




Women+ in Plasma Physics: Data and Retrospective

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Past APS-DPP WIPP chair (2016-2019)





The “W”s of WIPP (a brief history)

- When: Established as an APS-DPP committee in 2009
 - Who: Past & Present chairs (3-year terms)
 - Melissa Douglas
 - Mary Ann Sweeney
 - Arati Dasgupta
 - Lorin Mathews
 - Stephanie Hansen
 - Saskia Mordijck
 - What:
 - Networking luncheons & guest speakers
 - Town Halls & Panels
 - Data collection & curation
 - Advocacy & Allies
 - **Why? Well..**
- 

Why WIPP? In general, the climate for women in academia is *a bit uncomfortable*

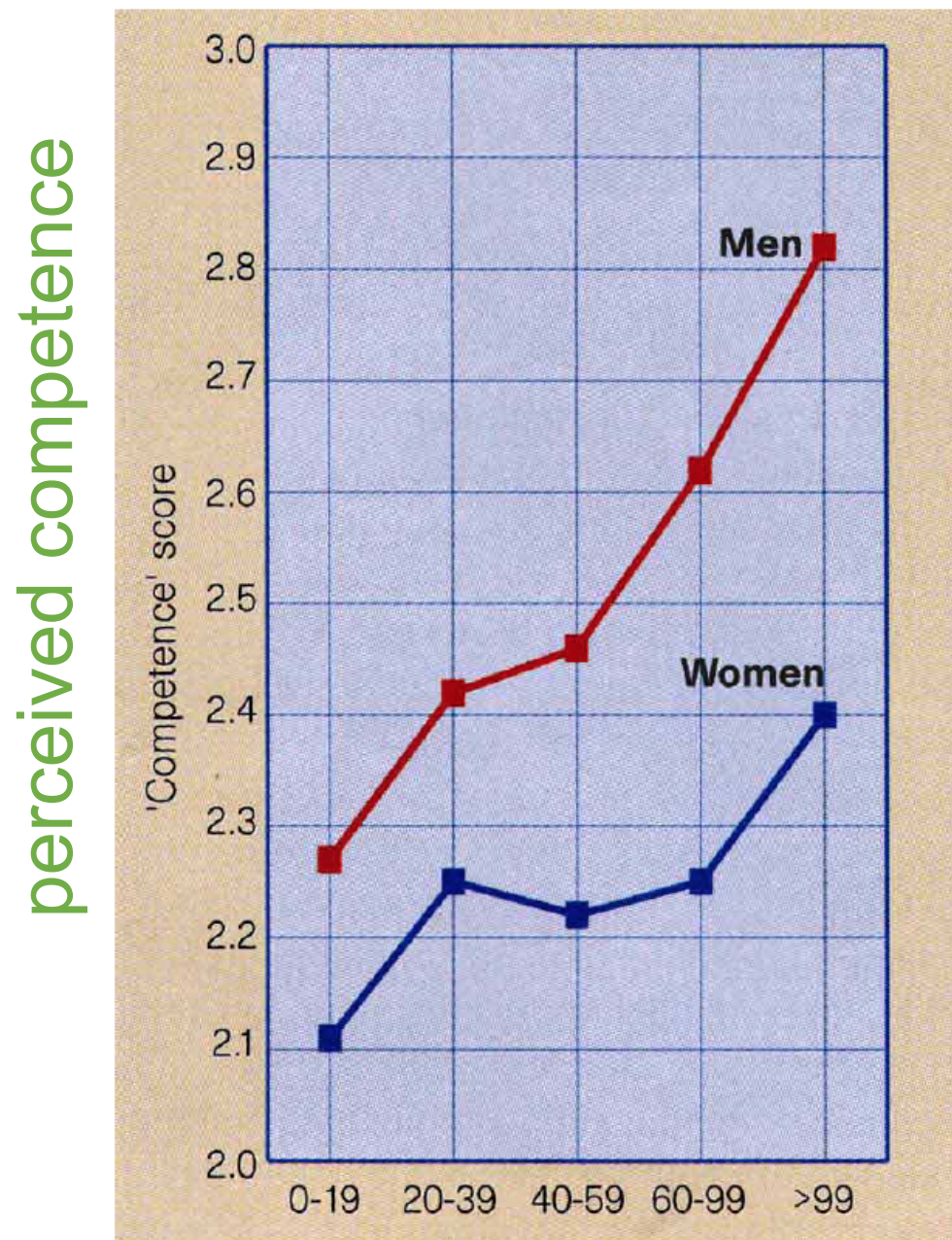
- 2018 National Academies study:
<https://www.nationalacademies.org/our-work/sexual-harassment-in-academia> Climate, Culture, and Consequences
- Key observations:
 - sexual coercion is relatively rare:
4% of women report experiencing this *in the past year*
 - unwanted sexual attention:
25% of women report experiencing this *in the past year*
 - gender harassment is very common:
59% of women report experiencing this *in the past year*
- These rates are correlated: Workplaces with higher rates of one of these have higher rates of the others. High rates of gender harassment are a red flag. **Workplace incivility is a red flag.**
- Most of the behaviors come from peers rather than supervisors



