AdvanceHE

Onwards and Upwards?

Tracking women's work experiences in higher education
Year 3 report

–

John Arnold, Sarah Barnard, Sara Bosley and Fehmidah Munir
Loughborough University

February 2019

AdvanceHE

Acknowledgements

Contents

1. Executive summary

The Onwards and Upwards study builds on the learning and development the Leadership Foundation (now Advance HE) has achieved with Aurora participants by carrying out longitudinal mixed-methods research on career trajectories, aspirations and work experiences of women working in academic and professional services roles in the higher education sector in the UK and Republic of Ireland.

Data collection

In the third year of the study we surveyed a further 658 women who were just starting the Aurora programme. This represents a response rate of 51% from the 1293 women in this cohort (Cohort 5). We followed up Cohort 4 to benefit from their perceptions soon after completing the Aurora programme. This brought the total number of women completing at least one survey to date to 2898.

We interviewed eight Aurorans who completed the programme in 2017 (Cohort 4) and four of their mentors. We also interviewed for a second time all eight of the Aurorans who completed the programme in the previous year (Cohort 3). Only two women from Cohort 3 and one from Cohort 4 were willing to complete diaries about their leadership experiences.

Getting onto Aurora

The most common route was via a general call in the employing organisation, with women often encouraged to apply by someone senior. Only about 30% went through a selection process as far as they were aware – there may have been covert selection.

Effects of Aurora

In terms of both perceived effects and changes recorded over time, participation in Aurora continues to be associated with increases in women's reported engagement with leadership and career self-management. However, the latter tends to dissipate somewhat over time. Insights into how to use and/or challenge workplace culture and systems are reported by a significant minority of Aurorans, and these people are more than averagely interested in leadership.

Predicting career development

Despite the wide range of data collected over time in this project, there is very little that predicts who will receive accelerated salary increments, and even less that predicts who will get promotion – not even career self-management activities. Longer time periods may be needed.

Athena SWAN

A silver Athena SWAN award, as opposed to a bronze or no award, tended to be associated with more positive perceptions of the availability of family-friendly policies, promotion prospects and collaborative working, especially where the award applied to a department rather than to the organisation as a whole. However, Athena SWAN status did not appear to have strong or pervasive associations with workplace perceptions.

Being placed in near-impossible leadership situations

About 10% of survey respondents strongly agree that they have been placed in a leadership situation where success was near-impossible to achieve. Such situations most commonly involved unhelpful team members and lack of authority over them, and unsupportive line managers. However, a range of more distal systemic factors, such as lack of resourcing, were also mentioned, and collectively they added up to a major perceived impediment to the exercise of effective leadership.

Stress

Stress scores were around the middle of the available range, with respondents tending to agree both that there are significant stressors and that they are coping. Engagement in leadership was not associated with greater stress. A lack of line manager support and work-life imbalances were. Academics on average reported more stress than professional services respondents, but this was mostly to do with longer working hours, not type of work per se.

Actions taken by Aurorans to improve women's situation in higher education

About one third of respondents described one or more actions they had taken to improve women's situations at work. Engaging with **Athena SWAN** activities to bring about changes was the most frequent response and positive changes within the school/deptartment or institution were attributed to Athena SWAN. However, about 20% of respondents did not know the Athena SWAN status of their section or of their employing institution. Other actions included taking a formal role in addressing equality and diversity issues or seeking to influence senior staff. Recruitment, promotion, pay and working practices were referred to as the focus of such activity. Supporting other women in their career development and undertaking career and professional development activities themselves were also important actions.

Discourses of leadership

We constructed 16 case studies by analysing data collected by interviewing a sample of Aurorans in Cohorts 2 and 3. Each of these women had been interviewed twice. Women in Cohort 2 were first interviewed in December 2015/January 2016 and again at the same time the following year. Women in Cohort 3 were interviewed in December 2016/January 2017 and for a second time in January 2018. From these case studies we discerned seven discourses of leadership: power holder; knowledge producer; people developer; professional role model; influencer/change agent; relationship builder; and the adaptive leader. Most interviewees presented more than one discourse of leadership. Frequent combinations included relationship builders and influencers. Thirteen presented themselves as relationship builders, seven as people developers, seven as influencers/change agents, and four as knowledge producers, with one who appeared to be an 'aspirant' knowledge producer. None regarded herself as in a position to lead by exerting power, although one aspired to and one talked about adapting her leadership according to the situation. This emphasis on relational collaborative aspects of leadership is somewhat mirrored in the survey data.

