COMMMITEE ON INCLUSION IN SDSS (COINS)

Rachael L. Beaton

Co-Chair SDSS-IV COINS 2019-2022

Space Telescope Science Institute

Johns Hopkins University

Princeton University

Carnegie Observatories

Oct 12 2022

Building High-Functioning and Inclusive Teams
Precursors to Pathways Science Meeting

On Terminology:

Equality — The assumption is that **everyone benefits from the same supports**. This is equal treatment.

Equity — **Everyone gets the supports they need** (this is the concept of "affirmative action"), thus producing equity.

Justice — All 3 can see the game without supports or accommodations because **the cause(s) of the inequity was addressed**. The systemic barrier has been removed.

Image Credit: mobilizegreen

Sloan Digital Sky Survey - IV

- ~1500 Wiki Accounts
- 60 Institutions
- 18 Countries
- 5 Continents

- Time Span: 2014-2021
- Annual Meeting averages ~150-300 people
- Two Telescopes/Two Hemispheres
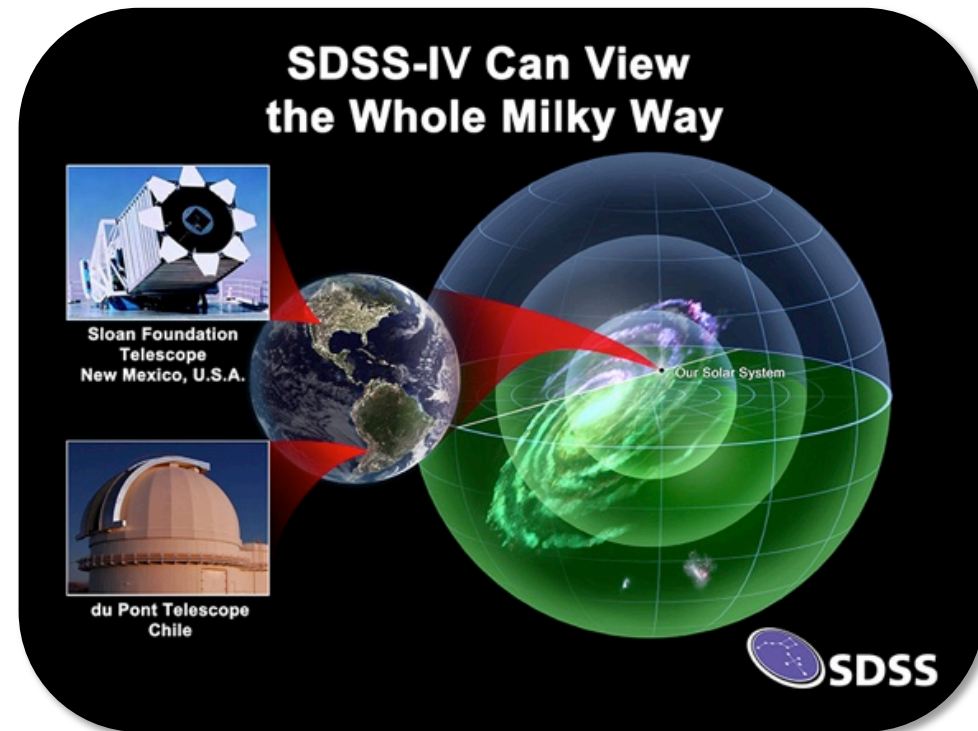
https://www.sdss.org/surveys/
Blanton et al. 2017, 2019

Sloan Digital Sky Survey - IV

➢ Since ~2000, every piece of data at every stage of data processing and every piece of code at every stage of use **goes public**

➢ We make datasets tailored to **specific goals**, but we design instruments for **broad use** and **encourage new discovery space**.

➢ This strategy is now more common, but was not the norm when SDSS started.
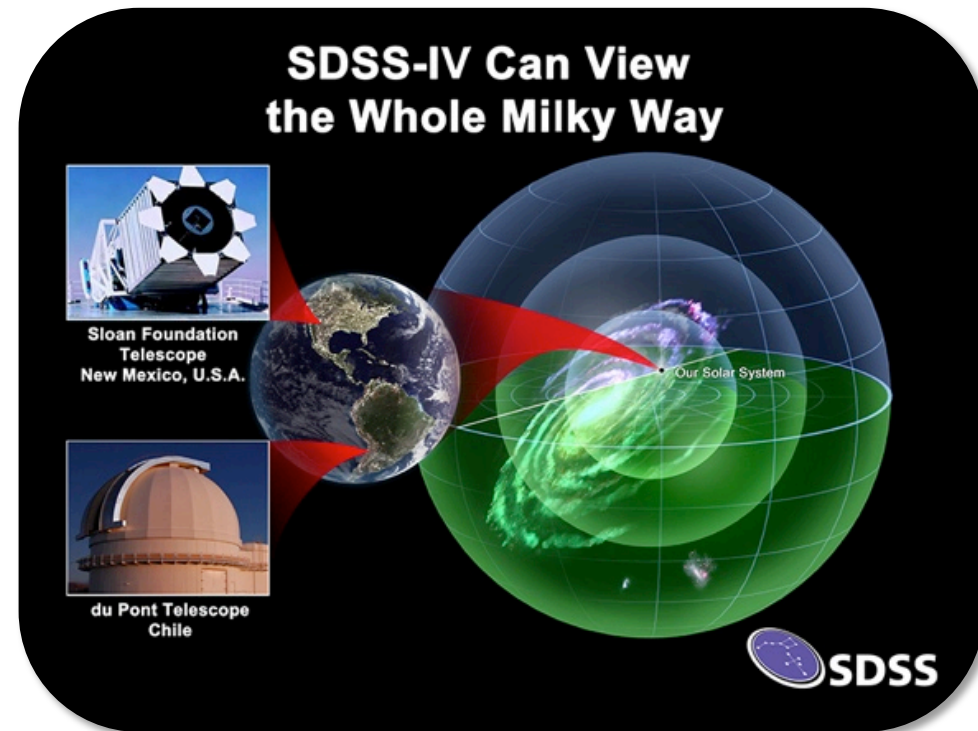
https://www.sdss.org/surveys/
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How does the science bit work?

- Publications Policy:
  - Web-based database of projects + papers that any member can sign on to.

