

## RESEARCH ARTICLE

# Increasing Diversity in Emerging Non-religious Communities

Christopher Hassall\* and Ian Bushfield†

Contemporary growth in non-religious populations has given rise to novel communities with unique perspectives on social issues. We describe a study of diversity within speakers at conferences organised by and attended by the atheist community. We analyse trends in diversity of 630 speakers, corresponding to 1223 speaking slots at 48 conferences conducted for the purpose of discussing or espousing non-religious views over the period 2003–2014. Diversity among speakers (defined using multivariate statistics in terms of the representation of women and non-white people) increased significantly over time during the period studied. This broadening participation may have arisen from interventions to address issues of representation or may simply reflect a generational shift in the demographics of the community. However, on-going problems with data collection and the imbalance in the social cost of identifying as non-religious between different social groups continue to impede efforts to reduce barriers to equality within this growing movement.

## Introduction

The number of people both not identifying as religious (a passive non-religiosity) and actively identifying as non-religious (an active non-religiosity) has increased over the past 10 years (WIN-Gallup International Poll 2012). Approximately 16% of the world's population is unaffiliated with a religion resulting in the third largest religious 'affiliation' on the planet behind Christianity and Islam (Pew Research 2012). Surveys that compare belief with belonging (i.e. affiliation) show that (in the UK, at least) measuring religious adherence using data on affiliation over represents religious groups (Voas and Crockett 2005). For example, 62.1% of respondents in the British Household Panel Survey (BHPS) answer "yes" to the question "do you regard yourself as belonging to any particular religion?" while only 36.9% when asked "how much difference would you say religious beliefs make to your life? Would you say they make a little difference, some difference, a great difference or no difference?" respond with "some" or "great difference" (Voas and Crockett 2005). Taken together, these two statistics suggest that while a large number of UK residents identify with a religion, their worldviews are not conventionally religious. Furthermore, there is a consistent generational decline in religiosity in some countries leading to ever-decreasing proportions of people adhering to religious beliefs (Voas and Crockett 2005).

We distinguish between two groups within the large and growing non-religious community: (i) the larger pool of

"nones" who profess no religion, and (ii) the atheist, agnostic, secular, and skeptical communities that actively profess a non-religious worldview. While the former group presents a series of interesting questions for researchers, such as how nones interact with socio-religious issues in society and if/where nones find social fulfilment if not through religious communities, we focus on the latter group of "out" atheists (Anspach, Coe and Thurlow 2007). Some of these out atheists form communities that are defined by their shared nonbelief, such as the International Humanist and Ethical Union, which acts as an umbrella group to almost 100 national membership-based organisations in 37 countries, and which in turn comprise thousands of local, community-based branches. This multinational group is open about their lack of religion despite the negative social consequences that can result in some contexts (Edgell, Gerteis and Hartmann 2006). Since membership of this community may entail a social cost for an individual, one should consider both the potential benefits that offset that cost and if/whether the structure of the community is designed to minimise that cost. Furthermore, out atheists often reject not only what they view as false religious beliefs, but also the concomitant negative social conditions they associate with those beliefs, such as patriarchal social structures and resulting gender inequality. While atheism, agnosticism, secularism, and skepticism are distinct identifications, all of these communities have undergone similar demographic transitions and so we shall follow Miller (2013) in taking them as a single "atheist community." We have, therefore, a growing atheist community that is attempting to define itself without reference to existing religious precepts, and that is focused upon perceived problems associated with religion in terms of the oppression of women and minorities.

\* University of Leeds, UK  
c.hassall@leeds.ac.uk

† Independent researcher, UK  
ian@bushfield.me.uk

We propose that the current state of the atheist community can be better understood by drawing parallels with the better-studied case of academia. However, before continuing, there are two important pieces of theory to introduce relating to the subject matter of this paper:

### Gatekeepers

Lewin's Gatekeeper model can help us understand the atheist community and the academic community it parallels. According to Lewin's model, the flow of ideas, behaviours, goods, and the social movement of people through a system or organisation can follow a large number of potential "channels" corresponding to particular phenomena (Lewin 1947, p146). Channels are said to have "gates" where decisions are made in response to particular confluences of motivating factors, such that the factors influencing decisions are different before and after the gate. Lewin gives the example of purchasing an expensive food item: the desire not to waste money (a motivating factor) initially hinders the purchase of that item, but once the item has been purchased the same motivation ensures that the item is used to the greatest benefit. Hence the same motivation of not wishing to waste money reverses its direction of action depending upon which side of the gate the decision resides. Since gates act as critical points along channels, Lewin argues that those individuals with the greatest influence over the decisions made at gates (termed the "gatekeepers") are the most significant targets for interventions to effect behavioural (at a small scale) or systemic (at a larger scale) change. The gatekeeper metaphor has been explored in a number of cultural settings, including popular music (Peterson and Berger 1975), the fashion industry (Hirsch 1972), and literature (Grissold 1981). In the majority of cases these gatekeepers are responsible for controlling the flow of cultural items into the wider environment, but there are particular cases where a cultural item may be inextricably linked to its creator, producing a situation in which a creator's social progress is also tied to the fate of their creation. Perhaps most relevant among these examples is that of the newsroom, where small groups of senior editorial staff decide which articles deserve to be placed in the varying levels of prominence within a publication (Clayman and Reisner 1998). Clayman and Reisner draw a distinction between the components of editorial decision making that rely upon objective criteria for newsworthiness, which account for ~20% of the variance in decisions, and the social context within which those decisions are made. It is that latter social context that is central to the concept of gatekeeping, and which appears to play a substantial role in both the determination of where news stories are placed within a publication and the resulting exposure for the author. This newsroom situation has a direct parallel with academia, where the publication of papers, the hiring of academic staff, and the awarding of grants are decided by small groups of individuals who each offer personal perspectives on the work being evaluated. Recent work by Van Den Brink and Benschop (2014) highlights networking practices among gatekeepers as a potential

