Scientific publishing

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Based on a lecture by Bruce Ransom

Editorial activities

- Founding Editor-in-chief GLIA 1987-now
- Founding Editor-in-chief Neuroforum 1995-2012

Successful Scientific Publishing: some suggestions

Conclusions

1. Publishing your work is essential.

2. If you can talk about your work, you can (*and must*) write about it.

3. The process of getting a paper into press is a straightforward, step by step process - don't be intimidated

Scientific Publishing: Why?

1. Communication of new knowledge

2. Expected by funding agencies

3. Career advancement (“publish or perish”)

Scientific Publishing: What?

Research papers

Subject reviews

Books

Opinion/editorial

The Research

1. Plan your research carefully (good questions, sound methods, feasible & reasonable timetable).

2. Write down your research plan (include mock tables/figures).

3. Discuss the order of authorship early

4. Write up your experiments and make Figures right after you have done them

Writing is easy…

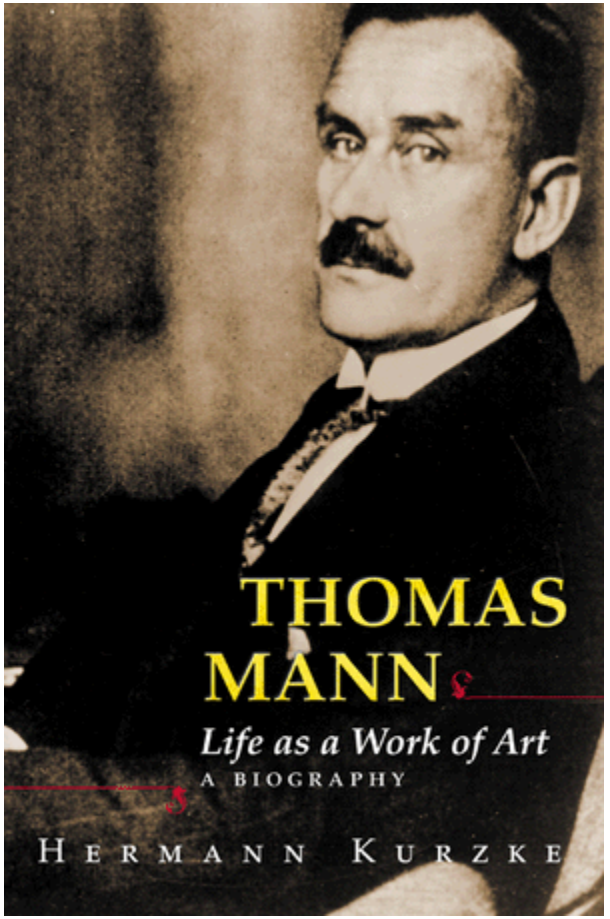
- “All you do is stare at a blank sheet of paper until drops of blood form on your forehead”

  – **Gene Fowler**

Writer

- “A writer is a person, for whom…
- writing is more difficult than it is for other people”

-Thomas Mann (1875 - 1955)



Writing the Paper

1. Giving a ‘talk’ about your work is a good starting place. Agree on key points and create a brief outline. Commit to a deadline (*perfectionism = paralysis!*).

2. Write the paper in this order: figures and tables, methods & results, *only then* introduction, discussion & abstract. Spend time choosing a title.

3. Introduction: clearly describe the rationale for your study. Introduction depends on the readership of the journal

Writing the Paper (cont.)

Discussion and Conclusions

4. Discussion: explain what is new, interesting and useful about your results; limitations of the data. The discussion should never be longer than the results

5. Conclusions should be justified and cautious, but hopefully also insightful (don't be grandiose).

Writing the Paper (cont.)

6. Keep the manuscript short. Use short sentences

   No relationship between length and importance

7. Edit ruthlessly, and often!

8. Edit ruthlessly, and often!

The Review Process

1. Pick an appropriate journal and follow its policies.

2. Consider the journal's "impact factor".

3. Suggest appropriate reviewers. Also mention reviewers who may have a conflict of interest.

4. Respond systematically and thoughtfully to referee comments. Rebut invalid criticisms.

5. Don't take rejection personally. Resubmit!

The Review Process

Pick an appropriate journal and follow its policies.

- Is the paper right for the journal's audience?

