

Promoting Open Science in the Sagol School Of Neuroscience

Best Practices for Researchers

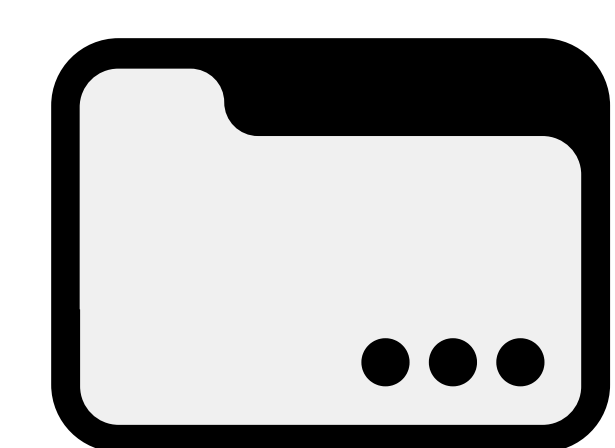


Open Design

- In ethics approval and informed consent forms, consider data sharing and its implications!
- Plan for preservation and sharing in the budget
- Review relevant open datasets, open-source tools, and biobanks
- Develop a data management plan



Preregistration



Data Collection

- Document the used SOPs, protocols, blueprints and schematics for sharing
- Collect additional samples for future sharing
- Follow FAIR standards to collect rich metadata



Analysis

- Separate pre-planned analysis from exploratory research (preregistration easily enables this!)
- Use open-source software when possible
- Fully share your source code



Share a Preprint



Publication and Sharing

- Share data publicly! Include metadata and use your field's standard formats and repositories
- Prefer Open Access Journals and Self-Archive
- Provide guidance for crediting your work



