‘No magic bullet’: An investigation into the first-class degree gender awarding gap at Oxford and Cambridge and how to address it

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About the author

Famke Veenstra-Ashmore was an intern at HEPI in the summer of 2024. She previously completed a BA and an MPhil in English at the University of Cambridge and now works as a parliamentary researcher.

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Executive summary

This HEPI report investigates the first-class gender awarding gap at the Universities of Oxford and Cambridge for undergraduate degrees. While women represent the majority of students in the UK and in most cases achieve the majority of first-class and 'good honours' degrees, the trend is bucked at some institutions including Oxford and Cambridge.

Though the size of the gaps varies by course, men are more likely to achieve first-class degrees at these institutions. The largest gap this report identifies is found in Classics at Oxford – 29 percentage points in favour of men in the 2021/22 academic year – and Theology at Cambridge with a 43.3 percentage point gap in favour of men in 2023/24. In other words, although 83.3% of men taking Theology at Cambridge received first-class honours, only 40.0% of women made the same grade. Figure 1 identifies the 10 largest percentage point gaps by course at Oxford and Cambridge using the latest publicly available data.

Figure 1: Courses with the largest gaps at Oxford and Cambridge

University of Oxford, 2021/22	Percentage point gap	University of Cambridge, 2023/24	Percentage point gap
Classics	29	Theology	43.4
Modern Languages	21	Asian and Middle Eastern Studies	32.2
Philosophy, Politics and Economics	19	Archaeology	29.8
Physics	19	Philosophy	21.7
History	18	Linguistics	21.1
Biochemistry	14	Mathematics	19.1
Chemistry	13	Geography	14.3
Law	10	Architecture	13.4
Music	7	Computer Science	12.9

Source: Cambridge data is from their online Information Hub https://www.information-hub.admin.cam.ac.uk/university-profile/ug-examination-results/results-course-dashboard; Oxford data is from their annual Gazette supplement https://gazette.web.ox.ac.uk/statistical-information-university-oxford. Oxford's data are only available rounded to the nearest whole number.

Using data, academic research and interview material, this HEPI Report covers the current state of the gender awarding gap at Oxford and Cambridge. The report also analyses the connection to gender equality.

Further significant takeaways from the data include:

- Female students generally outperform men in 'good honours' (first class and 2:1) and first-class degree outcomes across the UK higher education sector, except in the Social Sciences, where men outperformed women by 0.9 percentage points in the first-class bracket in 2021/22 (latest available data used).
- Almost all courses at Oxford and Cambridge had a first-class degree awarding gap favouring men in final honours exams in latest available data (excluding four subjects at Cambridge and two at Oxford).
- The only subjects with mean gaps favouring women were Geography, Human, Social, and Political Sciences, Land Economy and Psychological and Behavioural Science at Cambridge and Geography and Medical Sciences at Oxford.
- There is a correlation between courses with a low representation of female students and a high gender awarding gap, which is particularly pronounced in certain STEM (Science, Technology, Engineering and Mathematics) subjects.
- However, there are considerable gaps in subjects even where women are a significant majority, such as English Literature.

The report discusses several causes of the problem in new depth. It incorporates insights from academic researchers, staff and current students. Reasons which may be contributing towards the awarding gap include:

- **Exams:** the tendency for final-year examination-based assessment methods to determine the overall grade for undergraduate degrees, which research suggests disadvantages women from reaching the first-class bracket as they are generally less likely to take risks, are impacted by Premenstrual Syndrome (PMS) and are, in some cases, more likely to perform highly in coursework.

- **Representation:** many courses with significant awarding gaps have gender imbalances in both the student cohort and the teaching staff. Particularly pronounced in the STEM subjects, the representation problem can have a knock-on effect as role models are important for building confidence and encouraging aspiration.
- **The tutorial / supervision system:** Oxbridge's teaching style has been described as combative and confrontational, which is seen to disadvantage certain groups and have a knock-on effect on their exam performance. Female participants in a 2020 study reported their efforts to contribute to discussions were 'frequently thwarted by the domineering practices of male students'.[1]

In order to begin tackling these problems, the report recommends that:

- **Meaningful research with a genuine view to closing the gap should be funded.** For too long, the issue of the gender awarding gap at both Oxford and Cambridge has been discussed and researched without the accompaniment of actual change. Universities should empower themselves to experiment with methods of assessing academic progress: the pandemic showed us it is not only possible but can have positive results.
- **Institutions should avoid catch-all solutions and implement bold reforms.** This means instead of simply extending the timing of an examination by 15 minutes, a genuine overhaul of certain assessment methods needs to be made. The balance of examinations to coursework should be re-evaluated as well as the construction of question papers themselves – such as the scaffolding of questions.
- **Reforms should be accompanied by a reconsideration of awarding metrics.** The awarding gap is symptomatic of a broader institutional problem in relation to gender equalities. Institutions should ask themselves what it means to achieve a first-class degree in the current academic climate and whether the grading metric they are currently using stands up against the need to offer equal opportunity to all.

1. Introduction

What is the gender awarding gap?

There is a degree-awarding gap by gender in the United Kingdom. In the 2022/23 academic year, 78.0% of female undergraduates received 'good honours' (first class and upper second class) degrees.[2] By comparison, 73.6% of their male counterparts received this outcome. The gap between genders was 4.5 percentage points in favour of female students.[3] This trend is consistent across all four parts of the UK. A full account of the gender awarding gap at this level is in the Appendix.

Degree-awarding gaps are defined as significant differences between degree outcomes between different groups by certain characteristics. The largest awarding gap is found between students of different ethnicities and there are also gaps across other characteristics, such as disability. Often, gaps are narrowed or amplified by intersecting characteristics: for example, Black students from low socio-economic backgrounds are more adversely affected by awarding gaps.[4]

Women were first admitted to UK universities in the late nineteenth century. Women now outnumber men in higher education. In 2022/23, 57% of higher education students in the UK were female.[5] The overrepresentation of women is particularly pronounced at the undergraduate level, where 64% of students were female, but women are now also in the majority at the postgraduate level, at 51% in the same year.[6]

Mirroring the trend in primary and secondary schools, women tend to outperform men in the majority of subjects and institutions. Alongside entering higher education with higher entry rates, women are more likely to finish degrees, and to graduate with 'good honours'. However, there are prominent exceptions to this trend, with men outperforming women in certain classifications, subject groups and institutions in the UK.

The national gender awarding gap over time

Figure 2: Percentage of women and men achieving 'good honours' degrees at UK universities 2010/11 to 2022/23, plus the percentage point gap favouring women

Academic year	Female	Male	Gap
2010/11	68.7	63.4	5.3
2011/12	70.9	65.5	5.4
2012/13	72.8	67.6	5.3
2013/14	75.3	70.0	5.3
2014/15	75.9	71.3	4.6
2015/16	77.1	72.5	4.5
2016/17	78.6	74.0	4.5
2017/18	79.6	75.0	4.6
2018/19	79.6	74.5	5.2
2019/20	83.8	80.3	3.4
2020/21	84.5	81.4	3.1
2021/22	80.9	76.8	4.1
2022/23	78.0	73.6	4.5

Data source: Office for Students outcomes data

Figure 3: Percentage of women and men achieving 'good honours' degrees at UK universities 2010/11 to 2022/23

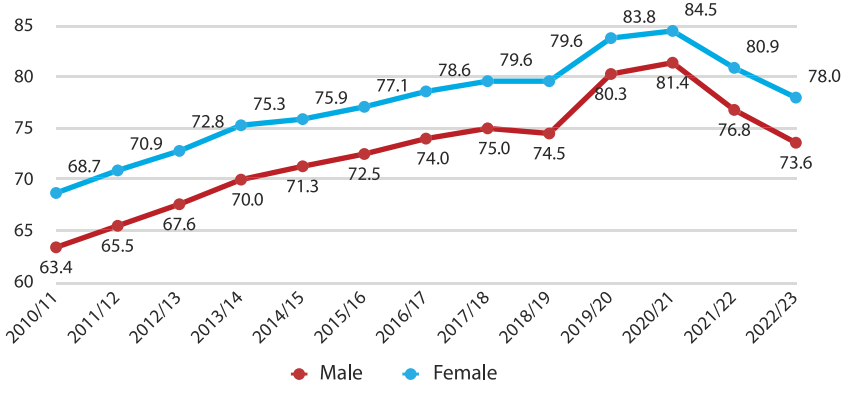
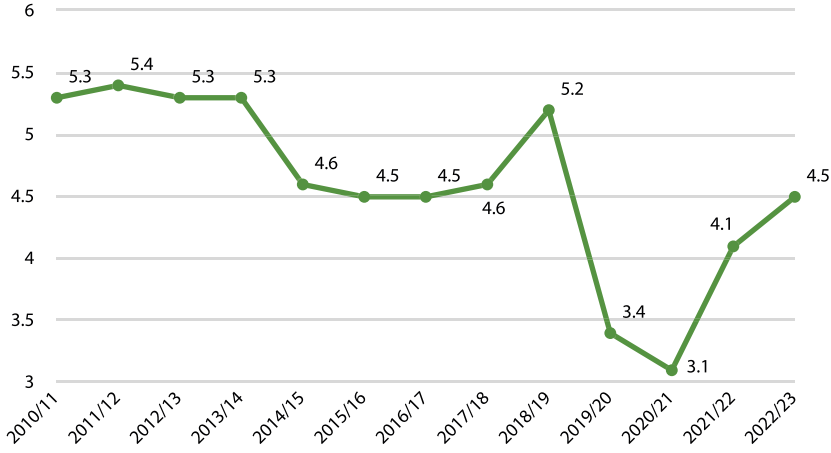


Figure 4: The percentage point gap over time between men and women at UK universities, 2010/11 to 2022/23



England's gender awarding gap is not considered significant enough to be included in many higher education institutions' Access and Participation Plans (APPs). However, it is still important to investigate any kind of structural inequality as they can indicate greater institutional problems, such as examining bias, issues with the format of assessments or a lack of academic support which favours or undermines the performance of a particular gender.

The HEPI report *Boys to Men: The underachievement of young men in higher education – and how to start tackling it* investigated the causes of the disparities in attainment between men and women at university.[7] Its Executive Summary acknowledges that men still outperform women in certain circumstances but does not analyse what causes such anomalies. I offer my report in response to the unanswered question of why certain universities and subjects buck the general trend.

The gender awarding gap at Oxbridge

There exist two significant institutional outliers to the national trend. The Universities of Oxford and Cambridge both have gender awarding gaps which invert the pattern observed nationally. At these universities, male students, despite being more or less equally represented in the student

population – 50% of Cambridge students and 48% of Oxford students are men – outperform female students.[8]

The inverted gender awarding gap at Oxford has existed since women were first awarded degrees at Oxford in 1920.[9] Dennis Ahlburg and Brian P McCall's 2021 paper 'One hundred years of the gender gap in examination results at the University of Oxford' evaluates a dataset from 1913 to 1986 to demonstrate the longevity of this trend.[10] It also suggests various causes which this report will cover in further detail, such as the 'cross-examination' style of tutorials and the lower academic self-esteem that some high-achieving women experience.

There is a similar inversion at Cambridge. The researcher NG McCrum describes the Oxbridge phenomenon as the 'academic gender deficit'.[11] His findings suggest that unique historical and institutional features of the two universities have contributed to the inversion of national trends. In recent years, Oxford and Cambridge have closed the gender awarding gap for good honours degrees, but significant gaps remain in first-class outcomes which buck national trends.

