**Coming out: Open Science**

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Conducting research in psychology and science in general are undergoing vast changes. Web-based technologies enabled acquisition of massive datasets with thousands of participants. The data, code, and any other research output can also be shared easily online. These advances are breaking the traditional publication model and this lecture will bring you to the forefront of this revolution. We will describe available technologies, discuss their advantages and weaknesses, and try to understand how to proceed in practice.

**Structure**

* Large-scale online studies
  + Why
  + Why not
    - Need to control what people are actually doing
    - Browsers have poor performance
  + Available tools
* Data sharing
  + Why
  + Why not
    - Data acquisition is costly and precious
    - People want to know who is using their data
  + Available tools
* Open access
  + Why
  + Why not
    - Little editorial oversight leads to lower quality
    - Too much published, no way to filter
    - What matters the most is reputation measured in impact factor
  + Why the current approach (Green open access, Gold open access) makes no sense
* Open Science in general
  + Study pre-registration
  + Open peer review
  + Free and open source software
    - Why use SPSS?
    - Code review
* Wrap up
  + Reward system is broken (impact factors, publication counts, lack of time)
  + Personal responsibility

**Content**

* Videos
  + Oral presentations
  + Demonstrations of software
* Some reading material
* Assignments
  + multiple choice questions
  + possibly open-ended questions

**Resources**

- Belluz, J. (2015). **Taxpayers spend $140 billion funding science each year — but can’t access many of the results**. Vox. <http://www.vox.com/2015/1/10/7522713/open-access>

- Nielsen, M. (2011). **Reinventing Discovery: The New Era of Networked Science**. Princeton, N.J.: Princeton University Press. <http://press.princeton.edu/titles/9517.html>

- Kubilius, J. (2014). **Sharing code**. I-Perception, 5(1), 75–78. <http://dx.doi.org/10.1068/i004ir>

- Nosek, B. A., & Bar-Anan, Y. (2012). **Scientific Utopia: I. Opening Scientific Communication**. Psychological Inquiry, 23(3), 217–243. http:[dx.doi.org/10.1080/1047840X.2012.692215](http://dx.doi.org/10.1080/1047840X.2012.692215)

- Nosek, B. A., Spies, J. R., & Motyl, M. (2012). **Scientific Utopia: II. Restructuring Incentives and Practices to Promote Truth Over Publishability**. Perspectives on Psychological Science, 7(6), 615–631. http:[dx.doi.org/10.1177/1745691612459058](http://dx.doi.org/10.1177/1745691612459058)

- Viskontas, I., & Mooney, C. (2014). **Scenes from the Postdocalypse**. *Mother Jones.* <http://www.motherjones.com/environment/2014/03/inquiring-minds-ethan-perlstein-postdocalypse>