



WORKSHOP:

PUBLISHING AND REVIEWING PAPERS

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Western Section TWS, Redding 2020



Purpose of this workshop: Save you from this life!

THE NEW YORKER



"What did we promise Mommy about leaving our rejected manuscripts and empty bourbon bottles on the stairs?"

JANUARY 3

Workshop Goals

- Improve chances of professional publication
- Introduce graduate students, early career professionals to publishing
- Introduce ways to achieve success in publication and review of papers

Part I

Publishing Research and Professional Papers

Publication is often the end of a long process

Motivation

- Introduction
- Why Publish? (self-reflection necessary)
 - You think it might be fun?
 - Nothing better to do?
 - Completion of a goal (Thesis or end of a project)?
 - Think it might help get you a job?
 - Publish or perish?
 - Advance science?
 - Advance conservation?
- Remember science never happened if not published

Olden Times vs. Modern Times

- Olden Times like 30-40 years ago
- Modern Times (i.e., Gen Z and Millennial Times) – like 6 seconds ago
- Publishing requires patience and reliance on primary sources of literature (Google is not necessarily your friend)
- Publishing requires a "thick skin" exposes you to criticism so deal with it
- Lou Holtz don't complain about your problems

Types of publications: quality is important

- □ "Peer-reviewed" journal article ★
- Peer-reviewed monograph series **
- Peer-reviewed symposium proceedings, peer-reviewed/edited book, or technical series (e.g., PSW-GTR)
- Book (usually not peer-reviewed)
- Conference proceedings/edited book ▲
- In house publications (random report by an agency)
- Gray Literature and popular articles (next to useless except for perspective about others opinions or biases)

What to publish?

- Research papers questions or hypotheses
- Reviews synthesis of topics
- "Notes" are short papers about observations
 - Observations during research or while in the field
 - Often discounted as valueless (but see *Ecology*)
 - They have value and you can usually publish
 - Example: "Notes on the nuptial display of the spotted wood quail..." *Ornithologica Neotropica*

What to publish Cont.

- Management case histories or techniques
 - Too few management case histories published relative to management programs conducted
 - Techniques can be the result of research or from trail and error learning during management programs
- Rebuttals (original authors offered response)
- Commentaries

How to publish

• Elementary concepts

Publishing begins with an Idea

- "There is no dearth of interesting questions"
- Idea = hypotheses or questions
 - Novel ideas, questions, or approaches are highly valued
 - Answers to important *practical* problems are highly valued
- Success depends on the quality of these

Craft an original Idea

Read

- Not just your field but other relevant fields (e.g., ecology, philosophy, statistics, psychology)
- Significance an issue with a compelling narrative
- Conceptualize
 - Create a framework for questions then determine ways to test hypothesize or predictions
- Pedestrian justification
 - "Never been done before"

Positive publication bias: "low hanging fruit"

- Little-known species vs. well-studied species
- Charismatic species (wolves, wild dogs, African lions)
- "Hot" topics: climate change
- Many "obvious" or well-known natural phenomena have not been described
- Broad-scale ~ compelling
- Members of the same club

Negative publication bias

- Negative results (Google Scholar: negative publication bias its existence is even questioned but it does exist)
- Replicate studies paradox of publishing
- Theoretical vs. applied

How to publish: Rocky's rules of writing

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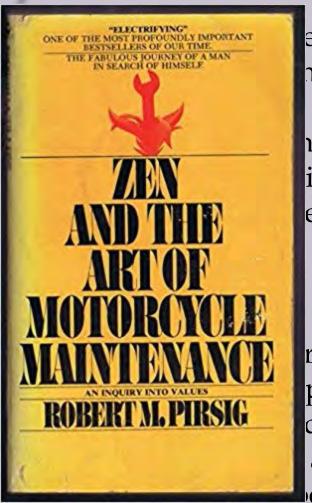
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■ R Rule 14 – W



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review or *read it aloud*)
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Consider ABT narrative story telling

- And
- But
- Therefore
- Narrative template for science writing
- Connection: Hollywood storytelling meets critical thinking by Randy Olson

Components of a paper

- Title
- Authors who should be an author?
- Bylines what institution should get credit?
- Abstract
- Key Words
- Introduction
- Methods (study area, field methods, materials, analysis)
- Results
- Discussion (summary, management implications)
- Acknowledgements
- Literature Cited
- Supplemental Information (electronic files examples)

Titles

- Very Important!! Critical for some journals
- Concise
- Informative
- Accurate
- Creative but not ridiculously so
- Unbiased

How effective is the Safe Harbor program for the conservation of Red-cockaded Woodpeckers?