Differences between demographic subgroups

Regarding ethnic groups, there were some signs of differential proportions in different professional services and academic departments. On average BAME respondents were more ambitious and career-focused than others, especially white British, but in certain respects reported less support and less previous career development. There were few signs that LGBT respondents experienced any more difficulties than other respondents. In contrast, those who said they had a disability or significant health impairment reported consistently less positive career and development opportunities.

Engagement with leadership and perceived leadership skills tended to increase with age, even while ambition, career self-management and career satisfaction fell. Some effects of age were partially attributable to organisational seniority as opposed to chronological age. Higher earners tended to report more caring responsibilities outside work.

Differences between work contexts

We have previously reported on differences between academic and professional services staff. The latter tend to report more positive experiences and more engagement in leadership skills and activities. This is particularly true for organisational decision-making and know how. Post-1992 universities show some signs of being more egalitarian but also more pressured than other types of institution. Staff in Ireland, both Republic and Northern Ireland, tend to report less positive conditions for women than those in England, Scotland and Wales. Again, we have noted this before. Endemic and consistent differences between different professional services departments and between different academic departments/schools were hard to identify. However, for professional service departments there were some differences in mobility, and staff in general departmental/school administration were most engaged in leadership. For academics, there were some signs that education and medicine and allied subjects schools/departments had some advantages over others.

Recommendations

1. The Athena SWAN bronze award should be reviewed to ensure that it makes a discernible difference to workplace practices and opportunities.

2. The Aurora programme should continue to grapple with workplace cultures and systems, and how to deal with them. The programme might include in the final session (if it doesn't already) an activity that helps women identify specific, realistic actions that they might take to promote equality in their institutions and who they might work with to achieve this.

3. Line manager training should make it clear just how important the line manager is to women (and probably men) reporting to him/her. There could also be more emphasis placed on relationship building.

4. Institutions may wish to consider the effects of managerialist approaches on collegiate behaviour.

5. It is important to recognise that many older women are interested in leadership and feel equipped for it, and that those who are interested in leadership are not necessarily those who are conspicuously "ambitious".

6. Institutions need to carefully scrutinise whether they treat people with disabilities and significant health impairments differently, recognising that this does not refer only to those who are registered as disabled.

7. Women should consider the discourses of leadership discussed in this report in order to review where they think they sit and where they would like to be.

8. Institutions should also consider the leadership discourses they use, their effectiveness and the value of 'discourse diversity' to promote different legitimate ways of leading. They should review what they say they want, and whether that is really what gets rewarded.

2. Introduction

The Onwards and Upwards study builds on the learning and development the Leadership Foundation (now Advance HE) has achieved with Aurora programme participants by carrying out a five-year longitudinal mixed-methods research project with women working in academic and professional services roles in higher education in the UK and Republic of Ireland. Specifically, we focus on perceptions and experiences of leadership (both respondents' own leadership and the leadership they experience from others), career trajectories and preferences, and other aspects of their work such as the interface between work and non-work lives. Most of our respondents have undertaken or are undertaking the Aurora programme but, in addition, a comparison group of women in similar university roles who have not undertaken Aurora is being tracked over the same time period. The specified research aims are:

+ Track and analyse the career pathways of Aurora participants.

+ Explore Aurora participants' perspectives on (and engagement with) leadership roles, activities and achievements.

+ Explore perceptions of confidence, aspirations, role and professional development, work-life balance, opportunities and challenges.

+ Assess the commitment of women to role, discipline, higher education, institution and their own professional development.

This report centres on the findings from **year 3** of this mixed-methods longitudinal study and we add this data to that which we have already collected. The data sources we use in this report therefore include in-depth interview and diary data and the large-scale survey data which inform each other in the analysis presented in this report. Some of this data has been collected at different time points, not only this year. Nevertheless, this report does not attempt a comprehensive overall analysis of all data collected to date – that would be too much.