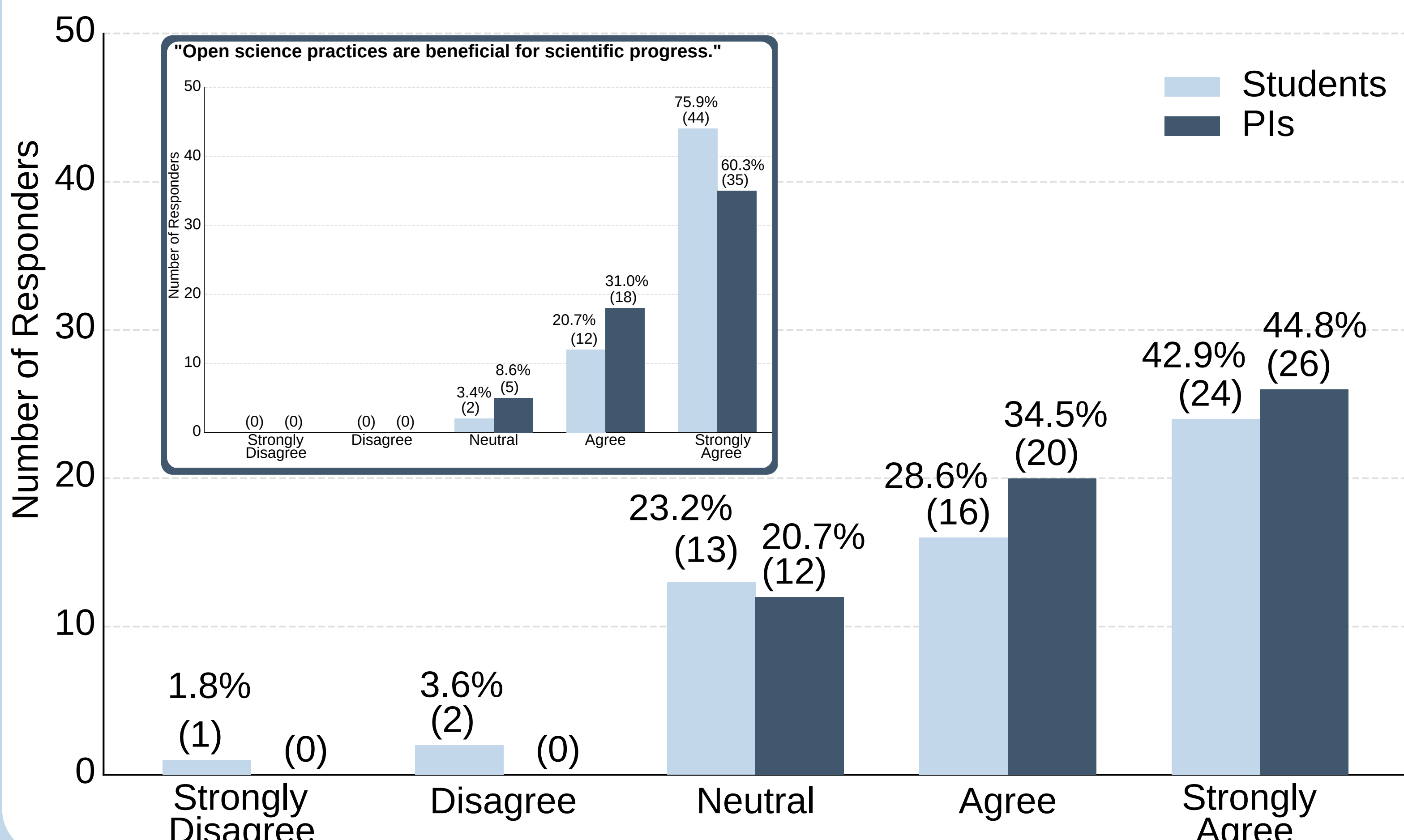
Impact

- Preserve sustainable access to resources
- Use open licenses whenever possible
- Avoid unnecessary restrictive IP for non-profit research, educational, and humanitarian uses
- Use public outreach tools to communicate your research

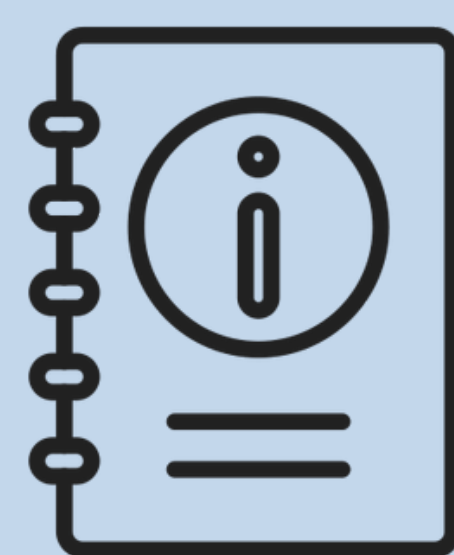
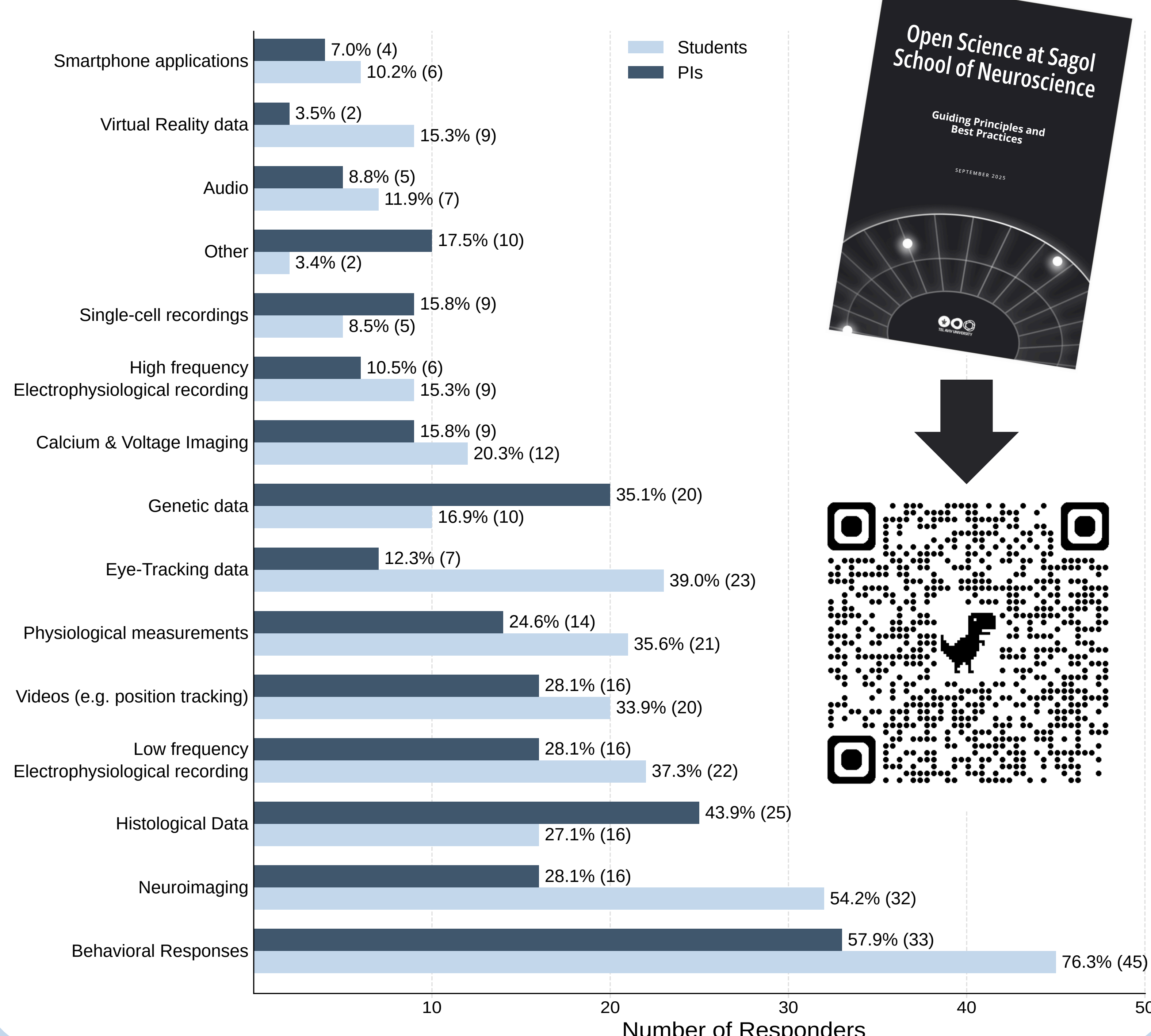
Surveys & Data Sharing guides