This report focuses on the gender awarding gaps at Oxbridge, rather than the national one. It argues that their different causes generally demand different solutions, though some suggested actions may be cross-compatible for both types of gaps. This will be discussed in Chapter 4.

Institutional recognition of awarding gaps

Many universities include the most prominent awarding gaps in their Access and Participation Plans (APPs). Some, such as the University of Southampton and the University of York, have set up specific projects or centres to tackle gaps.[12] Others, such as University College London (UCL), provide staff with awarding gap toolkits.[13] The University of Cambridge even has an Awarding Gaps Consultation Team designed to answer queries and guide departments on how to improve the gaps it recognises.[14] It is significant to note that my research found no institutions included the underachievement of men in their awarding gap pages. As HEPI's *Boys to men* showed, there is a long history of this group being ignored in such plans.

As for the gender awarding gap favouring men, Oxford aims to 'eliminate the undergraduate attainment gap by 2030'.[15] However, Cambridge has not recognised the gender awarding gap in its APP, despite the fact that in the 2022/23 academic year, Cambridge had an average gap of 8.3 percentage points for all undergraduate examinations.[16] This may be because the Office for Students (OfS) does not consider the gap in first-class degrees to be a significant problem.

Particularly at institutions such as Cambridge, which promises world-class education for all they admit – regardless of background – equal outcomes should be structurally assured. The University has promised to address the problem, telling the student newspaper *Varsity*, 'We have been carrying out extensive research into this persistent gender awarding gap and our commitment to understand, and address, the causes remains high'.[17]

Why the gender awarding gap at Oxford and Cambridge matters

Any systematic gaps in degree outcomes are likely to be symptomatic of greater institutional, departmental, educational or societal problems. Modes of assessment or examination may be advantageous for particular groups, or conversely certain groups of students may be impacted by unconscious biases or structural inequalities in support or learning, which need addressing across institutions.

In addition, gender awarding gaps have negative ramifications for the employment prospects of groups and individuals. It is generally agreed that graduating with 'good honours' is important to securing the best possible employment outcome, especially within academia. However, as participation in higher education increases, employers are increasingly interested in factors which differentiate between high-calibre applicants. Many students view a first-class degree as one way their CVs can stand out.[18]

The debate surrounding the value of a first-class degree remains contentious, though employers still value this distinction.[19] The 2022 Institute for Fiscal Studies (IFS) report *How much does it pay to get good grades at university?* drew on the Department for Education's Longitudinal Education Outcomes (LEO) dataset to show a positive correlation between high-degree classification and graduate earnings.[20] The study found that women who achieved first-class degrees earned around £2,200 per year more than women with upper second-class degrees.[21]

The HEPI report *Show me the money – an exploration of the gender pay gap in higher education* goes into further detail about the factors that contribute to gender inequalities in higher education.[22] If research suggests that fewer women achieve first-class degrees at Oxbridge, and first-class degree holders on average earn more, there is a financial implication that should be addressed.

But why should we care about such a particular awarding gap at two of the most prestigious and competitive universities in the UK? Oxford and Cambridge serve as two prominent examples of institutions with historical and prolonged awarding gaps which have also generated some thinking into how to address them. The financial and academic resources held by both institutions have enabled them to conduct much of the research into this issue. Other institutions can approach this report with the understanding that many of the problems affecting awarding inequalities are not exclusive to Oxford and Cambridge. The whole UK higher education sector might learn both from their failures and the progress they have made.

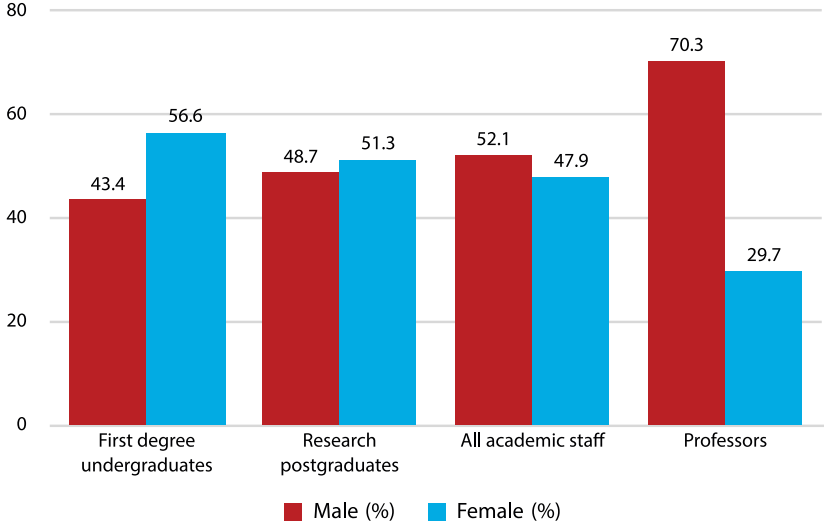
This report does not intend to undermine the significance of the national gender awarding gap favouring men. As was stated in the *Boys to Men* report, 'addressing the underachievement of young men is not a distraction from other inequalities' and neither is addressing the disparity between men and women at this localised level.[23] In fact, this report will suggest areas where recommendations for improving the gap in first-class degrees at Oxbridge may be helpful for other institutions in minimising the gaps in good honours degrees which favour women.

Furthermore, this report does not fully consider the gaps which can be found for women with intersecting characteristics of social and educational disadvantage, such as disability, socio-economic background or ethnicity. Black and minority ethnic female students, for example, are more likely to be negatively affected by awarding gaps at all institutions and therefore are likely to be worse-off than white women because of the gender awarding gap at Oxford and Cambridge.[24] However, they are still more likely to perform better than male students who are also BME. This report is not about intersectionality; however, it encourages further research on that issue might be needed in order to understand how to best support different groups of students.

The academic pipeline

Within academia, there are problems retaining women through the academic pipeline, which men suffer from less, despite them being overall disadvantaged by the national gender awarding gap. First-class degrees are considered especially important for those wanting to progress to postgraduate study and eventually academic employment. Data from Advance HE illustrate the challenge women face in progressing through the academic pipeline, despite making up the majority of students.[25]

Figure 5: Students to staff pipeline by sex for the 2021/22 academic year



Source: Advance HE, Equality in higher education statistical reports, 2023

The data suggest that something is preventing women from staying in academia past the point of postgraduate study. The issues of representation, attainment and career progress are therefore all interlinked. This report proposes that the awarding gap is one important factor impacting this problem and deterring women from achieving high-calibre academic careers at Oxbridge. Career progress is particularly challenging at institutions like Oxford and Cambridge which have a low staff turnover for permanent contracts.[26] Of course, awarding gaps should

be understood in relation to other factors affecting women, in particular with the 'motherhood penalty' (economic and employment disadvantages suffered by some women when returning to work after having children). Both factors contribute to a lack of representation, which makes it harder for women to envision themselves progressing through the pipeline. The representation breakdown in academic staff at each institution can be seen in Figure 6.

Figure 6: Percentage of women in each academic staff category at the University of Cambridge and the University of Oxford in 2023[27]

Oxford 2023		Cambridge 2023	
Staff type	**% of women**	**Staff type**	**% of women**
All academic staff	34	All academic staff	37
Associate Professor	33	All Professors	25
Titular Professor	29	Grade 11 Professor	30
Statutory Professor	22	Grade 12 Professor	25

Sources: University of Oxford, Equality, Diversity and Inclusion Report 2022/23 and University of Cambridge, Equality and Diversity Information Report 2022/23

The percentage of women in all academic staff at both institutions is well below the national average of 48%. Moreover, the proportion of women at the highest levels of professorship is far from the Advance HE figure of 29.7%. For Oxford and Cambridge, and the sector as a whole, the percentage of women decreases as the academic pipeline advances, while the percentage of Oxford professors who are women is markedly lower overall. Though some do make it to the end of the pipeline, there are evidently barriers for women making their first steps at these particular institutions.

Methodology

This report compiles data from a variety of sources. These include:

- Higher Education Statistics Agency (HESA) data by classification, sex, mission group and subject;
- individual institutions' data from public reports, information hubs and freedom of information (FOI) requests; and
- academic papers, studies and surveys.

Further research is based on around 25 semi-structured interviews with experts, university staff and students. Groups and individuals include:

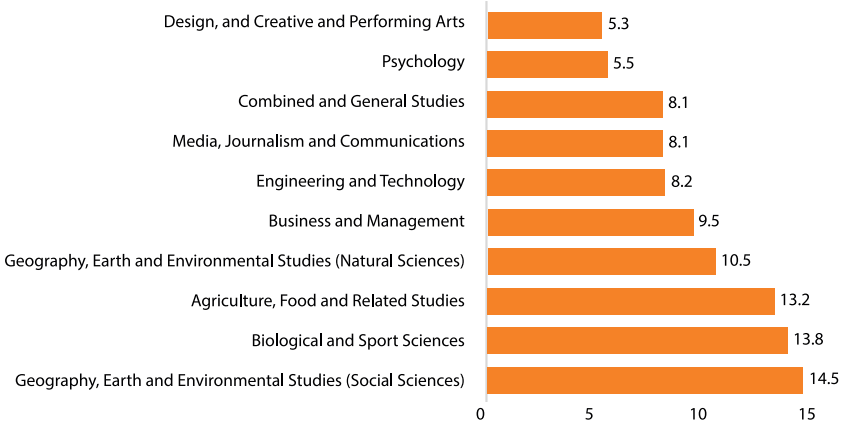
- eight academic staff from varying levels of leadership, from lecturers to Pro Vice-Chancellors;
- four staff working in admissions and outreach, as well as staff working in Equality, Diversity and Inclusion (EDI);
- one academic researcher focusing on awarding gaps in higher education;
- five student representatives from Junior Combination Rooms (JCRs) and students' unions; and
- students from various UK institutions representing different subjects.

2. Data

Data on national student outcomes from HESA

Our tailored data set from HESA reveals the breakdown of first-class degree outcomes by sex and subject.[28] Overall, this report has found that women outperform men in the first-class bracket in addition to the 'good honours' bracket in most subject groups when looking at the outcomes for first degrees taken by students at all universities in the UK. Figure 7 details the most significant gaps favouring women in the 2021/22 academic year.

Figure 7: Top 10 subjects with percentage point gaps favouring women, 2021/22

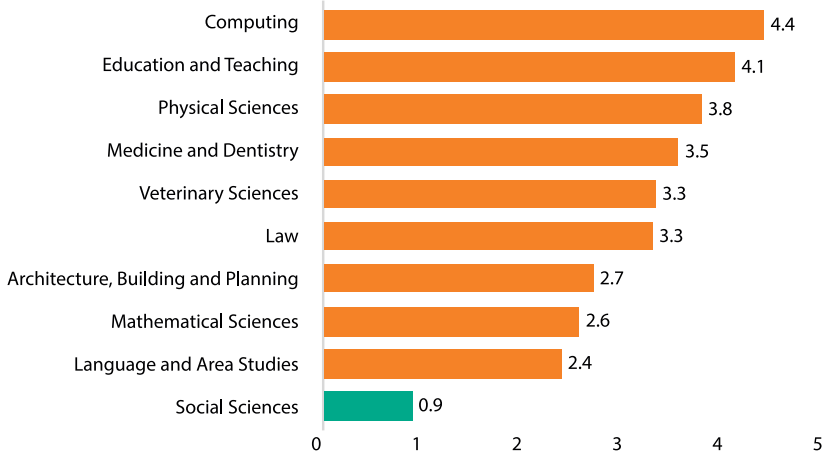


Source: HESA Tailored Data Set (expanded data set in the Appendix)

Subject groups produce percentage point gaps of varying sizes. The subjects with the largest gaps are Geography (14.5 and 10.5 percentage points for the Social and Natural Sciences respectively), Biological and Sports Sciences (13.8 percentage points) and Agriculture, Food and Related Studies (13.2 percentage points). The subjects represented here are mixed in terms of their discipline: there is a strong indication that women considerably outperform men in the first-class bracket in certain STEM (Science, Technology, Engineering and Mathematics) subjects like Biology and Engineering, but not as strongly as others, such as Physical Sciences (3.8 percentage points) and Mathematical Sciences (2.6 percentage points).

