Scientific writing

Or the art of publishing a scientific paper

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Outline of the presentation

Standard format of scientific articles

Strategically targeting academic journals

Customizing an article for specific journals

External reviews and comments

Ethics and legal aspects

  Plagiarism
  Replication
  Citation software
  Predatory journals
  PEP acknowledgments
Preliminary remarks

09:00-10:30 Friday, June 2, 2017 Loc. T.B.A.

Joint CPP/CWEN Panel: Publishing in Economics / Table ronde AdP-RFÉ: Publier en économique

Organizers
Winter, Jennifer (University of Calgary)
Schirle, Tammy (Wilfrid Laurier University)

Chair
Winter, Jennifer (University of Calgary)

Panelists
Bombardini, Matilde (University of British Columbia)
Hoynes, Hilary (University of California, Berkeley)
Rivers, Nicholas (University of Ottawa)
Lemieux, Thomas (University of British Columbia)
Schirle, Tammy (Wilfrid Laurier University)
In a nutshell

• Short Intro, Big picture
• The paper holds in the abstract
• Quality of writing is all (proof reader)
• Editor: Why should I publish this paper?
• Too many reasons to reject a paper...
• If editor not specialist, asks referee a one-liner: reject or carry on
• Google Scholar and REPEC: used to find referees
• Most papers are rejected for either of two reasons:
  • Contribution too thin/ poor research design
  • Poorly written
• Technical sophistication not a substitute for good research idea

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Publishing in good journals

- Essential ingredient of good article: **a good idea**.

- **To be published in a good journal, an article needs: good research design and be technically sound**

- Only include what is relevant to your research question. Everything else is irrelevant at best.

- The information should be 100% accurate.

- Terminology matters: avoid talking about **causality** when you really are measuring a **correlation**.

- Appearance matters: Poor formatting, poor written English, etc. is highly correlated with poor quality paper and may lead to rejection. Better to use typesetting systems such as **LaTeX**

- Avoid giving the impression that you «apply a technique learnt. You shall rather approach the research question at hand, and then attempt to find the most appropriate technique.» (PEP evaluation report, 2015)
Standard format for scientific articles

Title, Abstract and Introduction

• They will primarily determine if your paper is sent to the referees or desk-rejected and, eventually, to convince the referees not to reject your paper.
Standard format for scientific articles

Abstract and title

• About the abstract, "four questions:
  o What is known and why is this study needed? (Background and motivation)
  o What we do? (Methods)
  o What do we find? (Results)
  o What does it mean? (Discussion)

• About the title: It should contain the most important keywords characterising your paper
Standard format for scientific articles

**Introduction**

• Writing an introduction (following Keith Head’s introduction formula):
  
  • **Hook**: motivation of your paper, explain why the topic is interesting.
  
  • **Question**: research question and explanation of your strategy.
  
  • **Antecedents**: overview of directly relevant literatures that contextualize your article
  
  • **Value Added**: Contributions – most important part
  
  • **Roadmap**: Outline the organization of the paper with key points and milestones
You must be sure to understand all cited materials.

You should cite only sources that are crucially relevant to your research question.

The literature review should also help you to demonstrate the value-added of your contribution.
Standard format for scientific articles

Methodology

• It describes how the paper answers the research question(s)

• To do that, you need a credible and solid research design

• You need: (1) the right data and (2) the appropriate methodology

• You need to convince the editor and the referees that you use the best possible methodology given the available data to answer your research questions.

• Must provide all the details that are needed to replicate your research design, i.e. the exact reference(s) and a broad but stand-alone description of the method
  • Don’t bother explaining what a probit/logit is, nor presenting their likelihood function...

• Robustness checks and a discussion about the limits and caveats of the analysis are perceived favourably by referees
Standard format for scientific articles

Results

• Figures and Tables are central to this section

• Be sure that Figures and Tables are self-contained (no need to read the text to understand them)

• Descriptive statistics are crucially important:
  • By rigorously interrogating the basic data and their relationships, they should report information supporting and guiding the research questions
  • If you cannot tell a coherent story with the basic data, then how can the reader be convinced by empirical strategy?
Discussion and policy recommendations

• You should discuss your findings, stating whether they are new or support previous research.

• What generalisations can be drawn?

• What are the policy implications?

• Do not leave the reader thinking « So What? »
• Conclusions should be based on your results. Conclusions are not a summary of your results.