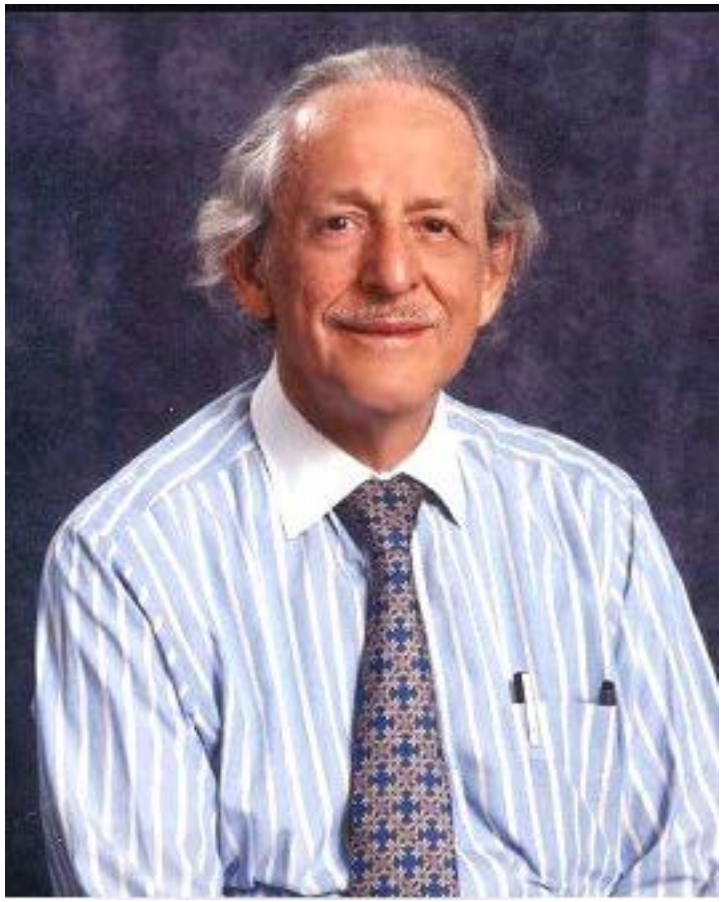
- "Turn-around time" for review process (ask).

- "Turn-around time" for publication ("accepted for pub Oct. 20, 1999", pub April 24, '00 = 6 months).

- Is the journal listed in bibliographic indices?

The Review Process

2. *Consider the journal's "impact factor".*



'Golden Age' of citation analysis:
- Impact factor - 1969

- *"scientometrics"*
(International society of Scientometrics and informetrics)

- *"Journaloglogy"*

Eugene Garfield: Founder and Chairman Emeritus, Institute of Scientific Information (ISI)

The history and meaning of impact factor. JAMA, 295:90-93, 2006

2. *Consider the journal's "impact factor".*

"Impact factor is not a perfect tool to measure the quality of articles but there is nothing better…" __C. Hoeffel.

I.F.: Frequency with which the "average article" in a journal is cited in a given year. Helps evaluate the relative importance of journal.

(*not the importance of a specific paper!*)

<u>Calculation</u>

# of citations in one year to articles in previous two years / total # of articles published in previous two years

Journal Impact Factor

Archives of Gliology - 1998

Cites in 2012 to articles published in: 2011 = 327
2010 = 451
= 778

Number of articles published in: 2011 = 109
2010 = 103
= 212

Calculation: $\frac{\text{Cites to recent articles}}{\text{Number of recent articles}} = \frac{778}{212}$ = IF of 3.670

The history and meaning of impact factor. JAMA, 295:90-93, 2006

Peer Review: A negotiation between author and journal about the scope of the knowledge claims that will ultimately appear in print.

The 'bright side'

1. Enforces ethical research and ethical publishing

2. Improves content

3. Improves quality of presentation

4. Prevents poor quality work from appearing in our best journals

Peer Review: A negotiation between author and journal about the scope of the knowledge claims that will ultimately appear in print.

The 'dark side'

1. Arbitrary

2. Slow

3. Conservative and censorial

4. Determines where your paper is published, not if it is published

Peer Review: *What Actually Happens*

1. Editor selects (~2) reviewers (list from authors, in-house list or editorial board, your bibliography)
2. Reviewer comments: to editor and for author
3. Editor makes first verdict: accept $\Rightarrow$ reject
4. Editor may or may not send revision for re-review (be clear and thorough in resubmission letter)
5. Editor makes final verdict.

Remember: Editor wants to accept and publish "good" work. Make sure the abstract indicates why the work is important.