There are some subjects which reflect only very minor gaps, which may suggest that, nationally, these disparities may not be considered institutional awarding gaps. Figure 8 details the 10 subjects with the smallest gaps favouring women.

Figure 8: Bottom 10 subjects with percentage point gaps favouring women, plus Social Sciences, which favours men



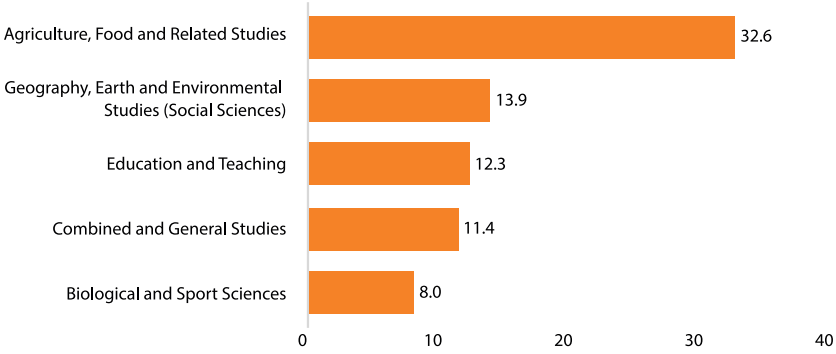
Source: HESA Tailored Data Set

There was only one subject group where the first-class degree awarding gap bucked the trend: Social Sciences. This subject group had a 0.9 percentage point gap in favour of men, which could be considered negligible, but it stands out among the other gaps identified in the HESA data. Traditionally, the Social Sciences include subjects such as Sociology, Politics and Economics. Though this data point might be anomalous and the reasons for this inversion of the gap are difficult to examine, this report offers an in-depth case study of Oxford's Philosophy, Politics and Economics course, which may offer some insight into why some men outperform women in this subject group at a first-class level.

The Russell Group

To nuance the outliers which Oxford and Cambridge present, it is worth briefly looking at the outcomes of the Russell Group, which is considered to group together some (but not all) of the highest tariff UK universities.

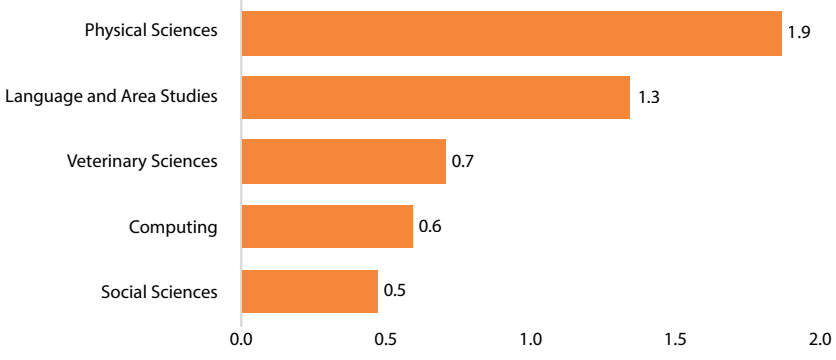
Figure 9: The top five largest percentage point gaps favouring women in the Russell Group



Source: HESA Tailored Data Set

By far, the largest group favouring women in the Russell Group is Agriculture, Food and Related Studies (32.6), followed by Geography (Social Sciences) (13.9) and Education and Teaching (12.3). Combined and General Studies (which may include unusual interdisciplinary dual honours degrees or Liberal Arts courses, for example) and Biological and Sport Sciences also have considerable gaps favouring women in the Russell Group dataset. These subject groups overlap significantly with the dataset representing all UK universities, although the gap for Agriculture is particularly pronounced.

Figure 10: The smallest percentage point gaps favouring women in the Russell Group



Source: HESA Tailored Data Set

There were no gaps favouring men in the Russell Group dataset. However, there were several subject groups with extremely small gaps favouring women, including the Social Sciences (0.5 percentage points) and Computing (0.6 percentage points). Again, these gaps could be considered negligible, however, they also overlap significantly with the dataset for all UK universities, so this could suggest a trend of more equal outcomes in particular subjects.

The University of Cambridge

Female students at Cambridge slightly outperform male students when it comes to 'good honours' results in both examination outcomes and final honours degrees, in line with national trends.

On the other hand, in the 2023/24 academic year, Cambridge averaged a 9.2 percentage point gap favouring men between male and female students for all first-class undergraduate examination results.

Figure 11: Undergraduate gender awarding gap Cambridge by the percentage of men and women achieving each classification, 2022/23

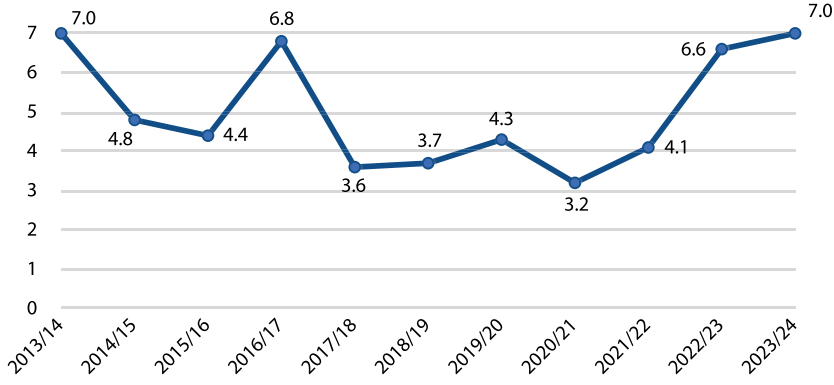
Gender	First class	Good honours
Male	33.4	82.7
Female	24.2	83.6

Source: University of Cambridge Information Hub, UG Examination results

Though this gap persists across years of examination, this report will consider further data from the final year of study at Cambridge, as Cambridge only began awarding an overall degree classification from 2023.[29] This is because of the structure of the Cambridge Tripos, a term used to describe the degree structure at the University.

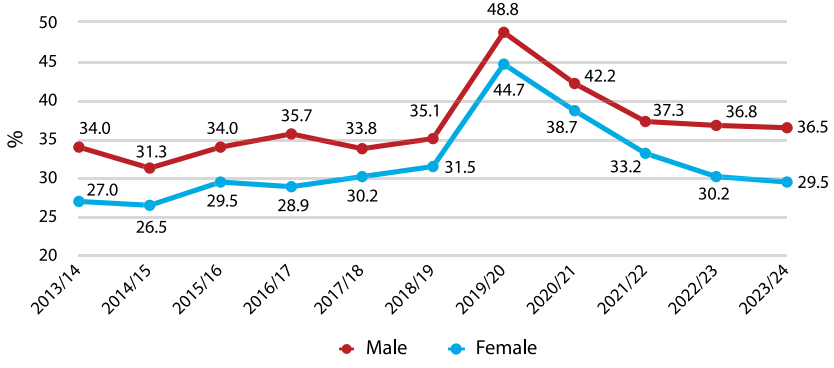
Students receive separate sets of results for each 'part' of the three-year course. The average awarding gap for first-class degrees over time can be illustrated by Figure 12, which skews in favour of men.

Figure 12: The average gender awarding gap for first-class degrees at Cambridge by percentage points, 2013/14 to 2023/24



The average gap for all courses has remained relatively consistent for the past decade. Figure 13 shows grade inflation in the 2019/20 academic year caused by the COVID pandemic, which resulted in many examination formats changing. The overall proportion of first-class degrees achieved for both male and female students has gradually decreased since then, though data from the 2022/23 academic year suggest a slight increase took place which continued into 2023/24.

Figure 13: Gender awarding gap for first-class degrees across courses, 2013/14 to 2023/24



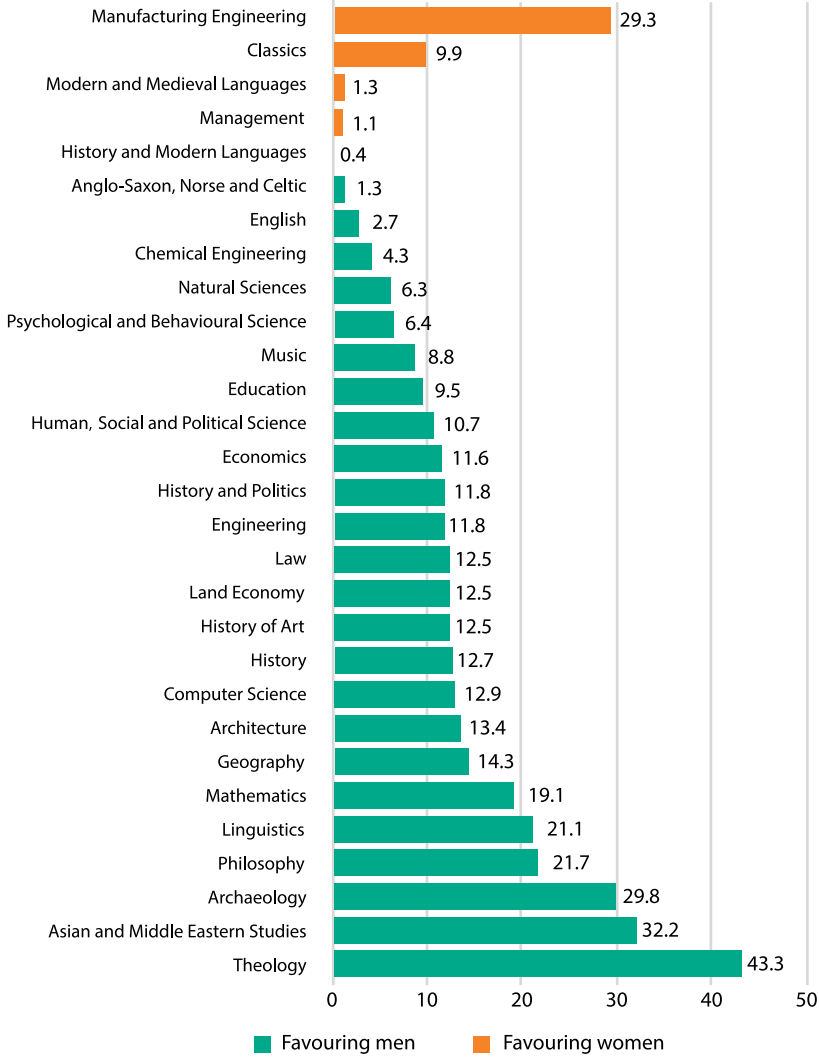
Source: University of Cambridge Information Hub, UG Examination results

