

Open peer review:

what is it and what does it achieve?

NO TRANSPARENCY NO CONSENSUS



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UNIVERSITY OF
CAMBRIDGE

Problems with closed peer review

- Inadequate, inconsistent, biased, subjective reviews
- Editors = key to high science/ethics standards
- Peer review behind closed doors prohibits quality control

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In a closed system, who is peer reviewing the Editors?

What are editorial decisions based on?

Why and who are editors selecting as reviewers?”

Jon Tennant 2016

<http://blog.scienceopen.com/2016/04/editorial-control-is-a-critical-part-of-open-peer-review/>

Resin & Elmore 2016 *Science & Engineering Ethics*,

<https://peerj.com/blog/post/100580518238/whos-afraid-of-open-peer-review/>

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“Peer review needs structure, coordination, and control. But why should this imply a closed system?

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“These are all questions that are obscured by traditional peer review, and traits of a closed, secretive, and subjective system - not the rigorous, objective, gold standard that we hold peer review to be.”

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What is an open peer review?

Review history published alongside the publication

Review history published + reviewers sign

Reviewers sign

Post-publication public review

✓ PEER-REVIEWED

Behavioral flexibility in an invasive bird is independent of other behaviors

Animal Behavior Zoology

Corina J. Logan

Published July 12, 2016

Note that a [Preprint of this article](#) also exists, first published April 24, 2016.

PubMed [27478705](#)

Author and article information

Abstract

Behavioral flexibility is considered important for a species to adapt to environmental change. However, it is unclear how behavioral flexibility works: it relates to problem solving ability and speed in unpredictable ways, which leaves an

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Meta

Peer Review history

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Outline

Background

Methods

Results

Discussion

Conclusions

Endocranial volume is heritable and is associated with longevity and fitness in a wild mammal

C. J. Logan, L. E. B. Kruuk, R. Stanley, A. M. Thompson, T. H. Clutton-Brock

Published 14 December 2016. DOI: [10.1098/rsos.160622](#)

Article Figures & Data Info & Metrics **Review History** PDF

1 of 20

Downloaded from <http://rsos.royalsocietypublishing.org/> on February 22, 2017

THE ROYAL SOCIETY PUBLISHING **ROYAL SOCIETY OPEN SCIENCE**

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Article citation details
R. Soc. open sci. 3: 160622.
<http://dx.doi.org/10.1098/rsos.160622>

Review timeline

Original submission:	23 August 2016	Note: Reports are unedited and appear as submitted by the referee. The review history appears in chronological order.
1st revised submission:	6 October 2016	
2nd revised submission:	16 November 2016	
Final acceptance:	17 November 2016	

Review History

RSOS-160622.R0 (Original submission)

Review form: Reviewer 1

Benefits of open peer review

- **Goal = improve peer review through transparency**
- Increased **accountability** of reviewers, editors
- Meta-research: **data** is available for analysis
- Readers can **learn** more about the research
- Reviewer comments are **useful**/civil, especially if signed
- Teaching tool: students can **learn** how peer review works