driver for gender inequality in academic hiring, emphasising the importance of understanding gatekeepers. The same process occurs during the development of conference speaker lists, allocating applicants to different tiers of prestige according to the value of the work, although this aspect of academia has been little-studied.

### Conferences

We argue that a conference presentation, whether academic or lay, is a form of creative output that is analogous in impact to outputs that are produced and disseminated through print or other media. As a result, we do not define conferences as a separate area of research, but as an extension of the wider creative arts. This view is certainly supported by the UK Research Excellence Framework – the method of research evaluation common to all UK Higher Education Institutions – which includes both "conference contributions" and "journal articles" as accepted outputs (Research Excellence Framework 2013). Within the academic field of computer science, conference presentations at leading conferences are equivalent to journal publications in mid-ranking journals, constituting a substantial contribution to an academic's portfolio of work (Freyne et al. 2010). Such outputs are routinely found on resumes and requested as evidence of academic excellence by probation, tenure, and promotion committees. While much work has been conducted on the issues surrounding gender, academic publishing, and academic career progression, the topic of conferences per se has been neglected, suggesting that more research might be needed. We do know that there is direct interaction between people at a conference, while written interactions involve a greater degree of separation. It has been shown, for example, that women are less likely to ask questions of speakers but more likely to be asked questions at an astronomical conference (Davenport et al. 2014). Conferences are also opportunities for informal discussion of ideas (both during presentations and through informal discussions), while written communication of research findings almost always involves comments on a final version of record. An additional dimension to the conference experience is that of networking, whereby social mobility can be enhanced through meeting key gatekeepers.

### Academia as a model for the atheist community

Both the atheist community and academia pride themselves on an empirical perspective on social justice issues and both tend to be self-governing with little recourse to external guidance. Evidence has shown that gender discrimination still plagues academia. At a fundamental level, it appears that there is a devaluing of the contribution of women (Moss-Racusin et al. 2012), stereotype threat looms large (Ceci, Williams and Barnett 2009), and female researchers tend not to position themselves so as to achieve their potential (Farrington 2012). These proximate factors are likely the drivers behind the underrepresentation of women as speakers at academic conferences, a key component of academic success that contributes to career progression (Van den Brink 2011), in fields such

as primatology (Isbell, Young and Harcourt 2012), evolutionary biology (Schroeder et al. 2013), microbiology (Casadevall and Handelsman 2014), and theology and religious studies (Guest, Sharma and Song 2013). It is worth noting, however, that datasets spanning longer time periods suggest that the increasing representation of women among speakers is an ongoing process and that present underrepresentation may be a transitory state (Genoways and Freeman 2001). In addition, there seems to be a lack of predictability about which fields experience gender imbalance. For example, fields such as astronomy, where women are traditionally less well-represented appear to have achieved a representative level of participation by women at conferences (Davenport et al. 2014), while fields such as primatology, in which women are numerically dominant, have less representation of women than might be expected (Isbell, Young and Harcourt 2012). Furthermore, there are correlations between the presence of women on conference organiser groups and the representation of women at those conferences (Casadevall and Handelsman 2014), suggesting a potential (if partial) solution. The selection of researchers to present their work in front of their peers is a mark of respect and prestige, particularly in the case of high-profile invited plenary talks. The underrepresentation of women in these positions of prestige is considered to be detrimental both to the female researchers who miss an opportunity for career advancement, but also to the wider community who miss an opportunity to hear about top quality research. These factors provide a two-fold motivation for fair representation of women at academic conferences.

There are a number of parallels between this situation in academia and the history of the atheist movement. The atheist movement originated with a small number of middle/upper-class white men, who still form the leadership of the majority of atheist organisations. As in academia, these men act as gatekeepers for the flow of ideas and the social movement of individuals through the movement (van den Brink and Benschop 2014). The atheist movement has also traditionally been driven by a small number of superstars travelling around lecture circuits, largely based in the UK and the USA, by whose particular ideas and processes become normative (Gibson and Klocker 2004). A good example of this phenomenon of superstars is the “Four Horsemen”: Richard Dawkins, Daniel Dennett, Sam Harris, and the late Christopher Hitchens, whose books have collectively sold millions of copies in multiple languages. All four are white, well-educated, male, and residents in the UK or USA. Finally, as in academia, conferences and congresses play a major role in the atheist community. These conferences can be on a similar scale to the larger academic conferences, attracting up to 1650 attendees (for The Amazing Meeting 9 in 2011). However, discussions of the representation of women and minorities (particularly with respect to race and disability) have involved little attempt at quantitative analysis of the community. In particular, there are questions of what constitutes “fair representation” of each group, what should be done in order to promote those