Confidential Notes to Editor

- “This is just about the worst article I have reviewed in years
- There is no science, there is no conclusion, there is no validity to the method, there are holes the logic and the English is clumsy and unfocused
- Their spell checker is working, however”

Peer Review: Some "Turn offs"

1. Obvious effort to publish a "LPU" (least publishable unit)
2. Excessive claims or contentions
3. "Sloppiness" (poor organization, typos, spelling and grammatical errors, etc.)
4. Excessive length (especially in the discussion)
5. Failure to cite relevant papers; excessive self-citation; suspicion of plagiarism
6. Combative response to reviewer comments (your rebuttal letter may be transmitted to reviewers)

CrossCheck

CrossCheck: an initiative to help journals (when desired) prevent scholarly plagiarism.

CrossCheck is two products:

1. A database containing indexed published content from *CrossCheck* members (Wiley-Blackwell, Elsevier, Nature, OUP, Springer, etc.)

1. A web-based, originality (plagiarism) detection tool (*iThenticate*) Yikes!

The Review Process

1. Respond systematically and thoughtfully to referee comments. Rebut invalid criticisms.

   - *Interpreting* the editorial verdict

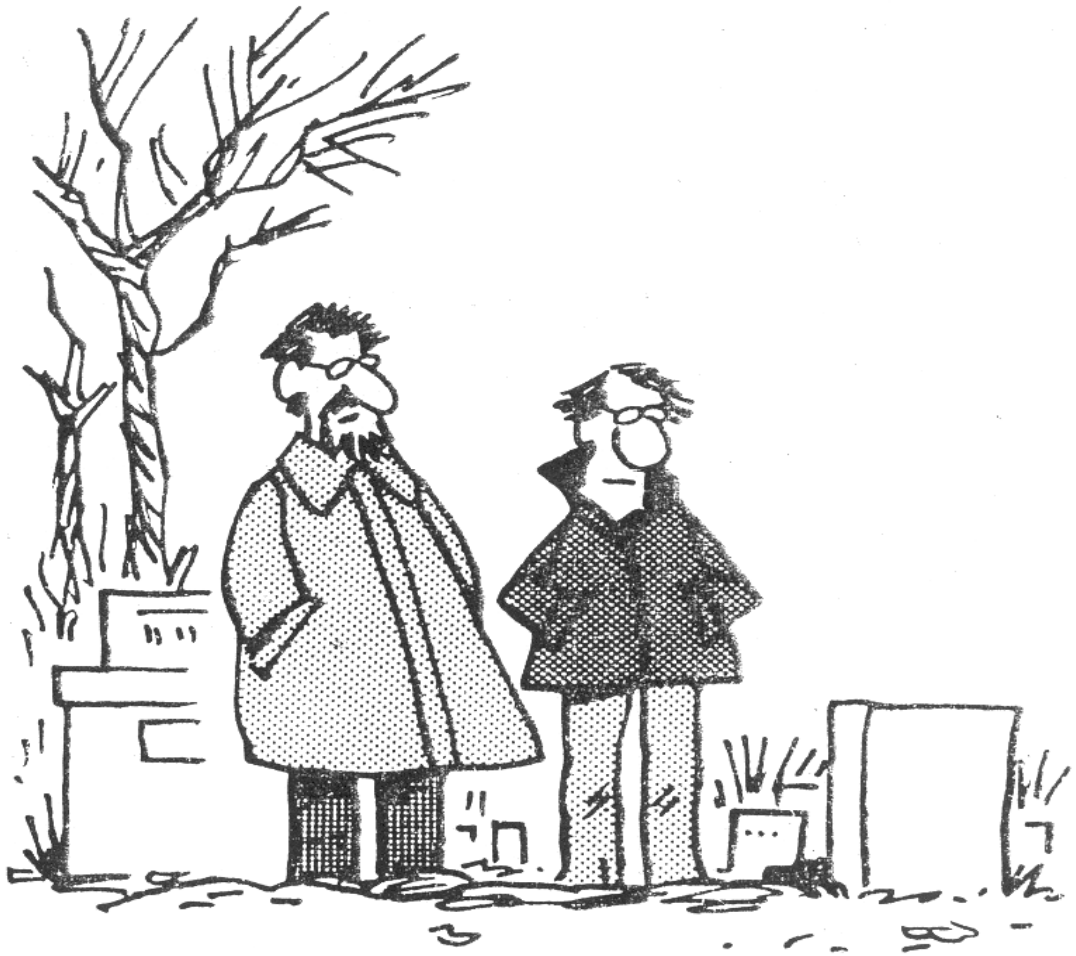
   - Does “no” always mean “no”?

2. Don’t take rejection personally. Resubmit!

Next steps: Joining an Editorial Board

1. Publish
2. Offer to do peer review, be timely, and do it well
3. Gentle self promotion (colleagues on boards, etc.)

Berry's World



"He didn't publish, so he perished."