In consultation with Advance HE and the project advisory group, the issues focused upon in this report are:

1. A brief commentary of any major changes since last year in any element of the data eg respondents' demographics, women's perceptions of their leadership skills, the cultural and structural features of their workplace including how it is led and managed, their career management strategies and the perceived impact of Aurora.

2. A brief analysis of responses to a new question on the survey questionnaire about how respondents came to be on the Aurora programme.

3. Following on from last year's coverage of structural and cultural barriers to women's leadership and career development, an analysis of what actions and initiatives respondents are taking to improve women's situation in HE.

4. The Athena SWAN status of respondents' departments[1] and universities, and whether this is correlated with their perceptions of their workplaces, particularly opportunities for leadership and perceptions of workplace culture.

5. A close look at the approaches to leadership respondents say they take, what they construe as leadership, how they evaluate their leadership skills, and how the way they see leadership has changed, if it has.

6. Women's reports of being placed in near-impossible leadership situations – the situation, the causes and the consequences.

7. Stress levels experienced by respondents, and how that correlates with work experiences (especially experiences of leadership) and life circumstances.

---

1 Departmental level awards affect academic staff and professional services staff who work in an academic department, and not staff who work in specialist or central professional services.

8. Intersectionality. We have limited numbers of respondents who describe themselves as BAME or LGBT, but across cohorts there are enough to examine more closely than we have hitherto how the experiences of different groups of women might differ.

9. As an extension of intersectionality, an examination of differences between women working in different disciplinary contexts in the case of academics and different service departments in the case of professional service respondents. In both groups we also examine in more depth than previously the differences between types of HE institution, and country.

3. Overview of data collected so far

In the third year of our project, in late 2017 and early 2018, we surveyed a further 658 women who were just starting the Aurora programme. This represents a response rate of 51% from the 1293 women in Cohort 5. We followed up Cohort 4 to benefit from their perceptions soon after completing the Aurora programme. This brought the total number of women completing at least one survey to date to 2898. These figures are summarised in Table 1 below.

Table 1: Women taking part in the Onwards and Upwards surveys in years 1-3

Respondents	First Survey (n)	Second Survey* (n)	Third Survey (n)
Women taking part in Aurora			
Cohort 1 (2013-2014)	195	–	–
Cohort 2 (2014-2015)	408	172	–
Cohort 3 (2015-2016)	667	262	123
Cohort 4 (2016-2017)	597	192	–
Cohort 5 (2017-2018)	658	–	–
Comparison Women	373	124	–
Total	**2898**	**750**	**123**

*Cohort 2 completed their follow-up survey 15-21 months after completing Aurora whereas Cohorts 3 and 4 completed their second survey 3-9 months after completing Aurora. The comparison women completed their first and second surveys at approximately the same times as Cohort 3.

A total of 192 Cohort 4 respondents and 123 Cohort 3 respondents could be matched to their previous response. In both cases there were some respondents who could not be matched due to giving incomplete or ambiguous identifying information.

Table 1a (Appendix A) outlines a range of occupational, demographic and biographical information about the 2898 women who have responded so far. Forty-four women from the comparison group were now on Aurora (23 from Cohort 4 and 21 from Cohort 5). Adding Cohort 5 to the responses did not significantly change the profile of respondents from those reported in our previous reports.

Table 1b (Appendix B) gives similar information for the 750 respondents who have completed two surveys and whose responses on the two occasions can be matched. The addition of the 192 Cohort 4 respondents did not substantially change any conclusions drawn from the previously conducted longitudinal analyses. Table 1c (Appendix C) does the same job for the 123 Cohort 3 respondents who responded for a third time.

3.1   Interviews and diaries

This year we interviewed for a second time the same eight Aurorans from Cohort 3 we had interviewed in 2016 (See Appendix D for the topic guide). We also contacted the same eight Cohort 3 diarists who had participated last year to see if they were would be willing to complete diaries again (the diary template is shown in Appendix F). We received three positive responses and received two completed diaries.