In one study, a woman needed ~1 extra paper in *Nature* to be perceived as equally competent to a less qualified man

or reviewer protégé

Nature publication

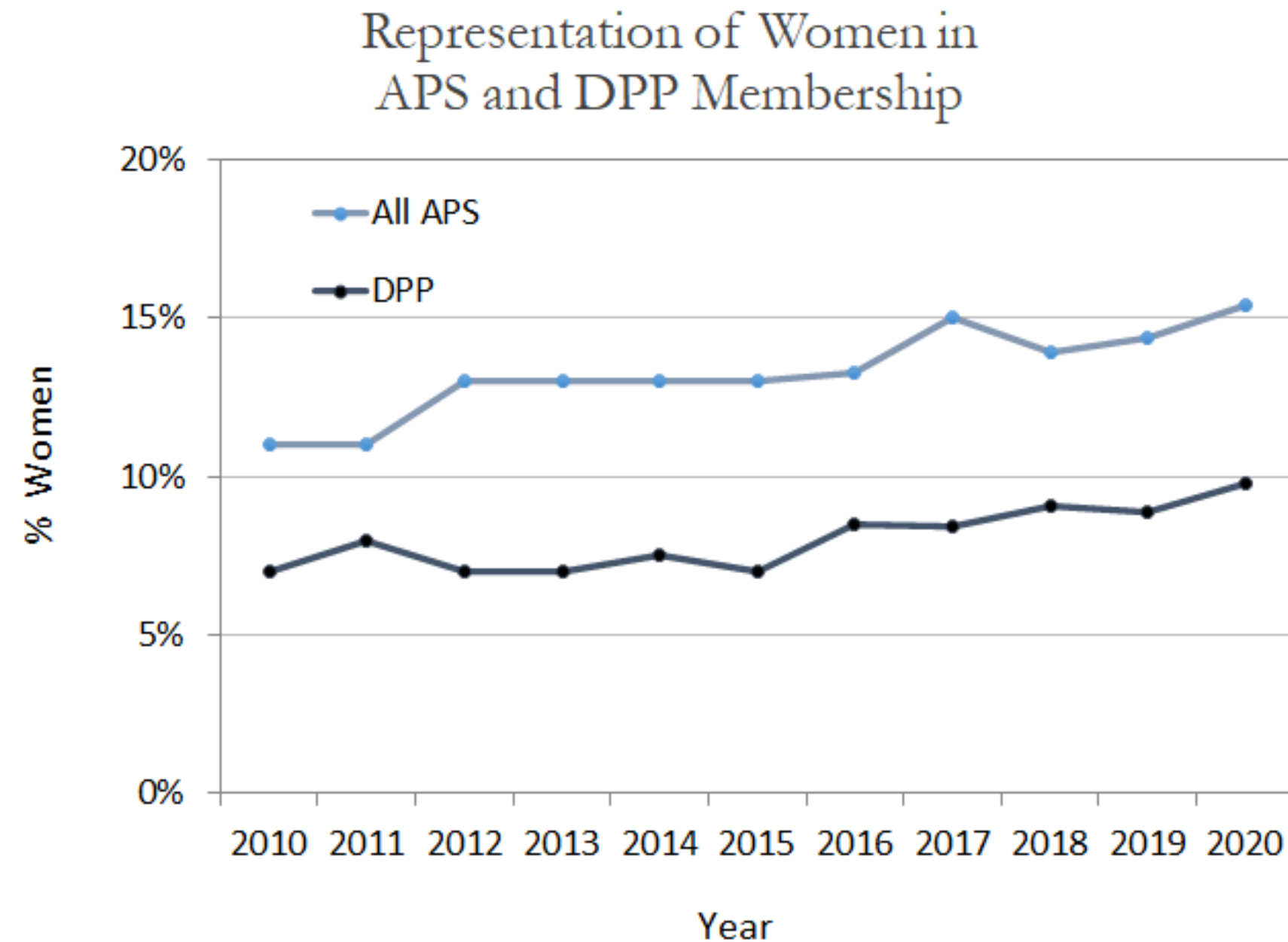


Being male or having an affiliation with a reviewer

- Prestigious Swedish postdoc fellowship
- 114 applicants: 52 women and 62 men
- 4 women and 16 men awarded the fellowships
