interests of the commenter may be unavailable.	Where anonymity is retained, require specific evidence, confidential conflict checks, neutral wording, a meaningful response route and platform accountability.
High-volume commenting	Repeated visibility may create informal authority or disproportionate influence independent of comment quality.	Conduct platform-level audits of concentration, subject coverage, correction rates and moderation outcomes without attempting deanonymisation.
Opaque moderation and no independent appeal	Acceptance, rejection, editing or removal decisions cannot be externally assessed for consistency, expertise or conflicts.	Publish moderator roles and qualifications, conflict and recusal rules, reason categories, appeal procedures and aggregate transparency reports.

Governance problem	Main risk	Proposed safeguard
Cross-field critique and expertise mismatch	Technical observations may be extended into broad scientific judgements outside the expertise required for interpretation.	Separate technical alerts from methodological, statistical and field-specific assessment; obtain relevant expert review before escalation.
Offensive or reputational language	Personalisation, insinuation and organised-crime metaphors may function as unverified public accusations.	Reject personal, sarcastic, speculative, inflammatory or collective-blame wording and require article-specific evidence.
External circulation of links	A public thread may be treated by institutions, funders or employers as evidence before independent review.	Require preliminary independent triage before formal escalation and state clearly that the link is not a misconduct finding.
Inaccurate or incomplete comments	A misleading claim may remain searchable even after correction, clarification or rebuttal.	Provide visible corrections, status labels, version history and prompt notification of material changes.
Unclear production models	Readers cannot determine whether analysis was individual, collaborative, externally supplied, tool-assisted or organisationally supported.	Where activity is consequential, require confidential process-level disclosure and quality-control information without public identification.
Weak author-response mechanisms	Authors may face public suspicion without a practical opportunity to clarify or correct the interpretation.	Provide prominent, contextualised responses and a procedure for review when a reply materially changes the evidentiary status.
Permanent status without restorative update	An initial comment can remain the dominant record after a journal correction, non-finding or exonerating information.	Link later outcomes prominently, reassess harmful wording and provide a restorative notification process for known downstream recipients.

Stakeholder perspectives and policy implications

The procedural problem affects stakeholders differently. Editors are responsible for the reliability of the published record; institutional research-integrity officers assess whether formal jurisdiction and evidentiary thresholds are met; some individuals who submit concerns report fear of retaliation; authors require protection from unsupported or prematurely consequential public allegations, specific notice of the concerns raised, and a meaningful opportunity to respond; readers need clear status information; and funders and employers should avoid treating the public visibility of a comment as equivalent to a misconduct finding. For editors and publishers, the principal requirement is independent assessment of the underlying scientific issue. For research-integrity officers, it is separation of preliminary screening from formal inquiry and separation of publication reliability from researcher culpability. Where anonymous reporting is retained, commenters should still be required to state a specific concern and provide supporting material. For authors, procedural fairness requires clear questions, reasonable time to respond and visible context when a concern is resolved or not substantiated.

Readers, collaborators, funders and employers encounter comments outside the setting in which they were written. Status labels should therefore distinguish an unassessed comment, an author response, a journal investigation, a correction, a retraction and an institutional finding. These categories are not interchangeable. Table 6 summarises these stakeholder interests and the corresponding safeguards proposed in this Perspective.

Table 6. Stakeholder perspectives and proposed procedural safeguards

Stakeholder	Primary procedural interest	Proposed safeguard
Editors and publishers	Assessing publication reliability without assuming misconduct.	Extract the specific concern, review the evidence independently, use relevant expertise and document the editorial basis for action.
Commenters and individuals submitting concerns	Ability to raise a specific concern without unnecessary public identification.	Where anonymity is retained, require supporting evidence, good-faith conduct and confidential conflict screening.
Authors and respondents	Notice, response and protection from premature reputational judgement.	Provide the exact concern, evidence requested, applicable process, reasonable response time and contextual updates.
Research-integrity officers	Correct jurisdiction, threshold and fair investigation.	Separate screening from formal inquiry; distinguish publication reliability from fabrication, falsification or plagiarism.
Readers and the wider scientific community	Understanding the evidentiary status of visible comments.	Use labels distinguishing an unassessed comment, disputed concern, author response, editorial action and formal finding.
Funders, employers and collaborators	Avoiding decisions based on unverified online visibility.	Verify primary evidence and formal outcomes before using a comment in assessment or employment decisions.
Platform administrators	Transparent, consistent and reviewable moderation of a consequential public archive.	Publish moderator roles, decision criteria, reasons, conflict rules, correction procedures, transparency data and an independent reconsideration route.

