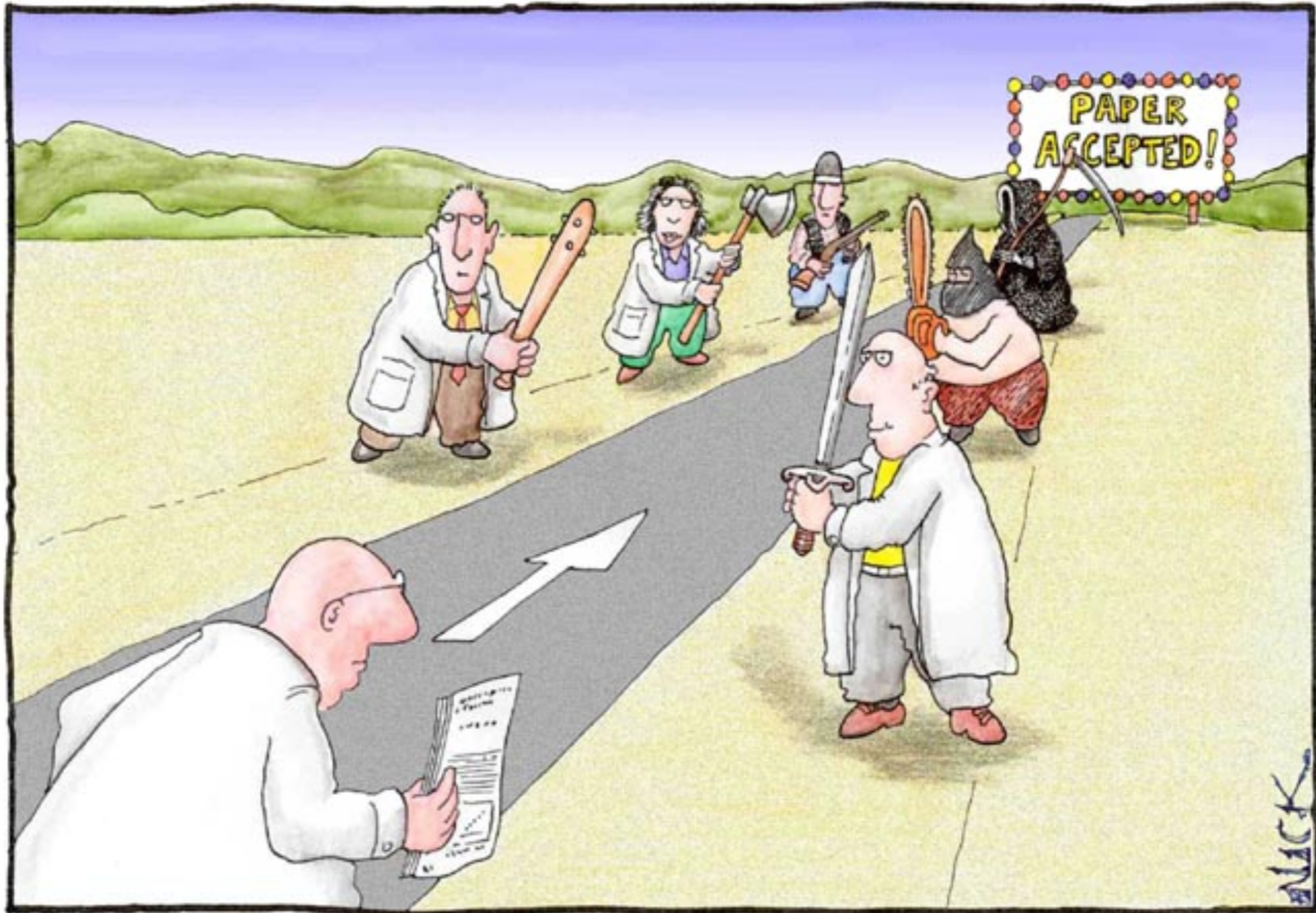


Peer Review



Most scientists regarded the new streamlined peer-review process as "quite an improvement."

