

Who Counts? Gender, Gatekeeping, and Quantitative Human Geography

Rachel S. Franklin¹, Victoria Houlden¹, Caitlin Robinson², Daniel Arribas-Bel², Elizabeth C. Delmelle³, Urška Demšar⁴, Harvey J. Miller⁵, and David O'Sullivan⁶

¹ Centre for Urban and Regional Development Studies (CURDS), School of Geography, Politics and Sociology, Newcastle University, Newcastle upon Tyne NE1 7RU

² Geographic Data Science Laboratory, Department of Geography and Planning, University of Liverpool, Liverpool L69 3BX

³ Department of Geography and Earth Sciences, University of North Carolina–Charlotte, Charlotte, North Carolina USA

⁴ School of Geography and Sustainable Development, University of St. Andrews, United Kingdom

⁵ Department of Geography, The Ohio State University, Columbus, Ohio 43210; Center for Urban and Regional Analysis, The Ohio State University, Columbus, Ohio 43210

⁶ Te Kura Tātai Aro Whenua - School of Geography, Environment and Earth Science, Te Herenga Waka - Victoria University of Wellington, Wellington 6021, Aotearoa - New Zealand

Abstract: How academic disciplines are represented and reproduced is a charged issue. In geography in particular, the challenge is not only who counts, especially with regard to gender and other factors, but also how the boundaries of the discipline are drawn and which subfields are acknowledged. This paper contributes to both aspects of the discussion by extending recent research on gender, internationalization, and academic gatekeeping to additional subfields of human geography. In particular, we focus on the demographic structure and international diversity of the editorial teams of flagship quantitative geography journals. We find that women are under-represented in our sample, with shares ranging from 23.1 to 43.5 percent—numbers unfortunately comparable to many other geography journals. We also find that career stage is an important factor and that our sample is more international and less Anglophone than the disciplinary norm. We conclude by emphasizing the importance of attending to issues of inclusive gatekeeping in geography and elsewhere.

Key Words: *academia, gender, geography, publication, quantitative methods.*

Introduction

This is a timely period to reflect on representation and reproduction in our discipline. Macro-level forces at the institutional scale have brought tenure, precarity, and the casualization of academic geographers to the fore. At the same time, at the individual level, there is increasing recognition and documentation of the ways in which perceived belonging and observed participation levels are influenced especially by gender identity and race or ethnicity, but also sexual orientation and socio-economic class, to name only a few characteristics. Together, the individual and the institutional—and the barriers to entry associated with each—help shape the contemporary composition of the discipline, but also its future make-up—that is, its reproduction. Added to these, a third factor in disciplinary reproduction operates at the meso-level: the ever-evolving drawing and redrawing of disciplinary boundaries in geography that define who, what, and where is included.

Gender, of course, operates at all three levels, as do other forms of social difference.¹ The same structural barriers that govern women's navigation of and success in academic geography are also important for understanding which groups are most impacted by increasing precarity and a job market associated with few permanent openings in limited locations. Such barriers are especially acute for women and other marginalized groups. Gender may matter, too, in how women sort into subfields of geography. Kaplan and Mapes (2016), for example, find departmental subfield mix matters for the number of women earning PhDs—the more GIS/cartography-oriented the department, the lower the number of female PhDs. It certainly matters in terms of larger narratives around attracting and retaining women in Science, Technology, Engineering, and Mathematics (STEM) fields. In geography

¹ While we study gender as a binary here, it is important to recognise the term is richer and includes non-binary forms. Our conclusions would likely be even bleaker were we able to take this richer conception of gender into account.

the gender imbalance remains stark, with just over one third of faculty identifying as female (AAG, 2018) and, according to Schurr, Müller and Imhof (2020), two female full professors for every seven male. Moreover, redressing imbalances takes time. Even with decisive action, it would be well over a decade before gender balance could be achieved in the highest ranks, which in turn influences the number of female role models, mentors, and advisors available to those entering the field.

In a recent paper in this journal, Schurr, Müller and Imhof (2020) address how barriers—or as they term it, gatekeeping—at key publication junctures affect representation within the discipline of geography, notably where gender is concerned. Their analysis, which assessed the editorial make-up of edited handbooks, progress reports in *Progress in Human Geography*, and the editorial teams of 22 key generalist human geography journals and flagship publications of sub-disciplines, was mainly focused on gender but also addressed internationalization.²

Publication (whether as author or editor) is of course only one element of academic “success.” International mobility, both short and long term (Cohen et al., 2020; Jöns, 2011; Storme et al., 2017), and international conference attendance (Derudder and Liu, 2016) are also important mechanisms by which researchers signal their “excellence.” Unlike other gatekeepers, however, publication gatekeepers, especially for journals, exercise enormous power at the institutional, disciplinary, and individual levels, controlling not only who is published but also on which topics (and in which journals); and publication, of course, is a

² The journals included in their sample are: *Gender Place and Culture*, *The Geographical Journal*, *Environment and Planning C*, *Progress in Human Geography*, *Environment and Planning D*, *The Professional Geographer*, *Geographical Review*, *cultural geographies*, *Annals of the AAG*, *Antipode*, *Transactions IBG*, *Urban Geography*, *Social & Cultural Geography*, *Economic Geography*, *Geoforum*, *Environment and Planning A*, *European Urban and Regional Studies*, *Political Geography*, *Journal of Economic Geography*, *Journal of Historical Geography*, *Applied Geography*, and *Area*.

pre-eminent factor in who is hired and promoted. Schurr, Müller and Imhof (henceforth SMI) provide a convincing argument around the roles of gatekeepers and the ongoing importance of gender, analysing the gender balance in editorial teams of flagship geography journals. Yet they neglect the third pathway in disciplinary reproduction and gatekeeping identified above: how disciplinary boundaries are drawn and policed. In selecting their sample of “important generalist journals” and “flagship journals of subdisciplines” they in fact omit from the universe of geography the more quantitatively-oriented subfields of population, transportation, Geographic Information Science (GIScience), and spatial analysis; these are active subfields of the discipline based on research activity and participation in major professional organizations such as the American Association of Geographers or the Royal Geographical Society.³ We view this as an important omission, not only for the explicit redefining of what is considered geography, but also given the implications for gender and the reproduction of the discipline. To neglect entire subfields is also to exclude those geographers, female and male, affiliated to those areas, potentially rendering them less visible in the discipline. This oversight may also serve in the longer term to make hiring and promotion in these subfields more problematic.