We conducted school-wide anonymous surveys regarding approach to OS and possible obstacles. **We received individual responses from 58 PIs and 58 students from different labs.** Furthermore, personal interviews were conducted 27 PIs.

"My research area would benefit from specific funding or initiatives to promote open science."



What types of data does your lab collect and save? (Select all that apply)



SOP-style data sharing guides were created to fit the common types of collected data, and will be continuously added and updated. A **Best Practices Guides** was created to inform researchers about Open Science and assist in the open design of your next research. **Scan the QR code to access both!**

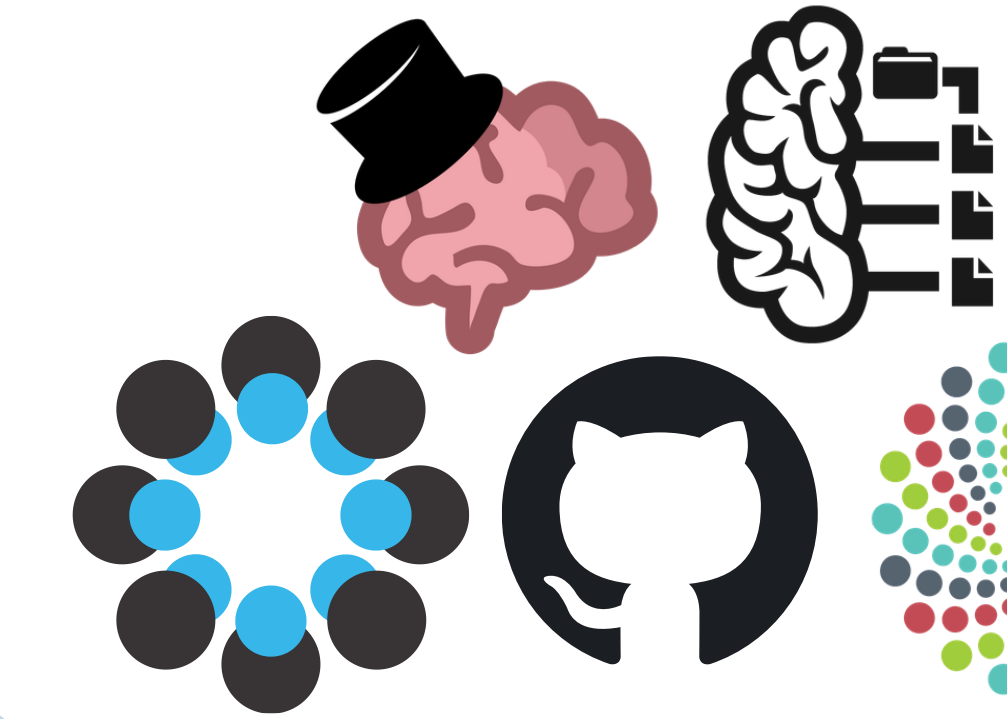
Why is this Important?



