

Gender Gaps in Australian Planning Academia



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Abstract

This study examines gender gaps in Australian planning academia. The authors found that wide gender gaps exist, and the “leaking pipeline phenomenon” is significant. Not only do the findings serve an academic purpose, but they may have significant implications related to matters of promotion or prestige within the profession. These findings may be of help to university administrators on matters of review of female planning academics, and serve as a point of comparison between Australian planning academia and the rest of the world.

Acknowledgement

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Introduction

In this paper we examine gender gaps in Australian planning academia. Research questions include:

- Do men produce more than women?
- Are men's work products more cited than women's?
- Do men attract more grants than women?

In the contemporary era, gender issues have come to the forefront in academia and therefore these questions are more relevant than ever. Not only do the answers serve an academic purpose, but they may have significant implications related to matters of promotion or prestige within the profession.

Through a rigorous methodology, our research aims to dispel various uncertainties related to gender gaps in planning academia and provide answers to the questions raised above.

Background

A large body of research, which has considered gendered patterns in the academy overall (not only planning), has revealed significant gender gaps. Two female academics, Danica Savonick and Cathy N. Davidson (2017), have compiled an annotated bibliography of important recent studies on gender issues in academia, in Australia and elsewhere. The studies included in this bibliography reveal that changing only the gender identification of the person being judged radically and consistently alters the way others evaluate the quality of that person's work. Work by people assumed to be men - as students, as colleagues, as authors, as experts - is consistently judged to be superior to that by people assumed to be women, even when the only difference is the author's gender-specific name. Women have internalized sexism and are as likely as men to make biased judgments that favour men. Culture stereotypes, which portray women as less competent but simultaneously emphasize their warmth and likeability compared with men, play an important role in perpetuating gender bias within and beyond academe.

In Australia, in particular, various commentators have suggested that academia is a hostile work environment for women. The shift in the 1990s from collegial to managerial decision-making has entrenched the gendered character of university power relations and contributed to the predominance of women in the lower ranks. Women just beginning or resuming their careers (e.g., after maternity leave) are particularly vulnerable. As a consequence, not enough women remain in higher education (hence the "leaking pipeline" phenomenon). Lacking critical mass, senior female academics are unable to impact on management culture, while at the same time early career female academics end up underprovided with networks, mentoring, and encouragement. Even women who reach senior levels in universities encounter the power of the male hegemony that is prepared to accommodate some women, but not to have its dominance challenged (see Asmar 1999; White 2001).

More recent research suggests that gender gaps have become less pronounced in Australian academia overall (Bentley 2011) but the present data show that this is not the case in planning.

Methods

In line with the research questions set forth at the outset, the methodology used three sets of data on planning programs/academics in Australian universities.¹

Programs and Staff

Data on the number of accredited planning programs offered by Australian universities were obtained through the Planning Institute of Australia (PIA). PIA is Australia's professional association of planning practitioners and academics. It is responsible for accrediting planning programs, and as such, maintains an up-to-date list of those. The exact number of planning academics proved to be more difficult to pinpoint than expected because most planning programs are embedded in interdisciplinary schools and their courses are taught by academics with a variety of backgrounds (many of whom do not self-identify as planners). The collection of this portion of the data proceeded in the following manner. First, a list of all academics affiliated with planning programs was created based on the information from university websites. At this stage, in addition to "planners", the list included individuals that did not appear to have a strict planning background but taught into planning programs. For our analysis, both teaching and research staff were included. Part-time staff members were excluded because, in Australia, it is rare for academics to work part-time. Second, the coordinators and/or directors of all the accredited planning programs were contacted (via email or phone) to confirm the number of academics in their program, and the list was modified as necessary.²

Publications and Citations

The list of planning academics was employed as a starting point for collecting publications and citations. These data were collected for the past decade - 2006 through 2016. The list of publications produced by each academic was obtained from the staff profile from university webpages, as well as Google Scholar, and then cross-referenced to ensure accuracy. In the case of planning, Google Scholar is a valuable source of data because its coverage extends beyond traditional peer-reviewed publications. While much of it qualifies as grey literature, it arguably reflects greater reach and impact compared to closed, pay-wall-protected publication and citation data such as Clarivate Analytics. For professional disciplines like urban planning, the grey literature produced by faculty is often research-based and reflects scholarly processes (Sanchez 2016).

Publications and citations were aggregated by: program; publication type; academic rank; and gender. Both totals and averages were computed; publication metrics were correlated with citation metrics. Publication types included: peer-reviewed journal articles; book chapters; edited books; authored books; and conference papers (both peer-reviewed and non-peer-reviewed as it was difficult to distinguish between the two).