> Explains who has decision making power
>
> Provides Equity for those that "build" the infrastructure of the survey and do "invisible work" that many take for granted
>> Recognizes trading your "science time" for making papers to efforts that make the survey work
>>> incl. observations, software, survey design, fundraising, leadership roles, running conferences, taking notes, data processing, and really important – doing inclusion work.

https://www.sdss.org/collaboration/publication-policy
https://www.sdss.org/collaboration/

How does the science bit work?

- Publications Policy:
  - Web-based database of projects + papers that any member can sign on to.
- Database is critical because:
  - **Transparency:** open to whole collaboration
  - **Responsibility:** clear expectations/templates
  - **Agency:** you are the person taking actions
  - **Inclusion:**
    - User accounts easily changed/updated for names, affiliations, etc. also auto-populates for papers.

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    - User accounts easily changed/updated for names, affiliations, etc. also auto-populates for papers.
    - Ex. We had a scientist with a gender transition and we had everything updated in the system in about 30 minutes from notification.

Sloan Foundation Push

This history illustrates **the important role that funding agencies can play in establishing priorities**. At the time, SDSS-IV was facing multiple existential threats and therefore, despite a generally positive inclination towards inclusiveness, was not devoting real resources to the issue. **The Sloan Foundation made the gender balance and overall inclusiveness of the project and collaboration a truly existential issue that we had to address.**
-- from Blanton et al. 2019

➢ What is now COINS was formed in 2012.
  ➢ Nearly a decade of effort!

The Earthscan Science in Society Series

PHILANTHROPY AND THE FUTURE OF SCIENCE AND TECHNOLOGY

Evan S. Michelson

Explored in a more general context by Evan Michelson in his book on Science Philanthropy.

COINS-IV Charge:

The broad goals of COINS are to:

✧ **assess** the SDSS project and collaboration's climate and demographics

✧ **recommend** to the MC new policies or practices with regard to increasing inclusiveness

✧ **assist** in the implementation of these new activities where necessary

New Policies in SDSS-IV:

- Clear Management Framework
- A set of Ombuds
- Standing Committee to Evaluate Inclusion
- Management Positions filled akin to formal hiring
- Integration of new members is a conscious effort
- Code of Conduct

→ Many of these were recommendations from the American Institute of Physics based on their demographics survey (2014; Lundgren et al. 2015) and site visit (Utah Collaboration Meeting)

Beyond the Code of Conduct

- COINS Best Practices
  - https://bit.ly/COINSBestPractices
- Respect your colleague's:
  - agency, sensibility, intelligence, personal space, history, and trust
- Elements of Workplace culture:
  - respect, kindness, trust, diversity, and inclusion
- Grey zones exist
  - We ask that you do your best and when you make a mistake you accept it and try not to make it again.

More COINS Documents:

- Best Practice: https://bit.ly/COINSBestPractices

- Meeting Accessibility: https://bit.ly/CoinsMtgAccessibility

- Telecon Recommendations: https://bit.ly/COINSTelecon

- Chairing Guidelines: https://bit.ly/COINSCharing

- Conflict Resolution Guide: https://bit.ly/COINSConflict

- All are duplicated on **github** to host these so it is more *"living"* -- Work in progress!
  - https://github.com/sdss/coins

THOUGHTS ON INCLUSIVITY

Inclusivity:

- Being inclusive is not a one time achievement, we have to work hard.

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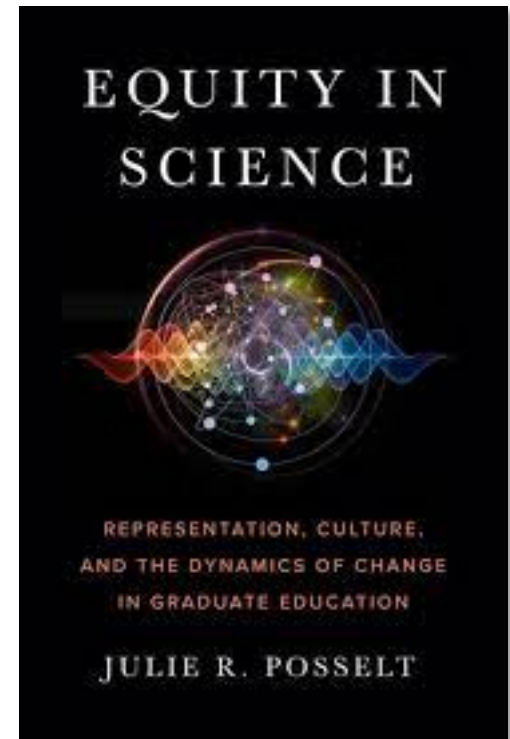- Inclusiveness varies: by telecon, by survey, and by demographic group.

Inclusivity:

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- It is something facilitated by policy & best practices, but it takes each of us doing our part to maintain.

- Inclusiveness varies: by telecon, by survey, and by demographic group.
  - Much of our work is in telecons and emails ➜ but how often do you think carefully about inclusivity in this context?
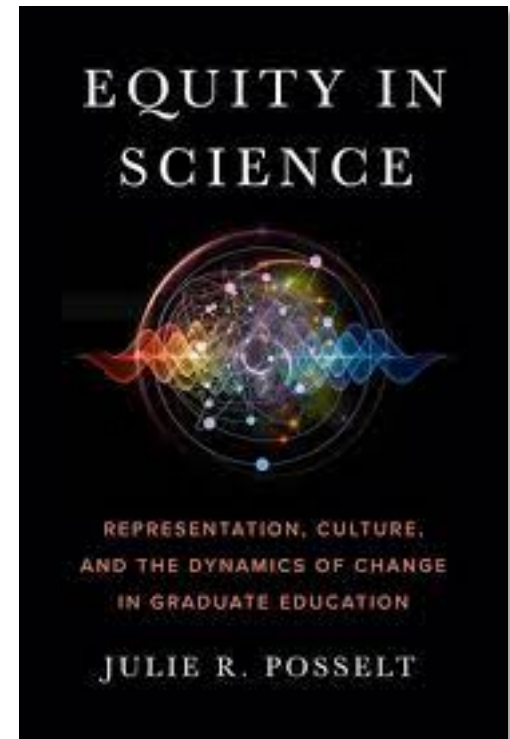
Why make inclusivity deliberate:

☐ Scientific norms are not written down or taught, they are learned in the practice of doing Science

EQUITY IN SCIENCE

REPRESENTATION, CULTURE, AND THE DYNAMICS OF CHANGE IN GRADUATE EDUCATION

JULIE R. POSSELT

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   ▪ This means what we think of as norms are highly experiential and depend on who we have interacted with

