Dual-Anonymous Peer Review and P106 update

Public

F. Patat – Observing Programmes Office

UC Meeting 29.04.2020
The PI does not know who the reviewers will be.

The reviewers know who the PI is and the team composition.

Implicitly and/or explicitly this means that this information is used to judge the proposal quality AND the ability of the team to carry out the project.

This is a source of biases (unknown vs. known teams, gender, country, ethnicity, …)
First steps

- As a first counter-measure, and following the practice at other observatories, ESO has:
  - Removed the PI name from the front page
  - Removed all the affiliations
  - Listed all cols on the last page, in alphabetical order
  - The reviewers know who the team is

- However, the information is still there. And one cannot expect that provided information is not used, consciously or unconsciously during the review.
Dual-Anonymous (DAPR)

- The PI does not know who the reviewers will be.
- The reviewers do not know who the team is.
- This is not a new concept:

  See e.g. Mulligan+ 2012
  
  Peer review in a changing world: An international study measuring the attitudes of researchers, Journal of the Am. Soc. for Information Science and Technology

  This is a survey of 4000+ researchers. 75% of them said that:

  [...] Double-blind peer review is considered the most effective form of peer review.[…]

  An extensive literature compilation can be found here.
In real life

- In place for refereed journals
- Becoming the standard in the industrial context

In place at HST as of Cycle #26

Deployment approved at ALMA for Cycle #8

To be deployed by NASA (Town Hall Feb 2020)
A recent study by Johnson & Kirk (2020) has shown that when the identities of the team were known, about 50% of application discussions include some mention of the PI or the team. And that gives an obvious opportunity for unconscious bias to creep back into the process.

“Using a dual-anonymization approach overcomes both of these obstacles (1) because dual-anonymization eliminates the possibility for bias to occur, rather than trying to overcome it, and (2) because it is difficult to argue that removing names from proposals is giving an unfair advantage to anyone.”

(1) Unconscious bias is automatic and difficult to overcome even with training. (2) Proactive measures cause backlash against female and minorities.
The case of HST

- Experimentally deployed for Cycle 26
  See also [this paper in Physics Today](#).

- Widely recognized as a success, by both applicants and reviewers

- It is now the standard at HST

- DAPR Workshop at STScI on Sep 25th, 2019

- Attended by all major astronomical organizations managing ground-based and space-born telescopes (R. Ivison and F. Patat for ESO)
Team information (identity, publications, expertise) is submitted in a separate form.

It is not accessible to the referees during the review process.

It is made available to the referees only when the ranking is completed.

The burden of anonymizing the proposals is on the community.
Proposers must submit a **Team Expertise and Background** exposition with their P1 submission. This section is not anonymous, and is used in the final stage of the review after the ranking is completed.

Proposers are no longer required to submit detailed Management Plans for Large, Treasury, or Archival programmes at P1. These are requested only for approved programmes.
How is this policed?

- Proposers are told that compliance the anonymization criteria is taken very seriously.
- Violations will be signalled to the Director General and potentially lead to the proposal’s rejection. (*)
- First screening by the reviewers during the pre-meeting phase.
- A new role, the “leveller” is introduced, with one leveller per panel.
- In Cycle 26 the levellers were STScI Faculty Members.

(*) Only one such case in Cycle 26.
They are present to keep the panel discussion focused on scientific merit. Not listening for issues pertaining to the science, rather they are focused on the discussion itself.

If the discussion veers to comments on the proposing team, their past work, their validity, or their identities, the leveller’s job is to refocus that discussion.

They have the authority to stop the discussion on a proposal.
If, in the deliberation of a given proposal, an investigator’s self-revealed identity becomes impossible to ignore, and that identity has a clear impact on the discussion, the proposal should be flagged for disqualification.

The levellers may bring this to the attention of the panel if they feel this threshold has been crossed.
Consider proposals solely on the scientific merit of what is proposed.

Do not spend any time attempting to identify the PI or the team. Even if you know, discuss the science and not the people.

In the panel discussions, do not make guesses on identities, insinuate likely identities, or instigate discussion on possible team’s past work.

Levellers will be present in each panel to help ensure this does not happen.

Proposers will have done their job if it is reasonably ambiguous who submitted the proposal.
After the scientific ranking is complete, the panel be given the list of investigators (alphabetized) and the Team Expertise and Background section for those proposals above the nominal cut-off.

The panels should break for 20+ minutes to review those materials.

Panellists should raise specific proposals for discussion.

Proposals can only be eliminated at this stage. No re-evaluation of the proposals is possible at this point (e.g. upgrade rejected programmes).
DAPR at ESO

Being discussed at ESO (TAWG recommendation)

- Relevant bodies being informed (OPC, STC/LSP, UC)
- Changes in P1 implemented
- Change in procedures
  - Prepare/Educate the community (dry run in P106)
  - Introduction of Levellers (ESO Faculty?)
  - Levellers training
  - E&B session for the OPC proper

Dry run of P106

- Announced in the CfP, Newsletter, email to active PIs
- Instructions, guidelines, examples, FAQ
- Meant as a training/information run, NOT used in the review
It is important to emphasize that the ultimate aim is NOT to make it impossible for anyone to guess who is on the proposal, but rather to change the tenor of the discussion so the focus is on the science, not the scientist.

The main goal is to level the playing field for everyone. DAPR has the potential of levelling the playing field between new and established researchers (Reid 2019, slides #9 and #10). See HST Cycle 27 results.
Update on P106

Short debriefing on the current status of the P106 call

- Actions taken
- Submissions
- Review timeline
- Panels and OPC organization
- Potential problems

- Nominations for future semesters