- Objective metrics assessed for productivity/impact ("actual competence")
- For applicants with equal actual impact and productivity, perceived competence scores were always higher for men

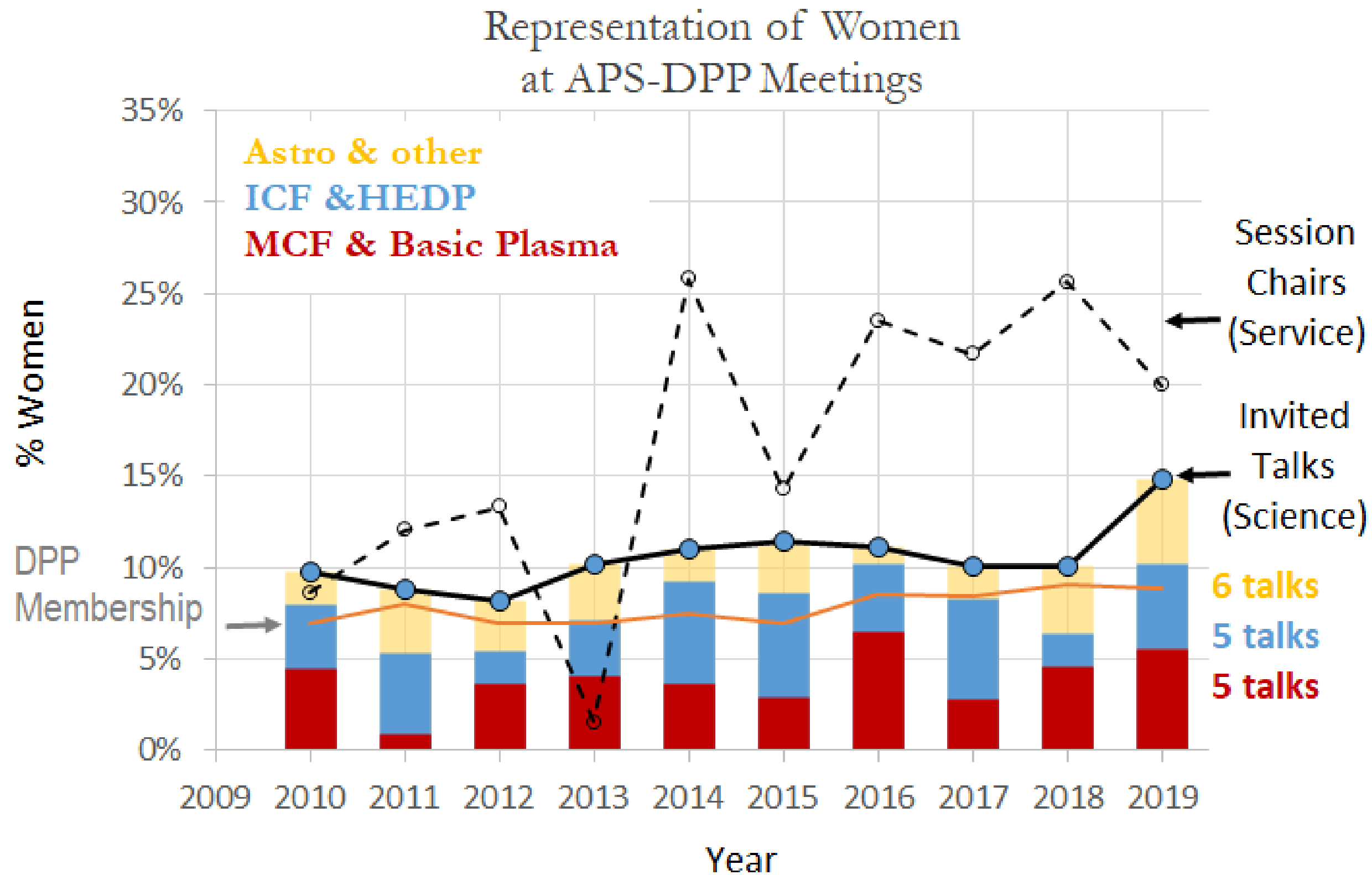
actual
competence

What about DPP? Are we doing any better than academia in general? ...the sciences?...APS? ...no?

