

How to write and publish research paper?

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Main References:

How to Write and Publish a Scientific Paper – by Robert A. Day & B. Gastel, 6th Edition, Cambridge University Press, 2006.

Publication Manual of the APA – by APA, 5th Edition, USA, 2002.



Processes of writing & publishing

- Outside the control of author
- Under the control of author



Under control



Beyond control

(This presentation is on process that is under the control of author)



Why is research paper hard to write & publish?

Providing proofs is not easy

Drawing conclusions requires rigor

No theory or model is complete – gaps exist

Science is uncertain to certain extent

Paper involves ‘state-of-the-art research’

Paper is of current academic debates



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Why publish?

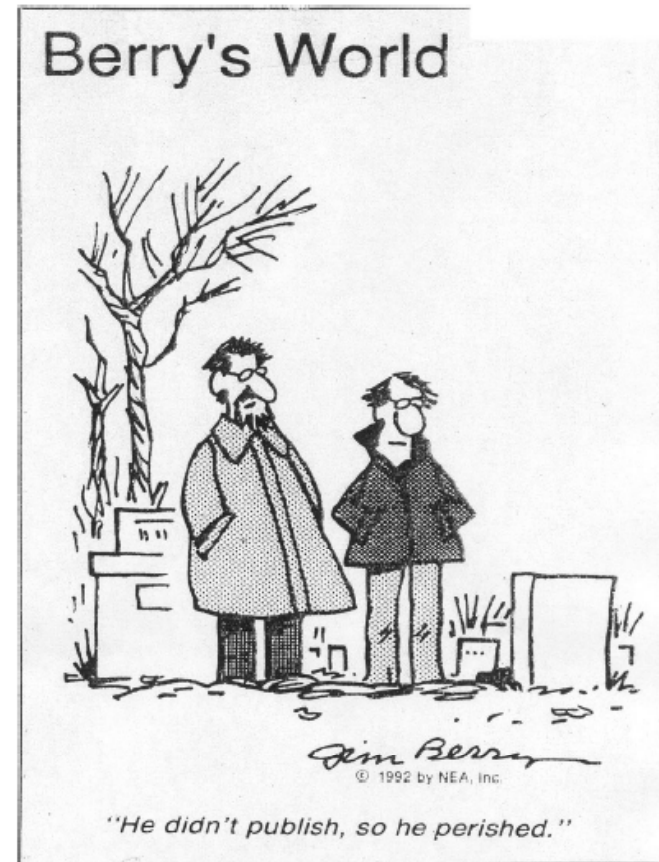
Make your thoughts, ideas, & opinions public

Share your expertise

Leave it open to discussion & further analysis

Become accepted as an academic, scholar, etc.

Record knowledge



<http://greenwichroundup.blogspot.com>

(Source in part: Dr. Guillaume & Dr. Andreas – Uni, Basel)



Background?

Previous research

How?

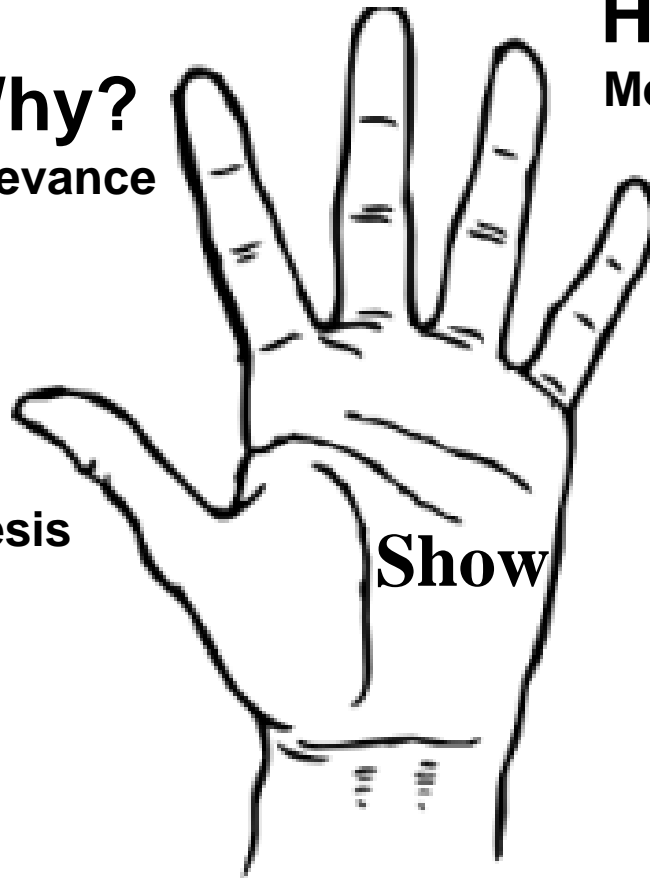
Methods

Why?
Relevance

Outcome?

Results

What?
Research
question/hypothesis



Structure & Proportion

Section	Proportion
Abstract	±200 words
1a). Introduction	5 – 10 %
1b). Theory & literature review	20 – 30 %
2. Methods & materials	0 – 15 %
3a). Results	50 % combined
3b). Discussion	
4. Conclusions	5 – 10 %
References	
Appendices	

(Modified from: Dr. Guillaume & Dr. Andreas)



Title: How to Prepare?

Title is a **label**, not a sentence

Describes contents in few words

Most read part of a paper



Whenever possible, remove '**waste words**' like - Studies of..., Investigation on ..., An..., The... A..., etc.