• Synthesizes the method, results, implications, and possible future research

• Do not draw conclusions that are not supported by your findings. Do not extrapolate.
Strategically targeting academic journals

- The paper should be well-suited to the journal

- Look carefully at the editorial committee. If the editor likely in charge of your paper is known not to like the methodology you use, then better to submit elsewhere

- Do not send your paper to a "policy" journal if it is too technical, unless the methodological section is adapted accordingly or included in an appendix.

- Check carefully whether the journal you target has (recently) published papers on similar topics using similar methodologies. If not, better to submit elsewhere

- If you do not quote a single paper in the target journal, don’t consider it...
Customizing for a specific journal

• Adapt the format and the structure of your paper’s sections, as well as the written style, to the journal you target. Each journal has its own writing style and focus.

• Try to cite papers (recently) published in the journal to which you submit
External review and comments

• Take comments and criticisms seriously. Your article may have problems, not the reviewers.

• Reply with a point-by-point answer, and address all comments, explaining how you address the comment or arguments for not making changes.
What journals should I aim for?

• There are a number of journal rankings (PEP adopts the UK REF system), but they usually all agree on the top journals (general economics) and top field journals in economics.

• Top development journals include: Journal of Development Economics (ranked 1st), Economic Development and Cultural Change, World Development, Journal of African Economies...

• You should plan for a list of journals where the paper could fit and you should probably always first try to aim a bit higher than you would:
  • You may underestimate the quality of your work
  • It is possible you get useful reviews from referees
  • But don’t spend much time addressing comments (only the one or two issues that you can easily correct) and send the paper right away to another journal.
Who should be included in the list of authors?

- In most cases, natural and frictionless process
  - Prior to starting the research, everyone involved agreed to collaborate and produce a paper together
  - Producing a paper together often involves splitting the tasks at the beginning of the project, so that not everyone contributes equally to all of the research tasks (the research design, data gathering and analysis, writing of the paper)

- Team composition may have to be revised
  - It could happen that someone needs to limit his/her involvement or even drop out of the project altogether
  - It is possible that someone joins the project at a later date
  - In these cases, the extent of the contribution must be assessed to decide in a collegial way who ought to be in the list of authors

- The practice in economics is to rank authors by alphabetical order
  - Follow the norm, unless there is a strong reason for not doing so.
What’s expected in an empirical paper?

• There should be a **background section** describing the policy context at the global and local levels

• I would expect a section that **describe the data thoroughly**: sampling frame, sample size and sample restrictions, basic descriptive stats (including a table of means, standard deviation, min and max values)

• Clearly state what your “preferred” specification is (and why) and focus on these main results in the discussion
  • It is good practice to show robustness checks,
  • But the reader should not be wondering which of the results to consider

• **Papers should not exceed 20-30 pages:**
  • Introduction (including literature review) between 3 and 5 pages
  • Abstract should not exceed 100-150 words
  • A model section, conceptual framework or empirical strategy section may be useful
  • The length of the different sections should be the same: you need to spend enough time discussing your results!
Writing style

• Clarity is the most important writing style attribute for a scientific paper
  • Back-up each of your arguments with a reference, some empirical facts, a logical demonstration,…
  • The reader of a scientific paper is not interested in your opinion, but in the flow of your arguments

• Your reader should have an enjoyable experience
  • A natural flow of arguments is what makes a paper enjoyable

• The reader should feel smart
  • If the reader is confused, it is because the message is not clear enough
  • A reader should not be struggling to get from one argument to the next
Writing style

1. **Always start by stating what you intend to do and then explain it.**
   This applies to:
   - the first sentence in a paragraph: it should state the main argument developed in the paragraph
   - the first paragraph in a section should state the main arguments developed in the section.
   - the introduction should state the main idea offered in the paper.

   Should be organized like a newspaper article (**first sentence= punchline**) and not like a suspense novel (**a long story leading to a final punchline**) – the reader does not need to know about your research process (**analytical and not chronological sequence**).
2. **Minimize formal notations**
   - Equations can add clarity but are not easy to read. You need to introduce notations in the main text, and you need to be parsimonious.
   - After introducing the notations, you need to translate in plain language what the equations that you use mean.

3. **Organize your paper around the main message you want to convey**
   - A good paper = one clear message, that you must state in different ways (avoid repeating exactly the same words).
   - All your arguments should be organized around this one message.