Preprinting, Open Access & Self-archiving
All Promote research **Accessibility** and **Impact** for scientists and the public



Data & Code Sharing



Transparency & Rigor



Both lower the risk of methodological errors and data manipulation

Publication Bias

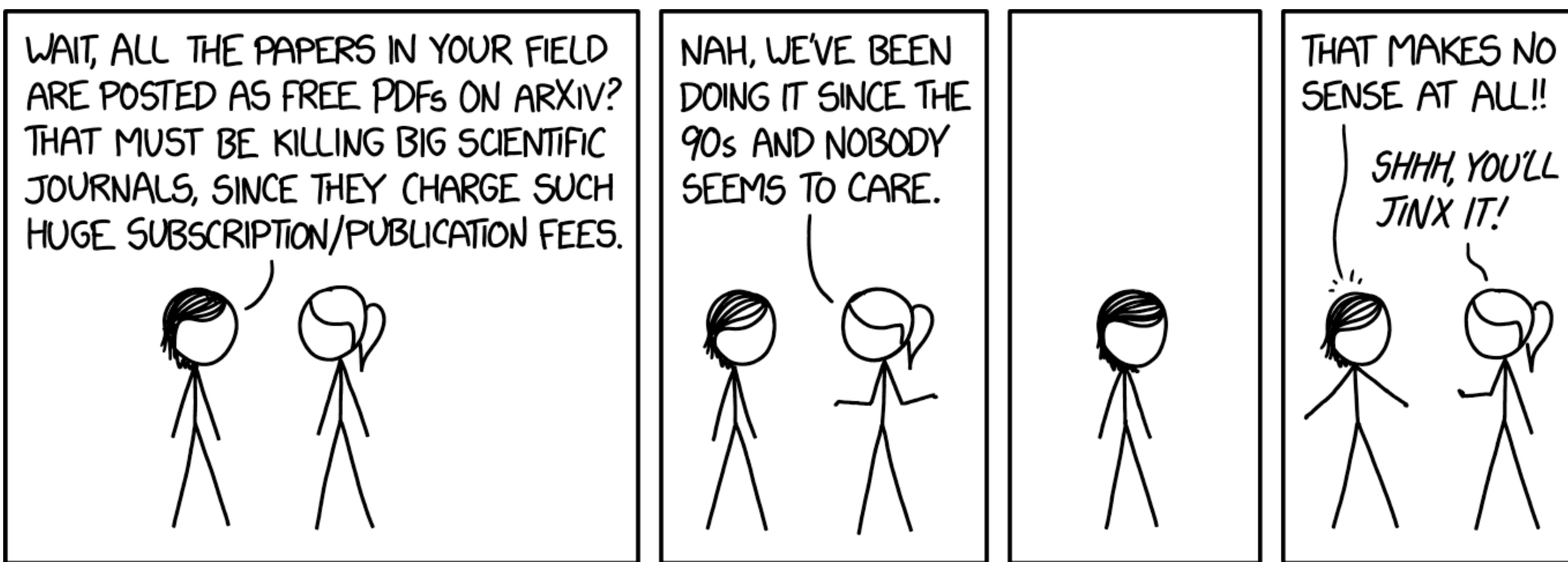


Sharing **null results**, **validating** and **reusing data** helps **research costs** and the **"File Drawer Problem"**