We agree, however, with SMI’s larger premise: that assessing the gender balance of core geography journals is valuable, given the gatekeeping as well as the signalling role that editorial teams provide. The spotlight SMI shine on their sample of journals should equally be shone on the more quantitative human geography journals, providing a benchmark of progress but also highlighting how geography as a whole is structured, with common challenges and shortcomings across the breadth of the discipline.

³ In 2019, the Geographic Information Science & Systems Specialty Group of the AAG had over 1,500 members, second only to Urban Geography. The Spatial Analysis and Modeling (1,025), Transportation (403), and Population (306) Groups also had longstanding and healthy memberships. These are not insubstantial numbers, considering an overall AAG membership of 11,795 in 2018 (AAG, 2019).

With that in mind, in this paper we extend SMI's analysis to offer three main contributions. First, we assess the contemporary gender balance of editorial teams for flagship geography journals in population, transportation, GIScience, and spatial analysis, as well as two urban geography journals considered to be important outlets for quantitative urban geographers; this permits us to compare directly these journals with the generalist and subdiscipline journals analysed in SMI, together providing a state-of-the-discipline overview of gender and editorial leadership across human geography. Second, given the important interplays between seniority and gender (i.e., older generations of geographers are more male-dominated and for balance we may need to look to younger cohorts), we investigate the relative age (year since PhD) and gender structures of the editorial teams in quantitative geography journals. This approach highlights some of the mechanisms by which imbalances emerge. Third, we extend the discussion of "Anglophone" hegemony in SMI and consider all countries of residence of editorial team members. In sum, our analysis provides benchmark data for quantitative human geography, ensuring it is included within larger disciplinary discussions around gender and gatekeeping, providing scope for comparisons across subfields, and ensuring that quantitative human geography is held to the same expectations as the discipline generally.

Gender and Intersectional Inequalities in Geography

Gender is a fundamental axis of social power that, through intersections with other axes of difference (including class, race, ethnicity, ableness and age), shapes social relations in an unequal way (Crenshaw, 1989; Hopkins, 2019). Gender is subsequently understood to have an uneven impact on a range of outcomes, in both home and workplace. Increasingly, the analytical lens of gender is used to evaluate processes of marginalization within academia, including individual disciplines. The gendered inequalities described are intersectional, and

therefore starker for marginalized women; this is especially the case for Black and Minority Ethnic (BME) academics, owing to racial discrimination in higher education (Bhopal, 2015).

We focus in this paper on inequalities in academic publication gatekeeping. However, across the academic board, a gender divide has been evidenced in multiple ways. This includes important components of academic visibility, such as international mobility—not only the extent to which women are able to be mobile, but also the real and perceived benefits of this mobility (Jöns, 2011; Cohen et al, 2020). It also stretches to bias in teaching evaluations (Boring, 2017) and professional forums (Wu, 2019), as well as under-representation in hiring processes or senior positions (Savigny, 2014), and of course salaries (Webber and Canché, 2015). Moreover, much of the gender gap cannot be explained away by differences in age, field, or productivity (Brower and James, 2020). These inequalities are replicated and accentuated within the publication process. Women tend to be under-represented as authors and editors of top journals across a range of social science disciplines, when compared with their overall share in the profession (Teele and Thelen, 2017). For example, the Regional Studies Association (RSA) estimates that of the articles submitted to their journals by males, 31 percent were accepted; for women, 24 percent of total submissions were accepted (RSA, 2019). Co-authorship penalties are also larger for women: while men who co-author with women do not suffer a promotion penalty, such is not the case for women (Sarsons, 2017).

By conflating a “gender-blind” peer-review process with objectivity, editors can fail to recognise how broader social structures operate to produce systematic inequalities within and beyond the editorial process (Lundine et al. 2019). Exclusion from the publication process is of particular importance, as the publication of journal articles is associated with legitimacy, hiring, promotion, and reputation within an author’s field. The COVID-19 pandemic has

brought concerns about the gender gap in publishing to the fore. Early estimates from journals indicate a gender divide in lockdown submissions, as women submit proportionally fewer articles while balancing their career with greater domestic and caring responsibilities (The Guardian, 2020; Viglione, 2020).

In geography there is a continued need to consider “[how the discipline] produces and constructs power inequities” (Faria et al. 2019: 369). Peake (2016) acknowledges a general discomfort with difference in the discipline. The subsequent lack of diversity of perspectives limits the types of research questions that geographers ask, and therefore our ability to understand the world (Kobayashi, 2006). Over the last three decades, assessments of the role of women in geography have been made in different national contexts (including McDowell and Peake, 1990; Berg, 2002; Monk and Hanson, 1982; Monk, 2008; Ahern, 2019; Schurr, Müller and Imhof, 2020). One of the most recent evaluations, a report on gender for the American Association of Geographers (AAG, 2018), provides evidence of a continued dominance by men in the field across the board, although this gap is steadily closing. Specifically analysing the composition of editorial boards across a selection of 22 human geography journals, SMI (2020) calculate that women’s representation has increased from 29 percent in 1999 to 39 percent in 2017.

Geography also has a tendency to marginalise and exclude academics resident in non-anglophone institutions across Europe, Asia, South America, and Africa (Rose, 1993; Garcia-Ramon, 2003).⁴ This is perpetuated by the “linguistic hegemony” of English-speaking

⁴ An important omission from much of the research on this subject is the differentiation between country of residence and country of origin, and those living outside their countries of birth. While we are unable to assess this, theory and anecdotal evidence would suggest that the hegemony of Anglophone institutions reflects not

journals (Meadows et al., 2016). For Garcia-Ramon (2003: 1), the growing domination of English as *the* global language “privileges the geographical discourse of the Anglophone world”. Native English-speakers are able to articulate and set agendas within geography, while non-native speakers may find it more difficult to enter the debate. In terms of publishing, journal referees and editors tend to share similar cultural backgrounds, while foreign authors are comparatively less likely to have informal access to editors. Meanwhile, authors who publish in a language other than English often address different research questions, from diverse epistemological perspectives. Their research questions and perspectives do not necessarily align with those of predominantly Anglophone journals (Rodríguez-Pose, 2004; Kitchin, 2005; Short et al., 2001).