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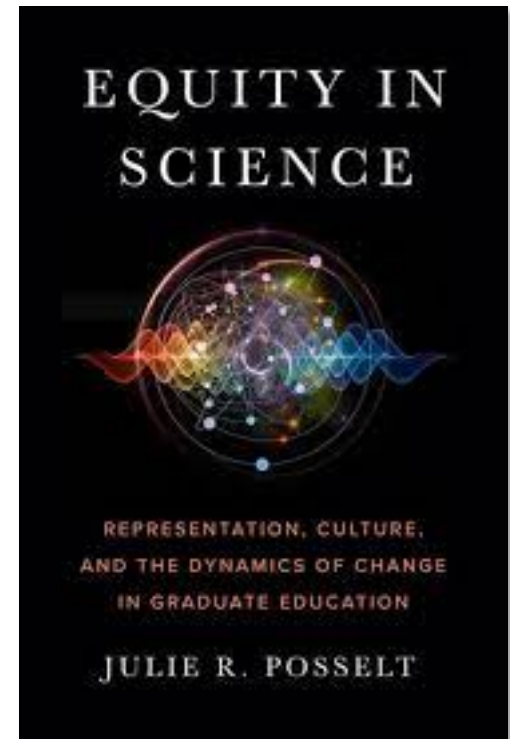
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 ▫ This means what we think of as norms are highly experiential and depend on who we have interacted with

 ▫ Norms are "**socially constructed and the result of a process through which people are socialized to see some behaviors as normal and within bounds and other behaviors not**."
 ➜ J. Posselt, Equity in Science

EQUITY IN
SCIENCE

REPRESENTATION, CULTURE,
AND THE DYNAMICS OF CHANGE
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The challenge …

- Norms that are not inclusive can persist for decades without being challenged.
  - Why?

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- Norms that are not inclusive can persist for decades without being challenged.
  - Why?
    - Challenging those in authority is hard.
    - Power imbalance is built into any hierarchical structure. Power imbalances are complex!
    - Someone needs to feel "safe" to speak out.
    - Someone needs to feel like they will be "heard" to speak out.

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the
fearless
organization

Creating **Psychological Safety** in the Workplace for Learning, Innovation, and Growth

Amy C. Edmondson

HARVARD BUSINESS SCHOOL

A FranklinCovey Title

"The ultimate blueprint for 'unofficial' project managers. You'll go from amateur to adept in seven easy chapters."
—JAY WILKINSON, founder and CEO of Firespring

e …

PROJECT MANAGEMENT FOR THE UNOFFICIAL PROJECT MANAGER

Project Management Institute.

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ou

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- **Fixed Mindset:**
  your basic qualities come from talent and are set in stone

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your basic qualities are things that you cultivate through effort. everyone can change and grow via applying themselves and experience.

  ◻ Challenges are opportunities to grow

[1] Mindset

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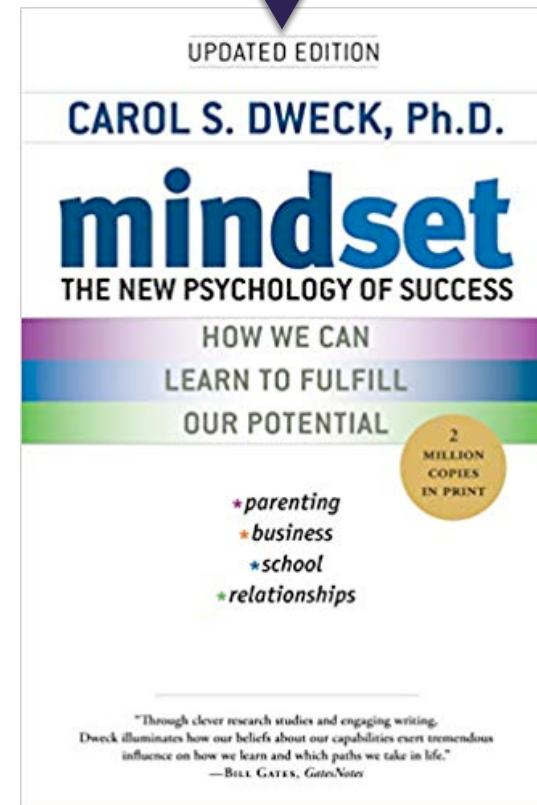 - **Challenges are opportunities to grow**

➢ Manifest in subtleties of language like "I am bad at"
vs. "I am still learning/struggling"

[1] Mindset

☐ We shift between the mindsets in our lives.

☐ We shift each other into mindsets due to our interactions.

☐ We shift between mindsets due to societal pressure.

☐ We shift between mindsets due to leadership decisions.

☐ We shift due to blood sugar.

UPDATED EDITION

CAROL S. DWECK, Ph.D.

mindset

THE NEW PSYCHOLOGY OF SUCCESS

HOW WE CAN
LEARN TO FULFILL
OUR POTENTIAL

2 MILLION COPIES IN PRINT

★ parenting
★ business
★ school
★ relationships

"Through clever research studies and engaging writing, Dweck illuminates how our beliefs about our capabilities exert tremendous influence on how we learn and which paths we take in life."
—BILL GATES, *GatesNotes*

➔ Inclusive practices helps put the collaboration and our teams into the growth mindset and we will be happier, healthier, and more productive because of it
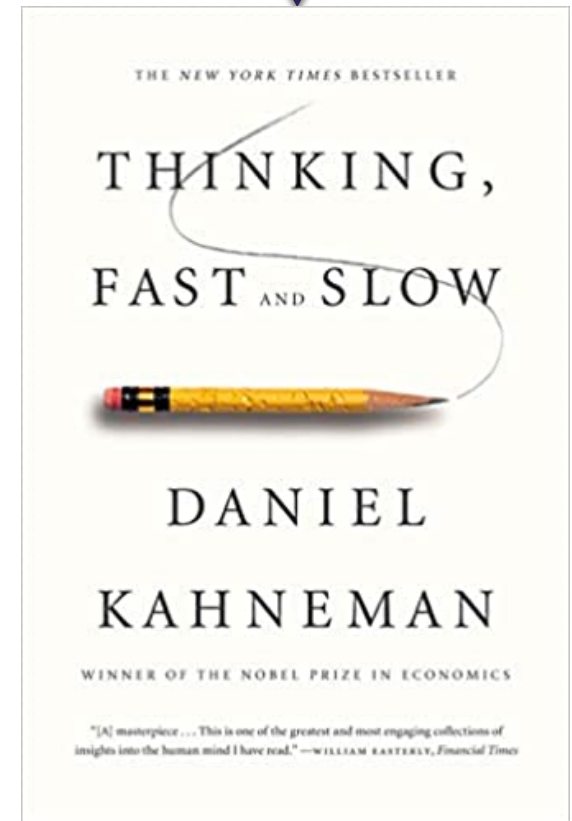
[1] Thinking Systems

Decades of behavioral science research

☐ **System 1:**
fast, automatic, frequent, emotional, stereotypic, unconscious

☐ **System 2:**
slow, effortful, infrequent, logical, calculating, conscious

THE *NEW YORK TIMES* BESTSELLER

THINKING,

FAST AND SLOW

DANIEL

KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS

"[A] masterpiece . . . This is one of the greatest and most engaging collections of insights into the human mind I have read." —WILLIAM EASTERLY, *Financial Times*

➔ Inclusive practices helps make sure decision making occurs in System 2 and that we communicate our thinking.