We interviewed eight Aurorans from Cohort 4 for the first time. We had more difficulty recruiting interviewees than last year. We recruited only one diarist from Cohort 4 and she completed all three entries.

The first set of Cohort 4 recruits (five) were interviewed using one topic guide but with the second set (three) we used a different topic guide (see Appendix E). We decided to do this because we had recruited few diarists and were therefore unable to explore sufficiently the topic of identity change unless we did it with interviewees.

Throughout we endeavoured to recruit interviewees and diarists with a range of demographic characteristics. As is always the case in research, we could only recruit from Aurorans who volunteered. In many respects, we succeeded in achieving diversity but our sample – and hence our case studies – are not quite as diverse as might be ideal.

Academic literature review also continued, though it is referenced here only where relevant to the key themes reported in the findings. For a more detailed analysis of the literature, please refer to the Onwards and Upwards Year 1 report. We plan to digest our findings and embed them in relevant literature more thoroughly in the final stages of this project.

Table 2: Interviewees and diarists completed for this year

	1st interview	2nd interview	Diarists
Cohort 3	8	8	2
Cohort 4	8	8	1
Cohort 4 mentors	4	–	–

We have interpreted the interviews in terms of interviewees' self-presentation or performance. Although we did not use discourse analysis as a method, leadership 'discourse' seems to be more appropriate than the more commonly used term, 'styles'. By discourse, we mean how interviewees talked about their leadership and what they chose to focus on. Categories of discourse in some instances contrast with their leadership approaches and/or their accounts of their job descriptions (see later for a summary of interviewees' leadership discourses) and in other instances are consistent with these.

4. Summary of changes and developments arising from Year 3 survey data

4.1 Characteristics of Cohort 5

The 658 women who have joined the study by completing in 2017-18 a survey questionnaire at the start of Aurora (Cohort 5) differ in certain respects from how the previous cohorts were when those previous cohorts completed their first questionnaire. For some of these differences, it is unclear whether they signal a change in HE, or a change in the women undertaking Aurora.

In summary, our Cohort 5 respondents are slightly more likely than their predecessors to be professional services rather than academic (51% in Cohort 5, 43% in previous cohorts). Perhaps because of that, they report working slightly fewer hours than earlier cohorts (we have previously noted that academics report working more hours than professional services respondents). They are paid slightly less. They are slightly less likely (but still likely) to be on a permanent contract and full-time.

Cohort 5 respondents are:

+ Less likely than their predecessors to report that aggressive leadership styles are the norm.

+ More likely to say that teamwork and cooperation are encouraged.

+ More likely to say flexible working opportunities are available.

In addition, they:

+ Report less requirement for leadership in their official job duties.

+ Report less knowledge of how the organisation runs.

+ Have slightly more caring responsibilities than earlier cohorts.

+ Are slightly less likely to say that work keeps them from other activities more than they would like.

+ Are less likely than earlier cohorts to say they know what they want from their career, or that they want to rise to a very senior position.

+ Engage slightly less in some aspects of career self-management, such as making oneself visible to senior people.

In other respects (eg country where working, type of institution, ethnic identity, sexual orientation, department/school worked in and, in fact, most perceptions and attitudes not mentioned above), Cohort 5 is very similar to previous cohorts. Our previous reports give more detailed information about the characteristics of our respondents.

4.2   Perceived impact of Aurora

Our previous reports have analysed this in some detail. Typically, Aurora is perceived to have a significant impact on some behaviours and attitudes (most frequently engagement with and skills for leadership approaches and roles, and clarity about career aspirations), and this impact does not, on the whole, diminish over time.

In year 3 of our project we obtained data about Aurora impact from Cohort 4 (shortly after completion of Aurora) and Cohort 3 (more than a year after completion of Aurora). In both cases these largely reaffirm the extent, types and duration of perceived impact of Aurora. There are some signs that increased clarity about career goals soon after completion of Aurora may dissipate with time, while seeking to mentor others at work increases after completing Aurora. Further comments about the possible impact of Aurora are made in the next section.