Gatekeeping in Geography

In their initial assessment of gatekeeping and gender in human geography journals, SMI (2020) identify two forms of gatekeeping in relation to the publication process. First, *admission* gatekeeping, which refers to the role of editors in granting access to important modes of publication. This reflects the integral role of editors in defining the direction of the discipline by deciding whether to publish or reject a manuscript and inviting contributions on specific themes. Second, *inclusion* gatekeeping refers to those producing the actual knowledge, who make decisions about who is cited, and therefore whose contributions become part of the geographical body of knowledge. We argue here that a third form of gatekeeping—*boundary* gatekeeping—also exists. Boundary gatekeeping reflects the broader exclusion and rendered invisibility of entire disciplinary subfields, including the junior members of those subfields.

only language, but also universities’ ability to attract global talent—a proposition that is also problematic and worthy of further study.

Where the more quantitative subfields of geography are concerned, the impacts of boundary gatekeeping may be unexpected and long-lasting. Here, gatekeeping is not just about exclusion from the production of geographic knowledge; it also has practical implications reflected in the role that GIScience plays in attracting funding and visibility for many geography programs, especially in the United States. Boundary gatekeeping can exacerbate or create disciplinary schisms that weaken geography overall and render it inhospitable to “out” groups—schisms which others have already long suggested be mended (e.g., Kwan 2002; Kwan, 2004). It can also lead to conflict with other disciplines as they “discover” geography. For example, Derudder and van Meeteren (2019) discuss the ways in which urban geography has dismissed emergent “urban science” debates that deal with data-driven, quantitative analysis of urban data. Had urban geography continued to embrace (and make a place for) quantitative urbanists, emerging urban science would naturally have been viewed as falling inside the boundaries of the original sub-discipline and not something entirely new.

Journal editorial boards are one of the key mechanisms via which processes of gatekeeping are played out within a discipline. Decisions about the composition of editorial teams, and which scholars merit inclusion, are not defined by common, overarching guidelines. Instead, rules are internally imposed by individual journals. There are several criteria that typify decisions about who to invite to an editorial team. An editorial team might choose to recognize senior members of the discipline for their contributions, or acknowledge those considered “best” in the field regardless of age. Alternatively, editorial invitations can be used to provide a signal to the audience about what kind of research the journal publishes, or aspires to publish. They can recognize both intellectual leadership and actual labor performed on behalf of the journal. As well as obscuring relatively junior members of a discipline, decision-making about the composition of editorial boards can exclude or render invisible

academics based on gender, race, and language, reflecting wider processes of marginalization and discrimination in the discipline as a whole.

Data

SMI's analysis of gatekeeping and gender in human geography includes handbooks, reports in *Progress in Human Geography*, and the editorial make-up of flagship journals in human geography. It is this latter that concerns us, as quantitative human geography remains well represented in handbook publications and *Progress* reports (see Johnston et al., 2019a and 2019b, for example), but was completely omitted from SMI's journal analysis.

To address this, our sample of flagship journals of quantitative subfields covers transportation and population, two quantitative urban journals, and the leading GIScience and spatial analysis journals in geography. Our final sample comprises 8 journals: *Computers, Environment and Urban Systems (CEUS, first issue 2020)*; *Environment and Planning B (EPB, first issue 2020)*; *Geographical Analysis (GA, first issue 2020)*; *Journal of Transport Geography (JTG, first issue 2020)*; *Transactions in GIS (TGIS, first issue 2020)*; *International Journal of Geographical Information Science (IJGIS, online access May 2020)*; *Population, Space and Place (PSP, first issue 2020)*; and *Journal of Geographical Systems (JGS, online access May 2020)*.

To build our database, we extracted names and institutions for all editorial team members: editors, associate editors (or the equivalent, referred to below as sub-editors), and editorial board members (or equivalent). Two journals also had an additional book editor (*EPB* and *JTG*), who are included in the total counts. Following SMI, we estimated gender by visiting institutional websites, coding on a binary scale (male or female) using available information, as it was unfortunately methodologically prohibitive to contact all individuals separately for

self-identification. We also tabulated the country of the individuals' present institutional locations, before further categorizing countries as Anglophone (US, UK, Ireland, New Zealand, Canada, and Australia) or not.⁵

With the intertwined complexities of gender and seniority, we expand our contribution by deriving a proxy for seniority/age, estimating “years since PhD”, which allows us to capture the demographic structure of journal editorial teams. These data were collected on individuals' websites and posted CVs, by email, or on university catalogues of published theses/dissertations, where necessary. Applying a mixture of tabular and graphical representations of our sample, we explored inequalities in gender balance by career stage and editorial position. We further considered journal geographical diversity, which we found to provide a more nuanced picture of geographical representation than the binary Anglophone/non-Anglophone approach employed in SMI—although we include analysis on the latter for the purposes of comparability with their study.

Beyond the country of institution, we were unable to consider other intersectional forms of social difference (including race, ethnicity, sexual orientation, ableness or class). Our analysis, instead, is what McCall (2005) terms inter-categorical, necessarily focusing on analytical categories of male and female to highlight processes of marginalization. While we acknowledge that it is imperative to recognise how women of color are disproportionately affected by these processes (Bonds 2013), such an analysis is regrettably beyond the scope of current data availability.

⁵ Country of origin, race, class, *et cetera*, are all important dimensions of this discussion but are not tractable with our methodological approach, which relies on published information to determine gender, current institution, and years since PhD. Other categories (and even gender) require the opportunity for individual self-identification.

An additional caveat is that we do not claim that all geography journals, or indeed sub-disciplines (health geography, for example), have now been included in this conversation, as we do not include other mainstream geography journals such as *Tijdschrift voor Economische en Sociale Geografie (TESG)* or the *Canadian Geographer*. Finally, although regional science journals are a frequent outlet for quantitative geography research, we omit these. Although many quantitative human geographers also identify as regional scientists, regional science journals come under the purview of their own disciplinary society, the Regional Science Association International. A similar point holds for regional studies and even remote sensing.

Results

We collected 365 observations (including editors, sub-editors, and editorial board members) across the eight journals (Table 1).⁶ The size of editorial teams across our sample varies, from 27 in total at *EPB* to 66 at *JTG*. Editorial structures also vary. Most journals have one editor, supplemented by a complement of sub-editors. *JGS* and *PSP* have more lead editors, but fewer sub-editors. There were 304 unique individuals in the data set, with 44 (from all three levels) who appear more than once.

[Table 1]

Gender (Do Women Count in Quantitative Human Geography Journals?)

Overall 115 (31.5 percent) of the editorial roles in our sample journals were filled by women. Most journals are edited by men; of the 11 editor positions across the eight journals, just three (27.3 percent) are occupied by women (Table 2). However, in only one journal were *all* editor and sub-editor roles filled by men (*TGIS*). The share of women ranged from 23.1 percent in *TGIS* to 43.5 percent in *GA*. Most editorial boards are about one-third female.