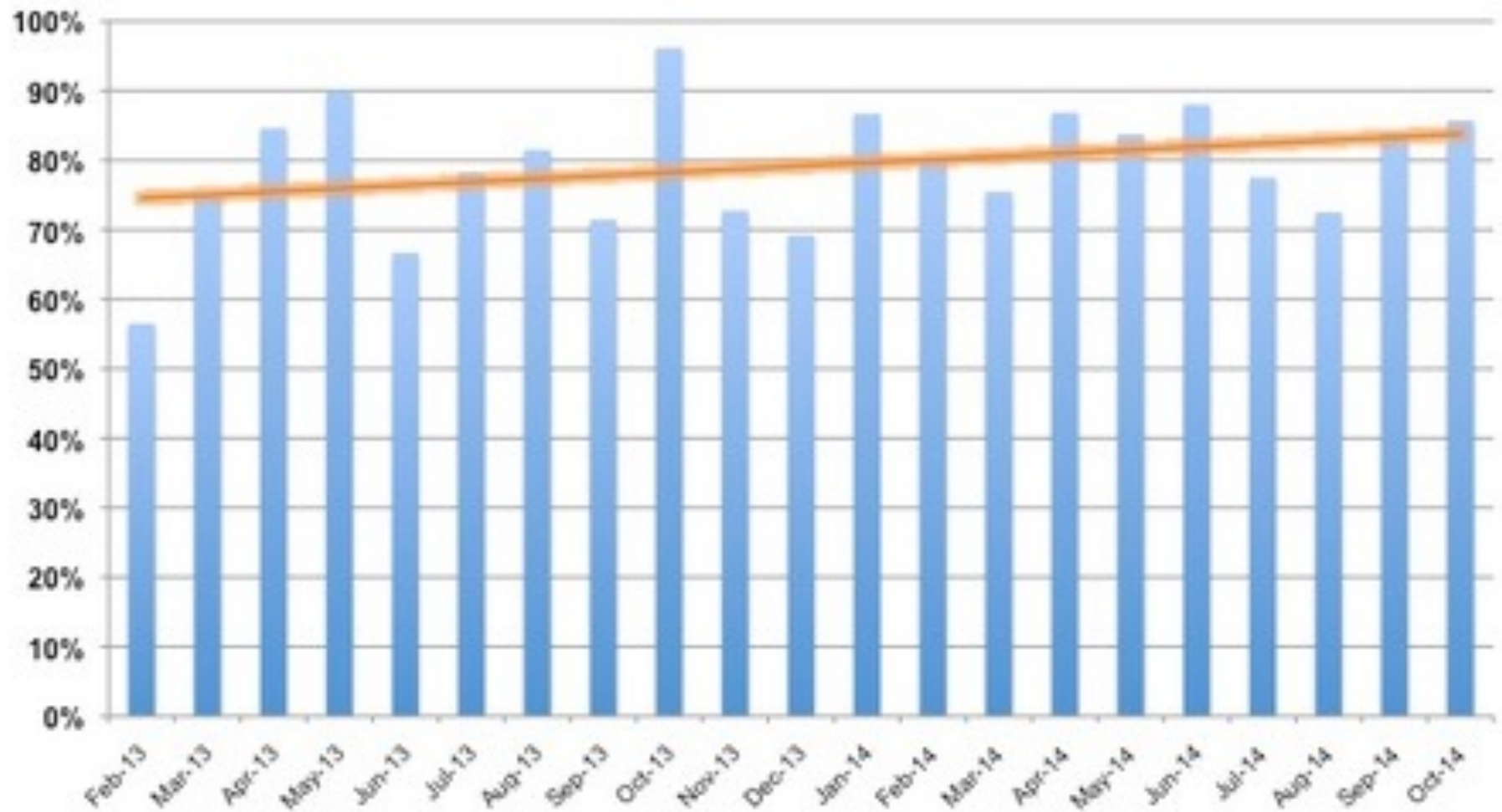
Reactions from publishers/authors

Public Review History

Authors: 80% Public

N = 610 articles

% PeerJ authors choosing open review history



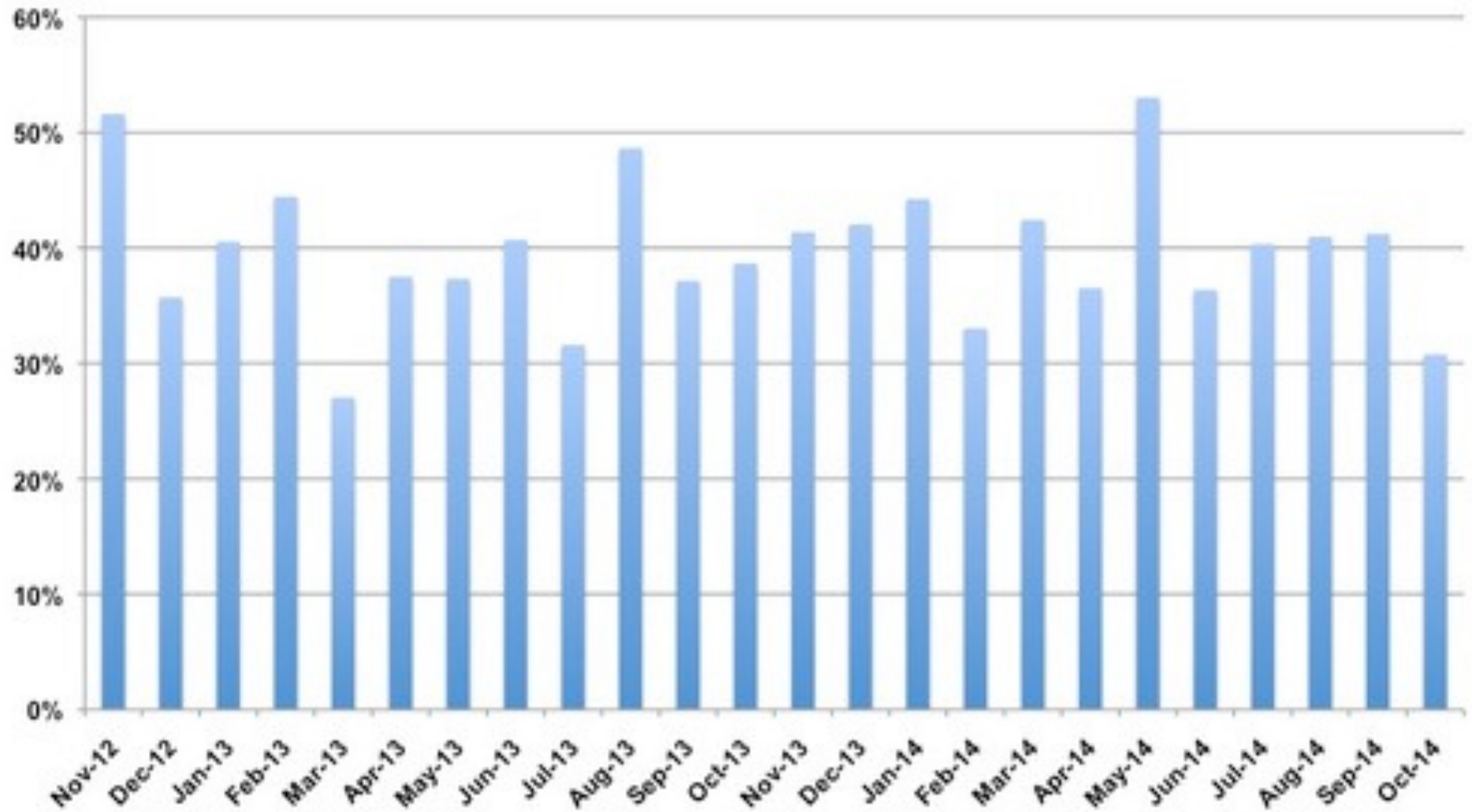
Reactions from reviewers

Open Reviewers

Named Reviews: 40% Public

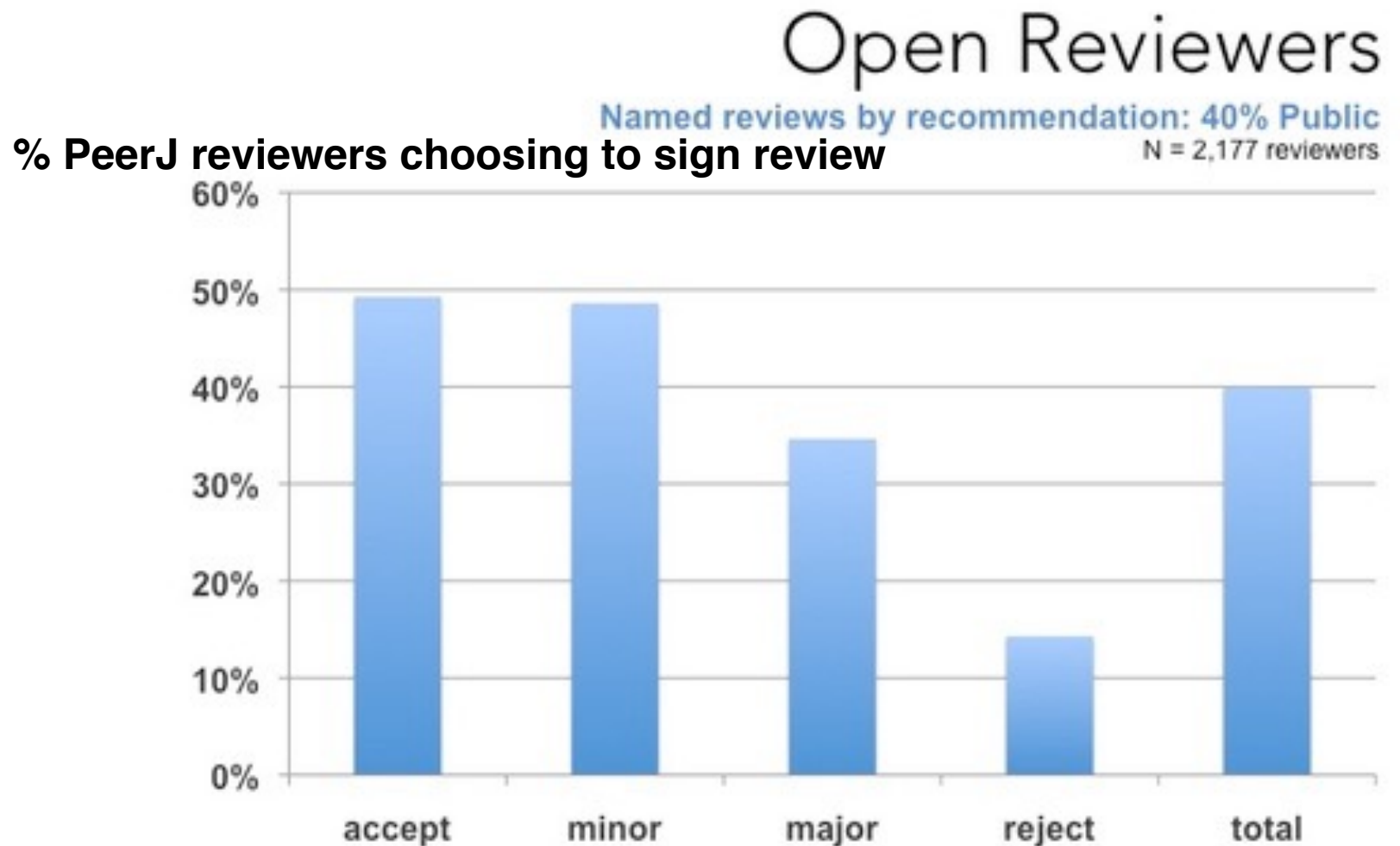
N = 2,177 reviewers

% PeerJ reviewers choosing to sign review



<https://peerj.com/blog/post/100580518238/whos-afraid-of-open-peer-review/>

Reactions from reviewers



<https://peerj.com/blog/post/100580518238/whos-afraid-of-open-peer-review/>
<https://royalsociety.org/journals/ethics-policies/openness/>

@thePeerJ

Reactions from reviewers

Conflicts of interest: do not review if you

- have co-authored/collaborated in the past 3 years
- are at the same institution



Reactions from reviewers / editors

2015-2016: 5 Elsevier journals piloted publishing review histories alongside article

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Publishing peer review reports – impact on reviewers

Of the reviewers who accepted the invitation:

- **95 percent** said publishing review reports didn't influence their recommendation
- **76 percent** said the fact their reports will be publicly available didn't change their wording
- **45 percent** gave us consent to reveal their names