During the project we have added two questions about the perceived impact of Aurora to the original list. These are "I openly challenge the system and/or culture of my workplace" and "I find ways of turning the systems and/or culture of my workplace to my advantage". Of the 624 Aurorans who have so far responded to these (in all cases, a year plus after the Aurora programme), 212 (34%) reported that Aurora had increased the former, and 250 (40%) the latter. These proportions are lower than for many other perceived effects of Aurora, but are nevertheless quite substantial. 135 women said yes to both these questions. This group of what might be called rebels/subversives (the label is perhaps a little over-drawn!) were markedly higher than others in their perceptions of their engagement with leadership, especially innovation and collaborative decision-making. It is not possible to verify chains of cause and effect here, but it is possible that, for a significant minority of Aurorans, the programme leads them to engage actively with the system and with organisational change.

4.3   Changes over time

We examined possible changes during 2017-18 across a wide range of variables for Cohorts 4 and 3. In the case of Cohort 4, this year corresponded with the time they undertook Aurora. This means that it is at least plausible that changes that occurred during the year may be attributable to Aurora, especially if the same changes are not observed in Cohort 3.

Indeed, there were some marked changes during year 3 of the project among those members of Cohort 4 who completed both before and after questionnaires. They showed statistically significant increases in the extent to which leadership was part of their work, and in the extent to which they sought it out. They recorded higher scores at the end of the year than at the start for several self-rated leadership skills and activities, including feeling comfortable with power, and inspiring, challenging and mentoring others. To some extent, Cohort 4 reported a more even playing field in opportunities for women and men in their workplace. They reported:

+ More confidence about putting themselves forward for positions of responsibility, salary increases and career advancement at the end of the year than at the start.

+ Engaging in more career self-management, especially making self visible, seeking feedback from others and setting goals for career progression.

+ Higher scores on knowing what they wanted from their career at the end of the year than at the start.

Illustrating the complexities of personal change, they simultaneously increased on self-reported challenging the organisational culture and conforming to it more than they would really like. Perhaps recognising the challenges of leadership, they also became slightly less likely to say that they expected their circumstances in five years' time to be compatible with taking on leadership roles, and slightly less keen to rise to a very senior position. Not everything changed. For example, reported enjoyment (or not) of organisational politics, and experience of the home-work interface were relatively constant.

The plausibility of the proposition that the changes in Cohort 4 scores over year 3 of the project can be attributed to Aurora is enhanced by data from Cohort 3, members of which had completed Aurora before the year began. They showed no significant changes in reported leadership approaches and skills. In certain aspects of career self-management, Cohort 3 decreased somewhat, in contrast to the increases observed for Cohort 4. For example, there were slight drops in confidence in putting oneself forward for career advancement, setting goals for career progression and enjoyment of organisational politics. Where changes did occur, they tended to be in the direction of pre Aurora scores, obtained in year 1 of this project. They did not happen in all areas – for example seeking out leadership opportunities maintained the increase that occurred over the year in which the Aurora programme was undertaken.

4.4   Job changes during year 3

Sixty out of 315 respondents reported being promoted during year 3 of the project. Twenty-two were in Cohort 3, and 38 in Cohort 4. There were almost no statistically significant predictors of who would be promoted among the data collected in this project. None of the survey questions about leadership, work-non-work interface,[2] workplace culture or individual career management and attitudes differentiated between those who were promoted and those who were not.

Demographic variables were not much better. For example, there was no difference in promotion rate between professional services and academic staff or type of institution. Although not a strong trend, 46 (20%) out of 230 women who identified as white UK reported being promoted during the year, compared with 11 of 80 (14%) in all other ethnic groups (white Irish, white other, any BAME). Similarly, 20% of women who did not identify as LGBT reported being promoted, whereas 10% of LGBT women did. However, that 10% constituted 2 out of 21 people, so it is far too small a number to draw confident conclusions.

We also asked whether respondents had received an accelerated or discretionary salary increment during the year. Twenty-one from Cohort 3 and 53 from Cohort 4 reported doing so. Full-time workers were more likely to report receiving an accelerated or discretionary increment than part-timers (26% vs 10%). Apart from that, there were no statistically significant associations with demographic variables.