groups that are considered to be underrepresented, and whether current and past attempts at encouraging underrepresented groups have been successful. This final issue of an evidence-based approach to increasing diversity is of particular interest (Pitts 2011). Miller (2013, p 221) defines three problems caused by the lack of qualitative and quantitative data on women speakers at atheist conferences: “*It is problematic for the atheist movement in terms of attracting more female members; it is problematic for the women in the movement who are being rendered invisible; and it is problematic for researchers and writers who are not documenting and analyzing the full range of atheist communities and experiences.*”

Over recent years, the atheist community has sought to resolve issues of diversity within the movement. For example, one leading organiser stated in July 2011 that it was time to “...take diversity seriously, and to make the skeptics movement a welcoming place for all people, regardless of gender or sex or race or sexual orientation” (Grothe 2011). These comments were part of a wider discussion that has been on-going over at least the past six years (for more details, see Miller 2013). In this study we produce a novel dataset of diversity in the atheist movement and use it to test two key hypotheses: (i) conference speakers are representative of the wider atheist community, and (ii) there are discernible trends away from the predominance of white males as leaders in the atheist community over a 12 year period. We first present a quantitative analysis of gender differences in atheist communities around the world. We then provide an analysis of the diversity of speakers at 48 atheist conferences held between 2003 and 2014 to investigate trends over time in the representation of women and non-white speakers.

## Methods

### *Global demographic data*

While previous analyses of scientific conference speakers have had access to demographic statistics for their community, few such statistics exist for the atheist community. In an attempt to establish a baseline gender ratio within the movement, we analysed census data from the United Nations Statistics Division “Population by religion, sex and urban/rural residence” collection (<http://data.un.org>, access date 21/03/2014). These data include 15,809 records of census entries for 96 countries or areas, under 385 religious classifications. While the atheist communities of different countries may fall into different classifications depending on the categories found on census forms, we selected the following categories as being most likely to be relevant to the atheist community: “Agnostic”, “Atheist”, “No Afiliation” [sic], “No Religion”, “Non-believers”, “None”, and “None or Refused”. We acknowledge that this may appear to be a rather large pool of potential respondents from which to characterise an “atheist” community, but as we discuss above the number of people identifying as non-religious is still likely to under represent the true number of atheists in many populations due to large differences between a sense of belonging and belief (Voas and Crockett 2005).

Indeed, work carried out on the UK census suggests that respondents are “...*ambivalent about their religious identities until the census questions were read out to them. Presented with a list of options, their identity suddenly crystallised in a way that seemed to suggest not that they were, for example, Christian but – perhaps more importantly – that they were not one of the ‘others’.*” (Day and Lee 2014, p346). We therefore view data from any census as only a vague approximation of true patterns of religiosity, but feel that any identification with a non-religious identity (that of the “*other*” to which Day and Lee refer) in such census data is more likely to correlate with an atheistic worldview simply because of the requirement for substantial personal investment, in many contexts, in any view that is not religious. The raw data were analysed in R (R Development Core Team 2013) which was used to remove all religious classifications other than those mentioned previously, to remove any breakdown according to urban/rural residence (leaving only “total”), and to leave only data for males and females individually rather than both combined. In some cases, countries had multiple censuses and so the most recent was selected in each case. The sex ratio of the atheist community (defined by those categories above) was calculated for each census in each country. It is worth noting that the United States census does not ask about religion and so data for the US was obtained from surveys (Pew Forum on Religion and Public Life 2008). Data were available for 67 countries and regions including the US (summary data are available in Table S1). A two-sampled, two-tailed t-test was used to test whether the sex ratios of international atheist communities were significantly different from the sex ratios of their respective countries (obtained from the CIA World Factbook, Central Intelligence Agency 2014).

### **Conference diversity data**

Data on attendance at atheist conferences were obtained from websites, brochures, and in a small number of cases by contacting conference organisers directly. We extracted data for 48 conferences held between 2003 and 2014 (dates and names of conferences are available in Table S2), with a total of 1223 speaker slots and 630 different speakers. For each speaker, we searched online resources for biographical details related to (i) gender, (ii) age at time of conference, (iii) race, (iv) nationality, and (v) education. When not explicitly mentioned in biographical data, we made reasonable assumptions for gender based on name or photograph, age estimated as 21 years prior to the speaker’s undergraduate degree award, nationality based on biographical details (such as alma mater), and race from photographs or on name and nationality. Further, we classified education along an ordinal scale as follows: high school=1; some college=1.5; unknown=2; bachelor’s degree=2; law degree=3; master’s degree=3; some doctoral education =3.5; doctorate=4. We assigned speakers whose educational level was unknown the same rating as speakers with a bachelor’s degree because the overwhelming majority of speakers held a bachelor’s degree or higher. Data are available in Table S3.

