1. Challenges of Peer Review
2. Increasing Complexity of Research Integrity Issues
3. Calls for Experimentation
Challenges of peer review

It is highly valued BUT

1. Large (increasing) burden on reviewers’ & Editors’ time
2. Potential for bias and process opaque (‘black box’) – selection, response, quality of review upon which decisions made
3. Wasteful across research system
4. Largely unrecognized
5. Fit for purpose for today’s science?
6. Increasing research integrity challenges...
Increasing complexity of research integrity issues

- Paper Mills (and fake authorship)
- Image manipulation
- Data manipulation
- Generative AI
- Duplicate submissions
- Reproducibility crisis
- Duplicate peer review
Calls for Experimentation

- Tailoring & selection precision
- Diversity
- Training & mentoring
- Cross-publisher sharing/portability
- Recognition, credit & reward for reviewers
- Technology to improve effectiveness & make it easier to do
- Transparency
1. Introduction
2. Oldenburg Principles
3. The Pillars of Peer Review
4. Q&A
The Oldenburg Principles - 1665

Registration

Evaluation & Certification

Dissemination

Archiving
1. Expertise
2. Objectivity and Impartiality
3. Confidentiality
4. Constructive Feedback
5. Timeliness
6. Ethical Conduct
We need more Pillars:

- Expertise
- Objectivity
- Confidentiality
- Constructive Feedback
- Timeliness
- Ethical Conduct
1. Diversity
2. Training & Mentoring
3. Recognition - Credit - Reward
4. Transparency ???
5. AI ????
Confidentiality
Constructive Feedback
Objectivity
Expertise
Timeliness
Ethical Conduct
Training
Diversity
Recognition

Pillars Supporting Academia
Expertise

Objectivity

Confidentiality

Constructive Feedback

Timeliness

Ethical Conduct

Diversity

Training

Recognition

Where is the Transparency?
Transparency
1. Peer review ripe for reinvention and in the context of Open Science/Research
2. Peer review is part of the scholarly record: *how can we make reviews work best for science?*
3. Growing research integrity issues support the case for more transparency throughout the publishing process... and in academia generally.
4. Research Assessment needs a large scale peer review.
Peer Review
Trends & Issues
Q&A

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END