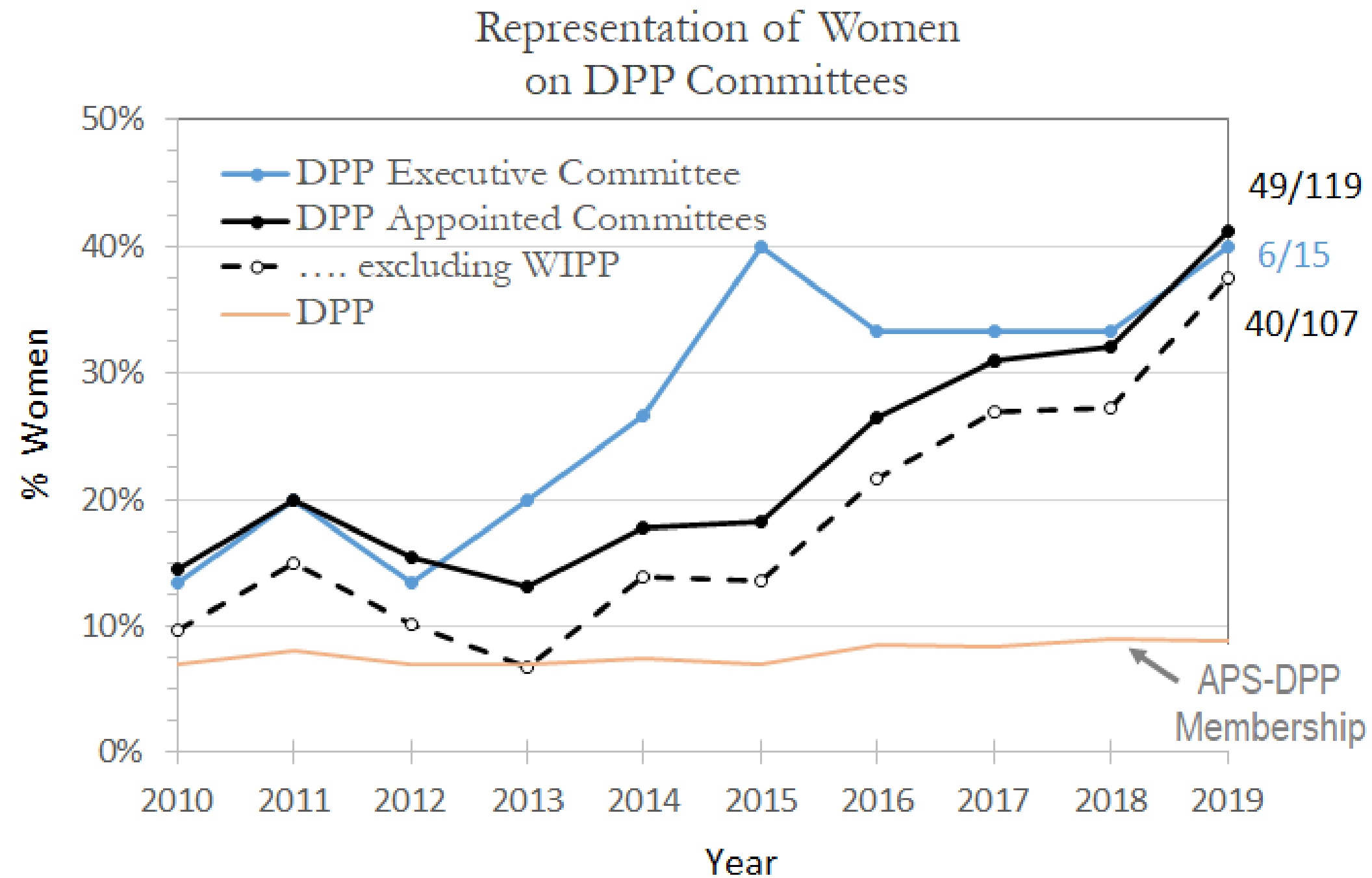


- Representation of women in physics is ~2x lower than in other scientific disciplines (physics is on par with computer science)
- Representation of women in DPP is consistently ~30% lower than in other APS divisions
- It is not uncommon for meetings to have better representation for men named “Matt” (and “Adam” and maybe “Dave” and “Mark”) than for women