Jennifer A. Smith, Kerry Brust, James Skelton, and Jeffrey R. Walters - Condor: January 2017

Authorship

- Authorship is earned
- Contributions justifying authorship
 - Idea (Concept) and Experimental Design
 - Funding
 - Field Work
 - Analysis
 - Writing
 - Critical contribution (publication not possible otherwise)
- Major advisor/ labs director not entitled to authorship!
- Much discussion about this read about it
- Be fair better to error on right than wrong side

Order of authors

- Can be complicated and contentious senior author should have final say
- Usually intellectual leader is senior author
- Remaining authors are listed in order of contribution or alphabetically (footnote the title if done this way)
- Some journals the lead author is placed last
- In my departments at Minnesota and Wisconsin, advisors when publishing with students are expected to be last in order of authorship regardless of their contribution
- Discuss authorship a priori to avoid conflicts later
- Fair to change order of authorship and add or subtract authors as a manuscript evolves – be reasonable!

Corresponding author

- The person who handles submission and communication with the editor
- Does not have to be senior author

Collaboration

- Trend in publishing is toward multi-authorship
- Productive collaborations increase productivity
- Collaboration can be stimulating
- Pitfalls
 - Unproductive collaborations are frustrating
 - All authors should contribute as expected
 - Expectations have be explicit and known to all
 - Expectations have to be reasonable
 - Pick your collaborators wisely!

Byline

- A byline identifies an author's affiliation
- Byline should reflect institution where work occurred even if author resides elsewhere
- Where graduate students took degree
- Uncertain? use your best judgement

Abstract

- Succinct synthesis of main result(s)
- Include hypothesis (question)
- Include method(s) if critical to interpretation of results (we used a robust sampling design....)
- Include main conclusion(s) or management implication(s)
- Avoid lists of results! Make it about biology

Key Words

- Essential for literature searches so include:
- Primary area of investigation (e.g., habitat)
- Geographic area
- Common name of taxa (e.g., ruffed grouse)
- Scientific name of taxa (Bonasa umbellus)
- Primary method (robust estimation)

Introduction

- Know your audience!!
- Sets context and background of research
- Frames problem
- Focused and succinct
- Too many introductions are literature reviews or random rabbit holes about whatever
- The introduction sets the stage for what will follow if it is badly written it could seal the fate of the paper before it is read

****Methods****

- Clear, concise, and organized logically (always defer to the style of the journal)
 - Study area
 - Sampling designs and constraints
 - Techniques
 - Definitions
 - Analyses (emphasize biology and not statistics!)
 - Why use approach?
 - State limitations or assumptions if important
 - Does the stat approach match the sampling design
 - Did you satisfy the assumptions of tools?

Experimental Design

- Elements of a well designed study*
 - Randomization
 - Replication
 - Local Control
- Sample size requirements. This can be estimated but rarely is. Relevance is having sufficient samples to support analysis
- Do inferences match design?
 - *This is a key to reviewing as well

Analyses

- A big can of worms because there is no consensus about how to do all things
- Conduct analyses appropriate to question
- Frequentist statistics and the quest to root out analytical Philistines
- The quest to purge statistics
- How to prevent your head from exploding
- Main point is recognize that reviewers have biases so interpret comments accordingly

Results

- First paragraph basic descriptive results (number caught, years of data etc.) but only those that support main results
- Present only results relevant to answering hypotheses you stated in introduction (most tables and figures introduced in results)
- Place emphasis on the biology NOT the statistics
- Think about your results critically
- Make logical inferences that follow from results not your preconceived ideas (hint: make a table of predictions and then use this as a way to force yourself to draw the correct inference).

Discussion

- Again remember your audience
- Here is where you interpret your work
- Comprehensive but cogent
- Avoid repeating results in discussion
- Compare and integrate your findings with both related and broader literature
- The main thing is linking discussion back to the introduction – what is the solution to the problem you set out to solve?

