



STScI | SPACE TELESCOPE
SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

Dual-Anonymous Peer Review (DAPR)

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Why Dual Anonymous Proposal Review?

Primary objective of peer review process:

Best-Justified Science

Anonymising proposals:

Places focus directly on **Science**

Removes focus from **Team**



DAPR: What it is and what it isn't.

What it **is**:

- Proposing team identity ambiguous.
- Removes focus from team, encourages focus on **science**.

What it **isn't**:

- Completely anonymous (eliminating all possibly-identifiable information).
- A **challenge** or **test** for reviewers.



Why do this? Does it work?

Why do this?

Human brains are biased.

Does it work?

Yes!



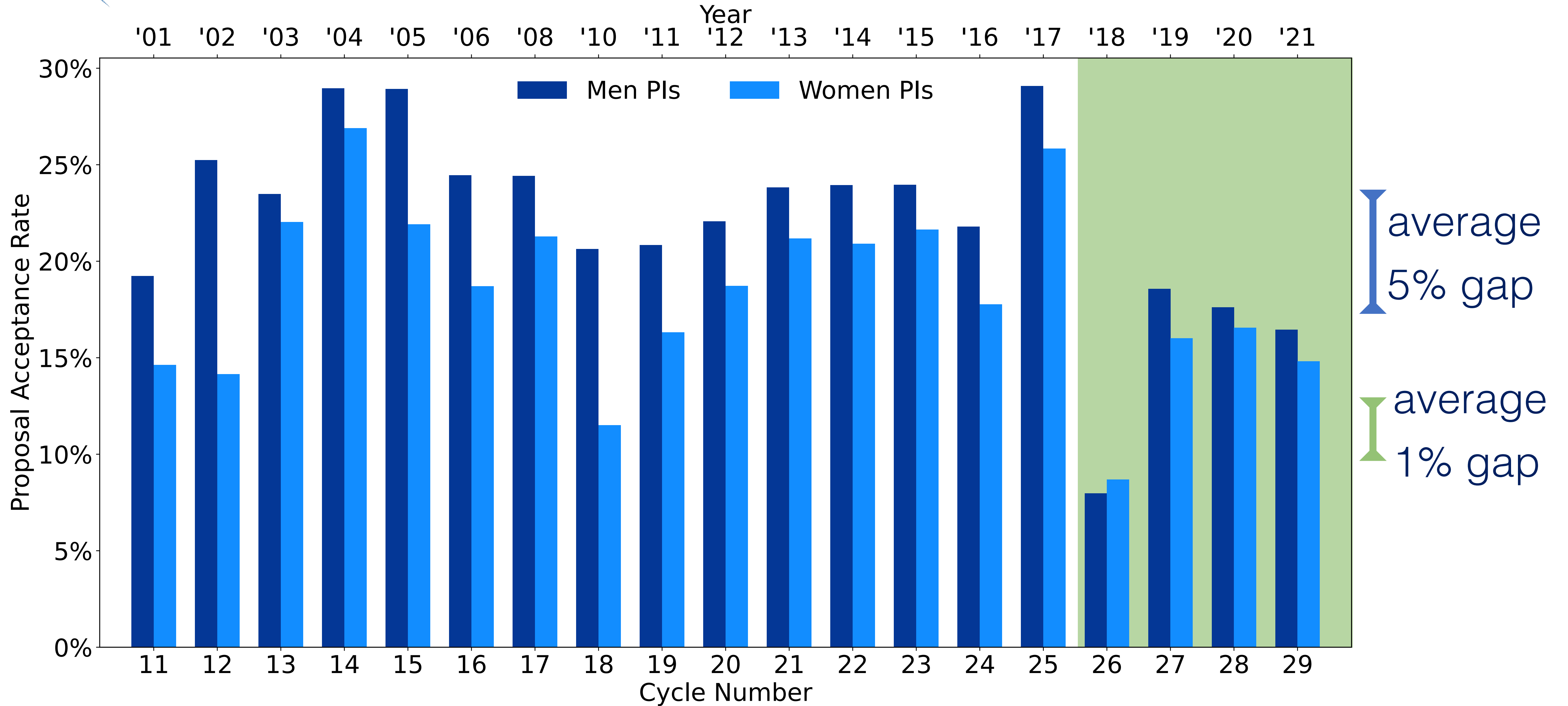
Unconscious Bias

- Human brains make shortcuts.
- When training data is biased, shortcuts are biased too.
- Leads to **unconscious** biases, even for people who are not **consciously** biased.
- Unintended consequences, e.g., ability to identify best scientific merit.
- **Lasting negative effects** on careers, particularly women and other underrepresented groups in STEM.

