Alphabetical name ordering is discriminatory and harmful to collaborations



When multiple authors collaborate on an article, book, or report, the order in which they are listed is important. How this is done may vary by scientific discipline, with most determining the order according to the authors' respective contributions. But some fields continue to follow the convention whereby authors are listed in alphabetical order. **Matthias Weber** argues there is convincing evidence that ordering alphabetically discriminates against authors whose names appear late in the alphabet, and has real implications for the number of collaborations they are inclined to enter into.

Each time the results of a joint project are written up, a decision must be made on the order in which the authors appear. This is the case for all pieces written by multiple authors, whether articles in peer-reviewed journals, books, research reports, or other writings. There are two main norms of how to do this. The first is contribution-based, meaning that the person who contributed the most is listed first and other authors are then listed in descending order depending on their contribution (in scientific works, the last place is sometimes reserved for the person with the overall coordination, such as the head of the laboratory). The second main norm is to list authors alphabetically, irrespective of their contribution.

In academia, the issue of author ordering has been the subject of lively discussion in professional journals and beyond over recent decades. The vast majority of scientific disciplines rely on the contribution-based norm, with only very few disciplines relying predominantly on the alphabetical norm (most notably economics and mathematics). It has been argued that the alphabetical norm disadvantages authors whose last name appears late in the alphabet. For example, this could happen in the social sciences because some authors disappear in the term "et al.", or because some people who are more used to the contribution-based norm may attribute greater credit to the first author. However, proponents of the alphabetical norm have argued that this norm makes it possible for authors to contribute equally to a work while being attributed an equal share of credit as the alphabetical listing does not reveal information about relative contributions.

In the end, whether it really matters how authors are ordered boils down to an empirical question: are people with a last name late in the alphabet really at a disadvantage under an alphabetical norm or are the potential effects disadvantaging them, in reality, irrelevant? Also, if there is (actual or merely perceived) alphabetical discrimination, does this change scholars' behavior? Do scholars with last names late in the alphabet avoid working with multiple others under an alphabetical norm (for example to avoid disappearing in the term *et al.*)? If alphabetical discrimination exists, this is not only unfair but can also be very inefficient as it means the best heads will not necessarily occupy the most important positions and that the best studies may not receive the most attention. Furthermore, if scholars are indeed considering the consequences of the alphabetical norm when deciding whom to work with this would certainly be inefficient. As a society we want the teams to collaborate that can achieve the best output, we do not want last name initials to play a role in collaboration decisions.



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There are surprisingly many scientific studies examining these two related questions empirically, many of which are reviewed in a recent article. It is not an easy task to identify alphabetical discrimination because it cannot be directly observed. If you observe promotions, citations, or other measures of academic success, how can you tell which part is driven by alphabetical discrimination, if any? Nevertheless, many researchers found clever ways to identify the effects. Some, for example, compared the distribution of last name initials at top universities between tenured and untenured faculty, starting out from the idea that alphabetical discrimination plays a greater role in later stages of the career (as visibility and recognition do not play such an important role for early-career researchers). Others conducted an experiment in which participants (from academia) see different author groups and assign contribution credits to the different authors. Overall, a variety of studies convincingly show that alphabetical discrimination does exist. The magnitudes found are quite sizeable. For example, the likelihood of gaining tenure at a top-ten economics department is estimated to be about 26 percentage points higher for faculty with an A-surname than with a Z-surname. The number of downloads on RePEc for top-1,000 authors is estimated to be about 60% higher for A-authors compared to Z-authors.

Similarly, studies show that scholars behave differently under an alphabetical norm than under a contribution-based norm. For instance, scholars late in the alphabet write papers on their best ideas alone more often than scholars earlier in the alphabet in fields where an alphabetical norm prevails. Scholars late in the alphabet are also less likely to collaborate with multiple others under an alphabetical norm.

The conclusion that can be drawn is straightforward: authors on written pieces should not be listed alphabetically but according to their contribution to the work. For academic work, this is particularly clear. The very few disciplines that predominantly adhere to the alphabetical norm should abandon this special arrangement and follow the contribution-based norm prevalent in the vast majority of disciplines. The point is strengthened as even in those disciplines to mainly follow the alphabetical norm, adoption of this norm is by no means universal, with a substantial number of researchers choosing to deviate from it already. Also, the fact that interdisciplinary collaborations increase in importance speaks for the abandoning of the special arrangement as it would be unclear in such cases which author ordering norm to adhere to.

One may ask what is the best way for these disciplines to abandon the harmful alphabetical norm. Some have suggested a top-down approach proposing that journals issue "a clear statement [...] that this practice [ordering according to an alphabetical norm] is unacceptable". While this certainly seems like a very good idea, a bottom-up approach may be even more promising, in which scholars discuss the issue with their co-authors and advocate the contribution-based norm, which is, after all, the standard when looking across different disciplines. If author groups feel that some of the authors contributed equally, they can resort to a random order of authors. This may be indicated with a footnote, "These authors contributed equally to this work. The order of author names was randomly determined". Equally contributing authors who work together frequently could also alternate the author order on their various projects.

This blog post is based on the author's article <u>"The effects of listing authors in alphabetical order: A review of the empirical evidence"</u>, published in Research Evaluation (DOI: 10.1093/reseval/rvy008).

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