On the bright side, women are maintaining or exceeding this (dismal) parity in invited talks at DPP meetings

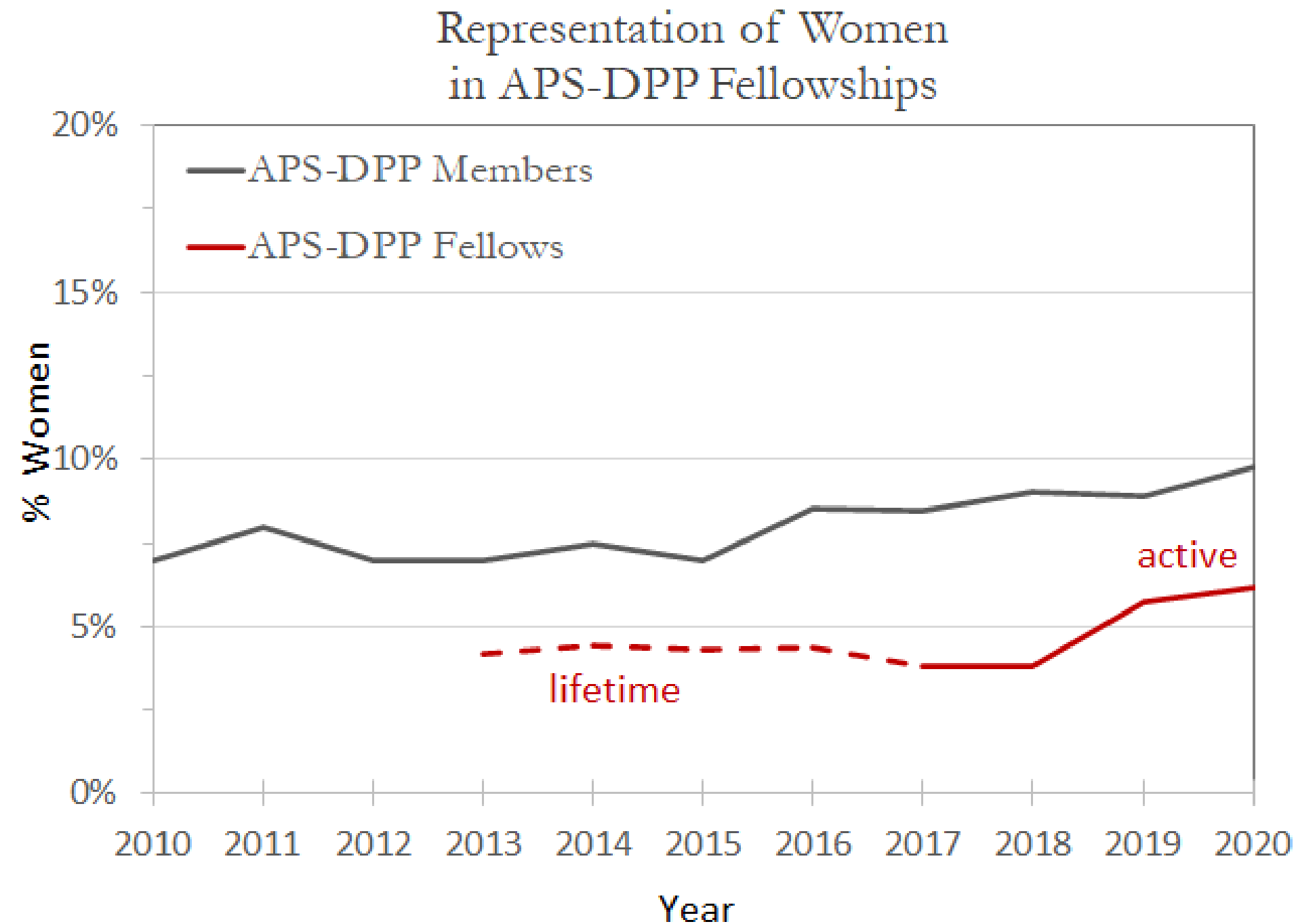


And women are ~4x over-represented on DPP committees! Hooray?