- DAPR is designed to help **mitigate** biases, it is **not *bias-free***.
- We encourage you to seek formal unconscious bias training.



Impact: Decreasing the Gap in Gender Bias





Impact: Enticing New Proposers

Cycle	New PIs
29	54
28	55
27	51
26	6
25	21
24	5



Caution



HST gender
award gap

Various other
inequities due to
conscious and
unconscious
identity biases



DAPR for **Proposers**: The Do Nots

- ✘ Names of proposing team
- ✘ Affiliations of proposing team
- ✘ Links to personal websites, ADS libraries
- ✘ Claims of ownership:
 - *In **our** recent analysis, **we** showed ... (Cannon et al. 2015).*
 - *Combined with data from **our** JWST Cycle 1 program (GO-1234), we will....*
 - ***We** have discovered 5 new candidates (Tinsley et al., in prep)....*
 - *We will use **our** proprietary software tool MySuperPipeline to perform...*



DAPR for Proposers: The Dos

- ✓ Focus on work proposed.
 - *We propose to... This program will measure the effects of...*
- ✓ Provide all relevant information needed to assess scientific merit.
- ✓ **Fully and properly cite relevant work.** (DAPR is **not** an excuse to skip citations.)
 - *In a recent analysis, Cannon et al. (2015) showed....*
 - *We will supplement this with data from JWST Cycle 1 program GO-1234 to....*
 - *Recently, 5 new candidates were discovered (Tinsley, **private communication**)...*
 - **By prior agreement** with the developers, we will use *proprietary* MySuperPipeline to perform...
- ✓ Proprietary data and software should also be cited.
 - *private communication, by prior agreement, in prearranged collaboration*



DAPR for Reviewers: The Do Nots

- ✘ Do not try to guess the proposing PI or team!
- ✘ This is **not** a challenge or a test.
- ✘ Do not comment on the experience and expertise of the team.

Guesses are
often **wrong!**



DAPR for Reviewers: The Dos

- ✓ Focus on the **scientific merit** of the work proposed.
- ✓ Refer to the **proposal** not the **proposers**.
- ✓ Assume the team can do the work.
- ✓ *Private communication* is **not** code for “hey, we’re the team”. It can (and often does!) mean information was communicated privately.



Non-Compliant Proposals

- ⚠ Egregious breaches of anonymity or minor accidental slip-ups.
- ✅ **Report** any cases to your **PSS** and your **SPG manager**.
- ✅ Not sure? **Report** it anyway.

Major violations, we will probably:

- ❌ Remove from consideration. Disqualify.

Minor slip-ups, we will probably advise you to:

- ✅ Ignore the instance and proceed with your review of the **scientific merit**.
- ✅ Highlight anonymity concern in feedback comments.
- ⚠ If you find you can't ignore it, **report** again.



Team Members & Team Expertise Statements

⚠ **You will not see these.**

⚠ **Not** anonymous.

✗ **Not** considered during scientific merit review.

✓ If you have serious concerns about expertise for extremely complex or exceptionally high-risk programs, leave a comment in the **Technical Notes** section. (We expect these comments to be **rare**.)

⚠ Comments to proposers should be based on the **scientific merits**, not on the team or their expertise.



Summary of Key DAPR Points

- ✓ **Focus on the *scientific merit* of the proposals.**

- ✗ **Do not try to guess the proposing team.**
 - Proposals should not include identifying information, but should cite relevant work.
 - **Report** non-compliant proposals to your PSS and SPG manager.

- ⚠ **DAPR *mitigates* bias, but is *not bias-free*.**