

Gender balance in evolutionary linguistics

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1. Introduction

One important step towards improving equity, diversity and inclusion in a given field is to be aware of current imbalances in the distributions of identities of researchers. However, intuitions about these imbalances can be inaccurate due to various cognitive biases about the perception of individuals and the norms in the field (e.g. García-González, Forcén & Jimenez-Sanchez, 2019). This complicates decision making about where to invest resources in student recruitment, job recruitment and outreach. One productive step is to explicitly monitor imbalances using objective methods. This study looks at the distribution of genders across sub-fields of evolutionary linguistics, broadly construed.

2. Methods

For the review stage, subfields were defined according to categories and keywords used in the Evolution of Language conferences (e.g. acquisition, phylogenetics, sign language), as identified in Waciewicz et al., (2022). Web of science was used to find hundreds of journal papers about language evolution from each sub-field published within the last 10 years. This was done by searching for field-level descriptors (“language evolution”, “evolution of language”, “cultural evolution”) together with a specific sub-field descriptor (e.g. “sign language”). The 100 authors with the highest number of publications in each sample were identified. Each author was manually coded for conferred gender based on academic profiles, using the methods from Cuskley et al. (2020) and Rennick et al. (2023). The distribution of genders in each language evolution sub-field was calculated and compared to the distribution of genders in the broader sub-field outside of language evolution. The same method was then repeated for

each subfield in general by searching only for the subfield descriptors and omitting language evolution keywords.

3. Results

Figure 1 shows a sample of the results. The subfield of phylogenetics had the lowest proportion of female authors writing about language evolution (15%) and the field of sign language had the highest (49%). These proportions were roughly equal to the proportion of female authors in the general literature. However, papers on language evolution and language acquisition had half the proportion of female authors compared to their general field.

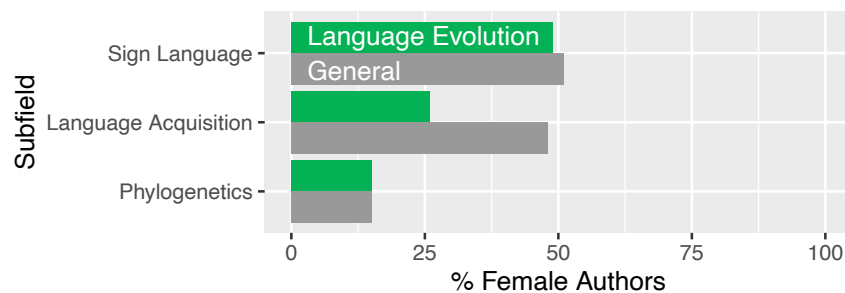


Figure 1. Sample of results: Proportion of female authors in papers published in evolutionary linguistics (green) and in general (gray) in three subfields.

4. Discussion

There appear to be several types of bias in the results. Some fields like linguistic phylogenetics may have low proportions of female authors because the general field has low proportions, possibly stemming from general longstanding biases in their feeder subjects like computer science and biology (Huang et al., 2020). In contrast, the gap for language acquisition may be due to factors specific to language evolution. For example, the historical baggage that comes with the necessary theoretical commitments to evolutionary theory may be perceived as an ethical barrier, and women may be less willing to engage with this than men (Kennedy & Kray, 2014). Alternatively, men may be more willing to do research outside their core field than women, though some studies show the opposite pattern (Pinheiro, 2022). Finally, there may be gaps between the perception of balance in a subfield and the actual distribution. For example, sign language may be perceived to be dominated by women (e.g. the majority of researchers who presented on sign language at EvoLang are female, see also e.g. MacDougall et al., 2012), but the publication data is more balanced. In addition, seniority and sampling biases need to be accounted for. Understanding these patterns is key to ensuring equitable access to the field of evolutionary linguistics.

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