What is peer review?

Before journal publication, a manuscript is sent to 2-3 (usually) experts in the field, who make comments, suggestions, and recommend publication or rejection.

Goals:

Improve quality of work

Keep flawed studies from publication

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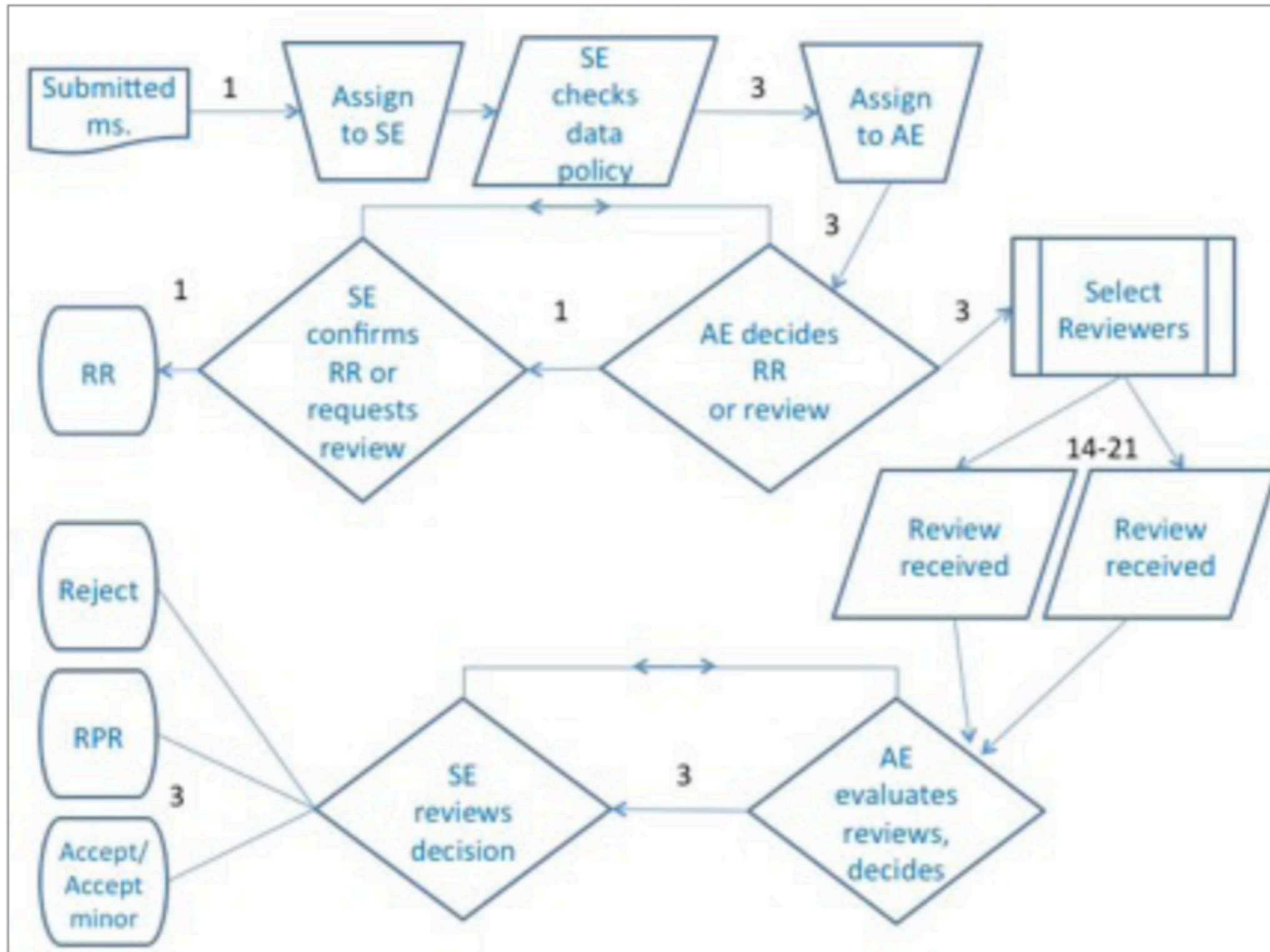
Keep flawed studies from publication