⁶ Our dataset is available here xxx.

There is no obvious relationship between the gender of the editor and the share of women on the overall editorial team. Of course, as noted above, some individuals sit on multiple journal boards. Of the women in our data, a slightly larger share serves on more than one of our sample journals (13.9 percent), compared to the men (11.2 percent), but in raw numbers more of the men are on multiple journals (28, versus 16 women). This weakly suggests that, although women may devote more professional time to service activities, they are less called upon for the higher visibility service work. Given our small sample of journals and the likelihood that many individuals serve on journals outside our sample, we hesitate to make strong claims on this front.

[Table 2]

[Figure 1]

[Figure 2]

Figure 1 provides age pyramids or “Tetris” diagrams of seniority (i.e., years since PhD) and gender structure across the different journals. Overall, many journals have a fairly full representation of men across all age groups. *CEUS*, *PSP*, and *JTG* have the most “bell-shaped” distributions across age cohorts, with relatively few very senior and very junior men on their teams. Other journals, such as *GA* and *EPB* seem to almost specialize in the youngest and oldest male cohorts—the grandfathers of the field paired with the young visionaries. *TGIS* has the strongest skew towards less senior members, featuring no individuals beyond 35 years post-PhD, but none of the journals have individuals with less than 5 years’ post-PhD experience. Relative bulges in younger cohorts may reflect a purposeful effort to refresh perspectives and outlooks.

It is in comparison with male age distributions that the lack of women especially stands out. If lack of senior women in the field were driving imbalances, we would expect to see few women in older age cohorts (those who received their PhD decades ago), but a balance that emerges in younger cohorts. Certainly, in some journals (*CEUS*, *IJGIS*, and *PSP*) the women on the editorial teams tend to be younger. In others, such as *GA* and *JTG*, the women are fewer, but more spread across age cohorts. Although the most balanced overall, the women on the *GA* editorial team tend to be slightly younger than their male counterparts, with three women under 10-years post-PhD and no men in this cohort. *TGIS* is remarkable: its age structure is young and yet it is still overwhelmingly male. *JGS* and *EPB* do not present a balanced picture, either, although *EPB* has strong representation in the female 15–19 post-PhD cohort. *EPB* has the fewest earlier-career female members, which may be a consequence of having the smallest editorial team.

Figure 2 emphasizes the small shares of editorial teams that are female, and that most female representation comes from editorial board roles (not surprisingly, since there are more board roles than editor roles). Women are included in all three positions for only two journals (*GA* and *IJGIS*)—the editor role being the main constraint. *PSP* has no sub-editor roles and therefore cannot be compared. Women are under-represented in the more senior ranks of *JGS* and *JTG* teams, potentially implying a lack of progression opportunities for the women on these journals.

In sum, it is clear that there are fewer women on the editorial teams of these journals, and they tend to be younger. As noted above, were this a product of lack of historic representation, we would expect to see a more balanced gender distribution among the younger cohorts. It appears that some journals display bias in favour of males, even in

younger cohorts, and especially in the more senior editorial positions. If this is the case, it represents a wider pipeline problem across the field and risks perpetuating the gatekeeping cycle.

Internationalization (Does Geography Have a Geography Problem?)

We start by tabulating editorial team members by country and continent. Figure 3 emphasizes the dominance of North America in all journals, with the exception of *PSP*, where Europe reigns. While all editorial teams include members located in Asia, Europe, and North America, and, with the exception of *JGS*, Oceania, only three (*CEUS*, *JTG* and *TGIS*) include South Americans. Africa appears only once, with one individual in South Africa for *JTG*—perhaps due to its large editorial board, *JTG* spans the most countries, coming second only to *JGS* for non-Anglophone representation (37.9 percent).

We next focus more closely on the country distribution of editorial team members across all eight journals, and English-speaking countries are clearly favored (Table 3). While there are 28 different nations represented in our sample, 22 of which are non-Anglophone, they constitute just 32.6 percent of the sample. Only *JGS* has an equal distribution of Anglophone and non-Anglophone country team members. At the other end of the scale, non-English speaking-countries constitute just 10.9 percent *GA*'s editorial team. It is not necessarily the case that the largest editorial teams are able to support the most international diversity, as highlighted by *JGS*, with one of the smallest teams of (28 members), and *GA*, with one of the largest (46 members). Both GIScience journals (*IJGIS* and *TGIS*) score highly on the number of different countries represented, although the individuals make up a modest proportion of the total board (33.3 and 28.2 percent, respectively). There is therefore some evidence of different patterns across subfields.

[Table 3]

[Figure 3]

Where English-speaking countries are concerned, both the UK and US are dominant, with US-based individuals making up 33.7 percent of all editorial team members, and UK-based another 20.5 percent, leaving the remainder to Australia, Canada, Ireland, and New Zealand. Of non-Anglophone countries, the Netherlands is represented by 22 editorial team roles, across seven journals, while 17 members over six journals are from Chinese institutions (and a further 11 in Hong Kong).

These results indicate issues with international gatekeeping where country of residence is concerned, which again may represent wider geographical and language-related inequalities in the field, and a particular bias towards Western countries, specifically the US and UK.

[Figure 4]

We now turn to the intersection of gender and international privilege, examining the shares of women and Anglophone countries on journal editorial boards (Figure 4), following the typology developed in SMI. We find no quantitative geography journals with larger shares of women than the SMI mean, although our results are in line with those from *Journal of Economic Geography*, *Political Geography*, *Geoforum*, and *Environment and Planning A*.⁷ Replicating SMI's terminology, our sample comprises seven *Cosmopolitan Gentlemen's Clubs* and one *Old Guard (GA)*. So, while quantitative geography journals do not perform as well as many other mainstream human geography journals in SMI on gender, they do compare well on Anglophone shares. Only four of the 22 journals in the SMI sample are

⁷ In SMI, *Progress in Human Geography*, the *Professional Geographer*, and *EP C* and *EP D*, among others, all have higher shares than average of women on their editorial boards.

below average in Anglophone shares, whereas seven of the quantitative geography journals are.

That *GA* is the closest of all journals to achieving gender parity in our sample indicates a potential conflict when balancing gender and international diversity. In many areas, non-Anglophone academia remains largely male, such that any efforts to increase international representation may come at the expense of gender representation. If gender parity is the priority, care must be exercised that this does not come at the cost of international representation. Our sample is small and so there is room for much further exploration of this topic.

Where Do We Go from Here?

