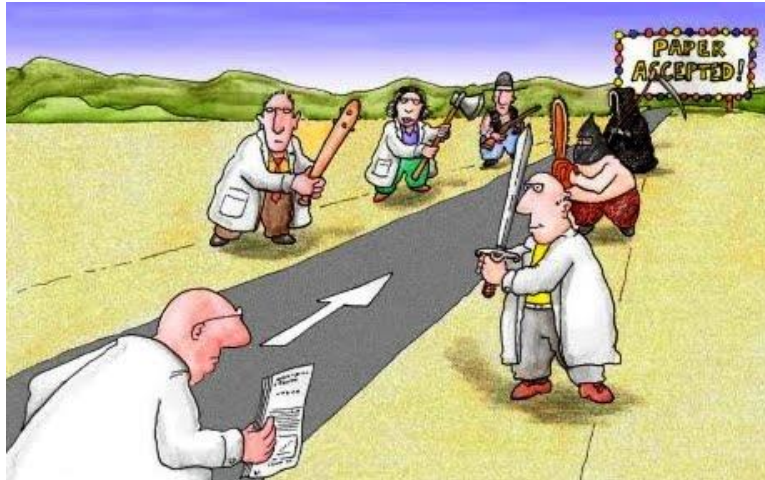


Lesson 17

Peer Review



Lesson Objectives

- All students **will** describe the process of peer review using key terms.
- All students **should** explain why peer review is important in psychology.
- All students **could** evaluate the role of peer review in the scientific process.

Key Words

- Peer review
- Single-blind review
- Double-blind review
- Open review
- Publication bias

Extension activity:

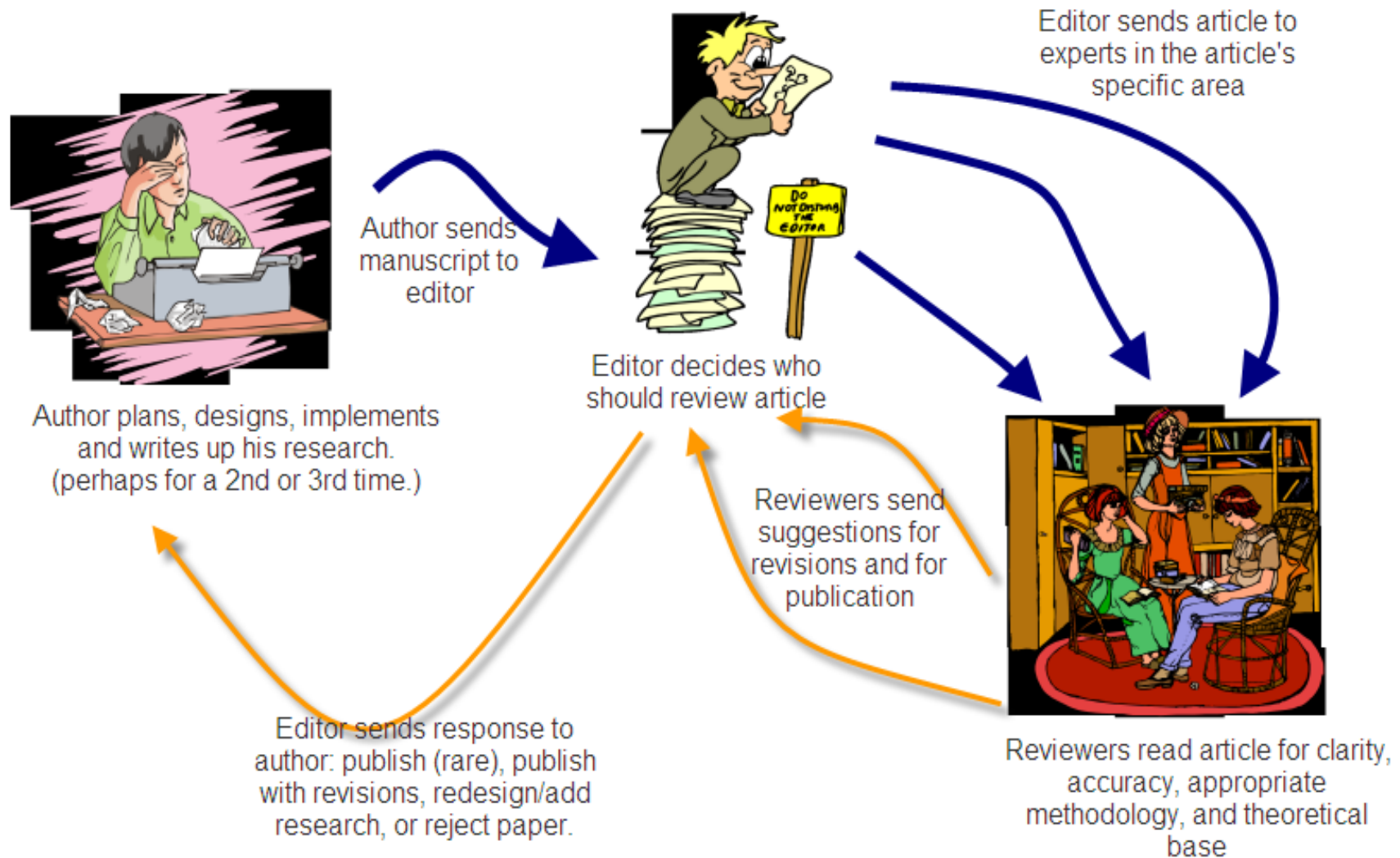
- Explore some of the latest research published in psychology journals via the BPS Research Digest: <https://digest.bps.org.uk/>



Questions to guide your thinking...