Citations/integrating literature

- Cite relevant literature and integrate concepts (and theory when appropriate)
- Ability to integrate stems from reading literature
- Errors
 - Only citing papers related to a subspecies or population studied is usually not acceptable
 - Not citing strong papers that show different results
 - Incorrectly interpreting results of other papers
 - Not citing competitors (or only yourself)
 - Not actually reading papers you have cited

Summary, management implications, or both?

- Depends entirely on journal and your research
- Management implications are not summaries or recommendations for new research
- Avoid
 - Repeating results
 - Making ridiculous recommendations
 - If you can't avoid these, don't write implications section
 - Pushing a conservation or management agenda
 - Random rants
 - Personal attacks

Acknowledgments

- Thank all who contributed something to research but who do not deserve authorship
 - Informal/formal readers
 - Field technicians
 - Stat geeks
 - Funding agencies
 - Not your mother, significant other, dog (exceptions are allowed), bartender
- Thesis acknowledgments are different cite your grandmother if she was relevant to your success. This one of the few times you can publically thank the people you love for helping you on your journey

Literature Cited

- Cross reference to ensure matching of literature citations and text citations
- Follow journal guidelines on style

Writing

- Submit a clean manuscript
- Submit your best effort you may not get a chance to submit again if your paper is sloppy even if the science is good

When (to submit)

- A paper is NEVER perfect or research complete
- Publish as soon as your manuscript is polished (but you can publish too quickly – insufficient thought or time given to manuscript)
- "I am too busy" is one of the lamest excuses on planet earth
- Waiting causes loss of momentum and often results in nothing being done when one waits for a perfect data set
- Getting "scooped"

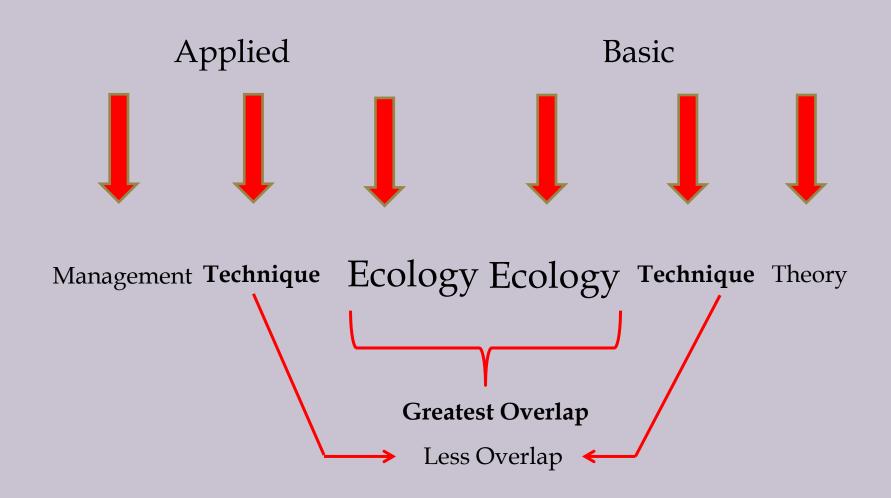
Where: How do I select a journal?

- Society Journals
- Commercial Publishing Houses vs. Predatory Publishing
- Open Access

Choosing a specific journal

- Depends on your goal
 - Make a contribution to your field choose journal of your main interest or field (JWM, WSB)
 - Educate the unwashed chose Ecology but don't be disappointed with rejection because Philistines don't like to be washed
- Impact Factor of journal

Journal selection: relevance



Impact Factor, Altmetric, H-Index

Selection of journal: Impact Factor

- Superficial Score
 - relative ranking among all journals
- Relevant Score
 - Relative ranking among journals within field
- Example (top IF for science, ecology, wildlife, ornithology)
 - Nature = 40.137
 - *Trends in Ecology and Evolution* = 15.268
 - Journal of Wildlife Management = 1.725
 - *Condor: Ornithological Applications* = 2.654
- Perspective on IF
 - 8,185 journals have a 2011 impact factor below 10
 - Fake IF (Jeffrey Beall, U of Colorado, Denver)!!!!



We're also able to compare this article to 4 articles from the same journal and published within six weeks on either side of this one. This article has scored higher than all of them.