As with previous studies of this kind (e.g. Davenport et al. 2014), we made a number of assumptions during the collation of publicly available data. First, the use of a binary gender variable assumes that all participants identify as male or female, and the gender variable represents the gender that the speakers identify with. Second, using a binary white or non-white variable is bound to omit a large number of hidden minorities whose race is not immediately apparent from their appearance or is not dominant in their place of origin. In both cases we regret the blunt nature of the analysis and would welcome any suggestions as to how to improve future analyses. Clearly, in both cases, the method of evaluation used to collect data reflects the perceptions of the authors with their attendant assumptions and experiences. However, we feel that while objectively inaccurate in some cases, this subjective method has merit for the purpose of this analysis.

We present descriptive statistics of the race, education, and age of male and female speakers separately and as a group (statistics for each conference can be seen in Table S4). While gender and race are of primary concern here, we also conduct a composite measure of diversity based on Gower distances on the traits (gender, age, education, nationality, race) to account for the mixture of quantitative and qualitative traits (Laliberté and Legendre 2010). These data were then summarised to give a single diversity value for each conference using Rao’s quadratic entropy statistic (Rao 1982). Rao’s statistic takes the sum of the squared distances between the speakers in multivariate space. We calculate three key response variables for each of the 48 conferences: the proportion of female speakers, the proportion of non-white speakers, and the diversity based on Rao’s index. These are then analysed using Spearman’s rank correlations to test for an association between each response variable and the date of the conference to which the data relate. We further examine the effect of the identity of the organisation that was facilitating the conferences, using mixed effects models with date as a linear predictor and organiser as a random effect. R code for all analyses is available on request from the corresponding author.

## **Results**

### **Global demographic data**

Sex ratios within global atheist communities were available for 67 countries or areas, which ranged in their atheist populations from 0 (the small island of St Helena in 2008) to >60,000,000 (Vietnam, which is officially an atheist nation with 81% of its population declaring themselves to be non-religious). The proportions of those populations made up of women ranged from 0.272 (Montserrat) to 0.571 (Tonga), with an average of 0.423 and a lower and upper 95% confidence interval of 0.409 and 0.438, respectively. In the UK and the US, the two countries with the largest number of conferences in the dataset, the population sex ratios (M: F) were 1.03 and 1, while the corresponding sex ratios among atheists were 1.26 and 1.44, respectively. A two-sampled, paired t-test showed that on average the proportion of women identifying as

atheist (based on the classifications outline in the methods) was significantly lower than would be expected given the sex ratios of the 67 countries ( $t=-8.543, p<0.001$ ). The high levels of atheism in Vietnam raise the issue of affiliation and belief that we highlighted in the introduction. However, Vietnam is the only nation in our data which has been declared an atheist state, and the omission of Vietnam from the analysis does not affect the result of the analysis (mean proportion of female atheists=0.428; 95% confidence intervals 0.415–0.442; this ratio is still significantly different from 0.5:  $t=-10.276, p<0.001$ ).

**Conference diversity data**

**Table 1** shows a breakdown of conference participants first by gender and then by age, education, and race. The total proportion of speakers who were female was 0.305, considerably below the 95% confidence intervals for the global community. The total number of speaker slots taken by women was 0.316, which is also significantly below our estimates of the global proportion of women identifying as atheists (**Figure 1**). There was a significant, positive relationship between the date of each conference and the proportion of women presenting ( $\rho=0.623, p<0.001$ ), the proportion of non-white people presenting ( $\rho=0.482, p=0.001$ ), and the overall diversity of speakers ( $\rho=0.499, p<0.001$ ; see **Figure 2**). When the identity of conference organisers was taken into account, the significant temporal trend was still seen in diversity ( $F_{(1,31-46)}=14.275, p<0.0005$ ), proportion non-white ( $F_{(1,31-46)}=4.275, p<0.050$ ), and proportion female ( $F_{(1,31-46)}=12.756, p<0.005$ ). Note that three conferences were comprised entirely of female speakers (the Women in Secularism Conferences, “WISC”). Due to concerns over whether these conferences might bias the results for female representation and overall diversity, analyses were repeated without those three conferences. With those conferences omitted, there is still a significant increase in the proportion of women presenting ( $\rho=0.584, p<0.001$ ) and the overall diversity of conferences ( $\rho=0.618, p<0.001$ ) over time.