Gaps by course at Cambridge, 2023/24

Figure 14: Percentage of male and female students achieving first-class results in their final year of examinations by subject, 2023/24. Ordered by size of gap favouring men. Positive values indicate that the gap favours men, negative values indicate the gap favours women

Course	Female	Male	Gap
Theology, Religion, and the Philosophy of Religion	40.0	83.3	43.3
Asian and Middle Eastern Studies	47.8	80.0	32.2
Archaeology	36.8	66.7	29.8
Philosophy	25.0	46.7	21.7
Linguistics	42.1	63.2	21.1
Mathematics	16.2	35.4	19.1
Geography	24.6	38.9	14.3
Architecture	36.6	50.0	13.4
Computer Science	30.0	42.9	12.9
History	32.7	45.3	12.7
History of Art	45.8	33.3	12.5
Land Economy	25.0	37.5	12.5
Law	14.4	26.9	12.5
Engineering	20.3	32.0	11.8
History and Politics	38.2	50.0	11.8
Economics	18.6	30.2	11.6
Human, Social and Political Science	33.6	44.3	10.7
Education	40.5	50.0	9.5
Music	31.3	40.0	8.8
Psychological and Behavioural Science	23.1	16.7	6.4
Natural Sciences	29.0	35.3	6.3
Chemical Engineering	27.3	31.6	4.3
English	43.8	46.5	2.7
Anglo-Saxon, Norse and Celtic	27.3	28.6	1.3
History and Modern Languages	61.1	61.5	0.4
Management	31.6	30.4	-1.1
Modern and Medieval Languages	54.9	53.6	-1.3
Classics	21.6	11.8	-9.9
Manufacturing Engineering	46.7	17.4	-29.3

Figure 15: The percentage point gap for first-class degrees by subject at Cambridge, 2023/24



Source: University of Cambridge Information Hub, UG Examination results

Some courses (such as the Classics four-year course) have been omitted due to small student numbers. Some subjects, such as Chemical Engineering and Management, are final-year subjects only, with students beginning on a different Tripos track.

The courses with the largest gaps were Theology (43.3), Asian and Middle Eastern Studies (32.2) and Archaeology (29.3), with the biggest gaps in STEM being Mathematics (19.1) and Computer Science (12.9). The smallest gaps favouring men were in English (2.7), Anglo-Saxon, Norse and Celtic Studies (1.3) and History and Modern Languages (0.4). Conversely, Management, Modern and Medieval Languages and Classics all had small gaps favouring women. Manufacturing Engineering had a significant 29.3 percentage point gap favouring women.

Mean gaps over time by course at Cambridge, 2012 to 2024

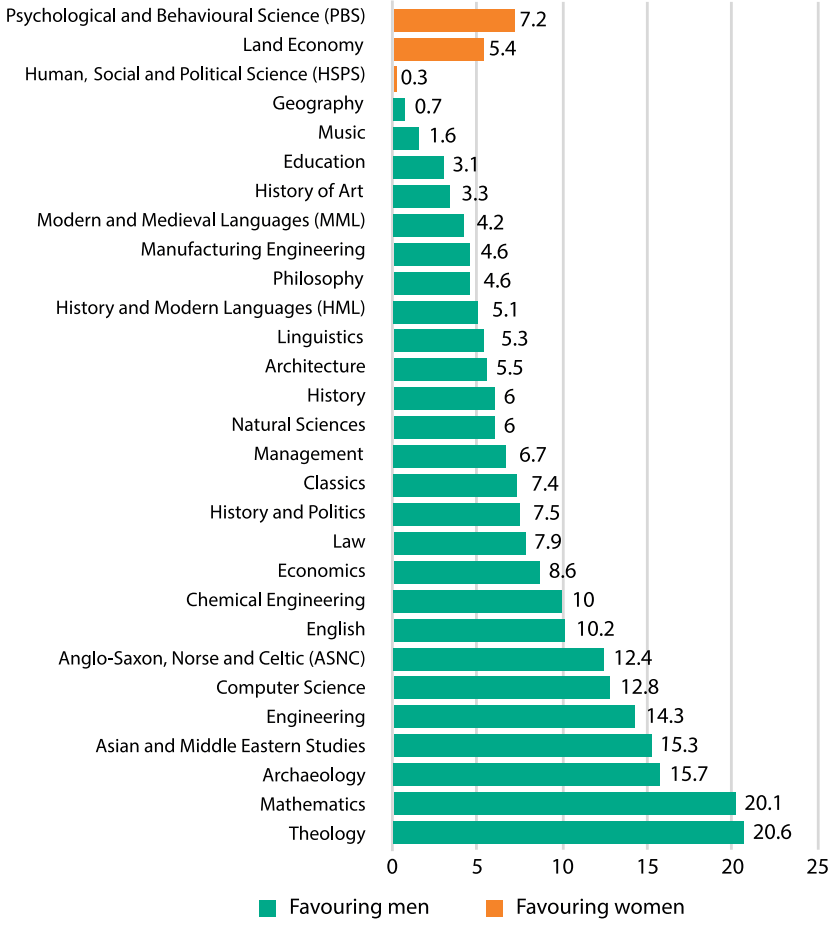
For certain subjects, the gender awarding gap has fluctuated wildly over time. For others, it has stayed relatively consistent. Figure 16 calculates the average (mean) gap for each area at Cambridge since the 2013/14 academic year.

Some courses, such as Theology and History and Modern Languages (HML), have very small student numbers. The data for these subjects tend to fluctuate more radically. For example, in the 2017/18 academic year, Theology had a 3.5 percentage point gap in favour of men, whereas in the 2020/21 academic year, the gap was 53.4. Other courses combine different subjects, such as Natural Sciences, which can couple Chemistry with Physics, for example. Conclusions about these subjects in relation to awarding gaps are therefore harder to make.

The largest mean gap in STEM is Mathematics (20.1), followed by Engineering (14.3) and Computer Science (12.8). The only STEM subject that favoured women was Psychological and Behavioural Sciences (7.2). The smallest gaps overall were in Geography (0.7) and Human, Social and Political Sciences (0.3).

The Arts and Humanities are not exempt from gaps – the largest are found in Theology (20.6), Archaeology (15.7) and Asian and Middle Eastern Studies (15.3). The cohorts for these courses are typically very small – the 2023 admissions cycle admitted 37 Theology students, 31 History and Modern Languages students and 67 History and Politics students.[30] Yet gaps persist across the board, including in subjects with large female populations, such as English.[31]

Figures 16: Mean gender awarding percentage point gap for first-class degrees at each course at Cambridge, 2013/14 to 2023/24.[32] *[Green] values indicate that the gap favours men, [orange] values indicate the gap favours women*



Source: University of Cambridge Information Hub, UG Examination results

The University of Oxford

The gender awarding gap is mentioned in Oxford's *Strategic Plan 2018-2023*, though not in its Access and Participation Plan.[33] One of the

University's education priorities is to 'Set ambitious targets by April 2019 to reduce by 2023 gaps in attainment by gender, ethnic origin and socio-economic background'.[34] In addition, Oxford's 2022/23 *Equality, Diversity, and Inclusivity Report* includes eliminating the gender awarding gap by 2023 as one of its six Equality Objectives.[35]

More specifically, it aims to reduce the first-class degree gender attainment gap from 8.5 percentage points to 4.4 percentage points by 2025. However, the report also acknowledges that reducing this gap is 'proving more challenging' than other objectives. It does not explain why that might be, or how they will reduce the gap so quickly. Furthermore, when interviewed, the Pro-Vice-Chancellor for Education at Oxford, Professor Martin Williams, admitted they are not on course to achieve this goal as of October 2024.

Gaps by division at Oxford, 2021/22

At Oxford, final degree classifications by school or division are published as well as data for individual courses. The schools are Humanities, 'Mathematical, Physical, and Life Sciences', Medical Sciences, Social Sciences and Continuing Education. Figure 17 is a table of degree classifications for the 2021/22 academic year by sex. In this case, Continuing Education has been excluded.

Figure 17: Percentage of degrees achieved in each classification by sex and division, 2021/22, plus the first-class gap favouring men

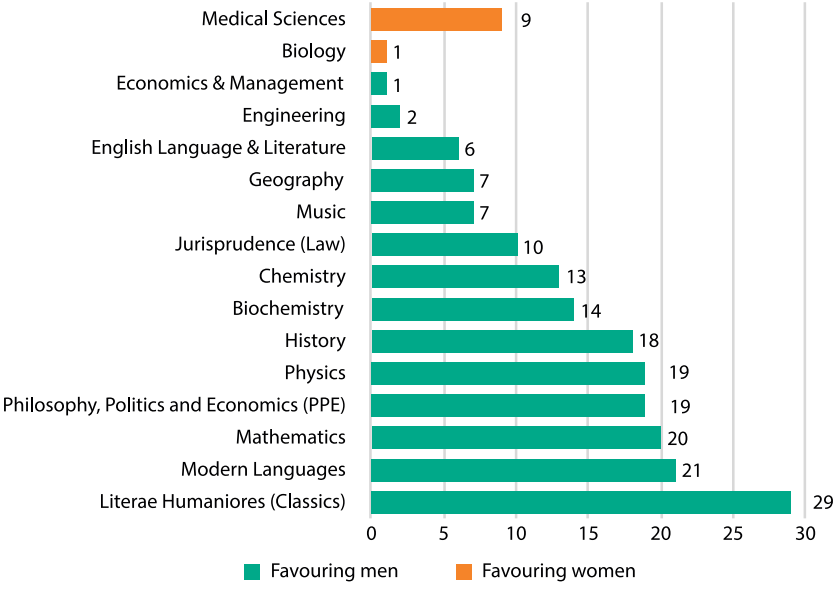
Division	Sex	1	2.1	2.2	3	Pass	Fail	First-class gap
Humanities	Male	44	55	1	0	0	0	8
	Female	36	62	1	0	0	0	
Mathematical, Physical, and Life Sciences	Male	42	43	13	2	0	0	6
	Female	36	43	19	4	0	0	
Medical Sciences	Male	39	54	4	0	0	0	1
	Female	38	60	2	0	0	0	
Social Sciences	Male	34	63	3	0	0	0	5
	Female	29	70	0	0	2	2	

Source: Oxford University Gazette, Final Honours data, 2021/22

These data suggest women achieve fewer first-class degrees across all divisions, with their highest awarding being in Medical Sciences (38%) and their lowest in Social Sciences (29%). Further data show in the 2021/22 academic year, 25.4% of women received first-class results compared to 34.3% of men, resulting in an 8.9 percentage point gap.[36] The gap has somewhat decreased in the 2022 academic year to 8.5, but the reduction is minimal.[37]

Gaps by course at Oxford, 2021/22

Figure 18: The percentage point gap by course at Oxford 2021/22. Green bars indicate the gap favours men, orange bars indicate the gap favours women



Source: Oxford University Gazette, Final Honours data, 2021/22

More so than Cambridge, Oxford has many small degree courses which combine single honours subjects. To protect individuals, courses which have numbers smaller than 25 do not offer percentage indications of degree classifications so have been excluded.[38]