[2] Everyone's experiences are different.

- Everyone's experiences are different.
  - Have to ask!
    - And make sure your space is one where people can speak up.
- Every group is made of different experiences.
  - What worked for Group A might not work for Group B
- Mix and Match strategies to adapt to your team – as a participant and as a leader

Putting it together➜

□ You have to see and to listen to the not inclusive actions to have the opportunity to change them.

Putting it together➔

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- Examples:
  - SDSS Membership is exclusive in the sense that it requires a resource commitment.
    - Multiple paths for participating in SDSS.
  - The world has many timezones, scheduling is hard.
    - Rotate time zones, record content, make sure minutes are distributed, give time for people to weigh in on decisions.

Remember:

Equality

The assumption is that **everyone benefits from the same supports**. This is equal treatment.

Equity

Everyone gets the supports they need (this is the concept of "affirmative action"), thus producing equity.

Justice

All 3 can see the game without supports or accommodations because **the cause(s) of the inequity was addressed**. The systemic barrier has been removed.

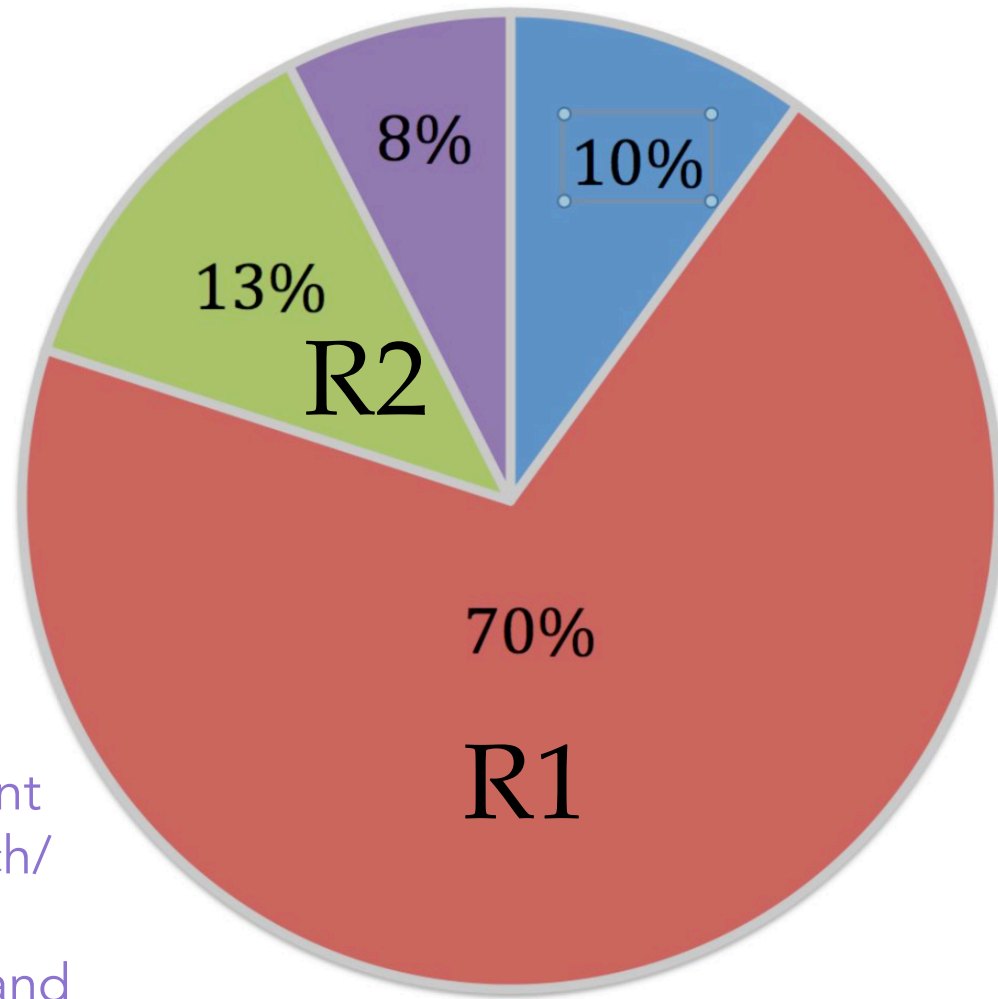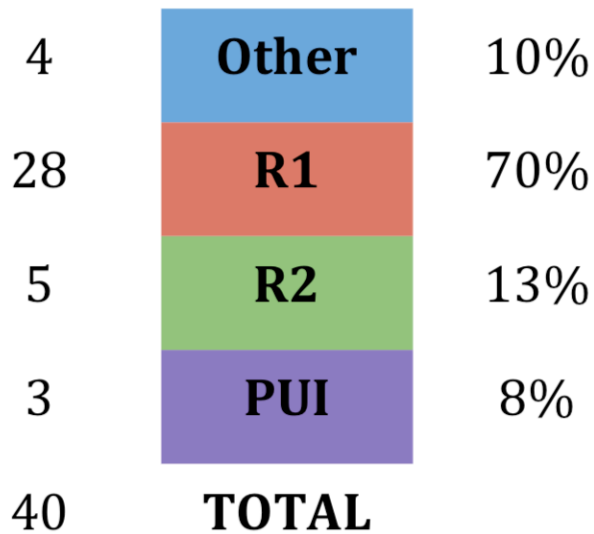Image Credit: mobilizegreen