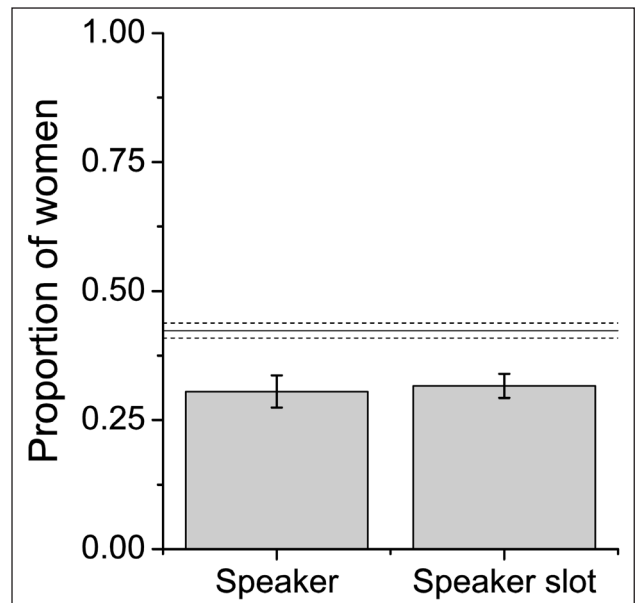
**Discussion**

Affirmative action and a wider awareness of gender bias have brought about huge changes in the representation of women in society over the past century (Blau and Kahn 2007). However, addressing the final stages of gender equality is likely to be the hardest as this relies on tackling indirect and implicit biases (Farrington 2012). Here, we show that the same is true for the atheist community, which has succeeded in significantly increasing the representation of not only women but also non-white members of the community at prestigious conferences. The conclusions are based on a substantial analysis of a large number of conferences using an ecological approach to calculating diversity.

Previous examples of successful attempts to increase diversity at conferences have rested on the institution of specific rules for the conference, such as the incorporation of women onto panels to select speakers (Casadevall and

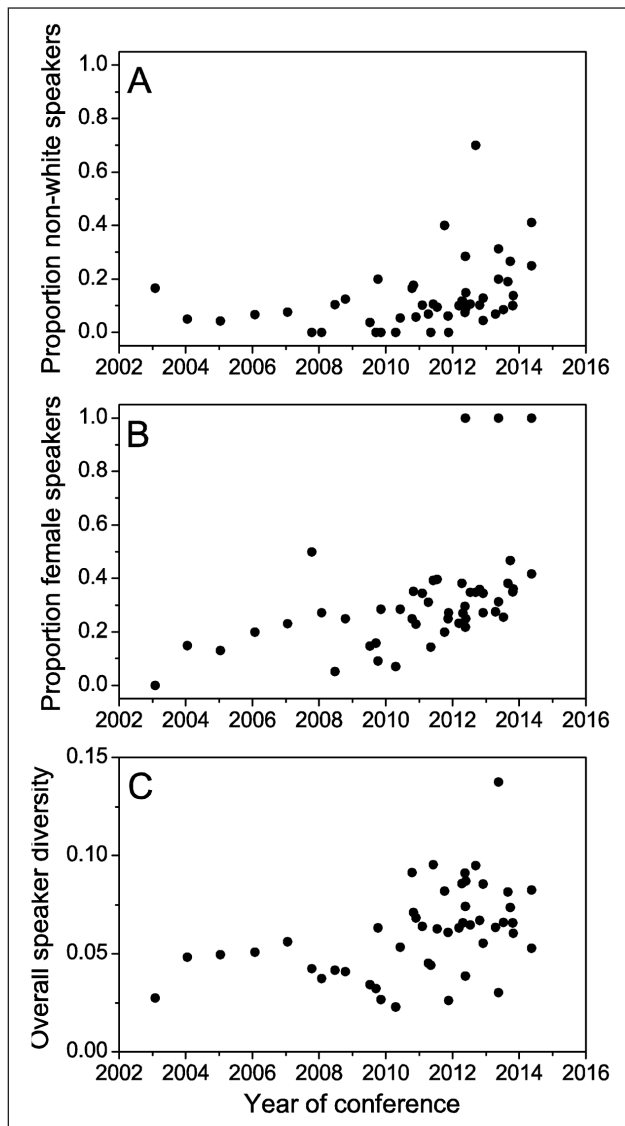
	Males	Females	Total
Mean age ( $\pm$ SE)	49.03 (0.03)	43.91 (0.07)	47.46 (0.56)
Education			
High school (%)	50 (11.4)	18 (9.4)	68 (10.8)
Bachelors (%)	147 (33.6)	77 (40.1)	224 (35.6)
Masters (%)	53 (12.1)	30 (12.1)	83 (13.2)
Doctorate (%)	172 (39.3)	62 (39.3)	234 (37.1)
Unknown (%)	16 (3.7)	5 (2.6)	21 (3.3)
Race			
White	383	156	539
Non-white	51	35	86
Unknown	4	1	5
Total	438	192	630

**Table 1:** Demographic data for 630 speakers at 48 atheist conferences between 2002 and 2014.



**Figure 1:** Gender ratios in the wider atheist community calculated from international census data (solid horizontal line represents mean, dotted lines give 95% confidence intervals) compared against the proportion of speakers and speaking slots at 48 atheist conferences.

Handelsman 2014). However, much of the work toward greater diversity at conferences has been held back by the absence of a systematic method of data collection. While we were able to find a number of suggestions as to how to redress the gender balance in academia (with potential application of those suggestions to a range of other arenas), we did not come across any reports of on-going empirical tests of those interventions. A further problem arises with demographic inertia in diversity, whereby notable individuals within a group remain notable and new individuals require time to establish themselves. Hence the six members of the all-male speaker list at the first



**Figure 2:** Changing demographics in speakers at 48 atheist conferences over time: (A) changes in the proportion of non-white speakers, (B) changes in the proportion of female speakers, and (C) changes in overall speaker diversity based on age, gender, race, nationality and education.

conference in our dataset (The Amazing Meeting in 2003) have 23 speaking appearances between them. While demographic inertia can be accounted for using models of academic career paths, it is unclear how this could be incorporated into models of speaker history in the case of the atheist community (Shaw and Stanton 2012).