In Australia there are five academic ranks: (A) Associate Lecturer; (B) Lecturer; (C) Senior Lecturer; (D) Associate Professor; and (E) Professor. A handful of programs follow the US model and combine levels A through C into a single rank - Assistant Professor. For this study, data for Assistant Professors were merged with data for Lecturers. The metrics for staff

members not on a traditional academic appointment (i.e., Research Fellows / Senior Research Fellows) were calculated as well.³ Teaching Fellows were excluded as they are not expected to produce research.

The data on citations were obtained through Google Scholar, by visiting the profiles of each individual on the list of planning academics. However we found only two universities where all planning academics had Google Scholar profiles - the University of Queensland and Western Sydney University. A surprising number of planning academics, 71 out of 196 (36 percent) did not have a Google Scholar profile. The distribution of those without a Google Scholar profile was about equal across ranks. For academics without a Google Scholar profile, publication/citation data were obtained through university website profiles. Only eight percent of planning academics without a Google Scholar profile did not have any outputs listed on their university profiles. In these cases, the academics were excluded from any further calculations.

Because of these gaps in the data, findings on citations are only approximate. While actual totals are likely to be higher than those reported in this study, averages (means or medians) might also be higher. It is well possible that, academics who are more productive and whose work is more highly cited are more likely to have public Google Scholar profiles. Also, younger academic are more likely to curate their web presence. These biases will affect the analysis we present below. For example, for two universities with high citation medians, citations counts could only be obtained for half of their planning academics.

Research Grants

Another important factor we examined were research grants - in this case those offered by the Australian Research Council (ARC) to planning academics. The ARC is the largest and most prestigious public research funding body in the country. Data on ARC research grant success is provided annually and is publicly available (ARC 2016). The ARC data were cross-referenced with the information from planning program websites, which often announce ARC grant success, and from a study by Troy (2013). Totals and averages were computed for programs, academic rank, and funding received.

Findings

The findings are reported following the same structure as set forth for the methodology above.

Programs and Staff

We identified 48 accredited planning degrees at 24 universities, and 196 planning academics.

The data reveal significant problems in regards to gender equity (Figure 1). Overall, men outstrip women among planning faculty members: 109 vs. 87 or 56 percent vs. 44 percent. Women are overrepresented in junior positions (lecturer ranks) but underrepresented in senior positions (professorial ranks). While women represent the majority in research-only positions, these are however few, as noted, and not always tenured. This means that, while planning programs have made an effort to hire younger women, they have fared poorly in terms of

retaining and/or promoting those women. In turn, this may have affected women's productivity (see later).

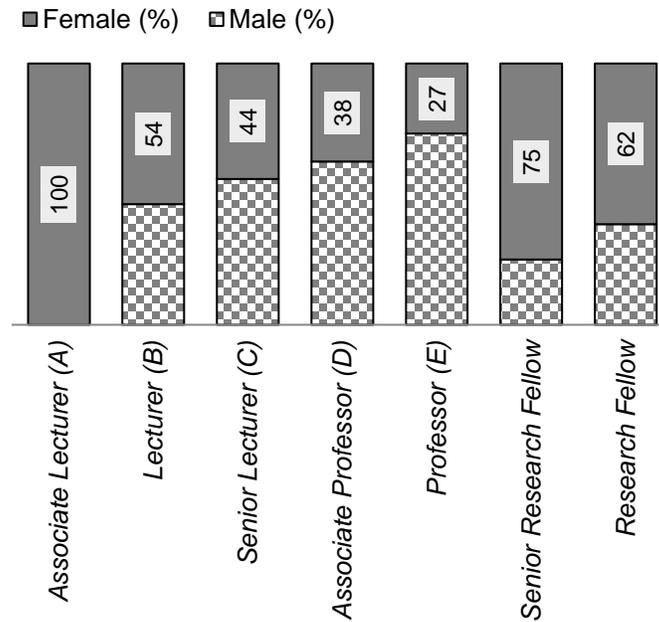


Figure 1. Gender split by academic rank.

Publications and Citations

The differences in output between men and women are significant (Table 1). Overall, men produce about one third as much as women. Part of this gender difference is due to the fact that women occupy lower academic positions. When men and women within the same rank are compared, a more complex picture emerges (see Figure 2).

Table 1. Publications and citations by gender.