4. **Use short sentences (can I make the same point with less words?), direct (rather than indirect) tense, spell out all acronyms (and used them parsimoniously), avoid footnotes, do not include tables/references you do not discuss**
   - Use a professional editor to correct your text.
Writing style

5. The introduction is the most important part of the paper
   You need to convince your reader (editor, referee, peers) of why the question asked is relevant, of how the answers provided are interesting, and of how the paper adds to current knowledge.
   Do not over-do it!
   Read and discuss carefully the papers that you cite (could be your referee).
A collective approach promotes private supply of sanitation

María Laura Alzúa, Habiba Djebbari, and Amy J. Pickering
January 2017

Abstract: Basic sanitation facilities are still completely lacking in large parts of the developing world, engendering serious environmental health risks. Interventions commonly deliver in-kind or cash subsidies to promote increased access to toilets. In this paper, we assess an intervention that provides information and behavioral incentives to encourage villagers in rural Mali to build and use basic latrines. Using an experimental research design and carefully measured indicators of use, we find a sizeable impact from this intervention: latrine ownership and use almost doubled in intervention villages, and open defecation was reduced by half. Our results partially attribute these effects to increased knowledge about cheap and locally available sanitation solutions. They are also associated with shifts in the social norm governing sanitation. Taken together, our findings suggest that a progressive approach towards improved sanitation targeting the whole community at one time can help meet the new Sustainable Development Goal of ending open defecation.

Keywords: sanitation, behavioral change, community-based intervention, social norm.
Outline for the introduction

• HOOK: Sanitation matters and typical sanitation programs fail to deliver: latrines are build but people don’t use them. Why?

• QUESTION: A community-based behavioral change program – can that work? If so, how?

• VALUE-ADDED: We do an experiment and find this program works! We also find that people’s beliefs are changed: they no longer find toilets to be a luxury good, and they change views about what’s appropriate practice.

• ANTECEDENTS: Material considerations are not a limiting factor and behavioral change is key for this type of deeply ingrained practices!

• OUTLINE: background, conceptual framework, experiment and data, analysis and discussion.
“Plagiarism is one of the most serious forms of scientific misconduct prevalent today and is an important reason for a significant proportion of rejection of manuscripts and retraction of published articles” (Debnath, 2016, pg. 164)

- Plagiarism is (from Debnath, 2016, pg. 165):
  - copy-paste
  - Literal copying
  - Paraphrasing (by carefully mixing up words without any change in the meaning)
  - Text re-cycling (self plagiarism of previously published article)

- To avoid plagiarism: write in your own words (without misinterpreting) when you cite and add quotation marks if not

- PEP has prepared a guide on plagiarism and scans all proposals and final outputs with an anti-plagiarism software. Voluntary plagiarism can lead to rejection.

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In the introductory editorial to *Econometrica* in 1933, Frisch wrote “In statistical and other numerical work presented in *Econometrica* the original raw data will, as a rule, be published, unless their volume is excessive. This is important to stimulate criticism, control and further studies.”

Why replication?
- For verification
- For reproduction (on a different sample)

More and more economics journals require data and replication codes before publication. In addition, many funders now require that, after a decent interval, data collected with their funding be made publicly available in its entirety (this is the case for PEP too).

Before submitting your article, replicate your analyses and be sure to get exactly the same results as the ones in your text.

Prepare a clean « data replication » file with raw data and all the codes required for any interested researchers to replicate your research.
Ethics and legal aspects

Citation software

• We strongly encourage you to use bibliography compilers (such as Mendeley, BibTex) to manage references in your paper (to insert them in the text or to prepare the reference list)

• Mendeley is compatible with Word and LaTex; BibTex compatible with LaTex. Very easy to learn, to use and to import citations.

• They also allow you to choose the academic style. PEP adopts the APA style, which is one of the most common in Economics journals
Ethics and legal aspects

Predatory journals

- Very common, be cautious when a journal asks you directly to submit an article.
- Do not submit, cite or deal in any way with predatory journals.
- PEP will provide further resources to detect predatory journals on our web site shortly.
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References

• PEP web-site: PEP will launch shortly a web-page pointing to references for all the issues briefly discussed today (and many others)


• Keith Head Blog on research Advice

• Arne Henningsen (2015) Checklist for Manuscripts to be Submitted to Scientific Journals
Thank you!

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