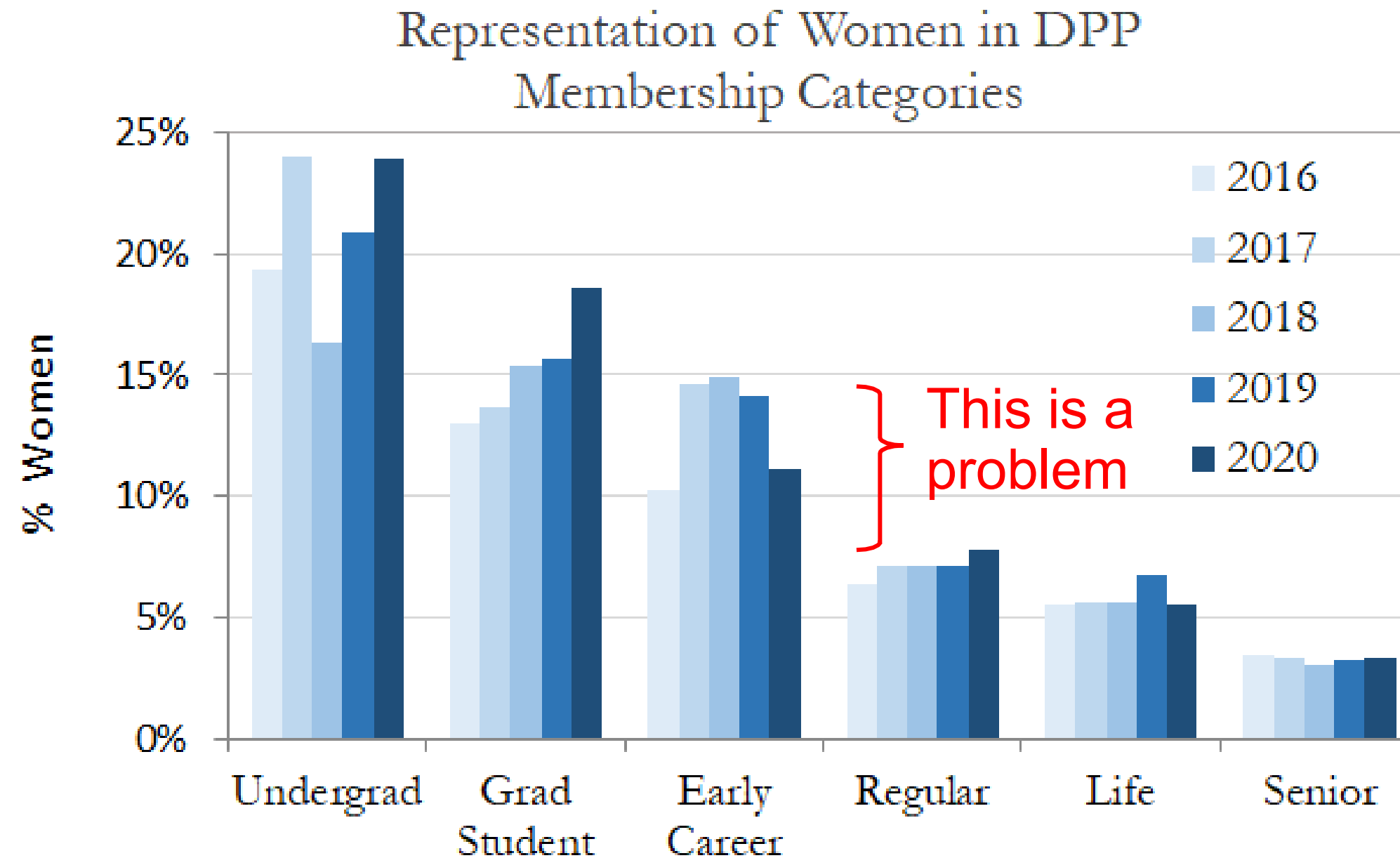
While women who work on committees provide much-needed representation, that **service work** comes at the expense scientific work – and recognition.

Women are under-recognized in prestigious awards and APS-DPP Fellowships



- A single year of active outreach to nominators in 2019 had a significant impact on Fellowships
- But DPP still lags all other APS divisions in the fraction of its Fellows who are women
- And until this year, all named Awards for women in both APS and DPP had prizes that were consistently **\$2k - \$7k lower** than general awards for the equivalent career stage (Weimer is now at parity with Stix!)

The pipeline for women is especially fragile in the postdoc/early-career stage



- ~50% of women who found a good graduate program leave the field **within five years of graduation**
- Women who do find good postdocs/jobs have much lower attrition rates in later career stages
- **Track the attrition – and the incivility – in your own workplace**



Thank you!