It is clear from both the composition of the global community, based on demographic data, and the composition of the leadership in the atheist movement, based on the subset of the community selected to speak at conferences, that white men still dominate. Miller (2013) has suggested that this preponderance of white males in the movement is due to the cost associated with living openly as an atheist in many communities. Certainly the costs associated with being “out” as an atheist are manifold: there is a substantial component of wider societal

mistrust of atheists, even compared to other groups such as Jews, Catholics, African Americans, and homosexuals who have traditionally been victims of discrimination (Edgell, Gerteis and Hartmann 2006). Research has revealed the many forms that anti-atheist discrimination takes, including verbal abuse, social ostracism, and coercion into performing religious acts (Hammer et al. 2012). Meanwhile, atheists, agnostics, and the unchurched in general may suffer from a lack of social support (Baker and Smith 2009). However, while these sorts of studies provide a deeply negative view of life as an atheist, it is worth noting that the costs are situation-dependent and frequently represent little burden to those who already enjoy a degree of societal privilege. For example, in the study of Hammer et al. (2012) frequencies of serious discrimination (e.g. denial of goods or services, hate crimes) were <10% across the survey of 1,038 participants, while the most common discrimination was being asked to take part in religious rituals (75–80% reported at least one instance) or seeing anti-atheist comments in the media (95% reported at least one instance). It is highly likely that the social costs vary with geography, due to variation in levels of religiosity, and that those members of society with sufficient privilege are capable of bearing that cost more easily, which may explain the socio-demographic similarities within groups of individuals identifying as atheists (Pasquale 2012). A recent study provided evidence that identifying as “atheist” may produce anti-religious discrimination in line with discrimination against Christians, Jews, and Pagans, while not mentioning religion removed this discrimination (Wright et al. 2013). The issue over how atheists are perceived in the context of wider religious identification and the notion of “believers” vs. “others” requires more attention.

**Next steps**

So what can we learn from the theoretical framework and empirical approach described above? There appear to be a few clear courses of action for those who wish to promote greater diversity based on the central principles of the gatekeeper model and more recent work on the sociological study of academia:

1. Monitoring prior to intervention – the substantial amount of work involved in searching for equality data on past conference participants demonstrates the lack of consistent and comprehensive methods for the evaluation of any future interventions. Indeed this has been observed in a number of previous studies as well, which have used informal methods of data gathering (e.g. observations of presented gender of speakers, Casadevall and Handelsman 2014; Davenport et al. 2014). If the collection of such data was conducted using best practices for human research, and coordinated through an institutional ethical review board from the outset then this data could provide a fascinating insight into questions of equality at conferences and other events, as well as the effectiveness

of equality interventions in general. Such monitoring is essential in the absence of randomised controlled trials to deliver top quality evidence.

2. Use evidence-based interventions – while there is a general lack of data on the effectiveness of particular interventions, there have been a number of propositions for reduction in gender bias. In particular, interventions should be grounded in theory, should involve active learning on the part of participants, and should avoid assigning blame to prevent excessive backlash (Moss-Racusin et al. 2014). Interventions should also be clear about their outcome measures, such as increasing awareness, decreasing implicit and explicit bias, and promoting positive behavioural change (Moss-Racusin et al. 2014).
3. Target and diversify gatekeepers – while not experimentally controlled, there is evidence from observational studies that the number of female gatekeepers (in this case conference organisers) increases the representation of women speaking at conferences (Casadevall and Handelsman 2014). As has been highlighted for editorial newsrooms (Clayman and Reisner 1998), there is frequently a lack of transparency over the processes involved in the selection and promotion of members of communities to prominent positions (e.g. conference speakers). Gatekeepers (both male and female) therefore represent important candidates for study, and a primary target for the sort of evidence-based interventions described above.
4. Provide female-directed support – standard networking practices involve the reinforcement of gender inequality through homophily in male-dominated fields (van den Brink and Benschop 2014). Recent efforts to encourage female-dominated and female-led sub-communities (e.g. [www.skep-chick.org](http://www.skep-chick.org), Boynton 2012; Women into Science and Engineering (WISE), Phipps 2008) have received little empirical evaluation as engagement and equality tools, but provide a potential solution to the lack of female mentors within the male-dominated communities.

We hope that we have demonstrated the value of diversity monitoring in the atheist community and we encourage the organisers of future conferences or past conferences that have not been included in this paper to contact the corresponding author with conference program details and speaker biographies. Given the relatively close links between organisers of conferences within fields (be it academia or atheism), there should be scope for a consistent recording schema for the on-going evaluation of diversity in invited and presenting speakers at conferences. By way of example, all of the data used in this analysis are available as supplementary data to this paper and we hope that they are of use to organisers in future work towards studying the role of equality in conference participation (<http://figshare.com/articles/>

[Increasing\\_diversity\\_in\\_emerging\\_non\\_religious\\_communities\\_data\\_/1264995](http://figshare.com/articles/Increasing_diversity_in_emerging_non_religious_communities_data_/1264995)).