<i>Totals</i>	<i>Mean no. of publications per person</i>	<i>Median no. of publications per person</i>	<i>Mean no. of citations per person</i>	<i>Median no. of citations per person</i>
Male	33	30	488	438
Female	25	20	228	160
Gender gap	32%	33%	53%	64%

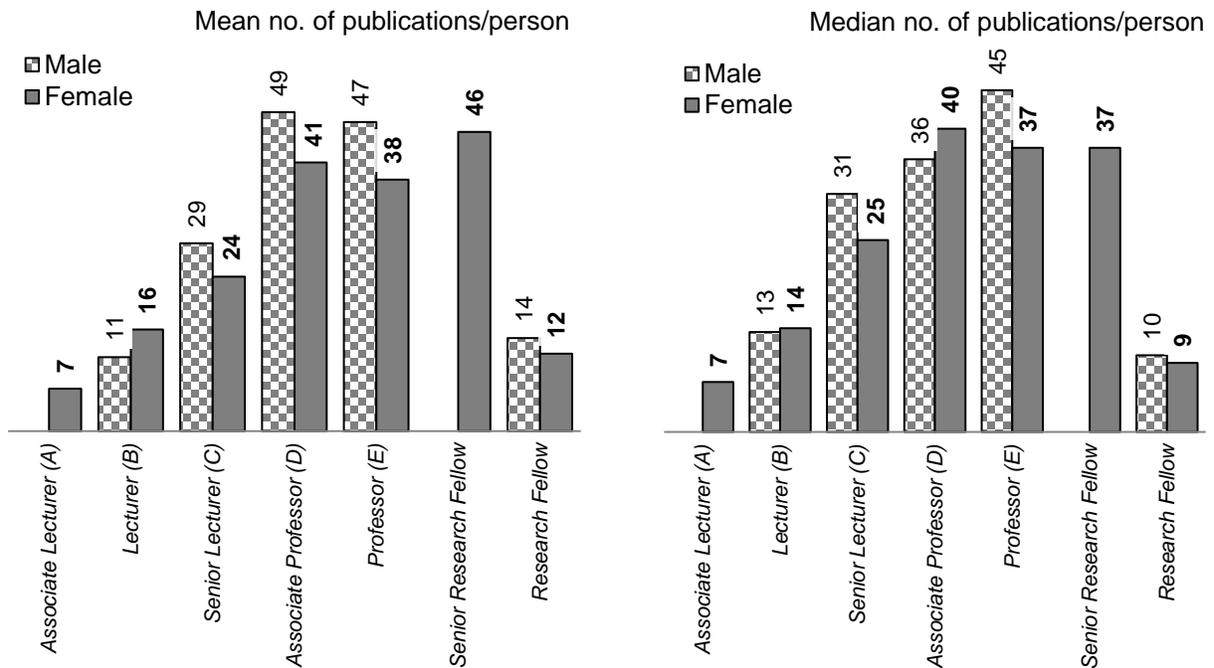
Note: Citation metrics are only provisional as not all planning academics have a profile in Google Scholar. Specifically, there are 42 men (21%) and 29 women (15%) without a profile.

Looking at both means and medians, women publish more than men at the Lecturer level - at which they also outnumber men. If only medians are taken into account, women publish more

than men at the Associate Professor level too. But men publish more than women at every other rank, and based on all other metrics.

If only means are considered, the “publication gender gap” in the ranks of Senior Lecturer, Associate Professor and Professor varies between 19 percent and 23 percent in favour of men. The productivity of women falls slightly at Professor level compared to Associate Professor level. Publication means and medians within the same gender are rather similar, except in the case of Senior Research Fellows where a much higher mean than median for women suggest the presence of a few highly productive outliers in this category - which is female-dominated.

These patterns indicate that significant systemic barriers exist, which hinder women’s productivity working as planning academics. Further study, possibly applying a qualitative methodology, is warranted in order to reveal the exact nature and location of those barriers.



Rank	Gender gap based on mean	Gender gap based on median
Associate Lecturer (A)	n/a	n/a
Lecturer (B)	27%	4%
Senior Lecturer (C)	-22%	-24%
Associate Professor (D)	-19%	10%
Professor (E)	-23%	-20%
Senior Research Fellow	n/a	n/a
Research Fellow	-20%	-11%

Note: There are no men in the Associate Lecturer (A) category, and there is only one man in the Senior Research Fellow category.