- **36 percent** of those who preferred to stay anonymous said they will reveal their names next time they review for the journal
- **98 percent** said they will accept further review invites for the journal

Of the reviewers who declined, **91 percent** said their decision was not influenced by the open review; most (**68 percent**) stated a lack of time as their reason for declining.

Reactions from reviewers / editors

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33% of **editors** noticed an improvement in review quality.

70% of these editors noted “*more in depth and constructive for authors to improve the quality of their manuscript*”

Mehmani 2016 <https://www.elsevier.com/reviewers-update/story/innovation-in-publishing/is-open-peer-review-the-way-forward>

Open review = editorial quality control

- I **reviewed a paper**, raised many issues, some unsurmountable

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- I am mentioned in Acknowledgements

Reaction from a reviewer:

I sign my reviews

Reaction from a reviewer:

I sign my reviews

- (unless double-blind)
- Including the ones I reject
- It ensures I am respectful and constructive
- Only positive experiences: many authors have thanked me for useful comments

Open peer review options

You can always sign (unless double-blind)

These journals also offer open review history:



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OPEN SCIENCE**



eLIFE

PeerJ

Open peer review options





[ACTIONS](#) [BROWSE](#) [COMMUNITY](#) [FAQ](#)



Dashboard

NAVIGATION						
REVIEW HISTORY						
EMAILED REVIEWS						
EDITORIAL HISTORY						
PUBLICATIONS						
FILTERS						
DATE	MANUSCRIPT	JOURNAL	ATTRIBUTES	OPEN	EDIT	ALTMETRIC
2016-07-07	'Aesop's fable' experiments demonstrate trial-and-error lear...	Animal Behaviour	    			-
2016-06-20	Reconciliation and third-party affiliation in carrion crows	Royal Society Open Science	    			-
2016-06-13	Personality-dependent differences in problem-solving perfor...	Behavioural Processes	    			

Open peer review options

Reviews = © reviewer
(unless journal has
implicit policy)



ACTIONS BROWSE COMMUNITY FAQ



Dashboard

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REVIEW HISTORY

EMAILED REVIEWS

EDITORIAL HISTORY

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SPARC <https://sparcopen.org/our-work/author-rights/introduction-to-copyright-resources/>, Schiermeier http://www.nature.com/news/you-never-said-my-peer-review-was-confidential-scientist-challenges-publisher-1.21342?WT.mc_id=TWT_NatureNews

Open peer review options

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implicit policy*)

‘You never said my peer review was confidential’
— scientist challenges publisher

Open-science advocate says journals should be clearer to peer-reviewers about terms and conditions.

