



THE HEALTHCARE TRIAGE PODCAST

SPECIAL SERIES: SCIENCE CULTURE & REPRODUCIBILITY

Episodes Four & Five

Description

This podcast series focuses on the relationship between science culture and reproducibility. We've talked about how poorly-designed incentives play a major role in driving reproducibility issues. One of those incentives is publishing, and it's the focus of the fourth episode of this series. Related to this is the media's coverage of science and of specific publications, which is the focus of the fifth episode of this series.

Materials needed

- A device capable of playing podcasts
- Internet connection for downloading or streaming audio
- Access to sources listed within lesson guide
- Make sure students know how to download/listen to podcasts:
 - <https://www.wired.com/story/podcasts-beginners-guide/>
- Episode 4 and Episode 5

Learning goals

- Understand the importance of conducting replication studies and our ability to publish them versus the value currently placed on both of those efforts
- Be able to discuss the utility of our current use of altmetrics and peer review
- Understand our current "Publish or Perish" culture, how it contributes to our resistance to null findings, and how null findings are affected by pre-registration policies
- Understand how studies in need of correction or retraction are generally handled in both academic publishing and in the media
- Be able to discuss the role of the media in holding science accountable

Suggested topics of discussion and related literature

1) How successful are we at publishing replications, and why should publication of replication studies be made a priority?

- Replication, replication, replication
- Why replication studies are essential: Learning from failure and success

2) 1) How successful are journals at identifying “bad” studies before publication? And how are they at addressing mistakes post-publication? And speaking of journals, let’s chat about altmetrics and peer review.

And how well does the media do in covering retracted scientific findings?

- Online Bettors Can Sniff Out Weak Psychology Studies
- Reproducibility: A tragedy of errors
- Media and social media attention to retracted articles according to Altmetric
- The Role of altmetrics and Peer Review in the Democratization of Knowledge

3) "Publish or Perish" and the relationship between pre-registration and null results

- To protect credibility in science, banish "publish or perish"
- First analysis of 'pre-registered' studies shows sharp rise in null findings

4) Journalist perspectives on metascience

- Panel discussion at Metascience 2019

Other general points of discussion:

1) How have your own experiences resonated with what our experts had to say in episodes four and five?

2) Do you think there's a problem with the way journals handle the publication of replication studies? How about with the way they handle corrections or retractions? How do you feel about our current use of peer review and altmetrics?

3) Have you noticed any particular media coverage of science or scientific studies that had you shaking your head? What are your overall thoughts on the role the media plays in the public's understanding of scientific issues?