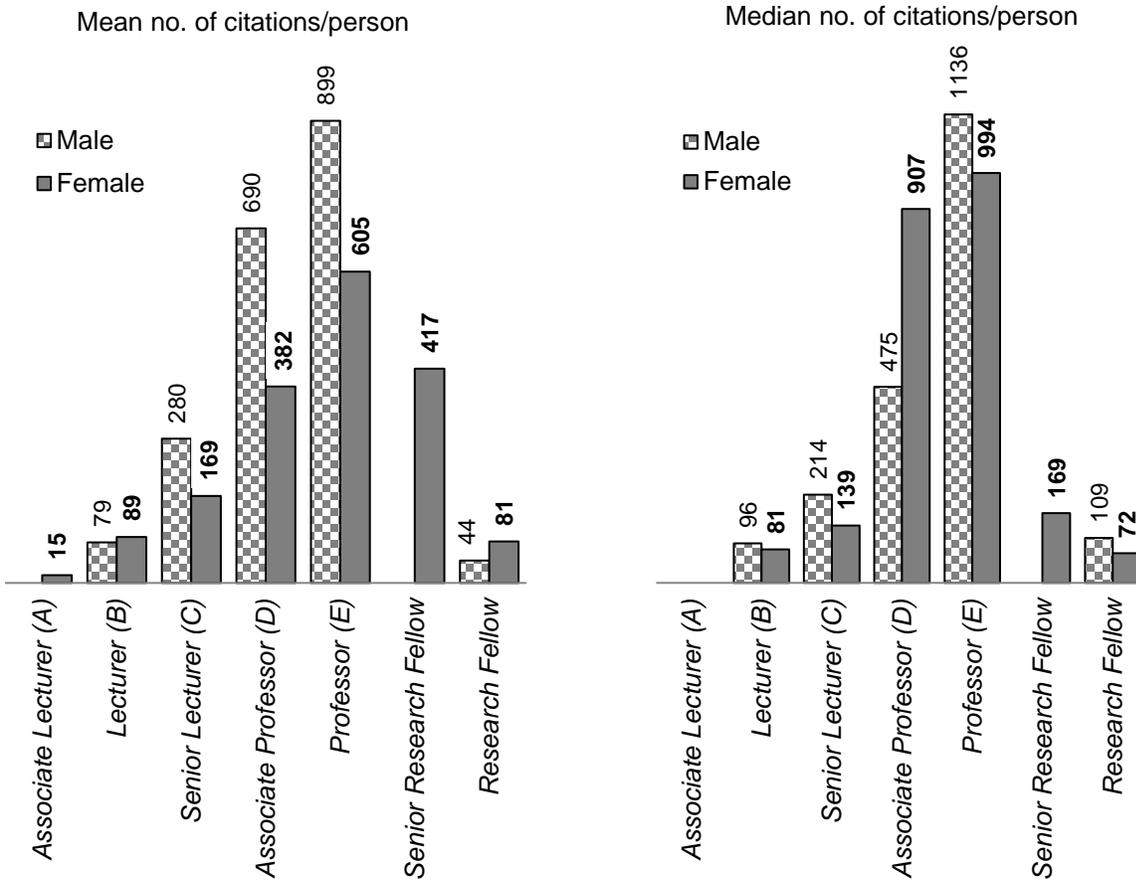
Figure 2. Publications by gender by rank.

Table 2. Publications and citations by gender.

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The same gender gaps seen in publications persist in citation metrics, but here the gaps are much wider (see Table 2 and Figure 3). It appears that the work of female planning academics is not considered as authoritative and worthy of citation as that of male academics. Again, patriarchal structures that constantly undervalue women are a likely culprit. Also, perhaps male planning academics engage in self-citation more than female planning academics.



<i>Rank</i>	<i>Gender gap based on mean</i>	<i>Gender gap based on median</i>
Associate Lecturer (A)		
Lecturer (B)	13%	-15%
Senior Lecturer (C)	-40%	-35%
Associate Professor (D)	-45%	91%
Professor (E)	-33%	-13%
Senior Research Fellow		
Research Fellow	85%	-34%

Notes: There are no men in the Associate Lecturer (A) category, and only one female academic in this category has a Google Scholar profile. There is only one man in the Senior Research Fellow category.

Figure 3. Citations by gender by rank.

Research Grants

As with the rest of the metrics reviewed in this study, gender differences in grant acquisition are staggering (see Figure 3). While men hold 121 ARC grants, women hold only 47 – a 61 percent gap. On average, a female planning academic has a chance of acquiring an ARC grant once every 20 years - vs. 10 years for a man.

While women are slightly ahead of men at the Lecturer level and the difference is small at the Senior Lecturer level, the “grant acquisition gender gap” broadens considerably at the Associate Professor and Professor levels. Male Professors hold 6.4 times as many ARC grants as female Professors. There are 2.7 times more male Professors than female Professors; therefore, the difference in grant acquisition cannot be entirely attributed to the lower number of women in professorial ranks. Similarly, male Associate Professors hold 2.1 times as many ARC grants as their female counterparts although they are only 1.6 times more numerous. In the case of Senior Research Fellows – a category dominated by women, grant acquisition levels are low, although productivity (publications and citations) is as high as that of Professors.

