RESEARCH METHODS
Getting your work published

- The journal publishing process
- Writing a paper
- Refereeing and dealing with referees' reports
- Ten rules for success

Deciding whether to publish

- **Why publish?**
  - to add knowledge to your field
  - to advance your career
  - to see your name in print!
- **Have I got something worth publishing?**
  - Does the work add *enough* to existing knowledge?
  - Is it of interest to others in the field?

Deciding where to publish

- Conference proceedings, book chapters and journals
- 26,000 journals – how to choose?
- Different strategies
  - topic and journal coverage (check website)
  - Is it peer-reviewed?
  - Most appropriate readership
  - Prestige
  - Length of time from submission to publication
  - Highest ‘impact’
- Journal impact factors

What are impact factors?

- An impact factor attempts to provide a measure of how frequently papers published in a journal are cited in the scientific literature.
- Calculated as the average number of times an article published in the journal in previous 2 years has been cited in all scientific literature in the current year.
- So, if there were an average of 1000 citations in 2007 for 100 articles published in a journal in 2005 and 2006, the impact factor would be 10.
- Most journals have impact factors that are below 2.
- Journals with impact factors above 4 tend to be regarded as having a high impact factor, and those above 10 are stellar,
  - e.g. Nature = 28, TREE = 12, J. Applied Ecology = 4.5, MEPS = 2.3, Journal of Environmental Economics and Management = 1.6, Environmental and Resource Economics = 0.9.

What editors look for in a manuscript

- Quality
  - good science: well planned, well executed study
  - good presentation
- Significance and originality
- Consistent with scope of journal
- Demonstrated broad interest to readership
- Will it cite?
- Well written ‘story’
- Author enthusiasm