### Supporting Information

Increasing diversity in emerging non-religious communities (data): Tables S1-S4 (XLSX)

### References

- Anspach, W., Coe, K. and Thurlow, C.** 2007 The other closet?: Atheists, homosexuals and the lateral appropriation of discursive capital. *Critical Discourse Studies*, 4(1), pp. 95–119. DOI: <http://dx.doi.org/10.1080/17405900601149509>
- Baker, J. O. and Smith, B. G.** 2009 None too simple: Examining issues of religious nonbelief and nonbelonging in the United States. *Journal for the Scientific Study of Religion*, 48, pp. 719–733. DOI: <http://dx.doi.org/10.1111/j.1468-5906.2009.01475.x>
- Blau, F. D. and Kahn, L. M.** 2007 The gender pay gap: have women gone as far as they can? *The Academy of Management Perspectives*, 21(1), pp. 7–23. DOI: <http://dx.doi.org/10.5465/AMP.2007.24286161>
- Boynton, P.** 2012 Getting the press we deserve: Opportunities and challenges for innovative media practice. *Feminism & Psychology*, 22(4), pp. 536–540. DOI: <http://dx.doi.org/10.1177/0959353512463557>
- Casadevall, A. and Handelsman, J.** 2014 The presence of female conveners correlates with a higher proportion of female speakers at scientific symposia. *MBio*, 5(1), pp.e00846-13. DOI: <http://dx.doi.org/10.1128/mBio.00846-13>
- Ceci, S. J., Williams, W. M. and Barnett, S. M.** 2009 Women's underrepresentation in science: sociocultural and biological considerations. *Psychological Bulletin*, 135(2), pp. 218–261. DOI: <http://dx.doi.org/10.1037/a0014412>
- Central Intelligence Agency.** 2014 *World Factbook*. accessed 15/04/2014: <https://www.cia.gov/library/publications/the-world-factbook/fields/2018.html>.
- Clayman, S. E. and Reisner, A.** 1998 Gatekeeping in action: editorial conferences and assessments of newsworthiness. *American Sociological Review*, 63(2), pp. 178–199. DOI: <http://dx.doi.org/10.2307/2657322>
- Davenport, J. R. A. et al.** 2014 *Studying Gender in Conference Talks -- data from the 223rd meeting of the American Astronomical Society* [manuscript]. At: [arxiv.org](http://arxiv.org), arXiv [physics.soc-ph].
- Day, A. and Lee, L.** 2014 Making sense of surveys and censuses: Issues in religious self-identification. *Religion*, 44(3), pp. 345–356. DOI: <http://dx.doi.org/10.1080/0048721X.2014.929833>
- Edgell, P., Gerteis, J. and Hartmann, D.** 2006 Atheists as “other”: moral boundaries and cultural membership in American society. *American Sociological Review*, 71(2), pp. 211–234. DOI: <http://dx.doi.org/10.1177/000312240607100203>
- Farrington, J.** 2012 From the research: Myths worth dispelling: Gender—Still a long way to go. *Performance*