Platform Transparent, consistent and Publish moderator roles, decision criteria, reasons, administrators reviewable moderation of a conflict rules, correction procedures, transparency consequential public archive. data and an independent reconsideration route. Future research agenda

The governance debate should be informed by empirical evidence rather than anecdote alone. This Perspective proposes conceptual categories and policy safeguards that require testing through reproducible research.

Several research directions are especially important. First, future studies should examine the relationship between public post-publication comments and formal editorial outcomes, including corrections, expressions of concern and retractions. This could be done by linking public threads to journal notices, publisher correction records and retraction or correction databases. Such research should determine how often comments precede formal action, how often no action follows, and whether specific comment types are associated with different outcomes.

Second, future research should analyse the content and evidentiary status of comments. Ortega demonstrated that PubPeer comments can be studied empirically in relation to comment volume, topic and user behaviour (Ortega, 2022). Building on this approach, future studies could classify comments according to the typology proposed in this Perspective: technical alerts, methodological critiques, interpretive critiques, integrity signals and reputational or personal claims. This would help prevent the common error of treating all public comments as equivalent evidence.

Third, future work should examine journal and institutional responses. Hardwicke et al. showed that many leading journals create barriers to the cultivation, documentation and dissemination of post-publication critique (Hardwicke et al., 2022). Further research should investigate how journals respond specifically when sent PubPeer links or other public comments: whether they independently assess the underlying evidence, consult relevant expertise, contact authors with clear editorial questions, or simply forward public links without additional assessment. Institutional responses also require attention, particularly because PubPeer-derived concerns can become relevant to research-misconduct processes. Fourth, future research should examine fairness, reputational outcomes and public perception. Studies could assess how often authors respond, how resolved concerns are represented, whether accusatory or uncivil language changes reader interpretation, and whether visible scientific conflict affects trust in researchers or scientific methods. Fifth, future work should examine high-volume commenting as a platform-level phenomenon. This does not require identifying anonymous commenters. Researchers could study publicly visible patterns of activity, topic distribution, disciplinary concentration, time trends, moderation outcomes and links between public comments and formal editorial action. Such work should be designed carefully to avoid harassment, deanonymisation or retaliatory use of data. The purpose should be to understand governance, reliability and fairness, not to expose individual identities. Table 7 summarises priority questions concerning editorial outcomes, comment types, moderation, stakeholders, public perception, high-volume activity and correction of the public record.

Table 7. Proposed future research agenda for studying public post-publication commentary

Research question	Potential data or method	Why it matters
How often are public comments followed by corrections, expressions of concern or retractions?	Link PubPeer threads to journal notices, publisher correction records and retraction databases.	Clarifies the real editorial impact of public comments.
What proportion of comments are technical alerts, methodological critiques, interpretive critiques, integrity signals or reputational claims?	Content analysis using the typology proposed in this Perspective.	Prevents treating all comments as equivalent evidence.
How do journals respond when sent PubPeer links?	Editor surveys, journal-policy review, correspondence analysis and case studies.	Identifies whether journals assess evidence independently or rely on public visibility.
How do public comments affect authors, readers and public perceptions of science?	Author interviews, reader experiments, longitudinal thread analysis and science-communication studies.	Tests reputational effects and whether incivility or unresolved allegations alter trust and interpretation.
How often do authors respond, and how are their responses represented publicly?	Thread-level analysis of author replies, editorial outcomes and public status labels.	Assesses fairness and the practical value of the right of reply.
How frequently are comments corrected, disputed or later contextualised?	Longitudinal analysis of comment threads and updates.	Determines whether inaccurate, incomplete or resolved concerns remain reputationally active.
How is potentially offensive or reputational language moderated?	Qualitative audit of language, moderation decisions and platform guidance.	Evaluates consistency with standards for neutral and evidence-based criticism.

Research question	Potential data or method	Why it matters
What production models support high-volume commenting?	Public data analysis, interviews and survey-based research without deanonymisation.	Clarifies whether activity appears individual, collaborative, tool-assisted, externally supplied or institutionally supported.
What procedures distinguish substantiated scientific concerns from unsupported, disproportionate or reputationally harmful public claims?	Comparative case studies of journal, platform and institutional procedures.	Helps translate post-publication critique into fair, evidence-based governance.
How do editors, individuals submitting concerns, readers and research-integrity officers understand appropriate due process?	Stakeholder interviews, surveys, Delphi studies and comparative institutional case studies.	Ensures that governance proposals reflect competing procedural needs rather than only the author's perspective.
How are moderation decisions, account categories, moderator expertise, conflicts and appeals structured?	Policy analysis, transparency-report review, moderator interviews and blinded audits of matched submissions.	Tests whether moderation is consistent, reviewable and independent of commenter status.