Care about **syntax** (faulty order of word)

Identify main issue of paper

Hypothesis and experiment variables are clues to titles

Avoid abbreviations, jargons



What Abstract? Informative!

Abstract is a **miniature version** of a paper

Key elements include *summary* of:

- Introduction (objectives/scopes),
- Materials & methods,
- Results & discussion, and
- Conclusions

Abstract is written **mostly** in **past tense**

Do not refer to **Tables** and **Figures**

Do not **cite**

Introduction:



Introduce the paper

- State the research problem (contextualize the nature & scope - why did you chose the subject & why is it important?)
- Briefly review literature (previous research)
- State method of investigation/of choice

Hypotheses if any (also theory)

State principal conclusions (no suspense)

Delimit the boundary (define what is done)

Mainly written in **present tense**

(dealing with current problem & referring to established knowledge)



Materials & methods

Describes procedure

What materials used

- **Reproducibility** (repeatability)

Mostly written in **past tense**

This section tolerates certain degree of **passive voice**





Results

State overall picture of method used (no details please – in as few sentences as possible)

Present your data (representative, important)

(The fool collects facts; the wise man selects them – Powell)

Use **past tense**



Discussion – so what?



Elements of good discussions:

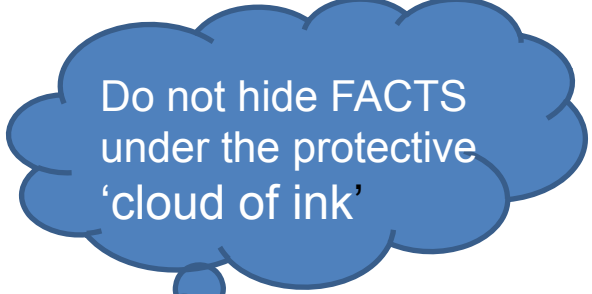
Present the principles, relationship,
& generalization of 'Results'

Point out exceptions

Relate with past research in
context (factual relationship)

Discuss the theoretical
implications (if need)

Mostly **present tense** (usually
emphasizes established knowledge)



Do not hide **FACTS**
under the protective
'cloud of ink'

FACTS



Conclusions (sometimes clubbed with Discussions)

Summarize your key conclusions with **evidences** (note that the conclusion is not the same as summary)

Open doors for further research (indicate weaknesses)

Do not whimper away (assert significance/strength of paper)



Like in discussion – mostly present tense

Do not bring out any new idea not reflected in the text



Other issues:

Identify audience, **Journal** to submit in advance

Submitting paper (follow '**Guide to authors**')

Review process (be aware of how to deal with editors and reviewers)

Copyright issues (be aware)

Publication process
(correspondences with editors)





Avoid common pitfalls?

English – writing **across culture**

Remove religious **biasness**

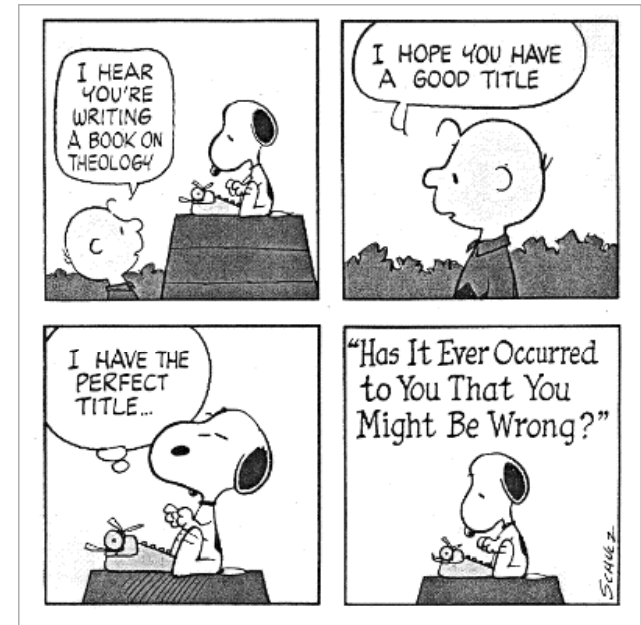
Proofread to avoid **copyediting**

Read, read, read, and listen

Use **inclusive words**, e.g., people, person instead of man, woman, he, she

Internal peer review, allow colleague(s) to read & comment before submitting to journal

(know that you might be wrong)



<http://paulocoelhoblog.com>



Write BETTER?

Keep it **simple** (one sentence, one idea)

Write mostly in **active voice** (passive voices are confusing, adds **verbosity**)

Be careful about **consistency** (e.g., *et al.* \neq *et al.*, 10% \neq 10 %, .05 \neq 0.05, 11.33 \neq 11.3, 10 ml \neq 10ml)

Care about **tenses** between sections

Avoid **jargons** (technical fine), **clichés**, **euphemisms**, **redundancy**, & **phrases**



Write BETTER...

About **numbers** (less than 10 has to be worded; **exceptions** in series & std. measurements; e.g., There were 2 girls, 3 boys, and 11 women; or 1 ml)

Never start a sentence with a number, if unavoidable, write in words, e.g., Eleven boys ran ...


Avoid mismatch between **citations** and **references** (use **Endnote**)

Use standard **Tables** and **Figures** (cf. some papers), also **captions**

Keep **threads/links** (of ideas, do not jump between)



If the part under the author's control is done well, it is easier for the other part to fit in

Thank  you