All articles

More generally, Altmetric has tracked 1,493,010 articles across all journals so far. Compared to these this article has done particularly well and is in the 99th percentile: it's in the top 5% of all articles ever tracked by Altmetric.

H-Index

- Publishing in high IF journals likely will increase paper's visibility, which can lead to greater citation of the paper, which can lead to a higher H-Index for an author = rat race
- Journals chase IF and authors chase H-Index
- All these metrics have spurred debate on their meaning, utility, and relevance.

Selection of journals: specialist journals

- Wildlife
- Conservation
- Ecology
- Diseases
- Human Dimensions
- Behavior
- Modeling
- Systematics
- Genetics

Selection of journals: taxa

- Birds, Mammals, Herptiles
- Deciding between taxa-specific journals and specialization journals depends upon the emphasis and content of your paper
- Many papers can fit in either taxa-specific or specialization journals

Selection of journals: cost

- Page charges
- PLOS journals (beware the formatting)
- Open access
- Predatory Journals (DO NOT PUBLISH IN THEM!!! - Don't feed the trolls!!!!)
- The alternative view of predatory journals may provide only outlet for radical ideas or papers subjected to dogmatic bias

Selection of journal: biases

- Discipline bias if not in discipline you may get hammered (e.g., systematics, ecology)
- Institution bias reputation of organization influences perception
- "Cartel" bias example, Nordic-based journals (Oikos, Journal of Avian Biology, Oecologia, Ecography, Wildlife Biology)
- Editor bias personal bias and the "idgit" factor
- □ Tip if you have time, wait till a hostile editor leaves and resubmit

Selection of journals: strategies

- Journals form tiers of quality as indicated by IF
- Strategies
 - Choose the highest "quality" journal if rejected choose a lower tier journal
 - Choose the "absolute right" journal first regardless of ranking and then go higher - lower if rejected
 - Choose the path best dictated by self-evaluation of the quality of your research
 - Choose the path of least resistance hint: it may not turn out to be so

The submittal process

- Most journal admission processes are automated
- Read the author instructions
- Read the journal's goals and intent
- Read papers in the journal
- Understand the reality and follow the instructions and intent!
 - Many manuscripts are rejected for trivial reasons like wrong format
- Send a good, but not long, transmittal letter
- Send a clean manuscript
- Send high quality graphics and cogent tables
 - Read journal requirements for dpi etc.

Letter of transmittal Is it important?

- Concise and salient
- Indicate your paper is original
- All authors should be copied on transmittal letter to inform editor that all authors have consented to contents
- Note 1-3 things that are important about this paper BUT DO NOT GET CARRIED AWAY!
- Suggest reviewers (this might be an automated process)

Beware the gatekeepers!

- You
- Major Professor thesis only
- Committee Members thesis only
- Agency a fine line to be walked
- Editor review or not
- Reviewers yea, nay or maybe
- Associate Editor yea, nay, or maybe
- Editor yea or nay

Behind the scenes process (For AE - this is what I do)

- Editor makes decision to review
- Editor sends paper to associate editor
- Associate editor solicits reviewers based on initial reading
- Reviewers accept or decline invitations
- ☐ If accept invitation time is specified for review but many are tardy
- Reviewer submits two reviews: one for authors, one confidential for associate editor as well as *confidential comments*
- Associate editor evaluates all reviews and does in-depth evaluation
- Associate editor summarizes key issues for authors based on his review and all reviewer comments AND writes *confidential evaluation* for Editor
- Editor evaluates AE and reviewer comments and recommendations
- Editor makes formal decision and advises corresponding author

key point: much that authors do not see, so don't assume rejection is unfair or unwarranted based on what you see

Review outcomes

- Rejection without review (can be reasoned, arbitrary, arbitrary and capricious)
- Review Decisions
 - Accept (no problema)
 - Minor revision (no problema)
 - Major revision (big flaws or bad presentation)
 - Reject with possibility of resubmission (worth it?)
 - Rejection without possibility of resubmission (hasta la vista baby)
- Rebuttal of rejection (worth a try?)
- Resubmission

A note about biased reviews

- Peer-review should be fair, competent, and objective
- However, not all reviewers meet this standard
- Signs of bias
 - Personal attacks
 - Attempts to change an obvious inference
 - Comments of a "political" nature
 - Comments meant to push or protect an agenda
- Recognize the difference between bias and incompetence
- Recommendations can be unreasonable decision to challenge

Revisions

- Revisions *do not* imply eventual acceptance
 - Revision might be sent to old or new reviewers
 - Revision might be handled by Associate Editor alone (usually decision of AE about what to do and this depends on 1. your response to reviewers and 2. your actual revision changes)
- Evaluate reviewer comments seriously
- Make unemotional decision about whether to revise or withdraw manuscript and try elsewhere – you are not the only one that has had a paper rejected!!

