Gender Disparities and Determinants of Tenure in German Sociology: Insights from Four Longitudinal Studies

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Despite efforts in promoting gender equality in academia, women tend to be concentrated in lower academic ranks and are less likely to hold senior positions, such as tenured professorships. Whether this discrepancy still is a result of gender discrimination—or rather a result of preference differences in career and family orientation—remains subject of ongoing academic debate. To investigate whether and under what conditions women face lower chances of becoming tenured professors, Isabel M. Habicht, Martin Schröder, Mark Lutter, and Lisa Wunsch conducted four studies on the correlates and determinants affecting academic careers in German sociology (Habicht et al. 2024; Lutter and Schröder 2016; Lutter and Schröder 2019; Wunsch et al. 2024). This long-term project started in 2013 when Lutter and Schröder began manually collecting all available CV and publication data for sociologists in Germany, by coding the webpages of 72 sociology departments (essentially all sociol- ogy departments in Germany).

From this data, they constructed individual career profiles for tenured and non-tenured sociologists, doctoral students, postdocs, junior professors, and full professors. The final dataset consisted of full career profiles for 530 doctoral students (47% female), 433 postdocs (43% female), including 36 junior professors (47% female), and 267 professors (32% female)—a total of 1260 individuals. In examining the data, a first publication in this project focused on understanding the role of both meritocratic factors (such as publication output) and non-meritocratic factors (such as gender, symbolic capital, and social networks) in becoming a tenured professor in Germany, as well as gender differences (Lutter and Schröder 2016). The study aimed to determine what a typical professor "looks" like at the point of their first tenured position—how many publications, what types of publications, how many institutional changes, how many interim positions, and, among other things, how many months abroad an average sociology professor had at the time they obtained a permanent professorship at a German department.

One of the most significant findings of the study was that, contrary to what the authors expected, women were not less but actually more likely to obtain tenure than men, even though they typically had fewer publications at the time of hiring. The results specifically showed that women secured their first permanent university positions with 23% to 44% fewer publications compared to their male colleagues. After adjusting for factors such as scholarly output, women were found to be 1.4 times more likely to be hired as full professors than men. This counterintuitive finding—women having better odds despite lower publication rates—suggests that factors beyond publication output play a critical role in tenure decisions for female academics.

The study also revealed interesting details on the average differences between men and women in the years they obtained their first professorship. Counting from the start of their academic careers (their first publication), women obtained their first professorship on average two years earlier than men, despite having a lower publication record. In all types of publications, men published significantly more: 1.8 times as many SSCI articles, 1.7 times as many non-SSCI articles, 1.4 times as many books, 1.3 times as many edited volumes, 1.4 times as many book chapters, and 1.8 times as much gray literature as women (Lutter and Schröder 2016, 1004). However, women accumulated more academic awards throughout their doctoral and postdoc careers: with an average of 0.52 awards before their first tenured position, women received 1.7 times more awards than men. Women also spend more time abroad during their career, although this difference was not statistically significant at conventional levels.

The multivariate analysis revealed additional insights into the sex differences in achieving tenure in sociology. First, the overall female advantage could not be fully explained by the fact that women specialize more often in the field of gender studies, an influential subdiscipline in sociology; the results remained the same when professorships in gender studies were removed from the sample. Generally, women had a higher chance of becoming professors in the field of gender studies—of 14 professors in total, 12 were women. The chances of becoming a professor decreased from 41% to 36% when excluding professors with a gender studies denomination, suggesting that part of the female advantage may indeed be explained by women's disproportionate access to these positions, though this is a small percentage of the overall advantage.

Lutter and Schröder also examined the odds of becoming a full professor (W3/C4 pay scale) versus of becoming an associate professor (W2/C3 pay scale in Germany). Interestingly, women are much more likely than men to become associate professor. However, for full professorships, women were still 20% more likely than men to secure W3/C4 positions. The female advantage was also substantial when considering assistant (junior) professorships.

Regarding different publication profiles, the study suggested that refereed SSCI articles are the main predictor of tenure success for men, while for women, SSCI articles play a lesser role, though still an important one. Instead, monographs and edited volumes have had a relatively larger impact for women. The strongest predictor for women, however, was symbolic capital in the form of academic awards; each award increased a woman's chance of becoming a professor by 67%, whereas there is no such effect for men. In sum, for men, the number of SSCI journal articles seems to be the most important predictor of obtaining a tenured position, while for women, individual reputation, the publication of edited volumes, books, and SSCI articles are key factors. Academic awards, however, were the strongest predictor of tenure success for women.