The Replication Crisis

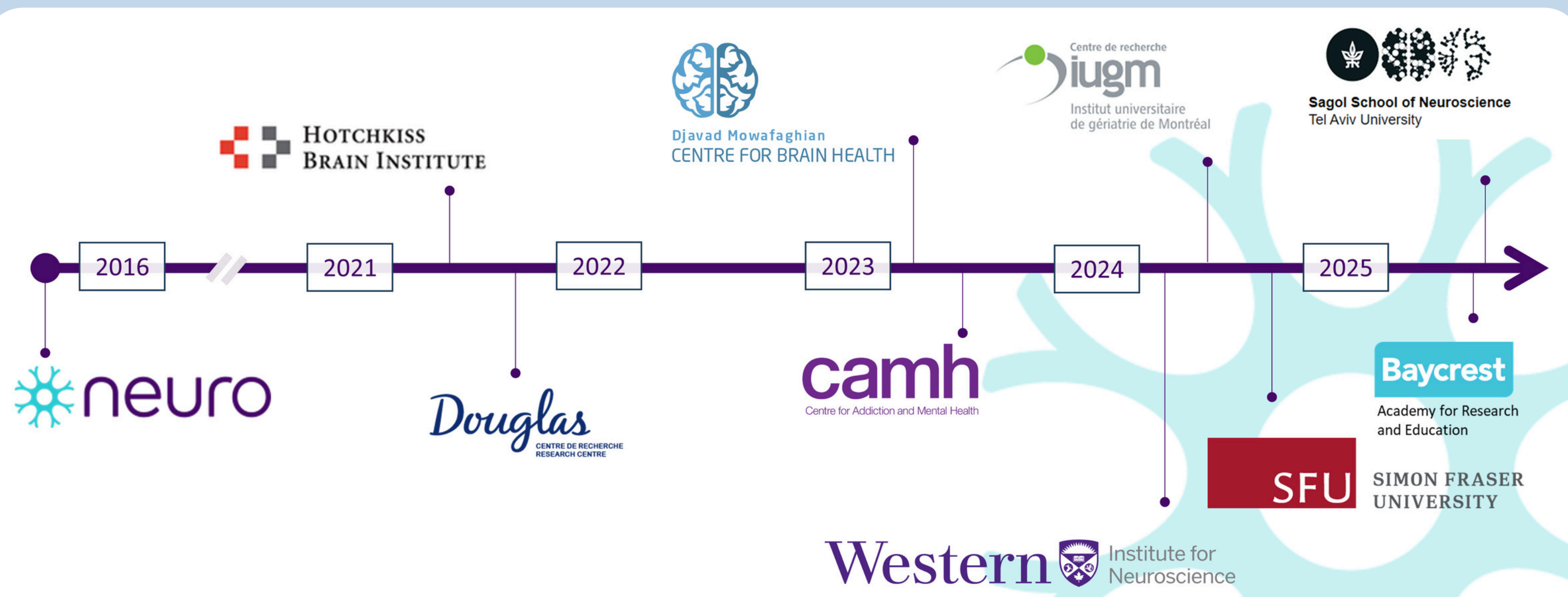


Transparency & Rigor can **mitigate the replication crisis** by rewarding excellence and quality over quantity



Comic by Randall Monroe [www.xkcd.com/2085]. The Arxiv project began in 1991. Neuroscience lags behind other scientific fields regarding access and data availability.

An Open Science Community



The Sagol School of Neuroscience is the **first institute outside of Canada** to join the now-international **Tanenbaum Open Science Institute (TOSI) Alliance** of McGill University, a network of leading Canadian institutions dedicated to advancing open science practices. In 2025, **Sagol researchers voted to adopt a set of Open Science Principles** and a **dedicated course was created** to teach OS practices.

Authors & Acknowledgements

This project was possible thanks to the **Tanenbaum Open Science Institute (TOSI)**, and led by **Professor Tom Schonberg**, with **Amir Miller** as project manager. A team of SSN researchers performed the survey and created the relevant resources: **Rony Hirschhorn, Eden Elbaz, Lior de Marcas, Adi Cantor, Gabriel Braun, Guy Zer Eshel, Ofir Sade and Amitai Mintzer.**

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