- What are the aims of peer review?
- Who are the 'peers'?
- What is the most common way in which research in psychology is published?
- Why is the peer review process important?
- Can you identify at least three problems with the peer review system?

The Peer Review Process:



Peer review is the process by which psychological research papers are subjected to independent scrutiny by other psychologists who work in a similar field. This is done before publication so that the research can be considered in terms of its validity, significance and originality and so that all research that is published is of a high quality.

The peer review process

Usually, there are a number of reviewers for each application/article/assessment. The reviewers are sent work by a journal editor. Their task is to report on the quality of the research (e.g. highlighting weaknesses or problem areas as well as suggestions for improvement if necessary). There are generally four options for reviewers to recommend: the research should be published as it is (accept it unconditionally), the research needs revising (accept it so long as it improves in certain ways), or whether it should be rejected. This can take the form of rejecting it, but suggesting revisions and a resubmission, or an outright rejection. Their views are then considered by a peer review panel.

The usual form of peer review is a **single-blind review**, which involves the names of the reviewers not being revealed to the researchers. This is intended to lead to anonymity and therefore an unbiased, honest review. However, there is always the potential issue of reviewers delaying their reviews so that they can publish similar research first and/or hide behind their anonymity to be undeservedly harsh.

To try to overcome this, a **double-blind review** can be used where both the reviewers and researchers are anonymous. This is intended to prevent bias against the researcher based on their name, age, ethnicity etc. However, the researcher may be identifiable by their writing style.

Alternatively, an **open review** can be used. This involves reviewers and researchers being known to each other. This is seen as reducing the risk of personal comments and plagiarism, and encourages open, honest peer reviewing. However, it may be that deserved criticism is watered down due to politeness or fear of retribution from famous or more powerful researchers.

The purposes of peer review

The three main purposes of the peer review:

1. **Allocation of research funding** – research is paid for by various government and charitable bodies. The overall budget for Science for 2015-16 was £5.8 billion, and organisations have a duty to spend it responsibly. Reviews enable public bodies (e.g. the Medical Research Council) to decide which research is likely to be worthwhile.
2. **Publication of research in scientific journals and books** – scientific journals offer scientists the opportunity to share their results. The peer review process means that incorrect or faulty data is much less likely to enter the public domain.
3. **Assessing the research rating of university departments** – all university science departments are expected to conduct research and this is assessed in terms of quality. Future funding for the department depends on receiving good ratings from peer reviews conducted by the Research Excellence Framework (REF).

Strengths – why peer review is important

- **Peer review protects the quality of published research.** It is a way to check the **validity** of research, the **credibility** of the research and to assess the **quality** and appropriateness of the way that the study (methodology) was designed. Peers can recommend whether the work can be published as it is, whether it needs revising or whether it should be rejected. Peers can also judge how **important** the research is in the wider context of Psychology. Peer review therefore **supports the scientific process** and the development of knowledge. Without it, we would not know what is mere opinion and speculation as distinct from rigorously researched data.
- **Helps to guard against fraud in psychology.** The consequences of false or unscientific research being accepted as true can be serious, not least because many other scientists' subsequent research may be based on the accepted facts of the original research. There are a number of famous cases of this e.g. Cyril Burt, an influential psychologist whose research strongly supported the claim that intelligence is an inherited characteristic, was found guilty of inventing data by the British Psychological Society. Peer assessment of the quality and accuracy of research helps to minimise the risk of such fraud.

Problems – issues with peer review

- **Reviewers may use peer review to criticise their rivals.** As suggested above, a minority of reviewers may use their anonymous status to criticise rival researchers who they believe have crossed them in the past or who they see as competitors for limited research funding. Although open reviewing is seen as a way of tackling this problem, it might lead to watered down criticism rather than an honest review (again, as noted above).
- **Publication bias.** Editors of journals want to publish 'headline grabbing' findings to increase the credibility and circulation of their publication. They also tend to prefer to publish positive or significant results. This could mean that research that does not meet these criteria is ignored or disregarded. As a result, this creates a false impression of the current state of psychological knowledge.
- **Ground-breaking research may be buried.** Researchers tend to be more critical of research that contradicts their own view and much more favourable to that which matches it. Journals are more likely to choose reviewers who are established and therefore findings that fit with current opinion are more likely to be accepted than research that challenges the established order.

Exam Practice

AQA A Unit 4 June 2010

18 Outline what is meant by the term 'peer review' in psychological research (2 marks)

19 Explain why peer review is important in psychological research (5 marks)

A possible question

A research paper is rejected for publication. Suggest **two** reasons why it may have been rejected. (4 marks)