Limitations

This Perspective is a conceptual and normative analysis rather than a systematic review, empirical audit or platform-level quantitative study. The documented examples demonstrate that public concerns may precede different editorial outcomes; they do not establish the accuracy of all comments, a general causal effect of PubPeer, or the adequacy of any platform's governance.

No causal, motivational or organisational inference is drawn from the volume or visibility of comments. This Perspective does not establish that any commenter acts collaboratively, uses automated tools, receives institutional or financial support, works outside their competence, coordinates with other actors, targets particular researchers, or is motivated by professional, ideological, financial or personal interests. These possibilities are presented only as questions that future empirical research could examine. Comment volume by itself is not evidence of any such production model, interest or behaviour.

The discussion of high-volume commenting, hypothetical production models, interests and process-level transparency is exploratory. The article does not assign any model or interest to a specific account. A stronger empirical study would require a transparent sampling strategy, reproducible data extraction, defined inclusion criteria, longitudinal analysis and careful distinction between visibility, posting behaviour, comment quality and institutional consequences.

The language and public-trust discussion is also limited. The cited experimental evidence concerns public communication of scientific disagreement rather than PubPeer specifically. It is used to identify a plausible public-perception issue that requires direct study in post-publication-comment settings.

Finally, evidence that identity protection may reduce fear of retaliation does not establish that anonymous platform comments are accurate or that PubPeer's anonymity model is procedurally adequate. Future research should examine when anonymity is necessary, what confidential

verification is feasible, how conflicts are screened and what remedies are available when an anonymous public comment proves inaccurate or disproportionate. PubPeer-derived concerns can enter formal processes, making these safeguards a due-process question rather than a matter of platform preference.

Conclusion

Public post-publication commentary is one mechanism through which concerns about published research may be raised. Documented studies and formal notices show that concerns identified after publication have sometimes preceded corrections, retractions or further investigation. Those outcomes do not validate PubPeer, establish the accuracy of every comment, or convert a website into an adjudicative body.

The procedural issue arises when comments move beyond online discussion and influence journals, institutions, funders, employers or public reputation. At that point, they should be treated as alerts requiring independent assessment, not as verdicts or evidence of misconduct in themselves.

This Perspective critically examines the governance consequences of PubPeer comments while distinguishing documented evidence, hypotheses for future research and normative proposals. It proposes a comment typology, an independent journal workflow, safeguards for anonymity and high-volume activity, reviewable moderation, controls on reputational language, stakeholder-specific procedures and transparent status reporting.

The interests of individuals submitting concerns, editors, readers, authors and institutional officers are not identical. Any process that considers publicly posted concerns must not treat anonymity, comment volume, moderator approval, account visibility or website prominence as proxies for evidence, expertise, independence or authority.

The central principle is that comments should trigger assessment, not replace assessment. Scientific and editorial concerns should be examined through independent verification, appropriate expertise, transparent procedure, meaningful author response, reviewable moderation and proportionate action. PubPeer should therefore be treated as a website containing moderated public comments, not as a scientific tribunal, a misconduct-investigation body or a verified evidentiary record.

Data availability

No new empirical dataset was generated for this Perspective. The hypothetical production models and governance proposals are conceptual and are not findings concerning any named or pseudonymous commenter.

Competing interests

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Conflicts of interest

The author declares no competing interests.

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Data availability

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References

1. Bik, E. M., Fang, F. C., Kullas, A. L., Davis, R. J., & Casadevall, A. (2018). Analysis and correction of inappropriate image duplication: The Molecular and Cellular Biology experience. *Molecular and Cellular Biology*, 38(20), e00309-18. <https://doi.org/10.1128/MCB.00309-18>
2. Brand, A., Allen, L., Altman, M., Hlava, M., & Scott, J. (2015). Beyond authorship: Attribution, contribution, collaboration, and credit. *Learned Publishing*, 28(2), 151-155. <https://doi.org/10.1087/20150211>
3. Caron, M. M., Lye, C. T., Bierer, B. E., & Barnes, M. (2025). The PubPeer conundrum: Administrative challenges in research misconduct proceedings. *Accountability in Research*, 32(8), 1369-1387. <https://doi.org/10.1080/08989621.2024.2390007>
4. Chinn, S., & Hart, P. S. (2022). Can't you all just get along? Effects of scientific disagreement and incivility on attention to and trust in science. *Science Communication*, 44(1), 108-129. <https://doi.org/10.1177/10755470211054446>
5. COPE Council. (2021). Handling of post-publication critiques [Flowchart]. Committee on Publication Ethics. <https://publicationethics.org/guidance/flowchart/handling-post-publication-critiques>
6. COPE Council. (2024). Cooperation between research institutions and journals on research integrity and publication misconduct cases. Committee on Publication Ethics. <https://doi.org/10.24318/cope.2018.1.3>