What is peer review isn't about

Spelling/grammar (unless it disrupts understanding)

Formatting

The system



Key areas of evaluation

Rigor of the science

- (1) Is the study accurately framed and presented within the context of the broader field and published precedents?
- (2) Are the methods appropriate to the questions being asked?
- (3) Are the studies well controlled?
- (4) Are the data of high quality and interpretable (i.e., believable)?
- (5) Were the follow-up analyses, such as statistical tests, performed correctly?
- (6) Is there a clear logic behind the experimental flow, and do the various parts form a coherent story?
- (7) Are the chief claims of the manuscript supported by the data?

Key areas of evaluation

Clarity of the presentation

- (1) Is each section of the manuscript logical? A logical flow and sufficient information in each section is important.
- (2) Is it easy to find the methods that correspond to each section of the Results?
- (3) Are the figures helpful in presenting the data? In what ways can the figures be improved?
- (4) Are the tables well organized? Is it clear what information is presented in each table column?

Key areas of evaluation

Strength of the conclusions

- (1) Does the strength of the conclusions match the strength of the data?
- (2) Where appropriate, are the conclusions supported by statistics? Is all pertinent statistical information provided; e.g., test statistics, degrees of freedom, and effect size (i.e., not just the p-values)?
- (3) Are the conclusions discussed in the light of previously published knowledge?
- (4) Are the references up to date? Are any important related references missing?
- (5) Are alternate conclusions possible or likely, given the same data?

Basic principles

- Be kind.
- What would be useful feedback if this was your manuscript?
- Whenever possible, make the criticism constructive. Offer alternatives.
- Provide evidence, where appropriate, for the statements you make in your report
- You don't need to fix every comma. (But if you can't help yourself, indicate somehow which comments are major vs. minor)
- Don't try to mold the paper the way you would write it
- Always conduct the review professionally, courteously, collegially and politely
- Always treat the paper with the utmost confidentiality

Workflow

Read the paper and take margin notes

Read the paper again (and make more notes)

Compile your notes - decide what is important vs. trivial

Draft a response

Skim through the paper again

Polish your response

Manuscript draft formatting

Full document "FullMS_xyz":

Title

Introduction

Methods

Results

Discussion

References

Tables

Figures

} Or emedded; captions should be on the same page

Manuscript draft formatting

Full document "FullMS_xyz":

Title

Introduction

Methods

Results

Discussion

References

Tables

Figures

} Or emedded; captions should be on the same page

Peer review document ("PartialMS_xyz"):

Title

Methods

Results

(References)

Tables

Figures

} Or emedded; captions should be on the same page

Manuscript draft formatting

Don't include your name or student number on any page except the last one. This last page should be blank except your student number and name. It will be removed from the peer review (partial) document.

Double spaced, with line numbers

The final assignment will be formatted to meet the guidelines of the Canadian Journal of Microbiology Article, with the exception of figure captions (they should be on the same page as the figure). The draft does not have to follow these conventions.

<https://www-nrcresearchpress-com.uml.idm.oclc.org/page/cjm/authors>

Manuscript draft

Comments on your draft can only be as helpful as the effort you put in.

The more complete a draft you have the more helpful the comments will be.

Manuscript draft timeline

Draft due: Sunday, November 10 11:59pm

Peer reviews due: Tuesday, November 19 11:59pm

Drafts returned: Thursday November 21 in class

Full manuscript due: Friday December 6, 11:59 pm