The clear but also disappointing result of our analysis is that women are under-represented in the flagship journals of quantitative human geography, but they are in good company with the balance of the discipline. That is, the good news is that the majority of quantitative geography journals (with notable exceptions) are similar in the gender balance of their journal leadership to the rest of the field; the bad news is that this journal leadership in general, with few exceptions, remains very male.

Where cynics would point to age structure as a factor—the idea that journal leadership is male because gatekeepers tend to be more senior and senior geographers are male—we are able to contend, through our analysis, that this does not appear to be the case. Many of the journals in our sample have balanced age structures, particularly on the male side, that are not complemented in the younger age cohorts by balance between men and women. This is unfortunate, as it suggests that the challenge is not only supply of women but their visibility

and the unwillingness of journals (and the larger discipline) to do the work of being more inclusive.

We do observe, however, that these quantitative journals have been relatively successful at being more geographically inclusive, and in this sense, they perform better than many of the mainstream geography journals or flagship journals of other subdisciplines. This parallels Derudder and Liu's (2016) finding that GIS and spatial analysis sessions at the AAG annual meeting tend to be more internationally integrated than other streams of sessions. Of the journals in our sample, only *Geographical Analysis* (at about 90 percent Anglophone) is in the "Anglophone male" category identified by SMI, showing it to be similar in gender and Anglophone focus to *Antipode* or *Transactions of the Institute of British Geographers*. The remaining journals in our sample are much more international in terms of their editorial boards, similar to *Geoforum* and the *Journal of Economic Geography*. As SMI also find, cracking both the gender and international balance is remarkably difficult.

How should we interpret these results? Where gender is concerned, it is tempting to attribute lower representation to subfield imbalances—the argument being that low numbers of women in particular subfields of geography present an effective ceiling, or binding constraint, on gender balance. To this we respond with a counterfactual: if women were so few in number but gender equity were of paramount concern, we should expect to see more women sitting on multiple journal boards, as everyone competes for the scarce females. This is not what we observe in our sample (although this is a fruitful avenue for future research). Second, persistent dominance of any one group in a sub-field over long periods of time is, in itself, problematic. The argument that GIScience, for example, is largely male, and therefore journal leadership is also male, suggests that barriers to inclusion on journal teams may

mirror similar barriers that exist earlier in the pipeline. Our third and related point is more difficult to quantify—another knowledge gap that could be filled—but is simply that even if shares of women are smaller in many sub-fields, they may remain under-represented even by that meager benchmark. The issue is partly inclusiveness and visibility.

Internationalization is a separate but also important challenge. In this case, we know that there exist quantitative human geographers around the world, in most countries. Lack of representation may be somewhat attributable to quality of research (that is certainly a justification that is deployed), but more likely comes down to networks and visibility of scientists outside a core set of countries, which tend to be English speaking. Those outside core countries who seek a larger platform for their research must typically navigate both national and international systems—a double burden in essence.

We have suggestions for moving forward. First, perhaps thinking of disciplinary reproduction is too narrow a concept: we do not want tomorrow's geography to look the same as today's. We need to be proactive in forcing ourselves to make changes today for the benefit of generations to come and geography to come. As individuals we can amplify and promote those who have less of a voice in our discipline. Those in decision-making positions can actively seek to improve the diversity of their journals, departments, and scholarly societies. Second, as a discipline we require better reporting and data—this assists with policy-making and evaluation today, but also provides a historical record for the future. Regular data aggregated across journals, not only for gender but also other dimensions of equality and inclusion, would allow for more transparency, comparison, and knowledge-sharing across subfields. Specific guidance on best practice from geography societies such as the AAG or the RGS-IBG would be welcomed and also provide accountability for change. Scholarly

societies can also provide support and guidance where it is badly needed: in the recruitment, mentorship, and support of students and early-career researchers from under-represented groups. Third, increasing editorial board size may be one strategy for overcoming perceived constraints in being more inclusive—this would allow for a wider range of criteria to be used in selecting board members that should benefit younger scholars from a range of backgrounds. It would be interesting to see an age/gender structure comparison across a wider set of geography journals to test this hypothesis.

In closing, like other types of disciplinary representation, editorial roles not only reward those at the pinnacle of the discipline but also help to promote others to that peak. They serve as aspirational mirrors for the discipline—the quality of research we hope to promote, the diversity we would like to see, and a reflection to those entering the field that they belong. Journal appointments are important and their composition merits our attention and, where necessary, censure. They are also a relatively easy problem to fix, particularly when set against longer term pipeline, hiring, and promotion challenges.

Our results suggest that women (and likely other marginalized groups) face similar barriers and gatekeeping challenges across the continuum of geography. To us, this highlights the importance of acting as a unified discipline when tackling these issues. More importantly, where “boundary gatekeeping” is concerned, our findings reinforce the importance of care and inclusiveness in establishing disciplinary borders. If geography is to address our gender and diversity problems, we must do it together. Drawing artificial limits around a broad field such as human geography is not conducive to working towards collective solutions and also serves to (artificially) perpetuate division more generally. On this one dismal dimension, we all certainly seem to be in a similar boat at the moment. Perhaps we should row together.

References

- Ahern, J., Mc Ardle, R., Till, K.E., Manzo, L.K.C. and Meletis, Z.A., 2019. Supporting Women in Geography (SWIG) Ireland: Confronting the role of gender and asserting the importance of the female voice. *Irish Geography*, 52(1), pp.101-122.
- American Association of Geographers. 2018. "Geographers by Gender Summary Report," accessed May 15, 2020 at http://www.aag.org/galleries/disciplinary-data/Geographers_by_Gender_summary_report_2018.pdf
- American Association of Geographers. 2019. "Handbook of the American Association of Geographers," accessed May 23, 2020 at http://www.aag.org/galleries/disciplinary-data/Handbook_2019.pdf
- Berg, L. D. 2002. Gender Equity as Boundary Object': or the Same Old Sex and Power in Geography All over Again? (Focus: Equity for Women in Geography). *The Canadian Geographer*, 46(3), 248.
- Bhopal, K. 2015. *The Experiences of Black and Minority Ethnic Academics: A comparative study of the unequal academy*. Routledge.
- Bonds, A. 2013. Racing economic geography: The place of race in economic geography. *Geography Compass*, 7(6), 398-411.
- Boring, A., 2017. Gender biases in student evaluations of teaching. *Journal of public economics*, 145, pp.27-41.
- Brower, A., and A. James. 2020. Research performance and age explain less than half of the gender pay gap in New Zealand universities ed. F. Cuthill. PLOS ONE 15 (1):e0226392.
- Cohen, S., Hanna, P., Higham, J., Hopkins, D. and Orchiston, C., 2020. *Gender discourses in academic mobility*. *Gender, Work & Organization*, 27(2), pp.149-165.