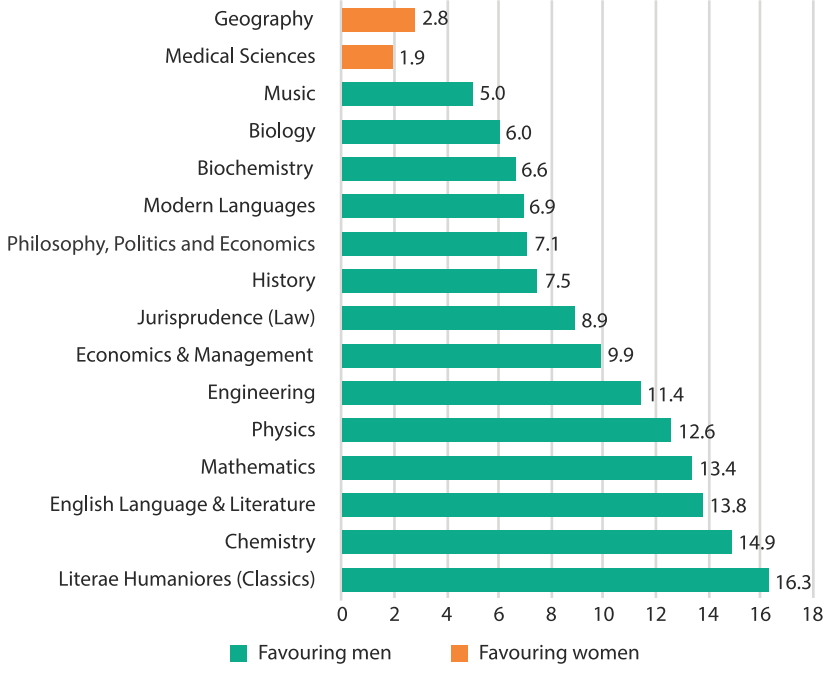
Furthermore, the STEM subjects listed (Physics, Biochemistry, Biology, Chemistry, Mathematics and Engineering) are all technically four-year

integrated Master's degrees. However, they are still judged with the undergraduate classification metric and therefore incorporated into this data.

In the 2021/22 academic year, Figure 18 shows that the courses with the largest percentage point gaps favouring men are Literae Humaniores (Classics) (29), Modern Languages (21), Mathematics (20) and PPE (19). These subjects mostly deviate from the domination of STEM courses in the Cambridge data. Two courses – Biology and Medical Sciences – favour women at this level, with a 9 percentage point and 1 percentage point gap respectively.

Mean gaps by course over time at Oxford, 2012 to 2022

Figure 19: The mean percentage point gap over time by subject, 2012 to 2022



Source: Oxford University Gazette, Final Honours data, 2012 to 2022

When looking at the decade-long trend, we see some significant similarities and differences in outcomes. Medical Sciences retains its position as one of the only courses favouring women at the first-class degree level, although the gap remains slight at 1.9 percentage points. It is joined by Geography at 2.8 percentage points. The very small size of these percentage point gaps could suggest that there is not a systematic problem with these courses. The largest percentage point gap remains in Literae Humaniores (Classics) (16.3), followed by Chemistry (14.9) and English (13.8).

3. Causes of the gap at Oxford and Cambridge

Lack of awareness and public-facing research

Rosie Freeman was the Women's Officer of the Cambridge Students' Union (known as the SU) in 2023/24. Until her resignation, she was the only full-time / sabbatical Women's Officer at any UK students' union.[39] When asked what the single biggest cause of the gender awarding gap might be, Rosie cited 'ignorance'. Notably, none of the students knew much about the gap or the reasons for it.

Rosie argues that 'letting students know [institutional problems] can be empowering, because sharing information can help legitimise an experience you might have had'. Some internal examiners' reports have signalled concern, but recognition of the gender gap specifically is surprisingly absent from public-facing resources.[40]

The gender awarding gap is not a recent phenomenon at Cambridge and Oxford and there have been efforts to raise awareness. A 2003 edition of the *Cambridge University Reporter* included a paper commissioned by the Joint Committee on Academic Performance on 'Indicators of Academic Performance' in 1996.[41] Some of the paper's findings – such as the fact that men significantly outperformed women in Mathematics – are consistent with present trends. Little progress has been made in this discipline at least.

In 2011, Cambridge had a Working Group on Performance by Gender which wrote an internally released report. A similar-sounding report was internally produced by Oxford in 2018. Both are cited by Dennis Ahlburg and Brian P McCall in their paper on the gender gap.[42] However, neither report could be found publicly, meaning its findings and recommendations are not widely accessible. When asked, neither university was able to supply the report.

Since then, there has been little external indication from Cambridge that the gender awarding gap is being addressed. The University recently came under fire for excluding the gap from its Access and Participation Plan (APP), despite promising the students' union that it would be included.[43] Although the exclusion of this gap was made on advice given by the OfS and statistics on 'gender attainment' are easily accessible, the 'extensive research' the University are doing remains to be seen publicly.[44]

Dorothy Byrne, President of Murray Edwards College, Cambridge, has been a vocal proponent of increased research into the awarding gap. When interviewed about the exclusion of the gender awarding gap from Cambridge's APP, she described it as:

> *ludicrous and wrong. I'm not interested in that completely spurious argument [that it shouldn't be included on the APP] – if first-class degrees don't matter, Cambridge should stop awarding them.*

The admissions process

In 1994, N G McCrum reported that about 90% of female admissions were made by men. He considered the admissions process a 'prime suspect' in enabling the gender awarding gap to develop. Alongside his query of the interview which, like the supervision system, is often thought to prove intimidating to female students, he asked, 'Are male tutors admitting women at the margin, women whose achievement is less than that of rejected men?'

The Master of Churchill College, Cambridge, and Physics Professor, Athene Donald, rejects this. While discussing Churchill and its historic reputation for being male and STEM-dominated, she argues:

> *Admissions is how we've made the difference [in gender]. If you look at the A-Level metrics, the idea that women have lower entry grades at Churchill simply isn't true.*

However, the data for the overall university paint a nuanced picture. In the 2023 admissions cycle, 24% of female acceptances had an A-Level profile of A*A*A* in the Arts and the Humanities. This compares to 15% of male offers with the same profile (a gap of 9 percentage points). However, in STEM courses, 26% of women had the three-A* profile, compared to 52% of men (a gap the other way of 26 percentage points).

This must be understood in the context of application numbers. In the same cycle, only 41% of STEM applications came from women, compared to 62% of Arts and Humanities applications. It may be that in those courses where fewer women apply, they are more likely to be admitted with lower grades if these low application numbers mean less choice for admissions staff.

Dr Emily Tomlinson directs admissions at Christ's College, Cambridge, a college renowned for its high rate of academic achievement. When she

began in 2016, the undergraduate intake was only 34% women. She has made steady progress: it rose 50% for the past three academic years, but fell back to 43.8% in 2023:

> *I have been pushing for the Cambridge Admissions Office to publish statistics by gender. Last year was the first year it was published, which was a bit frustrating.*[45]

When asked how the admissions process relates to the gender awarding gap at Christ's, she said:

> *Prior to 2016, Christ's had been in a negative feedback loop whereby we were not making that many offers to women in January. When August came, we would panic that our intake of women was too low and start reprieving women who had missed their offer conditions, where we would not have reprieved men with comparable grades.*

The average entry grades of women coming in were therefore lower than for men:

> *They then did worse in Tripos, and that fed a perception that women do worse than men at Cambridge, which in turn depressed the number of offers to women that Directors of Studies were prepared to make the following January.*

Dr Tomlinson began making more offers to women the following year, which 'substantially boosted both the number and attainment of women entrants to Christ's'.

Oxford operates its admissions under the guidance of an overarching policy called the Common Framework for Admissions. The Pro-Vice-Chancellor for Education at Oxford, Professor Martin Williams, notes that the University generally conducts more testing compared to Cambridge prior to interview and, unlike at Cambridge, each applicant will typically interview at multiple colleges. In an interview for this report, he argues that this creates 'more of a gathered field of candidates across the colleges, which feels fairer'.

The tutorial / supervision system

Oxford and Cambridge are notorious for their small-group teaching, known as the tutorials or supervision system respectively. A previous HEPI report found that 96% of Oxbridge undergraduate students spend at least one

hour a week in classes with 0 to 5 other students, compared to only 36% at other Russell Group universities.[46] The tutorials / supervisions usually take place between a supervisor and one to three students. The universities argue that this allows for the highest quality of teaching, one-to-one feedback and a tailored learning experience.[47]

The small-group teaching favoured by Oxbridge has been described by some as favouring 'combative, rather than co-operative [behaviours]'.[48] This phenomenon has also been called 'The Cambridge style' by researcher Andrea Spurling, who compares the setup to 'Socratic dialogue'.[49] While stereotyping should be avoided – many women are confident and report a positive experience – the lack of standardisation across the tutorial / supervision system makes greater room for imbalances than in seminars or lectures.

The pairing of women together has been anecdotally proposed, though Athene Donald argues they 'have to be able to deal with the cut and thrust – they should be supported to find a way through it'. However, Dorothy Byrne argues 'The supervision system – which everybody lauds as being brilliant – is actually particularly stressful for young women'.

Previous research supports this idea: a 2015 report by Cambridge Students' Union (then known as CUSU) which surveyed 1,400 students found that 27% of women felt their supervision partners spoke over them, compared to 14% of men.[50] The same report found that one-in-five women reported they 'felt unable to make points in classes at all'. Research backs up anecdotal evidence: female participants in a 2020 study reported their efforts to contribute to discussions were 'frequently thwarted by the domineering practices of male students'.[51]

This may be partially influenced by the absence of appropriate training given to supervisors and tutors at Oxbridge. In some cases, students (particularly in the Humanities) are taught by PhD students in the early stages of their degree. Addi Haran Diman, the President of the Oxford Students' Union, is one of these tutors for Politics. She described the training provided as 'minimal' and said that although directed to ensure students were making clear points, gender was only mentioned 'very briefly'.

In addition, female students have reported difficulties with receiving the necessary feedback for them to reach the first-class degree bracket. Dr Deborah Cameron, Professor of Language and Communication at Oxford, told the *Guardian* that some female undergraduates just shy of achieving a first-class degree result 'are not getting the same attention that men of a similar ability get from tutors'.[52] It appears that more should be done to ensure the confidence of female students in teaching settings at these institutions.

Examiners' Reports from Oxford obtained by the student newspaper *Cherwell* acknowledge there is 'clearly something systemic' affecting gender attainment in examinations.[53] One potential factor cited by these reports and explored in research is the idea of 'academic self-concept'. Evidence suggests a relationship between low self-belief and reduced academic achievement.[54] This can create a self-fulfilling prophecy which individuals at Oxbridge are particularly vulnerable to due to the academic demands of their courses.

Assessment methods

Some universities have closed awarding gaps by reducing the number of traditional examinations held. Dr Katharine Hubbard, Senior Fellow in Awarding Gaps at the University of Hull, has 'seen multiple awarding gaps close as the University has massively reduced the number of exams we use – we use much more authentic forms of assessment such as presentations, research proposals and industry-style reports rather than exams'. It is therefore possible that if similar changes were implemented at Oxford and Cambridge, it would help close their gender awarding gaps.

Most undergraduate degrees at Oxford and Cambridge rarely feature summative coursework (work that counts towards a student's final grade) beyond final-year dissertations. Almost uniquely, many degrees at Cambridge are primarily assessed through examinations in the final few weeks of a student's final term. Cambridge degrees either adopt a system which is 100% based on final exam results or adopt a 30:70 split.