Clearly, senior men are favoured during the grant awarding process. The fact that women hold fewer ARC research grants partially explains the lower publication and citation rates among female planning academics. But it also suggests that women are more accomplished at generating more publications from less funding.

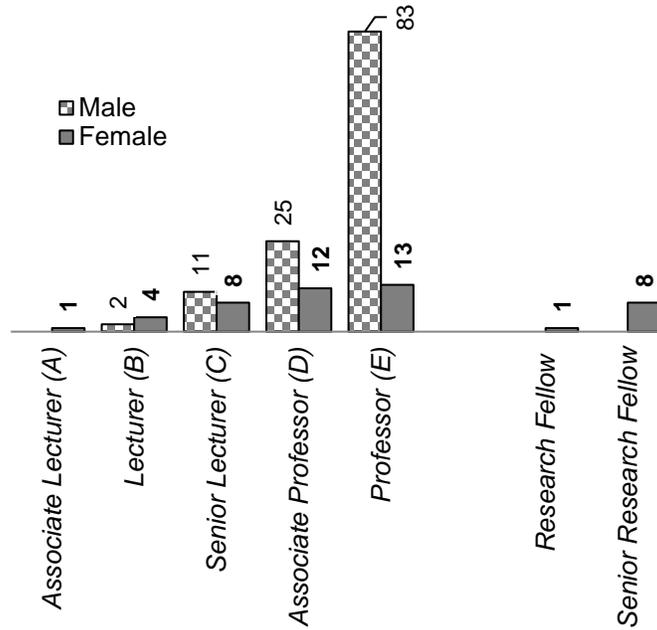


Figure 3. Number of ARC grants by gender by rank.

Prior research has suggested that, in general, peer review committees for grant applications are dominated by men and therefore women, especially younger ones, may face harsher evaluation (Asmar 1999; White 2001). Currently, in the ARC College of Experts, which evaluates grant applications, 70 of the 176 members are female (40 percent). The gender gap is wider among Professors in the College of Experts: only 36 percent are female.

The lion's share of external funding to planning programs is provided by the ARC (Troy 2013). However, smaller grants are received from a variety of other sources. Funding amounts are unavailable, but tend to be much lower than what is provided by the ARC.

Conclusion

Overall, the study has uncovered wide gender gaps in Australian planning academia. The “leaking pipeline phenomenon” is significant. While women enter the profession in larger numbers than men, planning programs emphasize the retention and/or promotion of men, and this translates into much higher numbers of men in the professorial ranks.

The main findings of this study are summarized in Table 3.

All these metrics (publications, citations, grants) are lower for women than for men. Also, women are underrepresented on the ARC College of Experts, which evaluates grant applications. The likelihood of acquiring an ARC grant is higher for men in senior positions and in Go8 universities.

Table 3. Summary of findings (2006-2016).

	Publications/academic (mean)		Citations/academic (mean)		ARC funding/academic (mean)
	Total	Per Year	Total	Per Year	Per Year
All universities	29.5	2.7	316	29	\$17,000
Go8 universities	36.0	3.3	368	32	\$35,000

The implications of this study are relevant to both broad and planning-specific trends. As other commentators before us, we call for conscious, structured, institutional efforts to counteract unconscious and unintentional gender biases. It is hoped that the foregoing findings will be of help to university administrators on matters of review and promotion of female planning academics, and will serve as a point of comparison between Australian planning academia and the rest of the world. Future research must quantitatively and qualitatively explore the reasons behind gender gaps, compare different universities, and highlight best practice which could help stragglers achieve gender equity targets. Once produced, the studies based on such research should be required reading of all administrators and all faculty who are called upon to make decisions about hiring, tenure, and promotion based on purely quantitative measures such as “productivity” or “citation counts.” One cannot simply count the end product (such as number of articles accepted, reviewed, awarded prizes, or cited) without understanding the implicit bias that pervades the original selection process and all the subsequent choices on the way to such rewards (Savonick and Davidson 2017).

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Notes

¹ Microsoft Excel was used to analyze the data.

² The analysis did not account for the fact that some academics may not have been employed in their current job during the entire study timeframe.

³ For the purpose of this study, data for “Research Associates” was combined with data for “Research Fellows” as there was a single researcher listed in the “Research Associate” category.