Crenshaw, K 1989. Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum* 140: 139–167.

Derudder, B. and Liu, X., 2016. How international is the Annual Meeting of the Association of American Geographers? A social network analysis perspective. *Environment and Planning A*, 48(2), pp.309-329.

Derudder, Ben and van Meeteren, M. 2019. “Engaging with “urban science”, *Urban Geography*, DOI: 10.1080/02723638.2019.1585138

Faria, C., Falola, B., Henderson, J., and Maria Torres, R. 2019. A long way to go: Collective paths to racial justice in geography. *The Professional Geographer*, 71(2), 364-376.

Garcia-Ramon, M. D. 2003. Globalization and international geography: the questions of languages and scholarly traditions. *Progress in human geography*, 27(1), 1-5.

Hopkins, P. 2019. Social geography I: intersectionality. *Progress in Human Geography*, 43(5), 937-947.

Johnston, R., Harris, R., Jones, K., Manley, D., Wang, W. W., and Wolf, L. 2019a. Quantitative methods I: The world we have lost – or where we started from. *Progress in Human Geography*, 43(6), 1133–1142. <https://doi.org/10.1177/0309132518774967>

Johnston, R., Harris, R., Jones, K., Manley, D., Wang, W. W., and Wolf, L. 2019b. Quantitative methods II: How we moved on – Decades of change in philosophy, focus and methods. *Progress in Human Geography*. <https://doi.org/10.1177/0309132519869451>

Jöns, H., 2011. Transnational academic mobility and gender. *Globalisation, societies and education*, 9(2), pp.183-209.

Kaplan, D.H. and Mapes, J.E., 2016. Where are the women? Accounting for discrepancies in female doctorates in US geography. *The Professional Geographer*, 68(3), pp.427-435.

Kitchin, R., 2005. Commentary: Disrupting and destabilizing Anglo-American and English-language hegemony in Geography. *Social & Cultural Geography*, 6(1), pp.1-15.

Kobayashi, A. 2006. Why women of colour in geography?. *Gender, Place & Culture*, 13(1), 33-38.

Kwan, M.P., 2002. Feminist visualization: Re-envisioning GIS as a method in feminist geographic research. *Annals of the association of American geographers*, 92(4), pp.645-661.

Kwan, M.P., 2004. Beyond difference: From canonical geography to hybrid geographies. *Annals of the Association of American Geographers*, 94(4), pp.756-763.

Lundine, J., Bourgeault, I. L., Glonti, K., Hutchinson, E., and Balabanova, D. 2019. "I don't see gender": Conceptualizing a gendered system of academic publishing. *Social Science & Medicine*, 235, 112388.

McCall, L. (2005). The complexity of intersectionality. *Signs: Journal of women in culture and society*, 30(3), 1771-1800.

Meadows, M., Dietz, T., and Vandermotten, C. 2016 A perspective on problems and prospects for academic publishing in Geography. *Geo: Geography and Environment*, 3: 1, e00016, doi: [10.1002/geo2.16](https://doi.org/10.1002/geo2.16).

McDowell, L., and Peake, L. 1990. Women in British geography revisited: Or the same old story. *Journal of Geography in Higher Education*, 14(1), 19-30.

Monk, J. 2004. Women, gender, and the histories of American geography. *Annals of the Association of American Geographers*, 94(1), 1-22.

Monk, J. and Hanson, S., 1982. On not excluding half of the human in human geography. *The Professional Geographer*, 34(1), pp.11-23.

Peake, L.J., 2016. Women in geography. *International Encyclopedia of Geography: People, the Earth, Environment and Technology: People, the Earth, Environment and Technology*, pp.1-9.

Regional Studies Association (RSA) 2019. Gender bias in peer review – opening up the black box. Available online: <<https://www.regionalstudies.org/news/gender-bias-in-peer-review-opening-up-the-black-box/>>

Rodríguez-Pose, A. 2004. On English as a vehicle to preserve geographical diversity. *Progress in Human Geography*, 28(1), 1-4.

Rose, G. (1993). *Feminism & geography: The limits of geographical knowledge*. University of Minnesota Press.

Sarsons, H., 2017. Recognition for group work: Gender differences in academia. *American Economic Review*, 107(5), pp.141-45.

Savigny, H. (2014). Women, know your limits: Cultural sexism in academia. *Gender and education*, 26(7), 794-809.

Schurr, C. Müller, M. and Imhof, N. (2020) Who Makes Geographical Knowledge? The Gender of Geography's Gatekeepers, *The Professional Geographer*, DOI: [10.1080/00330124.2020.1744169](https://doi.org/10.1080/00330124.2020.1744169)

Short, J.R., Boniche, A., Kim, Y. and Li, P.L., 2001. Cultural globalization, global English, and geography journals. *The Professional Geographer*, 53(1), pp.1-11.

Storme, T., Faulconbridge, J.R., Beaverstock, J.V., Derudder, B. and Witlox, F., 2017. Mobility and professional networks in academia: An exploration of the obligations of presence. *Mobilities*, 12(3), pp.405-424.

Teele, D.L. and Thelen, K., 2017. Gender in the journals: Publication patterns in political science. *PS: Political Science & Politics*, 50(2), pp.433-447.

The Guardian (2020) Women's research plummets during lockdown – but articles from men increase. [online] Available at:

<https://www.theguardian.com/education/2020/may/12/womens-research-plummets-during-lockdown-but-articles-from-men-increase>

Viglione, G. 2020. Are women publishing less during the pandemic? Here's what the data say. *Nature News*, doi: 10.1038/d41586-020-01294-9.

Webber, K.L. and Canché, M.G., 2015. Not equal for all: Gender and race differences in salary for doctoral degree recipients. *Research in Higher Education*, 56(7), pp.645-672.

Wu, A.H., 2019. Gender Bias in Rumors among Professionals: An Identity-based Interpretation. *Review of Economics and Statistics*, pp.1-40.