Figure 20: Examples of courses which fall into either weighting category at Cambridge

0:30:70	0:0:100
In this scheme of weighting, 30% of the final classification is based on work completed in the second year of study and 70% is based on work completed in the third and final year of study.	In this scheme of weighting, 100% of the final degree classification is based on work completed in the third and final year of study.
Triposes following this scheme: • Asian and Middle Eastern Studies • Archaeology • Architecture • Chemical Engineering and Biotechnology (*for students matriculating from 2023 onwards*) • Economics • Education (*for students matriculating from 2023 onwards*) • Engineering • English • Geography • History (*for students matriculating from 2022 onwards*) • History and Politics (*for students matriculating from 2022 onwards*) • History of Art (*for students matriculating from 2022 onwards*) • Linguistics • Philosophy • Theology, Religion and Philosophy of Religion (*for students matriculating from 2022 onwards*)	Triposes following this scheme: • Anglo-Saxon, Norse and Celtic • Chemical Engineering • Classics • Computer Science • Education (*for students who matriculated 2020-2022*) • History (*for students who matriculated in 2020 and 2021*) • History of Art (*for students who matriculated in 2020 and 2021*) • History and Modern Languages • Human Social and Political Sciences • Land Economy • Manufacturing Engineering Tripos • Mathematics • Modern and Medieval Languages • Music • Natural Sciences Tripos • Psychological and Behavioural Sciences • Theology, Religion and Philosophy of Religion (*for students who matriculated in 2020*)

Source: Cambridge Data, Degree classes

The distribution of courses across these two categories is relatively even, with a recent movement towards the 0:30:70 ratio.

Some argue the 100% weighting favours those more likely to postpone serious study to the end of their degree – a risk that men are more likely to take, as women tend to work more evenly across the three years of study.[55] This may explain why women receive the majority of upper second degrees at many institutions and subjects, whereas male students are more likely to

get first-class degrees (and conversely, lower second-class and third-class degrees) at Oxbridge.

Extending examination periods and a larger distribution of classification weighting is seen to benefit women. Menstruation and Premenstrual Syndrome (PMS) can exacerbate the challenge of tight exam periods.[56] The intensity of work, revision and examination is exhausting for many students, but the added anxieties around menstruation and the tiredness and pain that can come with it are often cited as contributors to unexpectedly poor academic performance in some examinations taken by women.[57]

The COVID-19 pandemic gave many universities the unprecedented chance to experiment with examination methods. Exams moved online, meaning many were open book. When asked about the changing assessment methods and the gender-awarding gap, the previous Chair of Cambridge's English Faculty's Athena SWAN Committee, Jason Scott-Warren, told *Varsity* they 'were surprised to find that these did not improve the situation'.[58] While it may not have worked for English, there is evidence (discussed in more detail later) that it brought down awarding gaps in other subjects, such as Mathematics.

There were also questions raised about the integrity of the pandemic-style examinations. The Pro-Vice-Chancellor for Education at Oxford, Professor Martin Williams, recalled how 'some exam markers were negative about these exams. Some felt that students didn't approach them well, whereas the constraints of a closed-book exam forced people into more rigorous, well argued, shorter, better answers'.

The pandemic was not the first occasion when these universities have experimented with assessment methods to mitigate the gender awarding gap. In 2017, the Computer Science and Mathematics Departments at Oxford ran exams with an extra 15 minutes for all, motivated by the hope that it would improve outcomes for female students by reducing time pressure.[59] The extension made no difference to the gender awarding gap in first-class degrees for these subjects. It seems unlikely that changing assessment methods alone will fix the problem.

Dr Katharine Hubbard concludes, 'A lot of awarding gap interventions don't really get to the heart of assessment'. One 2021 Wonkhe article investigated every APP plan in England and found that reforms to assessment methods

were surprisingly absent.[60] However, there is evidence that suggests reforming exam structures can reduce the gender awarding gap.

A 2015 study assessed the impact of question structure on the performance of first-year Physics undergraduates at Cambridge.[61] Compared to the 'highly scaffolded' structure of exams at a secondary school level, the Physics course is assessed in 'less-structured' question formats. The study restructured a mock exam which allocated half its marks to university-style questions and half to scaffolded questions. The latter broke each problem down into multiple parts with marks allocated for each question.

Overall, 19.5% more female students achieved first-class marks for the scaffolded questions compared to the university questions. Providing scaffolding also benefitted male students, who achieved better results, but it 'builds the confidence of women preferentially'.[62] This is not to argue that exams should be 'dumbed down', but often clarity and direction can produce confidence and subsequently success, benefitting groups which have been historically excluded or disadvantaged.

Structure and governance of collegiate universities

In some areas, it is more difficult to enact effective and speedy change at Oxford and Cambridge because of their history and structure. Many forms of decision-making at departments and colleges are done through a small group of individuals who typically skew white and male. For example, in 2022/23 only 19% of the Council of the School of Technology at Cambridge were women, and only 4.8% of its members were BME.[63] In 2021/22, only 33% of Oxford's heads of departments were women.[64]

Again, stereotyping should be avoided. Individuals are largely not to blame for the stagnant progress in awarding gaps. However this sustained practice, which typically excludes female perspectives, may have created systemic problems and caused the gender awarding gap to remain unaddressed. Standards are improving, but from a low bar.

A former departmental lecturer at Oxford remarked how 'the autonomy of different bodies makes coordinated action very challenging'. Each department and each college may have their own methods of teaching and admitting students. The subsequent decentralisation of decision-making makes it difficult to achieve even and productive progress. The same lecturer concluded: 'Colleges can argue that the issue rests with

Departmental assessment, and Departments can argue that the issue is about College admissions'. Professor Martin Williams commented that:

> *What we have failed to do is give enough insight into the data at department level. There is a tendency in central teams to assume that everyone knows their own equalities data – and they often don't.*

On the other hand, the decentralisation of Oxford and Cambridge is helpful for localising problems and gaps. The reasons behind awarding gaps are likely to vary by department and college, so it may be easier to make progress in some areas than others. For example, it may take a significant amount of time for the representation problem in Mathematics to improve, but Equality, Diversity and Inclusion (EDI) training can be incorporated into supervisor training for the next cohort of academic tutors.

Furthermore, Oxford and Cambridge's compressed, eight-week terms often make it challenging for individual students or campaigns to make progress on large systemic issues.

During her tenure as Women's Officer at Cambridge, Rosie Freeman led an open letter in reaction to the gender-awarding gap and its exclusion from the APP. It did not succeed in its goal, but did raise some awareness of the issue and highlighted current research efforts by the University.[65] Rosie admitted it is 'hard' for the majority of students to 'stay informed' when facing considerable workloads and extracurricular activities. She also remarked 'how Cambridge decides its priorities is very informal and individual'. Meanwhile, representatives of Oxford's Students' Union said they felt change could be encouraged if they pushed the university to adopt 'clear language and more ambitious, decentralised, and clear goals'.

Jennifer Blakesley, the Head of Education and Student Outcomes at Cambridge, admitted that, though there is widespread concern about the gap across the University, 'activity in recent years has been undertaken within specific disciplines or settings'. To remedy this, she is 'creating a central resource pulling together the activities undertaken and associated data, that can be used for evidential and research purposes'.

Lack of support and opportunities

Many colleges engage with female secondary school students, holding women-only taster days and 'women in STEM' residentials.[66] However,

Emma Smith's paper *Women into science and engineering? Gendered participation in higher education STEM subjects* highlights how:

> *Decades of well-targeted initiatives have had limited impact and even making all young people study the sciences up to the age of 16 had little long-term effect on recruitment at the next educational levels.*[67]

Once female students reach Oxford and Cambridge, there is little women-specific support available. Widening participation schemes typically tail off once students are admitted. There is currently no Women's Officer at either university. Early interventions should be made to ensure that female students (and those suffering from other awarding gaps) acquire the skills and confidence necessary to achieve – qualities which Professor Bhaskar Vira, Pro-Vice-Chancellor for Education at Cambridge, described to me as 'a critical ingredient to future success'.

In addition, academic opportunities that are seen as high profile and high status, for example, postgraduate teaching and opportunities for research, are most likely to be allocated to men.[68] Furthermore, there are very few formal mentorship or mentoring opportunities specifically for women at Oxford or Cambridge, meaning there are fewer role models for female students to look up to and consult. Although 'bridging courses' and 'foundation years' have emerged, their focus is mostly on helping students from disadvantaged backgrounds of both genders at the start of their courses.[69]

Lack of representation

Data discussed show there is a correlation between departments with a low percentage of female academics and courses with a low percentage of female students. The correlation does not prove causation – indeed, the disparities in STEM subjects are understood to be indicative of wider societal and cultural factors dissuading girls from studying science and progressing into academic careers in the same disciplines. However, that does not mean the two forms of under-representation are disconnected.

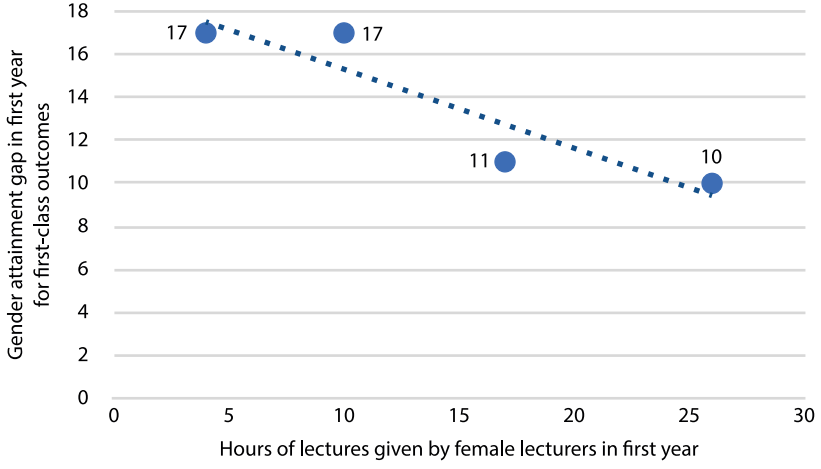
Role models play a fundamental part in ensuring outcomes for all students, and this extends to women. Research demonstrates the significant positive impact of female role models on the academic performance and welfare of female students.[70] The 2020 Athena SWAN application by the Faculty of

Engineering at Cambridge found that increasing hours given by female lecturers reduced the gender attainment gap as students progressed through the course (Figure 21). [71]

It is significant to note that although this suggests the direct impact of representation on female performance, the reverse does not seem to be true for boys in schools. HEPI's report, *Boys to Men*, queried whether an increase of male teachers would improve academic performance and found 'past initiatives to raise the proportion of male adults in classrooms have had only a limited impact'.[72] This difference suggests the impact of role-modelling may be more effective at closing smaller local awarding gaps, such as the one exemplified by the Cambridge Engineering faculty.

Significantly, this is not a problem unique to Oxbridge. Laura, a recent graduate of the Physics MSc at Imperial College London, described female representation in her department as 'absolutely terrible. I didn't have a single female lecturer until the end of my second year'. Though Laura did not have any overtly sexist experiences from teachers or students at Imperial, 'It's hard to say whether the sex of my supervisors affected my experience or degree outcome, because I have never had a female tutor'.