SHOW ME THE DATA

Demographics Surveys

- Provide data on survey participants using self-reported demographic information
- Quantitative information regarding the climate that can be sub-divided into affinity groups
- Five surveys over seven years
  - 2014
  - 2015
  - 2016
  - 2018
  - 2021

https://github.com/sdss/coins/tree/main/materials#demographic-surveys

Inherit Demographics

US Institutions SDSS-IV

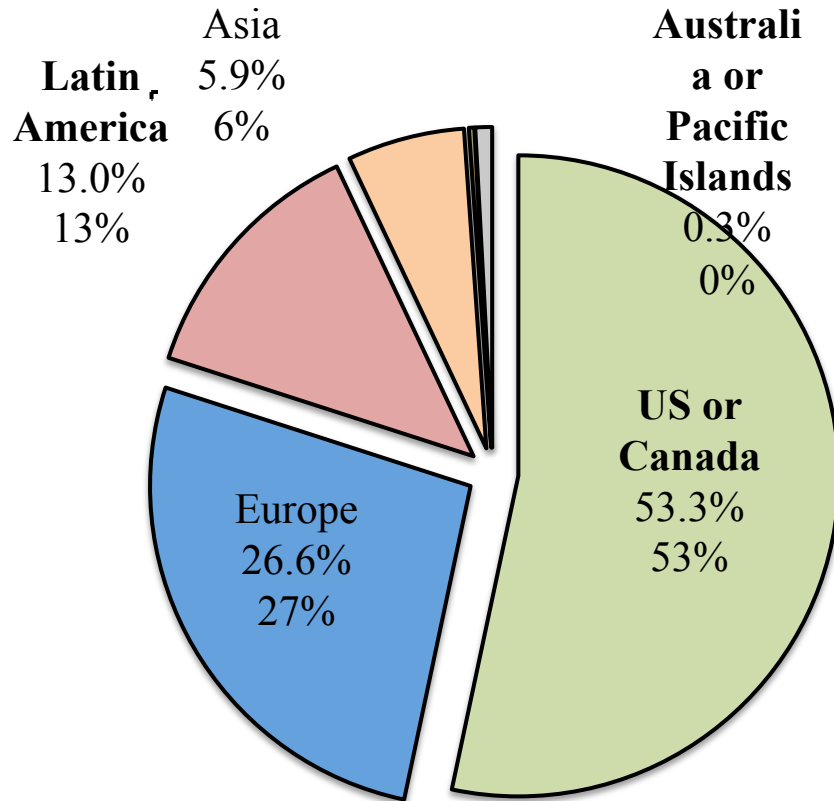|		
4	**Other**	10%
28	**R1**	70%
5	**R2**	13%
3	**PUI**	8%
40	**TOTAL**	

- ➢ These institution types have different balances between teaching/research/service
- ➢ Differences in their demographics and goals for hiring

8% 10%

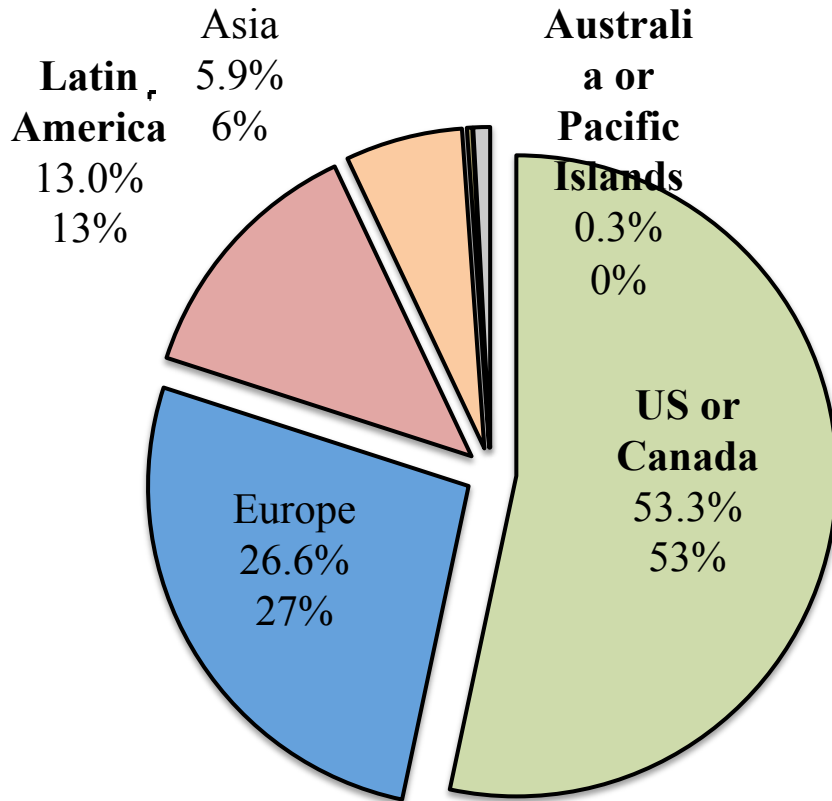13% R2

70% R1

https://carnegieclassifications.acenet.edu/

Who is/was SDSS?

Asia
5.9%
6%

Latin America
13.0%
13%

Australia or Pacific Islands
0.3%
0%

US or Canada
53.3%
53%

Europe
26.6%
27%

**Average over 5 Surveys
(2014,15,16,18,21)**

Who is/was SDSS?

Pie chart:
- Asia 5.9% / 6%
- Latin America 13.0% / 13%
- Australia or Pacific Islands 0.3% / 0%
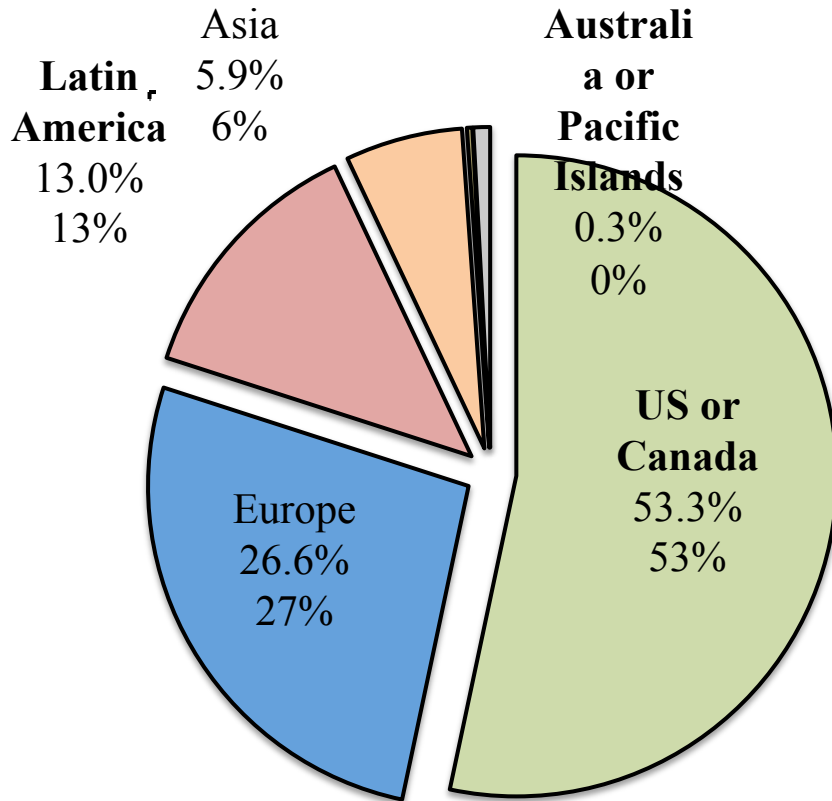- US or Canada 53.3% / 53%
- Europe 26.6% / 27%