Tables

Table 1 *Overview of journals included in analysis*

| Journal | Field | Gatekeepers | | | Total |
|---|------------------|-------------|-------------------|-----------------|-------|
| | | Editors | Associate Editors | Editorial Board | |
| Computers, Environment and Urban Systems (CEUS) | Urban | 1 | 4 | 53 | 58 |
| Environment and Planning B (EPB) | Urban | 1 | 4 | 21 | 27 |
| Geographical Analysis (GA) | Spatial Analysis | 1 | 3 | 42 | 46 |
| International Journal of Geographical Information Science (IJGIS) | GIScience | 1 | 8 | 48 | 57 |
| Journal of Geographical Systems (JGS) | Spatial Analysis | 3 | 1 | 24 | 28 |
| Journal of Transport Geography (JTG) | Transportation | 1 | 7 | 57 | 66 |
| Population, Space and Place (PSP) | Population | 2 | 0 | 42 | 44 |
| Transactions in GIS (TGIS) | GIScience | 1 | 2 | 36 | 39 |

Notes: EPB and Transport Geography have a book review editor, reflected in total.

Table 2 *Percent of journal editorial team that is female*

| Journal | Editors | Associate Editors | Editorial Board | Total |
|---|---------|-------------------|-----------------|-------|
| Computers, Environment and Urban Systems (CEUS) | 0.0 | 50.0 | 32.1 | 32.8 |
| Environment and Planning B (EPB) | 0.0 | 50.0 | 33.3 | 33.3 |
| Geographical Analysis (GA) | 100.0 | 66.7 | 40.5 | 43.5 |
| International Journal of Geographical Information Science (IJGIS) | 100.0 | 37.5 | 29.2 | 31.6 |
| Journal of Geographical Systems (JGS) | 0.0 | 100.0 | 29.2 | 28.6 |
| Journal of Transport Geography (JTG) | 0.0 | 42.9 | 24.6 | 27.3 |
| Population, Space and Place (PSP) | 50.00 | NA | 31.0 | 31.8 |
| Transactions in GIS (TGIS) | 0.0 | 0.0 | 25.0 | 23.1 |

Note: Book review editors included in denominator.

Table 3 *International orientation of editorial teams*

| Countries | CEUS | EPB | GA | IJGIS | JGS | JTG | PSP | TGIS | Country Total |
|------------------------|-------------|------------|-----------|--------------|------------|------------|------------|-------------|----------------------|
| Non-Anglophone | | | | | | | | | |
| Austria | 0 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 5 |
| Belgium | 1 | 0 | 1 | 1 | 1 | 5 | 0 | 0 | 9 |
| Brazil | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| China | 4 | 1 | 0 | 5 | 0 | 1 | 1 | 5 | 17 |
| Colombia | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Finland | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| France | 0 | 1 | 1 | 1 | 2 | 2 | 0 | 0 | 7 |
| Germany | 2 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 8 |
| Hong Kong | 1 | 1 | 0 | 1 | 1 | 4 | 2 | 1 | 11 |
| Israel | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Italy | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 4 |
| Japan | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 5 |
| Luxembourg | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Malta | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Netherlands | 4 | 0 | 2 | 1 | 4 | 2 | 8 | 1 | 22 |
| Norway | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Portugal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Singapore | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| South Africa | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Spain | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| Sweden | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 |
| Switzerland | 1 | 0 | 0 | 3 | 0 | 1 | 2 | 1 | 8 |
| Total non-Anglophone | 22 | 7 | 5 | 19 | 14 | 25 | 16 | 11 | 119 |
| Percent non-Anglophone | 37.9 | 25.9 | 10.9 | 33.3 | 50.0 | 37.9 | 36.4 | 28.2 | 32.6 |
| Anglophone | | | | | | | | | |
| Australia | 3 | 1 | 0 | 5 | 0 | 3 | 2 | 2 | 16 |
| Canada | 1 | 0 | 3 | 2 | 2 | 6 | 1 | 2 | 17 |
| Ireland | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 2 | 6 |
| New Zealand | 2 | 1 | 2 | 1 | 0 | 1 | 0 | 2 | 9 |
| UK | 8 | 9 | 6 | 6 | 3 | 14 | 22 | 7 | 75 |
| USA | 22 | 9 | 29 | 22 | 9 | 16 | 3 | 13 | 123 |
| Total Anglophone | 36 | 20 | 41 | 38 | 14 | 41 | 28 | 28 | 246 |
| Percent UK | 13.8 | 33.3 | 13.0 | 10.5 | 10.7 | 21.2 | 50.0 | 17.9 | 20.5 |
| Percent USA | 37.9 | 33.3 | 63.0 | 38.6 | 32.1 | 24.2 | 6.8 | 33.3 | 33.7 |
| Percent Anglophone | 62.1 | 74.1 | 89.1 | 66.7 | 50.0 | 62.1 | 63.6 | 71.8 | 67.4 |
| Journal Total | 58 | 27 | 46 | 57 | 28 | 66 | 44 | 39 | 365 |

Note: Numbers include book review editors and for all reflect the country of the institution the team member is affiliated with on journal masthead.

Figure Captions

Figure 1 *Years since PhD by gender, selected journals, 2020*

Figure 2 *Distribution of journal editorial team by gender and position*

Figure 3 *Editorial team members by continent and country*

Figure 4 *Intersection of internationalization and gender, selected journals, following SMI*