A key issue raised by the study is the potential for survivorship bias in the dataset. The analysis focuses on individuals sampled and observed in the year 2013. While the dataset consists of retrospective longitudinal panel data, the CV information itself was collected at one point in time. Therefore, the study accounts only for those who remained in academia long enough to compete for tenure, excluding those who dropped out earlier. Dropout risks are potentially gender-specific, however. Women are more likely than men to leave academia early due to structural and personal factors, possibly including the challenge of balancing work and family life, lack of mentorship, or even better opportunities outside academia. This could result in an overestimation of women's success in obtaining tenure, as only the most resilient women—those who survive the "leaky pipeline"—are included in the analysis. This may explain the female advantage observed by Lutter and Schröder.

To address the study's potential survivorship bias, the authors extended the original 2013 dataset by adding two additional waves of observation, updating the data in 2016 and 2019, and collaborating with Isabel Habicht (Habicht et al. 2024). This follow-up generated a full longitudinal sample with observation points in 2013, 2016, and 2019. The updated data now included 699 doctoral students (53% female), 903 postdocs (48% female), 59 junior professors (54% female), and 486 tenured professors (39% female).

In comparing the original with the newly updated data, the authors reveal novel additional insights into the gender dynamics in sociology. Between 2013 and 2019, the proportion of female full professors nearly doubled, rising from 21% to 39% (Habicht et al. 2024, 410). Compared to 2013, women are no longer recruited earlier than men (both genders now take about 15 years on average from first publication to tenure), but the publication gap remains: men still have significantly more publications at the time of their first tenured professorship—about 1.5 times more SSCI journal articles, 1.6 times more non-SSCI articles, 1.4 times more books, and 1.2 times more book chapters

than women. There is no longer a significant difference in winning academic awards, however. Replicating the multivariate models of the original study, Habicht et al. (2024) confirmed the female advantage with the updated data. The effect increased to 46% in the new study, meaning that women are 46% more likely to receive tenure compared to men. The effect increased to 48% when controlling for parenthood.

Due to the three-wave design, this study is now one of the first that provides information on those who left the academic career since 2019, revealing so far unknown gender-specific dropout patterns. According to their data, if women in sociology decide to leave academia, they tend to do so early in their careers, particularly before completing their doctoral studies (pre-doc stage). In contrast, if men decide to leave, they are more likely to exit during the post-doc stage. Despite these dropout patterns, the higher female success rate in obtaining tenure remains, suggesting that the effect is not a result of survivorship bias in the data.

The most recent study in this project examines impact of research specialization on academic career success in German sociology (Wunsch et al. 2014), particularly with a focus on gender differences in publication output. Based on a computational text analysis of all journal abstracts of all tenured professors in their updated dataset on German sociology, Wunsch et al. (2024) find that specialization benefits women more than men, whereas a generalist publication record benefits both men and women, but women to a lesser extent. Interestingly, women particularly profit from specializing in quantitative sociology, while they have no benefit when they build their career in qualitative sociology. For men, it makes no difference whether they specialize in qualitative or quantitative sociology.

Finally, Lutter and Schröder (2019) look into the effect of parenthood on publication productivity in German sociology. They utilized a combination of their manually coded career dataset along with an email survey directed at the scholars in their sample to gather information about their parental status. The data shows that childbearing leads to a considerable decline in publication productivity for female sociologists, whereas male sociologists experience no such impact. Moreover, the authors observe that the gendered impact of parenthood on productivity does not sufficiently lessen the overall disparities in publication output between genders; women continue to publish about 20% less than men even after controlling for the negative effects associated with childbearing. Therefore, the female publication gap seems to originate from other factors than childbearing. Interestingly, the authors also find that the consequences of childbearing vary depending on women's prior academic achievements, indicating a mechanism of performance-driven self-selection. Specifically, women with lower academic performance experience a more pronounced motherhood penalty, while the publication output of high-achieving women remains largely unaffected by childbirth. Consequently, women who achieve early career recognition tend to encounter less severe declines in productivity associated with parenthood.

In conclusion, the presented research points to recent changes in gender inequality in academia. Overall, we find that women in sociology seem to be not at disadvantage anymore when it comes to them being promoted to tenured professorship positions. This result is in line with several newer studies on the changing dynamics of female representation in academia (Bol et al. 2022; Carlsson et al. 2020; Lutter et al. 2022; Schröder et al. 2021; Schröder et al. 2024; Solga et al. 2023; Williams and Ceci 2015). Ceci et al. (2023), reviewing in a meta study six key domains in academia, conclude that "contrary to the omnipresent claims of sexism in these domains appearing in top journals and the media, our findings show that tenure-track women are at parity with tenure-track men in three domains (grant funding, journal acceptances, and recommendation letters) and are advantaged over men in a fourth domain (hiring)" (Ceci et al. 2023,15). Despite an increase in the number of female

professors, the persistent publication gap indicates that structural challenges or preference differences continue to affect women's advancement in academia. Future research should continue to explore these dynamics, ensuring our knowledge about current gender (in-)equalities in academia.

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