Average over 5 Surveys (2014,15,16,18,21)

➢ **Equality vs. Equity**
  ➢ **Must be mindful when polling for telecon times to not exclude Latin America and Asia!**

➢ **Strategies:**
  ➢ **Cycle telecon times**
  ➢ **Allow comment via telecon as well as via email or other medium**
  ➢ **Plan far enough ahead that you can have multiple meeting cycles before making a decision**

Who is/was SDSS?

Latin America 13.0% 13%

Asia 5.9% 6%

Australia or Pacific Islands 0.3% 0%

US or Canada 53.3% 53%

Europe 26.6% 27%

Average over 5 Surveys (2014,15,16,18,21)

➢ **Culture Clashes**
  ➢ Hierarchical cultures vs. non-hierarchical cultures
    ➢ Speaking out of turn/ interjecting, etc.
    ➢ Questioning more senior people
    ➢ Competition vs. Collaboration
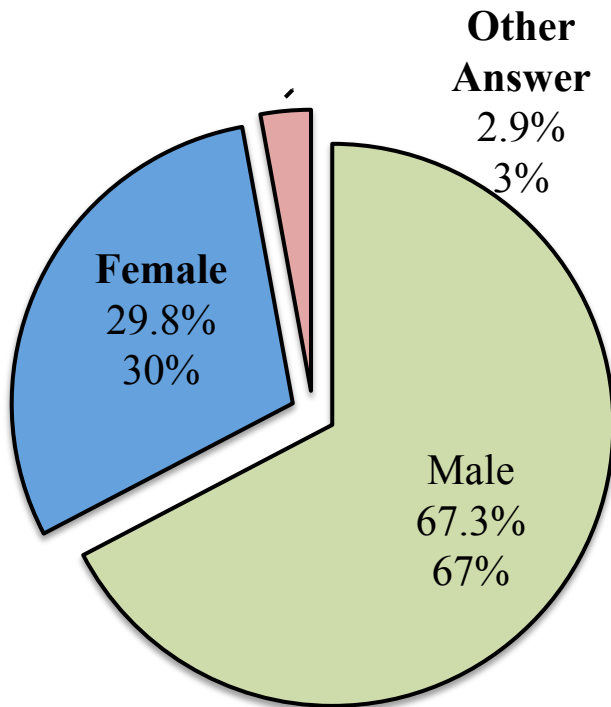   ➢ Count to 15 before moving on

➢ **Language Barrier**
  ➢ Pause and wait for folks to mentally translate
  ➢ Speak slowly
  ➢ Written and verbal communication
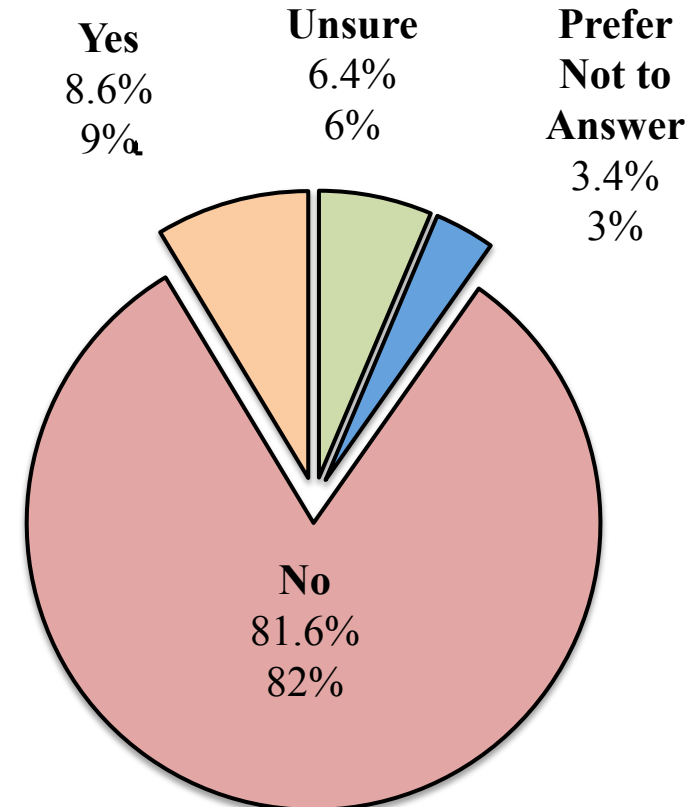
Who is/was SDSS?