Responding to reviews

- Confidential comments may be different to yours
- Review can causes confusion because the reviews may seem positive but their comments to editors may be negative – so are the editors being jerks or did the reviewer(s) sandbag you?
- Rule 1 don't think you control the process
- Rule 2 don't complain (exception: when bias is obvious)
- Rule 3 be respectful
- Rule 4 respond point by point to the AE's comments and the reviewer's comments
- Rule 5 Ok to disagree with reviewers but provide defensible reasons for disagreement

Responding to reviews

- Tip Europeans tend to choose rejection for papers when they should be asking for major revisions
- Point is there may be more or less meaning to simple categorical outcomes of minor or major revision

Dealing with rejection

- Go run 5 miles
- Go home and kiss your sweetie because your sweetie may be the only one in the world you think likes you at that time
- Think about writing a nasty letter to the editor but don't (reason – a nasty letter could accidentally find the send button!)
- Wait a week
- Regroup and take no prisoners!

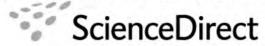
Tidbits on rejections

- Good research can always find a home
- Therefore try somewhere else
- It is not always your fault
- Can be a matter of luck (wrong editor or wrong reviewers can trash a good paper or vice versa)
- Sometimes editors and reviewers are not the brightest bulbs in the box

Review timeframe



Available online at www.sciencedirect.com



Linear Algebra and its Applications 430 (2009) 1-6

AND ITS
APPLICATIONS

www.elsevier.com/locate/laa

Generators of matrix algebras in dimension 2 and 3

Helmer Aslaksen a,*, Arne B. Sletsjøe b

Received 14 June 1995; accepted 8 May 2006

Available online 8 October 2008 Submitted by T.J. Laffey

WUISE!!

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Requirements to archive data

- Some journals require archiving others don't
- Reason
 - Repeatability of science
 - Public funding of studies
- Controversial
 - Reduces incentive for long-term studies
 - May lead to poor science
 - Can be misused by agenda-driven scientists (see Peery et al. 2019. Frontiers in Ecology and the Environment)

Final step: handling galley proofs

- Galley proofs = manuscript in journal layout
- Author responsibility is to check these rigorously and quickly (return time < 48 hours)
- Line by line review by two people is best
 - One person reads the original typescript
 - The other person follows on the galley proof
 - Scientific names, complex names, and numbers all stated letter by letter and number by number
- Other methods don't work!

Part II Peer-review

- Peer-review assessment by experts
- Peer-review form of quality control
- Peer-review separates legitimate journals from predatory journals (where peer-review might be advertised but does not really happen because these journals are pay to publish)
- Is the standard accepted by courts "best available scientific information"

Peer-review

- Critically Importance –improves quality of research and identification of bogus data, analysis, or inferences (far from perfect!)
- Types
 - Open (both authors and reviewers known)
 - Blind (reviewers anonymous)
 - Double blind (both reviewers and authors anonymous)
- Can sign name even in blind review

Should you review?

- Yes professional obligation
- If you publish, you "must" review
- If you accept a review assignment
 - Be constructive and thorough (a simple single sentence on the quality of a paper is useless, unfair, and actually delays the review process)
 - Be on time (if you can't do a review justice do not accept)
 - Negotiate review time if request is unreasonable (reviewers are hard to find, editors will bargain)
 - Be fair if you are biased a priori do not review!
- If you reject an assignment suggest an alternate

Conflict of interest

- Conflict of interest means you have potential to be biased (either positively *OR* negatively)
- Something politicians should know but don't
- If you cannot provide an objective evaluation for any reason –decline review!
- If you are not competent to review decline