7. COPE Council. (2025). Retraction guidelines (Version 3). Committee on Publication Ethics. <https://doi.org/10.24318/cope.2019.1.4>
8. Cromeey, D. W. (2010). Avoiding twisted pixels: Ethical guidelines for the appropriate use and manipulation of scientific digital images. *Science and Engineering Ethics*, 16(4), 639-667. <https://doi.org/10.1007/s11948-010-9201-y>
9. Davidson, M., Korfitsen, C. B., Riveros, C., Chaimani, A., & Boutron, I. (2025). Post-publication peer review and the identification of methodological and reporting issues in COVID-19 trials: A qualitative study. *BMJ Evidence-Based Medicine*, 30(4), 233-240. <https://doi.org/10.1136/bmjebm-2024-113068>
10. Hardwicke, T. E., Thibault, R. T., Kosie, J. E., Tzavella, L., Bendixen, T., Handcock, S. A., Köneke, V. E., & Ioannidis, J. P. A. (2022). Post-publication critique at top-ranked journals across scientific disciplines: A cross-sectional assessment of policies and practice. *Royal Society Open Science*, 9(8), 220139. <https://doi.org/10.1098/rsos.220139>
11. International Committee of Medical Journal Editors. (2026a). Defining the role of authors and contributors. In Recommendations for the conduct, reporting, editing, and publication of scholarly work in medical journals. <https://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>
12. International Committee of Medical Journal Editors. (2026b). Disclosure of financial and non-financial relationships and activities, and conflicts of interest. In Recommendations for the conduct, reporting, editing, and publication of scholarly work in medical journals. <https://www.icmje.org/recommendations/browse/roles-and-responsibilities/author-responsibilities--conflicts-of-interest.html>
13. International Committee of Medical Journal Editors. (2026c). Scientific misconduct, expressions of concern, and retraction. In Recommendations for the conduct, reporting, editing, and publication of scholarly work in medical journals. <https://www.icmje.org/recommendations/browse/publishing-and-editorial-issues/scientific-misconduct-expressions-of-concern-and-retraction.html>
14. Journal of Neuroscience Research. (2020). Retraction: Mechanisms and effects of curcumin on spatial learning and memory improvement in APPswe/PS1dE9 mice. *Journal of Neuroscience Research*, 98(3), 575. <https://doi.org/10.1002/jnr.24580>
15. Olesen, A. P., Amin, L., Mahadi, Z., & Ibrahim, M. (2019). Whistle blowing and research integrity: Potential remedy for research misconduct in Malaysian institutions of higher education. *Accountability in Research*, 26(1), 17-32. <https://doi.org/10.1080/08989621.2018.1554444>
16. Ortega, J. L. (2022). Classification and analysis of PubPeer comments: How a web journal club is used. *Journal of the Association for Information Science and Technology*, 73(5), 655-670. <https://doi.org/10.1002/asi.24568>
17. Price, A. R. (1998). Anonymity and pseudonymity in whistleblowing to the U.S. Office of Research Integrity. *Academic Medicine*, 73(5), 467-472. <https://doi.org/10.1097/00001888-199805000-00009>
18. PubPeer Foundation. (n.d.-a). About PubPeer. Retrieved July 22, 2026, from <https://pubpeer.com/static/about>
19. PubPeer Foundation. (n.d.-b). Frequently asked questions. Retrieved July 22, 2026, from <https://pubpeer.com/static/faq>

20. Rossner, M., & Yamada, K. M. (2004). What's in a picture? The temptation of image manipulation. *Journal of Cell Biology*, 166(1), 11-15. <https://doi.org/10.1083/jcb.200406019>
21. Wager, E., & Kleinert, S. (2012). Cooperation between research institutions and journals on research integrity cases: Guidance from the Committee on Publication Ethics. *Saudi Journal of Anaesthesia*, 6(2), 155-160. <https://doi.org/10.4103/1658-354X.97030>