A Guide to Writing the Model Article

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How to get around journal editors!
Established to represent all disciplines of science.

AAAS supports scientific exchange and discussion of science and society issues.
Thomas Edison

1880
Evolution of the journal
The changing landscape of scientific publication
But we don't just do Science…

- Peer reviewed research
- Award winning news
  - *Science*NOW (daily)
- Science products
  - Science Signaling
  - Science Translational Medicine
  - Regional Gateways
  - Multimedia
    - Interactive features
    - Webinars
    - Slide shows
    - Videos
    - Podcasts

**Special Feature: Science and Engineering Visualization Challenge 2007**

**The Macaque Genome**

Richard Gibbs and other scientists discuss the significance of the rhesus macaque, and its genome, for biomedicine and evolutionary studies in a special interactive online version of the pull-out poster published with the 13th April Special Issue.
Competitive
The review process?
Precious manuscript
Precious manuscript
Precious manuscript
What’s going on inside?
28 Editors, Deputy, Senior, Associate

- PhDs and MDs, with post-doc research experience
- Professional experience in research
- Cover all of physical and biological science
- Backgrounds include physics, chemistry, geology, astronomy, ecology, evolution, molecular biology, plant science, neuroscience, signal transduction, cell biology, immunology, etc.
- We learned ‘editing’ on the job
- Main offices in Washington DC, and Cambridge UK
Stages of review
How the process works
The editor’s role
Criteria for selecting papers
The Author, the Editor and the Referee
(The Good, The Bad and the Ugly)

Preparing for submission

After submission.

Role of the editor: friend or foe?!

Revision and publication

Pleading your case
Submission
Submission

\[\downarrow\]

Initial evaluation

\[\leftrightarrow\]

Board of Reviewing Editors
Submission → Initial evaluation

- Rejection
- Peer review

Board of Reviewing Editors
Submission

Initial evaluation

Rejection

Peer review

Board of Reviewing Editors

Rejection
Submission

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Rejection

Board of Reviewing Editors

Peer review

Rejection

Revision

Acceptance (often after re-review)
What Doesn’t Matter

- The eminence of the authors
- The prestige of the institution
- Whether you contacted Science before submitting
- Whether you are from the USA
- Whether you are a member of AAAS
- The field of inquiry
A tough process

- 70% published (biological)
- 20% rejected before in-depth review
- 6% rejected after in-depth review
- 4% published (physical sci)
Peer-review
Discussion and careful consideration

Reviewer <-> Staff Editors <-> Authors

Board of Reviewing Editors
Submitting a paper.
Author

Editor

Reviewer

JOURNAL

Readers

Peers
Outside the field
Media
Public at large
At what point is your work ready? Where to submit?
Should your paper go to SCIENCE?

Is it your best work?

Will it have a big impact?

Will it interest scientists in other fields?

Does it overturn conventional wisdom?
More than incremental?

- Answer to a long standing question.
- Different way of thinking.
- Proof of principle for important hypothesis
- Important application.
The work is sufficiently interesting!
Plan: Decide when and how to write up. Who should write-up the work?!
Write with the editor in mind……
Author

Is the importance of this work apparent?

Have I got the message across clearly?

Editor

Is it the right length?

Are hype and jargon at a minimum?

Reviewer

Is it comprehensible to a general audience?

Format.
Good cover letter.
Write with the reviewer in mind.
Is there enough detail?

Is there too much detail?!

Are interpretations of the data appropriate?
Is the data clear?
Quality of figures good?
What helps......

Assess both research and presentation

Run your own review process first

Ask for feedback - specialist / non specialist
Is the main message of the paper clear?

Is the importance of the work made clear?

Is the paper the right length?

Are the figures clear?
What doesn’t help

• The LPU
• Excessive or unfounded speculation
• Repeat examples of a known phenomenon
• Poor presentation, language, grammar.
Common reasons for rejecting a paper: Stage 1

Lacks novelty

Too specialized

Insufficient advance over previously published work
Common reasons for rejecting a paper: Stage 2

Technical: Unconvincing data

Main conclusions not supported by the experiments
Observations without interpretations
Common reasons for rejecting a paper: Stage 2

Interpretations without observations!!
Reading into Rejection.

Extracting a useful message from the rejection.

Reviewer comments: improving the manuscript for another journal

Criticism: constructive rather than crushing

Argue your case, or submit elsewhere?
Reviewing papers

See review as a means of providing constructive criticism

Reviewers help guide the editorial decision
Reviewing papers

>Give brief synopsis of the paper
  one paragraph

>Analyze quality of experiments
  explain reasons, support arguments

>Analyze validity of interpretation
  explain reasons, support arguments
Reviewing papers

>Suggest further experimental directions

>Discuss what impact the paper might have in its own specialty in a broader context

>Note any similar publications
Submitting a Manuscript to *Science*

- Submit online at www.submit2science.org
- Follow information to contributors
  - Preparing your manuscript:
    - Some flexibility is allowed in length of initial submission
    - Write clearly, proofread and if not a native English speaker ask one to read and edit your manuscript
- Types of Submissions:
  - Research Article ~4500 words, 6 figures and tables
  - Report ~2500 words, 4 figures and tables
  - Brevia ~800 words, 1 figure/table + 800 word SOM with 1 figure or table
  - Policy and Education forums (1000-2000 words)
  - Editorials, Perspectives, Book reviews and Reviews (typically invited)
http://sciencecareers.org
Resources for the next generation of scientists

- Jobs
- Career advice
- Funding database
- Discussion forum
- Job market news
- Alternative careers

- New articles each week
- Career advice: networking, resumes, CVs, interviewing
- Balancing work and life
- Browse by date, career stage, discipline
Questions and Answers.

Welcome to the world of science. AAAS is being asked to help deliver answers more quickly than ever before. Keeping up-to-date with the latest scientific news and developments is ever more critical at this time in order to succeed. The question is how.

AAAS magazine, the weekly journal of AAAS, gives you an inside track to a world of scientific information, understanding, and knowledge. Every week, our members make astounding discoveries inside the pages of Science and access up-to-the-minute with privileged access to the latest via Science Online. By becoming a member of AAAS, you too can gain access to this world of scientific insight.

AAAS has been helping to answer the questions of science and scientists since 1848, and today is the world's largest multidisciplinary, nonprofit membership association for science-related professionals. We work hard at advancing science and serving the needs of our members and society-by supporting improved science education, sound science policy, and international cooperation.

So, if the question is how do I become a member, here’s the answer. Simply go to our website at www.aaas.org/join, or in the U.S. call 202-326-6477 and ask for code T31 or internationally call +1 202-326-6477.

And you’ll discover the answers are all on the inside. Join AAAS today.