Self-Identified Gender

I am considered an ethnic or racial minority at my institution

Other Answer
2.9%
3%

Female
29.8%
30%

Male
67.3%
67%

Yes
8.6%
9%

Unsure
6.4%
6%

Prefer Not to Answer
3.4%
3%

No
81.6%
82%

**Average over 5 Surveys
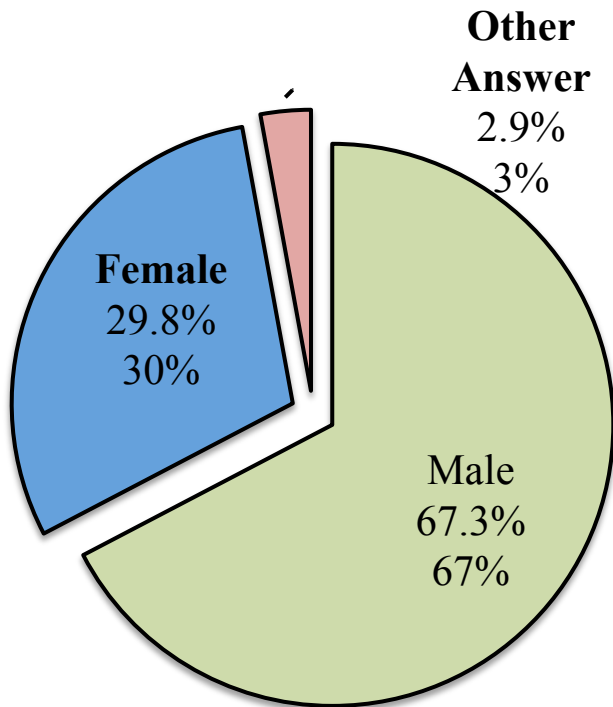(2014,15,16,18,21)**

**Average over 5 Surveys
(2014,15,16,18,21)**

➤ Similar M/F ratio as AAS or IAU
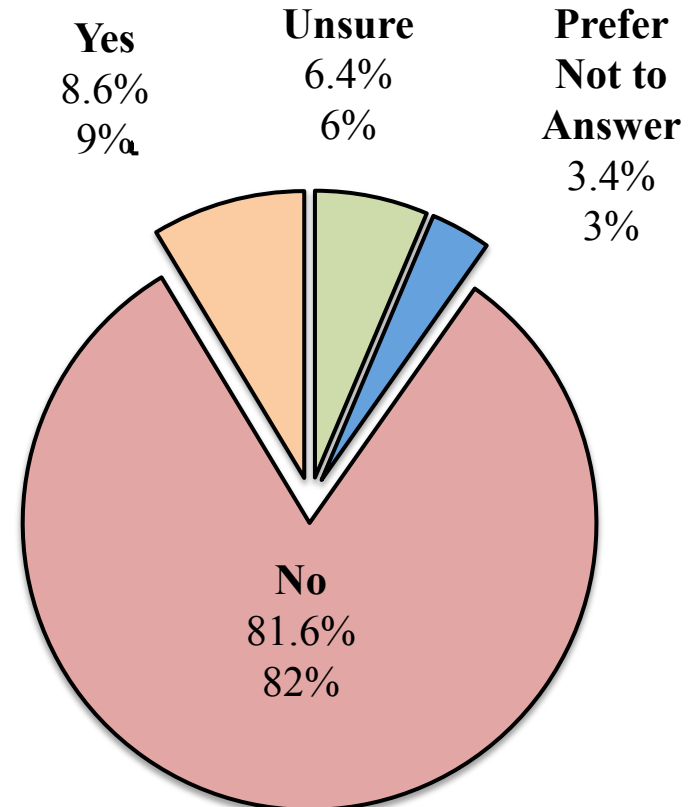➤ Difference between anonymous and identifiable

Who is/was SDSS?

Self-Identified Gender

I am considered an ethnic or racial minority at my institution

Pie chart: Self-Identified Gender — Male 67.3% / 67%; Female 29.8% / 30%; Other Answer 2.9% / 3%

Average over 5 Surveys (2014,15,16,18,21)

Pie chart: I am considered an ethnic or racial minority at my institution — No 81.6% / 82%; Yes 8.6% / 9%; Unsure 6.4% / 6%; Prefer Not to Answer 3.4% / 3%
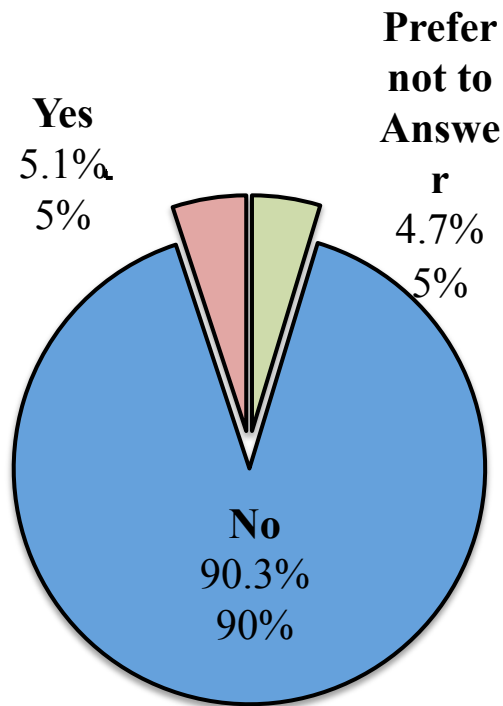
Average over 5 Surveys (2014,15,16,18,21)

➢ Similar M/F ratio as AAS or IAU
➢ Difference between anonymous and identifiable

Who is/was SDSS?

I consider myself part of the LGBTIQ community:

Yes
5.1%
5%

Prefer not to Answer
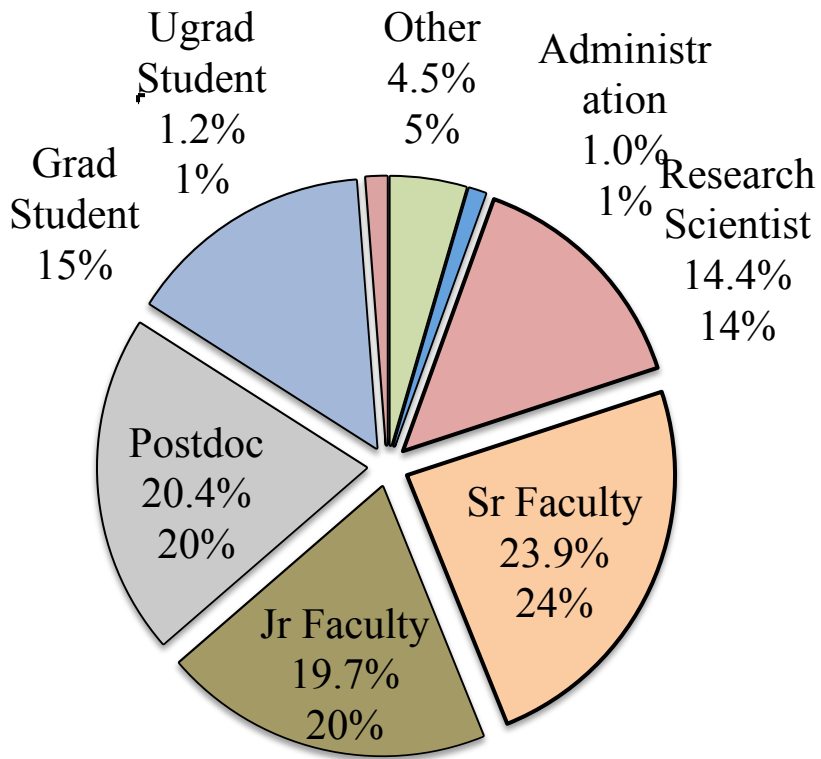4.7%
5%

No
90.3%
90%

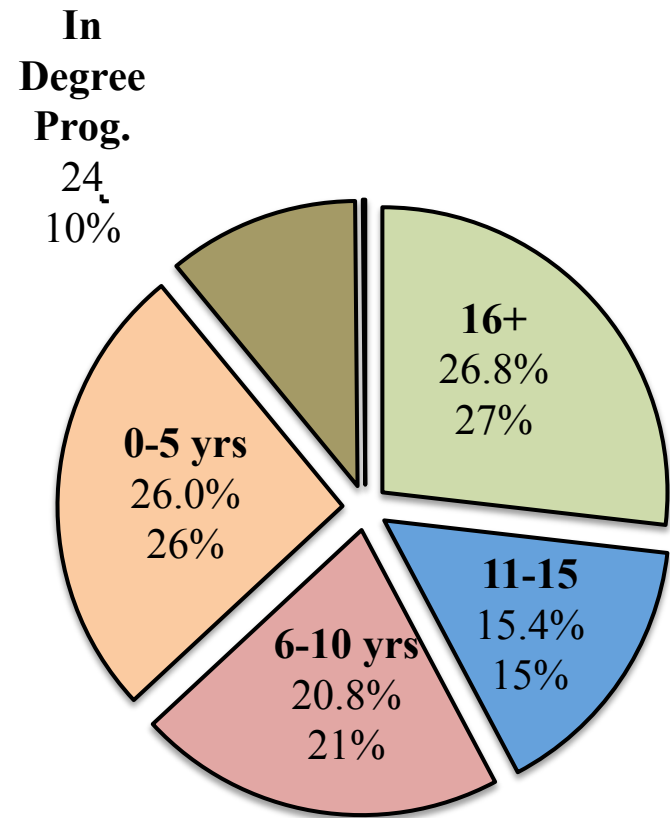**Average over 5 Surveys (2014,15,16,18,21)**

Also have data on disability status, self-reported ethnicity/nationality, if respondents have children, and more!

**Not yet compiled for all surveys.
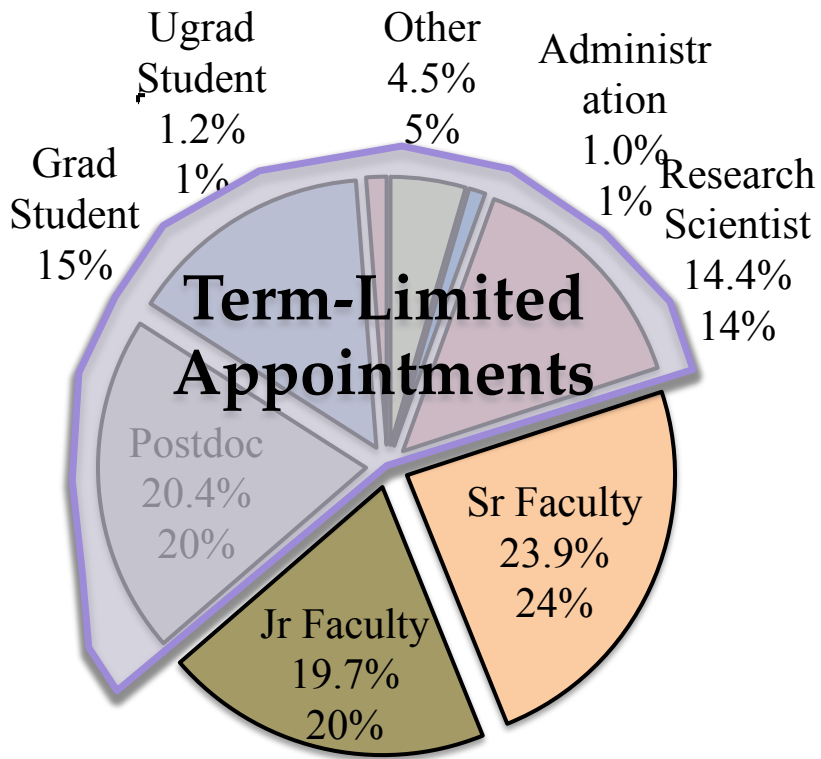
Career Stage | Academic Age

Ugrad Student 1.2% 1%
Grad Student 15%
Other 4.5% 5%
Administration 1.0% 1%
Research Scientist 14.4% 14%
Postdoc 20.4% 20%
Sr Faculty 23.9% 24%
Jr Faculty 19.7% 20%

Average of 5 Surveys (2014, 15, 16, 18, 21)

In Degree Prog. 24 10%
16+ 26.8% 27%
0-5 yrs 26.0% 26%
11-15 15.4% 15%
6-10 yrs 20.8% 21%

Average of 5 Surveys (2014, 15, 16, 18, 21)

Career Stage & Academic Age

Left pie chart — Term-Limited Appointments:
- Ugrad Student 1.2% 1%
- Other 4.5% 5%
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Average of 5 Surveys (2014, 15, 16, 18, 21)

Right pie chart — Early Career or "Junior":
- In Degree Prog. 24 10%
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Average of 5 Surveys (2014, 15, 16, 18, 21)

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or "Junior"

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16+ 26.8% 27%

11-15 15.4% 15%

➤ **More than half of the respondents are in term-limited positions and more than half are considered "Early Career"**

   ➤ **Have to make decisions with their timescales and concerns in mind.**

(2014, 15, 16, 18, 21)

Ask the Collaboration What it Thinks

- Look for high-level from the 2014/2015/2016 surveys in
  - A. Jones, R. Beaton et al. (in prep.)
  - R. Beaton, A.Jones et al. AAS241 iPoster
- See Lundgren et al. 2015 for the 2014 Demographic Survey Results: https://ui.adsabs.harvard.edu/abs/2015PASP..127..776L/abstract

SDSS

COMMMITEE ON INCLUSION IN SDSS (COINS)

In parallel to other subsystems in SDSS, making as much as possible public/open access:
- ➢ Work in progress!
- ➢ github.com/sdss/coins

Contact Us: coins@sdss.org