Figure 21: Gender attainment gap in first year reduces with an increase in the number of hours of lectures by women, 2020



Source: 2020 Athena SWAN Silver Award application, Faculty of Engineering, University of Cambridge

Laura reflected:

> *I don't think I was ever pushed away from Physics and Maths. I come from a very academic family – my sister studied Maths at Cambridge. It felt like a normal and natural thing to do.*

Further research needs to be done to prove the relationship between representation in families and social circles and academic success, in order to determine the importance of representation both within and outside of academia.[73]

In 2023, 34% of Oxford's academic staff and only 28% of professors were women. The Mathematical, Physical and Life Sciences department has a particular deficit of women in academic and research roles, totalling just 24%. This starkly contrasts with the 70% of women in Social Sciences and Humanities.

While we can see the positive effect of representation on some outcomes, the Oxbridge gender awarding gap remains prominent in subjects with good gender parity like History, as well as subjects that are overwhelmingly taken by women, like English.

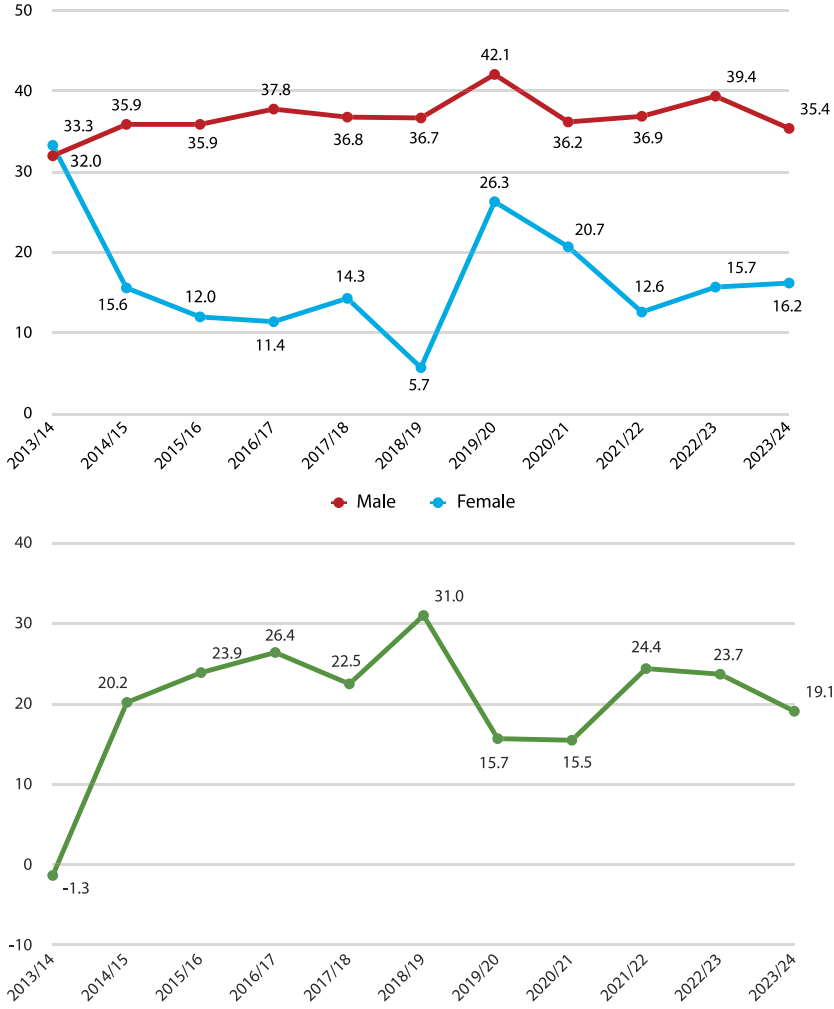
This suggests that different subjects or departments will require individual changes to improve first-class degree outcomes for women and that improving the visibility of female academics and their proximity to students will not be enough.

Case study: Mathematics at Cambridge

One way we can consider these causes in relation to data is by looking at particular case studies.

In Mathematics at Cambridge, we see a clear gap between the degree outcomes of male and female students from 2014 onwards.

Figures 22 & 23: Percentage of students awarded first-class degrees in their final year examinations for Mathematics at Cambridge, 2013/14 to 2023/24, plus the gap



Source: University of Cambridge Information Hub, UG Examination results

Interestingly, in the years where students took exams during the pandemic, the awarding gap almost halved from 31.0 percentage points in 2018/19 to 15.7 and 15.5 percentage points in the following years respectively. This is potentially due to changes in examination formats; in 2020, the Mathematics department, in line with other departments, moved examinations online and made them open book. When examinations returned to normal, so did the awarding gap. This suggests that the assessment format is a significant contributor to the awarding gap in this discipline.

Why is the gender awarding gap so pronounced in Mathematics? At Cambridge, evidence points towards the examination format. In the written papers, questions are given a numerical mark in addition to a quality mark, which judges the completeness and quality of each answer.[74] Students therefore have to strike a careful balance between answering as many questions as they can, while also ensuring the quality of their answers in order to score as highly as possible.

Research shows that male students are more likely to take risks in examination settings.[75] Subsequently, it does not seem surprising that men perform better in this style of exams, though it should be acknowledged that this may also explain why men receive a larger proportion of third-class degrees in certain subjects. Commenting on this unique method of examining Mathematics, Dorothy Byrne said:

> *Nobody else does this. If you question people about this, they say 'this is a system which has stood the test of time'. It has throughout history, discriminated against women.*

However, some feel that changing the examination system avoids solving an overarching question the department faces. Mathematics student Lycka argues:

> *Rather than trying to tailor the examination system so as to yield equal results to women as to men, we should focus on what qualities we want to measure.*

There is also a well-known representation problem in Mathematics. In the 2023 admissions cycle, only 26.3% of applications to the Mathematics course was from female students. And although 28.6% of all offers were to women, just 19.4% made the grades to continue onto the course.[76]

The harsh disparities between offers and acceptances are frequently blamed on Sixth Term Examination Papers (STEP) required for entry into the Cambridge undergraduate Mathematics course.[77] It is often cited as a barrier to female students in particular, who are less likely to take the Further Mathematics A Level.[78] In 2021, just 29% of students taking Further Mathematics were female.[79]

Those women who do make it to Cambridge are more likely to switch course or discontinue their studies, either intermitting (taking a year out for medical reasons or another grave cause) or dropping out entirely. The problem with retention is not minor – in 2016, a third of all women on the course discontinued their studies at some point.[80] One student, who switched from Mathematics to Modern and Medieval Languages in their first year, wrote 'women who study Maths at Cambridge are very well aware of how rare they are'.[81]

Female role models and support networks in this subject are few and far between. According to staff numbers reflected on the faculty's website, 14.4% of academic staff are women, excluding researcher-only posts.[82] The likelihood of a female student being taught by a female professor is therefore low and dependent on the module or paper taught. This places the onus on the individual student to engage with female-led teaching and research, and can make the overall faculty appear not 'designed for us'.[83]

A senior professor suggested the Mathematics department at Cambridge in particular has been 'historically hostile' to women. She described how 'deeply rooted' beliefs, such as the idea that men are just 'inherently better' at the discipline, remain ingrained. Societal factors, such as the lack of encouragement directed towards girls while at school, contribute to the smaller pool of applicants, and has a knock-on effect on female students' confidence.

Lycka has not encountered any overt sexism or misogyny while studying Mathematics at Cambridge. However, she:

> *knows several women who, discouraged by exam results, lack the confidence to proceed to higher levels in academia, even though exams often do not measure how well you would thrive doing research.*

She suggests the problem is 'amplified' by the absence of visible female role models, also commenting that the majority of PhD supervisors are men.

Case study: Philosophy, Politics and Economics at Oxford

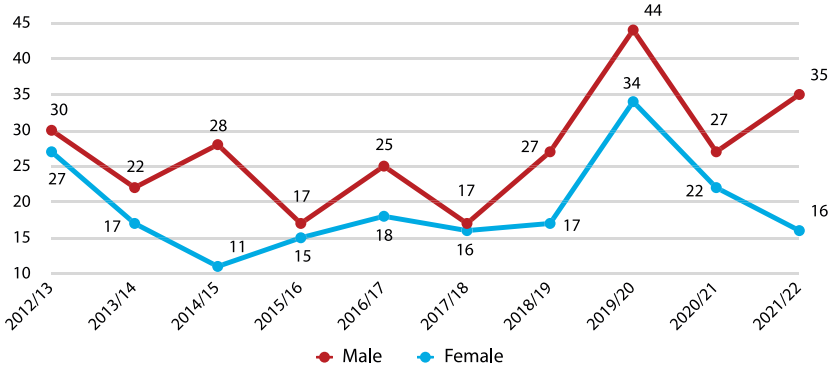
Philosophy, Politics and Economics (PPE) at Oxford is known as the politician's degree.[84] The majority of students on the course are men, who also tend to outperform women when it comes to achieving first-class results in final honours exams.

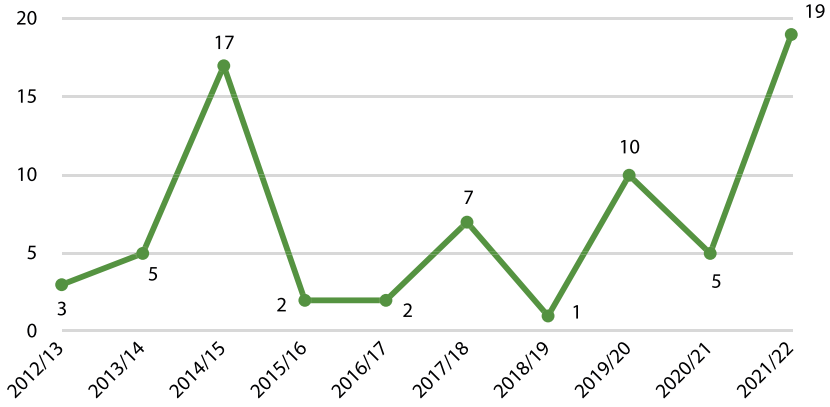
At 19 percentage points, the gap reached a 10-year peak in the 2021/22 academic year. The significant fluctuations in achievement between each academic year make it difficult to conclude how severe and consistent the gap is in this subject. However, given the gap's longevity, it is clear that the PPE course has elements which contribute to better outcomes for male students.

The representation of female students of PPE has improved over recent years: they made up 43.3% of the 2021 to 2023 cohorts, which rose from 33.7% for the three-year average from the 2016 to 2018 academic years.[85] This matches anecdotal evidence: Merton College JCR President Lucy Chen commented, 'I believe PPE is more male represented but only marginally. I haven't felt this imbalance personally'.

She also remarked how 'the representation of women [at a staff level] is quite good, as in, my tutors were around half women and half men'. However, out of the 58 people listed as academic staff on the Faculty of Economics' website, only 14 were women.[86] Another female PPE student told me out of the 10 tutors she had in her first two years, all were white men.

Figures 24 & 25: Percentage of students achieving first-class degrees in PPE at Oxford, 2012/13 to 2021/22, and the percentage point gap





Source: Data from the Oxford University Gazette, Statistical information, 2012 to 2022

Lucy noted 'my lectures were predominantly delivered by men, with female lecturers only guest lecturing in Politics and no female Philosophy or Economics lecturers'. The absence of women extends to those invited to speak at department and society events. One 2020 *Cherwell* article commented 'Fewer women than men named Greg are speaking at Oxford PPE Society events this term'.[87]

In their 2021 report, *The Gender Balance in UK Economics*, Dr Victoria Bateman et al found that only a third of Economics lecturers and 15% of Economics professors in the UK were women.[88] A third-year Economics student at Cambridge corroborated this discrepancy. In her experience, the majority of the Mathematics-based papers were taught by men, while female supervisors tended to lecture on subjects like Economic History.