[Quirin Schiermeier](#)

23 January 2017 | Corrected: [24 January 2017](#)

 Search or Import 

ACTIONS BROWSE COMMUNITY FAQ



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Taking control of where you donate your reviewer time

Reviewing Ethics

If I am invited to review a paper for a journal and/or publisher that is not aligned with my commitment to conducting rigorous science, I accept the review, write the below text in the Comments to the Authors section, and submit the review. I got this idea from the [Peer Reviewers' Openness Initiative](#) and modified it to suit my particular ethics.

- - -

My goal is to ethically conduct and promote rigorous science. I avoid exploiting myself as a scientist, I facilitate equality and diversity by ensuring that no one is discriminated against when reading scientific literature I contribute to, and I keep funds in academia (see my [presentation](#) for background). I use the mechanism of transparency to achieve my goal so anyone can evaluate my contributions at every step of the process.

Therefore, I am only willing to review papers that:

- 1) are going to be published gold open access under a CC-BY license,
- 2) will publish the review history alongside the paper (when it is an option),
- 3) are submitted to a journal where 100% of the articles are open access, and
- 4) are submitted to a journal that is published by an academic non-profit organization, or a for-profit corporation that a) has low or no article processing charges, and/or b) heavily invests profits in academia.

I am not willing to review this paper at this journal because criteria 1 and 3 are not met.

Sincerely,
Corina Logan
University of Cambridge

- - -

Also results in editorial quality control

<http://www.corinalogan.com/ethics.html>

Post-publication review

Commentary...

Living document...

PeerJ

F1000Research
Open for Science

Comments on this article

Version 3

 Comment

Version 2

Author Response 11 Jul 2016

Jon Tennant, Imperial College London, UK

Dear Ruth,

Many thanks for pointing out that typo. It looks like it in future versions of ... [Continue reading](#)

Reader Comment 11 Jul 2016

Ruth Lewis, Biology Library, Washington University

Very useful review! Pardon my ignorance but I don't Open Accessfggd policies - Figure 3?

Competing Interests: No competing interests we

1 Have differences in learning abilities been implicated as an underlying mechanism for variation in BWCs?

The fact that, while American Robins were the most abundant species, only the juveniles collided with windows suggests that this species has to learn about the properties of windows either through personal experience or by watching others to know that they need to avoid flying into them. One way they could learn is by remembering what windows are where in their environment, but since this is a mig...

[...read more](#), vote or answer

Animal Behavior Zoology
Bird Cognition
Social Learning

 **Corina Logan** • 880
• 3 years ago

 Edit

1 answer

Ask a question about this section

Close

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We found that collision mortality for adults was inversely related to species abundance, and only adult Long-distance Migrants died early in the breeding season. Conversely, juvenile mortality was positively related to species abundance, and juveniles of all three migratory guilds (Long-distance and Short-distance Migrants and Permanent Residents) died from late June through early August. Mortality differences among age classes would be expected to reflect the timing at which individuals were present on site: adult mortality prior to successful reproduction and post-fledging mortality after juveniles enter the population. However, adults generally remain within breeding territories near buildings throughout the entire season and, if collision risk is simply related to abundance, then we should have observed adult mortality more consistently throughout the summer. The mechanism driving mortality differences in age and migratory class is unknown, and because we could not differentiate age classes during point counts, we are not certain whether differences in species or age class abundance drove differences in mortality.

BWCs are hypothesized to be influenced by flight behavior and temporal variation in mobility, i.e., flight speed, distance moved, and dispersal patterns (Klem, 1989). From the

Hager & Craig 2014 *PeerJ*, Tennant et al. 2016 *F1000*

Open peer review: what does it achieve?

- **Increases scientific rigour** through transparency and accountability
- Allows **quality checking** of editors, reviewers, and authors
- Can turn an archived paper into a **living document**