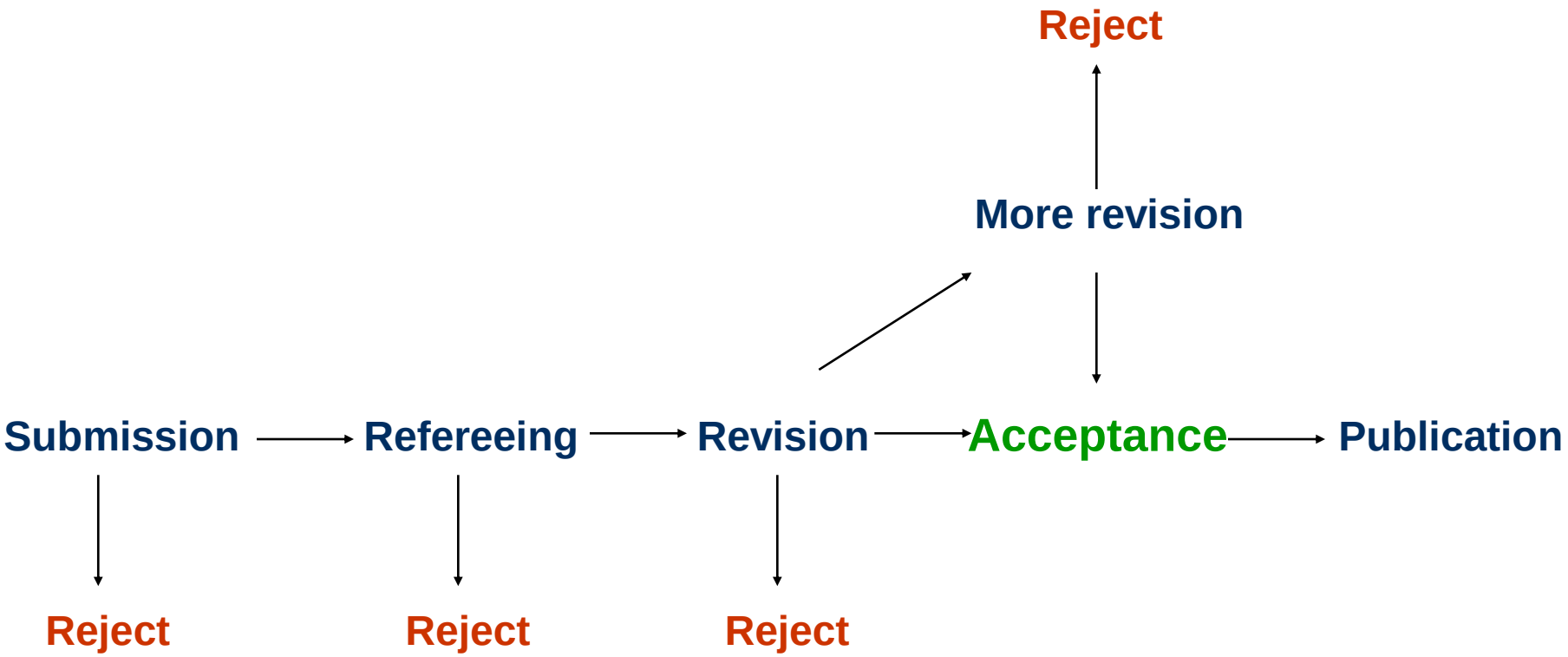
Writing the paper: key points

- Strong Introduction
  - Engage the reader
  - Set the scene, explain why the work is important, and state the aim of the study
- Clear, logically organised, complete Methods
  - Provide enough information to allow assessment of results (could someone else repeat the study?)
- Results
  - Be clear and concise; avoid repetition between text, tables and figures
- Relevant Discussion
  - Start strongly – were aims achieved?
  - Discuss significance and implications of results

Thesis versus papers

- “Your thesis is the kitchen sink.”
- Your papers should be your jewels.
- Revise and refine
- … And then do it again

Journal publishing process



Attracting the editor/reader

- There are lots of opportunities for rejection!
- Remember: your paper is competing with many others for the attention of editors and readers
- Title
  - Brief, interesting and accurate
- Abstract
  - Attract readers to your paper
  - Aim for 4 sections: why, how, what and implications
  - Include important keywords for searching
  - Make it clear and easy to read

Before you submit

- Internal review
  - Ask your peers to read it to get an alternative perspective
  - Ask someone **outside** your field to read it
- Read the Notice to Authors
  - Follow format and **submission instructions**
- Write a **cover letter** to the editor
  - Should clearly explain (but not overstate) the scientific advance
- Submit with the consent of all authors and to **only one** journal

After you submit: the refereeing process

- Referees are crucial to quality control – they play a vital role in the scientific process
- Selection criteria
  - Knowledge of the field, expertise, reputation
  - Specific recommendations
  - Editor's experience of referee's style
  - Reliability
- Referee selection: four or five referees
  - Referees hand-picked for each paper
  - Use cited references, keyword searches, related papers
  - ISI Web of Science, web (Google Scholar), journal/publisher databases
  - Editorial Board member recommendations

Understanding reviews: what makes a good review

- Good reviews provide the editor with the information on which a decision can be based
- The best are *insightful*, *articulate* and *constructive*
- They tell the editor:
  - What is interesting about the paper
  - How the results are significant
  - What contribution the paper makes to the field
  - What can be done to improve the paper
  - If the paper is not publishable and why

Detailed comments in the review

- A good review answers the following questions and provides suggestions for improvement:
  - Does the introduction explain why the work was done and the hypothesis being tested?
  - Is the experimental/study design appropriate?
  - Are the methods clearly described to enable full assessment of the results?
  - Is the analysis appropriate?
  - Are the results presented effectively?
  - Is the work discussed in the context of all relevant literature?
  - Does the discussion make clear the significance and wider implications of the work?
  - Are the conclusions supported by the data presented?

Referees' reports: what the author sees (and what the editor sees)

What does the author see?