Figures

Figure 1 *Years since PhD by gender, selected journals, 2020*

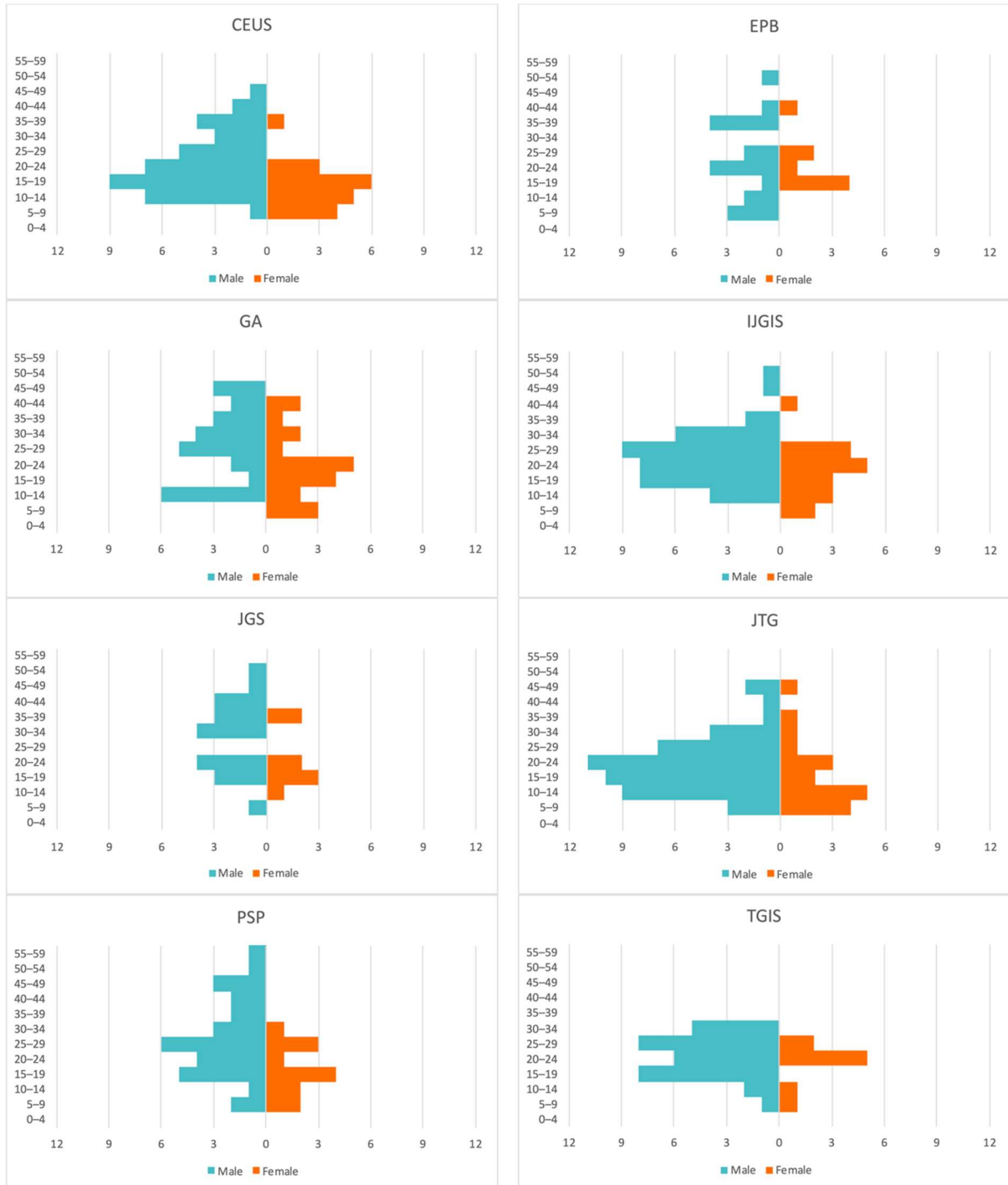


Figure 2 *Distribution of journal editorial team by gender and position*

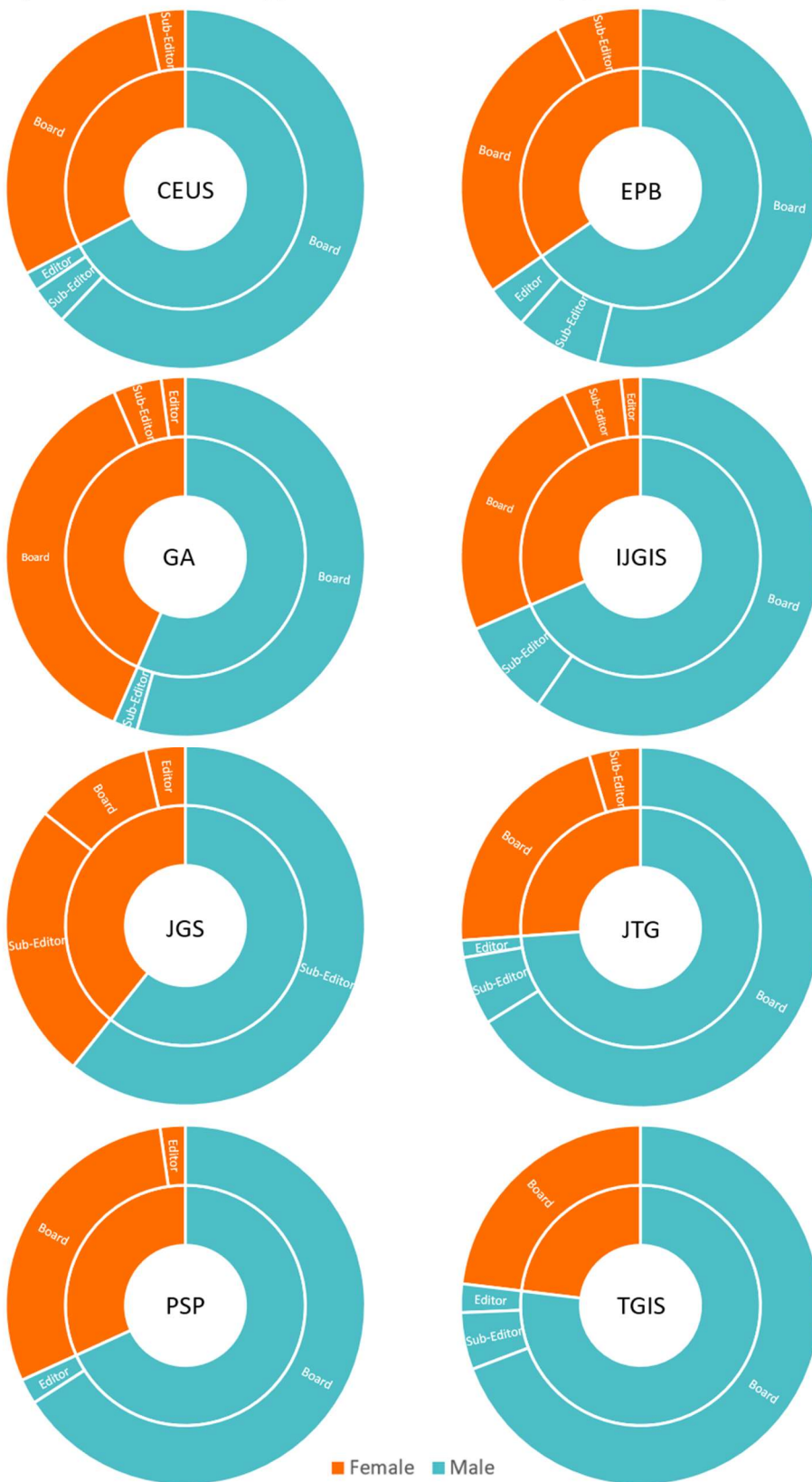


Figure 3 Editorial team members by continent and country



Figure 4 *Intersection of internationalization and gender, selected journals, following SMI*