Anecdotal evidence suggests the gender imbalance of a cohort can knock the confidence of its female students in classroom situations, especially in institutions like Oxford, which defines itself by the quality of its small-group teaching. The PPE course has been accused of being able to 'genuinely teach you to be a really good waffler', though this is disputed; Oxford would argue that mark schemes would give a very poor grade to waffle.[89] Additionally, female students have reported being spoken over by their male peers or even claimed that tutorials have been 'monopolised' by men.[90]

The effects of these learning situations may spill over into examinations. Aside from some of the more Mathematics-based Economics papers, PPE is primarily assessed through essay-based examinations. Unlike STEM subjects, which typically demand more objective answers, first-class Humanities scripts are often marked by a unique 'flair' or writing style. In a previous investigation by *Varsity*, the Cambridge History Professor Peter Mandler described this kind of assessment as a 'test of machismo'.[91]

Research has found that certain characteristics of writing, such as presentation, effort and argument have become gendered – the former two qualities being cited as more 'feminine' and the latter 'masculine'.[92] Anecdotally, female students at both Oxford and Cambridge report being told by male and female supervisors to 'write like a man' or to 'write less like a woman' if they want to achieve first-class results.

Although Lucy has not experienced overt sexism while studying PPE, she was unsure whether she had 'ever felt [Oxford] actively promoting gender equality specifically'. Though the promotion of gender equality in Lucy's department may be limited, individual colleges are beginning to make efforts to address the under-representation of female students. For example, in March 2019, Balliol College held a women-only PPE taster day in an effort to encourage more applications from female students.[93]

4. Conclusions and policy recommendations

Conclusions

- Gender awarding gaps at a first-class level are common at Oxford and Cambridge. Though certain subjects are more impacted than others, female students can generally expect to be less likely to achieve first-class degrees compared to their male counterparts at either of these universities. Within the 'elite' context of both universities, this stands out as a clear systemic inequality. Gender specific issues and structural issues are enjoined here and – without intervention – these gaps seem likely to persist.
- The gender-awarding gaps at Oxford and Cambridge do not have a single cause. A combination of these institutions' history, structure and examination procedures, as well as the societal issues female students and academics generally encounter, produce a system which favours men at the highest degree classification. This is a problem for the academic pipeline, because those with better exam performance are more likely to receive offers for postgraduate study and ultimately to progress into an academic career.
- Certain courses which have awarding gaps also have representation issues. Supervisors and tutors are more likely to be men, reducing the number of female role models available to students. This is especially severe in the STEM subjects, such as Mathematics, where a lower proportion of women than men apply, receive offers, are accepted and achieve first-class results.
- The metrics and methods that are currently used to measure academic success at Oxford and Cambridge were designed for a much narrower proportion of the population than the cohorts now represented. Magdalene College, Cambridge only began admitting women in 1988.[94] Oxford's St Benet's Hall (now permanently closed) did not allow women until 2016.[95] Though women-only colleges existed before these landmarks (and still do at Cambridge), the experience of women has only recently come into total consideration for all areas of these institutions. Consequently, progress on awarding gaps in general has been disjointed and decentralised.

- Attempts to offer solutions to the problem have been disconnected. Research can be traced back to the late 1980s, yet the gender-awarding gap remains a significant problem. Institutions should be strategic and efficient with tackling gaps – to keep track of findings and to monitor data effectively. Though there are historic and current efforts to enact progress through working groups, we need to move away from discussing the issue and towards addressing it. Some changes will be speculative and experimental but seeing what works and what does not is the first step in closing the gap.
- Oxford and Cambridge are not the only institutions with a first-class gender-awarding gap favouring men. Significantly, as the HESA data illustrate, this is not just a problem impacting the first-class awarding gap at Oxford or Cambridge, but extends to other UK universities in certain subjects. More granular data need to be attained to demonstrate which institutions have the largest gaps. Furthermore, given most of the gaps favouring men are localised to STEM subjects, institutions should direct more attention to improving outcomes for their female students.

Recommendations

Considering these findings, institutions should consider:

- Conducting further, meaningful research with a genuine view to closing the gap should be funded by institutions with large gaps and the ability to do so. For too long, the issue of the gender awarding gap at Oxbridge has been discussed and researched without the accompaniment of actual change. Universities should empower themselves to experiment with methods of assessing academic progress: the pandemic showed us it is not only possible but can have positive results.
- Making data about all awarding gaps, including for gender, publicly available to all. Many already do this for issues such as the gender pay gap because they are legally obliged to, which has consequently facilitated research and public knowledge. A good model for other institutions to follow is Cambridge's 'Information Hub', which gives detailed statistics for both classified and unclassified degree results for the past 10 years.
- Avoiding catch-all solutions and implement bold reforms. This means instead of simply extending the timing of an examination by 15 minutes, a genuine overhaul of certain assessment methods needs

to be made.[96] Researchers and academics should be encouraged to share experimental work on addressing the gender gap. The balance of examinations to coursework should be re-evaluated as well as the construction of question papers themselves – such as the scaffolding of questions.[97]

- These changes should be course specific. What works for one subject may not be transferrable to another – there is no 'catch-all solution'. Some methods, such as increasing the time available, have failed to make a difference in Computer Science – though revaluating the timing of exams may work better for essay-based subjects like History and English. Likewise, scaffolding has been proved effective in Physics but may be ineffective in Languages.
- Further to this, the awarding gap this report investigates is not the only one affecting students' experience at Oxford, Cambridge and beyond. Further research should be done to establish the divergent experiences of women with intersecting characteristics (like disabilities) and male students who are generally outperformed by women across the education system. Specific solutions should be tailored to these groups as with courses, not every change will alleviate the problem for every group.
- Refraining from scaling back the 'academic rigour' of their assessment methods. Students entering universities like Oxbridge (and elsewhere) expect to be challenged and understand that not everybody will achieve a first-class degree. However, there should not be systemic disadvantages faced by certain groups of students while at university. Institutions should not see this recommendation as an encouragement to 'dumb down' their assessments but to reconsider what skills they are assessing.
- Accompanying reforms with a reconsideration of awarding metrics. The awarding gap is symptomatic of a broader institutional problem in relation to gender equality. Institutions should ask themselves what it means to achieve a first-class degree in the current academic climate and whether the grading metrics they are currently using stands up against the need to offer equal opportunity to all.
- Improving access at a postgraduate level: this report has not discussed the often-neglected status of postgraduate awarding gaps. Access and

participation in certain disciplines (particularly some STEM areas) need to improve across the academic pipeline. Improving graduate access and diversifying cohorts could result in more women staying on in academia and teaching women themselves.

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Appendix

Interviewees

I am grateful to this full list of interviewees:

- Professor Bhaskar Vira, Pro-Vice-Chancellor for Education at Cambridge;
- Professor Martin Williams, Pro-Vice-Chancellor for Education at Oxford;
- Dorothy Byrne, President of Murray Edwards College, Cambridge;
- Professor Athene Donald of Physics and Master of Churchill College, Cambridge;
- Dr Katharine Hubbard, Senior Fellow in Awarding Gaps at the University of Hull;
- Dr Emily Tomlinson, Director of Admissions at Christ's College, Cambridge;
- Jennifer Chapin, Head of Equality at Oxford;
- Jenny Blakesley, Head of Education and Student Outcomes, Cambridge;
- Dr Chris Scott, Tutor for Admissions and Outreach at Gonville & Caius College, Cambridge;
- Rosie Freeman, Women's Officer of Cambridge SU 2023/24;
- Oxford SU Sabbatical Staff 2024/25 including President Addi Haran Diman;
- Students at UK universities (only those quoted have been named in the report unless they have requested anonymity).

1. *The percentage of men and women achieving first-class degree outcomes by subject group across all UK universities, plus the percentage point gap. First degree only, 2021/22 academic year. Negative values indicate the gap favours women.*

Subject	Male (%)	Female (%)	Gap (pp)
Social sciences	28.8	27.9	0.9
Language and area studies	32.8	35.2	-2.4
Mathematical sciences	41.7	44.2	-2.6
Architecture, building and planning	24.7	27.4	-2.7
Law	20.3	23.6	-3.3
Veterinary sciences	15.9	19.3	-3.3
Medicine and dentistry	7.9	11.4	-3.5
Physical sciences	39.7	43.5	-3.8
Education and teaching	26.4	30.5	-4.1
Computing	42.9	47.3	-4.4
Subjects allied to medicine	29.8	34.6	-4.8

Historical, philosophical and religious studies	28.0	33.0	-5.0
Design, and creative and performing arts	29.6	34.9	-5.3
Psychology	22.7	28.2	-5.5
Combined and general studies	30.8	38.9	-8.1
Media, journalism and communications	24.0	32.1	-8.1
Engineering and technology	37.2	45.4	-8.2
Business and management	22.3	31.7	-9.5
Geography, earth and environmental studies (natural sciences)	25.0	35.5	-10.5
Agriculture, food and related studies	17.7	30.9	-13.2
Biological and sport sciences	23.8	37.7	-13.8
Geography, earth and environmental studies (social sciences)	23.3	37.9	-14.5

Source: Higher Education Statistics Agency (HESA) Tailored Data Set

2. *The percentage of men and women achieving first-class degree outcomes by subject group for the Russell Group, plus the percentage point gap. First degree only, 2021/22 academic year. Negative values indicate the gap favours women:*

Subject	Male (%)	Female (%)	Gap (pp)
Social sciences	34.0	34.5	-0.5
Computing	52.4	53.0	-0.6
Veterinary sciences	18.5	19.2	-0.7
Language and area studies	37.6	38.9	-1.3
Physical sciences	43.4	45.2	-1.9
Mathematical sciences	41.5	43.4	-1.9
Architecture, building and planning	27.4	29.4	-2.1
Law	24.2	26.4	-2.2
Medicine and dentistry	9.1	12.8	-3.7
Historical, philosophical and religious studies	31.6	35.5	-3.9

Media, journalism and communications	27.0	31.5	-4.6
Engineering and technology	43.1	48.1	-5.0
Business and management	27.5	33.9	-6.4
Design, and creative and performing arts	34.3	40.7	-6.4
Subjects allied to medicine	34.9	42.3	-7.3
Psychology	28.3	35.8	-7.5
Geography, earth and environmental studies (natural sciences)	30.0	37.5	-7.5
Biological and sport sciences	34.7	42.8	-8.0
Combined and general studies	35.8	47.1	-11.4
Education and teaching	17.1	29.4	-12.3
Geography, earth and environmental studies (social sciences)	25.1	39.0	-13.9
Agriculture, food and related studies	21.8	54.4	-32.6

Source: Higher Education Statistics Agency (HESA) Tailored Data Set

This paper looks at why men are more likely than women to achieve first-class degrees at Oxford and Cambridge. This situation stands in stark contrast to the UK higher education sector as a whole, where women are generally more likely to achieve both first-class honours and 'good' honours.

The author, Famke Veenstra-Ashmore, argues that the first-class awarding gap represents a significant and unfair disadvantage for female students and must be addressed to give women from Oxford and Cambridge fairer labour market outcomes, including for women intending to pursue academic careers.

The report discusses the causes of the problem, incorporates insights from academic research, staff and students and makes recommendations for action, including an overhaul of certain assessment methods.

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