Reviewer Number 1
Title XXX
Authors YYY
Quality of the Science
Mostly competent; suffering from serious flaws

Importance of the Science
Important research on topic of broad significance; novel aspects
Quality of Science Rating 3
Importance of Science Rating 3
Overall Assessment
Reject in present form, but encourage submission of new manuscript
Reduction in Length
Yes

What does the editor see?

Reviewer Number 2
Title XXX
Authors YYY
Quality of the Science
Experimentally and/or theoretically excellent, reliable data, no flaws
Importance of the Science
Important research on topic of broad significance; novel aspects
Quality of Science Rating 4
Importance of Science Rating 4
Overall Assessment
Accept after minor revision; no further referee assessment
Reduction in Length
No

Responding to referees' reports

- Read the editor's letter first for instruction
- Re-read reports and discuss with coauthors …
- Revise paper and prepare response document
- Remember –
  - Even comments that seem aggressive or ignorant can be helpful
  - Always view this as a chance to improve the paper

Good response to referees' reports are ….

- Well organized
  - Address common themes at start
  - Use a 'quote and response' OR numbering system of points raised by each referee
- Informative
- Provide full explanations
- Do not overlook or ignore any points
- Assertive (and polite)
- Point by point

A good example

Referee:

"Abstract – too long and too little about rationale; some repetition and some jargon presented without explanation (e.g. SL and age-0)"

Author:

"We thank the reviewer for the valuable suggestion. The rationale behind the study has been established at the beginning of the abstract (L29-32). The abstract has been shortened to 200 words and all jargon except age-0 has been removed (we don't agree that this term will confuse readers as it is commonly used). However, we have defined age-0 in the Introduction (L62 revised MS)"

Not so good …

Referee:

"The presentation is not particularly clear, nor concise. I feel the paper would benefit from being shortened, with more emphasis on the new conclusions and differences from previous works."

Author:

"As it is clearly apparent that you have not properly read or understood the paper, comments on clarity are irrelevant. The paper has been shortened."

Referees:

Two three-page reports with many fixable, but major, criticisms.

Author:

"I have changed the MS in line with the referees' comments."

The decision: accept, re-review, reject

- Questions going through the editor's mind:
  - How good is the science in this paper?
  - Is an important issue/area of study being addressed?
  - Is the experimental design appropriate and adequate?
  - Are the analyses appropriate and competently done?
  - Has the study been put in context?
  - Does the paper contribute significantly to the literature?
  - Does the paper tell an interesting story?
  - ***Will it be read and cited?***

The decision

- **<u>Remember</u> –**
- **The editor will make a final decision based on how well the referees' reports have been dealt with, so …**
- Revise with care
- Respond fully to each of the referees' comments
- Present cogent and complete arguments if you have not followed a referee's recommendation
- **Make the editor's job as easy as possible!**

Summary

- Writing for successful publication means
  - having a well designed, original study to write about
  - selecting an appropriate outlet/journal
  - knowing what you want to write
  - writing clearly
  - making the story interesting
  - highlighting the significance of the results
  - responding carefully and positively to referees' reports

Ten rules for getting published (1)

1. Read many papers, and learn from both the good and the bad ones.
2. The more objective you can be about your work, the better the work will ultimately become.
3. Good editors and reviewers will be objective about your work.
4. If you do not write well in the English language, take lessons early; it will be invaluable later.
5. Learn to live with rejection.

Ten rules for getting published (2)

6. Understand what makes good science and what makes good science writing: be objective about them.
7. Start writing the paper the day you have the idea of what questions to pursue
8. Become a reviewer early in your career.
9. Decide early on where to try to publish your paper.
10. Quality (not quantity) is everything.

Further information

- Getting your work published (Podcast)
  - http://www.jobs.ac.uk/careers/whitepapers/640/Getting_your_academic_work_published
- PLOS *Computational Biology* – 'Ten simple rules for getting published'
  - http://compbiol.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pcbi.0010057&ct=1
- 'How to get published in LIS journals: a practical guide'
  - http://www.elsevier.com/framework_librarians/LibraryConnect/lcpamphlet2.pdf