- Improvement Quarterly*, 25(2), pp. 107–114. DOI: <http://dx.doi.org/10.1002/piq.21116>
- Freyne, J.** et al. 2010 Relative status of journal and conference publications in computer science. *Communications of the ACM*, 53(11), pp. 124–132. DOI: <http://dx.doi.org/10.1145/1839676.1839701>
- Genoways, H. H.** and **Freeman, P. W.** 2001 Evolution of a scientific meeting: eighty annual meetings of the American Society of Mammalogists, 1919–2000. *Journal of Mammalogy*, 82(2), pp. 582–603. DOI: [http://dx.doi.org/10.1644/1545-1542\(2001\)082<0582:EOA SME>2.0.CO;2](http://dx.doi.org/10.1644/1545-1542(2001)082<0582:EOA SME>2.0.CO;2)
- Gibson, C.** and **Klocker, N.** 2004 Academic publishing as 'creative' industry, and recent discourses of 'creative economies': some critical reflections. *Area*, 36(4), pp. 423–434. DOI: <http://dx.doi.org/10.1111/j.0004-0894.2004.00242.x>
- Griswold, W.** 1981 American character and the American novel: an expansion of reflection theory in the sociology of literature. *American Journal of Sociology*, 86(4), pp. 740–765. DOI: <http://dx.doi.org/10.1086/227315>
- Grothe, D. J.** 2011 With TAM Right Around the Corner, Some Important Announcements [blog post, 09/07/2011]. <http://www.randi.org/site/index.php/jref-news/1354-with-tam-right-around-the-corner-some-important-announcements.html>, Accessed 20/03/2014.
- Guest, M., Sharma, S.** and **Song, R.** 2013 *Gender and Career Progression in Theology and Religious Studies*. Durham, UK: Durham University.
- Hammer, J. H.** et al. 2012 Forms, frequency, and correlates of perceived anti-atheist discrimination. *Secularism and Nonreligion*, 1, pp. 43–67. DOI: <http://dx.doi.org/10.5334/snrad>
- Hirsch, P. M.** 1972 Processing fads and fashions: an organization-set analysis of cultural industry systems. *American Journal of Sociology*, 77(4), pp. 639–659. DOI: <http://dx.doi.org/10.1086/225192>
- Isbell, L. A., Young, T. P.** and **Harcourt, A. H.** 2012 Stag parties linger: continued gender bias in a female-rich scientific discipline. *PLoS*, 7(11), pp. 49682. DOI: <http://dx.doi.org/10.1371/journal.pone.0049682>
- Laliberté, E.** and **Legendre, P.** 2010 A distance-based framework for measuring functional diversity from multiple traits. *Ecology*, 91(1), pp. 299–305. DOI: <http://dx.doi.org/10.1890/08-2244.1>
- Lewin, K.** 1947 Frontiers in group dynamics. *Human Relations*, 1, pp. 143–153. DOI: <http://dx.doi.org/10.1177/001872674700100201>
- Miller, A. F.** 2013 The non-religious patriarchy: why losing religion HAS NOT meant losing white male dominance. *CrossCurrents*, 63, pp. 211–226. DOI: <http://dx.doi.org/10.1111/cros.12025>
- Moss-Racusin, C. A.** et al. 2012 Science faculty's subtle gender biases favor male students. *Proceedings of the National Academy of Sciences*, 109(41), pp. 16474–16479.
- Moss-Racusin, C. A.** et al. 2014 Scientific diversity interventions. *Science*, 343(6171), pp. 615–616. DOI: <http://dx.doi.org/10.1126/science.1245936>
- Pasquale, F. L.** 2012 A portrait of secular group affiliates. In: P. Zuckerman, ed. *Atheism and secularity*. Santa Barbara, CA: Praeger, pp. 43–87.
- Peterson, R. A.** and **Berger, D. G.** 1975 Cycles in symbol production: the case of popular music. *American Sociological Review*, 40(2), pp. 158–173. DOI: <http://dx.doi.org/10.2307/2094343>
- Pew Forum on Religion and Public Life.** 2008 *U.S. Religious Landscape Survey*. Washington: Pew Research Center.
- Pew Research, C.** 2012 The Global Religious Landscape. *The Pew Forum on Religion & Public Life*, Retrieved 18 March 2013.
- Phipps, A.** 2008 *Women in Science, Engineering and Technology: Three Decades of UK Initiatives*. Stoke on Trent: Trentham Books.
- Pitts, D. W.** 2011 A little less conversation, a little more action: using empirical research to promote social equity. *Journal of Public Administration Research and Theory*, 21(suppl 1), pp. i77–i82. DOI: <http://dx.doi.org/10.1093/jopart/muq071>
- R Development Core Team.** 2013 *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing.
- Rao, C. R.** 1982 Diversity and dissimilarity coefficients: A unified approach. *Theor. Popul. Biol.*, 21(1), pp. 24–43. DOI: [http://dx.doi.org/10.1016/0040-5809\(82\)90004-1](http://dx.doi.org/10.1016/0040-5809(82)90004-1)
- Research Excellence Framework.** 2013 *Output collection formats: February 2013*. Date accessed: 25/09/2014: available from: <http://www.ref.ac.uk/subguide/>.
- Schroeder, J.** et al. 2013 Fewer invited talks by women in evolutionary biology symposia. *J. Evol. Biol.*, 26(9), pp. 2063–2069. DOI: <http://dx.doi.org/10.1111/jeb.12198>
- Shaw, A. K.** and **Stanton, D. E.** 2012 Leaks in the pipeline: separating demographic inertia from ongoing gender differences in academia. *Proceedings of the Royal Society B: Biological Sciences*, 279(1743), pp. 3736–3741. DOI: <http://dx.doi.org/10.1098/rspb.2012.0822>
- Van Den Brink, M.** 2011 Scouting for talent: appointment practices of women professors in academic medicine. *Social Science & Medicine*, 72(12), pp. 2033–2040. DOI: <http://dx.doi.org/10.1016/j.socscimed.2011.04.016>
- Van Den Brink, M.** and **Benschop, Y.** 2014 Gender in academic networking: the role of gatekeepers in professorial recruitment. *Journal of Management Studies*, 51(3), pp. 460–492. DOI: <http://dx.doi.org/10.1111/joms.12060>
- Voas, D.** and **Crockett, A.** 2005 Religion in Britain: neither believing nor belonging. *Sociology*, 39(1), pp. 11–28. DOI: <http://dx.doi.org/10.1177/0038038505048998>
- Win-Gallup International Poll.** 2012 Global Index of Religion and Atheism. *Press release*, <http://redcresearch.ie/wp-content/uploads/2012/08/RED-C-press-release-Religion-and-Atheism-25-7-12.pdf>.
- Wright, B. R. E.** et al. 2013 Religious affiliation and hiring discrimination in New England: A field experiment. *Research in Social Stratification and Mobility*, 34(0), pp. 111–126. DOI: <http://dx.doi.org/10.1016/j.rssm.2013.10.002>



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