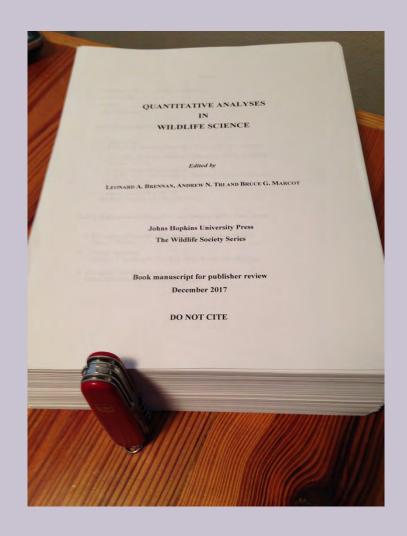
Condor: Ecological Applications - Conflict of Interest Policy

Comor. Leological Applications - Confinet of Interest Foney					
Personal conflict	1 yr COI	2 yr COI	3 yr COI	4 yr COI	Permanent
Family relationship, including spouse or partner.					X
Current business partnership.					
Association as MS student/advisor (4 year conflict after graduation)				X	
PhD student/advisor (permanent conflict)					Х
post-doctoral student/advisor (4 year conflict after conclusion of employment).				x	
Graduate committee member (two year conflict).		Х			
Collaboration on a project leading to a publication of any kind (three year conflict).			х		
Coediting a book or proceedings (editors and associate editors are not in conflict with each other based only on their service to the journals)					X
Coauthors on multi-authored papers are all in conflict with the first author for three years. If no other conflicts apply, coauthors are not in conflict with other coauthors if they did not collaborate directly			X		

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Confidentiality

- Review manuscriptsare confidential –respect the authors!
- Do not share either the manuscript or the content with others
- Do NOT steal intellectual property



Basic rules of review

- Objectivity
- Fairness
- Competence
- Honesty (different from fairness and objectivity because you should only review that for which you are competent and have no COI; you can even defer commenting on certain things or section you don't understand)

My reviewing process

- Assess conflict of interest
- Read the entire paper quickly see broad patterns
- Methods review relative to stated goals
- Review to standard of your own papers
- Review for substance
- Review for clarity
- Review for consistency
- Review for adherence to standards of science (do methods allow analyses and do inferences follow from results?)

Detail or technical?

- English is the *lingua franca* of science
- Should you review for grammar or content or both? Depends
- Some journals request you do not edit grammar (but fair to make general comments on writing)
- Writing quality is declining in my experience.
 Some journals will reject immediately if the writing is poor

A few other suggestions

- It is tempting to "snipe" please don't
- Anonymity is meant to protect from retaliation not to allow abuse
- Be constructive if you think something is wrong state the exact reason why it is wrong
- Provide alternatives for analyses
- Try to be helpful and unambiguous
- If necessary cite examples using line numbers
- Watch for inappropriate criticism in papers

How do I become a reviewer?

- If you publish, they will find you!
- If they don't ask
 - Go to journal of your interest and offer services
 - All journals maintain a database of reviewers and their expertise, ask that your name be placed in the database
 - Don't review for predatory journals because they are making money off your free labor

How much should I review?

Only as many as you can do justice

Advocacy: a final word of caution

- Science Advocacy
 - A necessary task in this day and age
- Advocacy Science
 - A process that undermines the integrity of science and scientists
- Be alert to detecting advocacy science!
- A few potential signs
 - Normative language
 - False inference directed in a biased way
 - Criticism of other research when it is either not necessary or it is not warranted
 - Use of strawmen or red-herrings
 - Failure to cite relevant literature, particularly when it is contradictory to results in the paper
 - Criticism of agencies in management implications (one can criticize without being hostile; moreover, criticism is part of science)

Agenda-driven Science: A different dimension

- Conducting research to support a conservation agenda
- Elements
 - Unstated conflicts of interest
 - Inappropriate use of data and literature
 - Drawing unsupported conclusions
 - Inappropriate use of social and other media
 - Inappropriate professional behavior
- These can result for other reasons
- Many elements need to be present so don't accuse someone without multiple lines of evidence
- Be Aware!

The End

- Thank you for your patience
- Let me know on the evaluation form if this workshop was useful
- Suggest specific additions or deletions (including me!)



Goldy Gopher says: どうもありがとうございました! Include comment on post docs being used as associate editors or on the editorial board. Bad deal as they do not have experience and perspective. They might do a good job but it is less likely they will because they are often naïve and overzealous