Those who reported receiving an increment were more likely to say (in their first questionnaire, before receiving the increment) that they:

+ Wanted to be an expert in their domain

+ Knew what they wanted from their career

+ Took care to maintain their work contacts

+ Were more confident about putting themselves forward for career advancement and salary increases

---

2   The way in which work and non-work commitments and activities impact on one another.

Like the analyses above regarding those who were promoted, responses to the questions about workplace culture and practices, and the respondent's approach to leadership, did not distinguish between those who received an increment and those who did not.

Ninety-five Cohort 3 or 4 respondents out of 315 (30%) reported at least one unsuccessful attempt to change jobs in the last year. Eighty-nine (28%) reported one or more unsuccessful promotion attempts. Note that respondents did not always construe promotion as a job change.

Motives for changing or trying to change job were many and varied, but the dominant ones were:

+ To expand skills (n= 134)

+ For more seniority (n= 122)

+ More responsibility (n= 112)

+ More money (n= 79)

Few (20) reported family or relationships as a major factor, while rather more (42) cited a change in career direction.

Only very small numbers of respondents moved between institution, type of institution, country or job type during year 3 of the project.

5. How respondents got onto Aurora

This year we asked members of Cohorts 3 and 4 to think back to how they had found their way onto the Aurora programme. We offered eight alternative responses, and invited respondents to tick as many of those as applied to them. For this analysis we used all Cohort 3 and 4 responses (not just those who we were able to match with their earlier responses), which amounted to 410 people. Responses from each cohort were very similar, so are aggregated here.

Responses are shown in Table 3 below, in descending order of frequency.

Table 3: Respondents' reports of how they got onto Aurora

I applied in response to a general call in my employing organisation	**240**
I was nominated or encouraged to apply by more senior people than me in my employing organisation	**166**
I was selected from among other applicants by my employing organisation	**121**
I self-nominated or applied without any particular encouragement	**55**
I was nominated or encouraged to apply by peers in my employing organisation	**28**
I applied after seeing information about Aurora that did not come via my employing organisation	**10**
Other	**4**
I'm not sure, it just seemed to happen	**2**

This shows that the opportunity to participate in Aurora was almost exclusively mediated via employing organisations. Most commonly this was done openly, with a general call as reported by about 60% of respondents. Only about 30% of respondents underwent a selection process. Also common was personal encouragement or perhaps even patronage by senior members of the organisation. In a small number of cases encouragement by peers was a spur, though twice as many (about one in eight) said they had put themselves forward without any particular encouragement.

Further analysis (not shown in the table) cross-tabulating the most common responses showed that over a quarter of respondents were nominated or encouraged by a senior person and then did <u>not</u> have to participate in any selection, while about one in seven were encouraged and also went through a selection process within their employing institution. This suggests that patronage or sponsorship was a significant factor for some respondents and in some cases it was enough on its own.

About one in three respondents reported applying in response to a general call and not undergoing a selection process, compared with one in five who applied in response to a general call and participated in selection. This suggests either that in some institutions asking was enough, or that selection happened but was too covert for our respondents to be aware of it. About half the self-nominators reported undergoing selection.

6. Actions taken to improve women's situation in HE

Following a question included in previous surveys about cultural and structural barriers to women engaging in leadership, we invited women in Cohort 3 (second post Aurora), Cohort 4 (first post Aurora) and Cohort 5 (pre Aurora) to respond to the following question. This is not to suggest that individual women are responsible for overcoming potential structural and cultural boundaries. Rather, we are interested in the ways in which Aurorans might feel motivated to try to change things.

> **The following question was asked to year 3 survey respondents**
>
> Have you taken action to address any barriers to careers and leadership facing women in higher education, either on your own or as part of a group? If so, please tell us what you have done and what effect you think your action has had.

About one third of Year 3 respondents described one or more actions they had taken. Content analysis of their responses led to the identification of the following themes:

Table 4: Respondents' reports of action taken to improve women's situation in HE

Actions	Number of respondents
Engaging with Athena SWAN	**67**
Challenging gendered practices	**63**
Supporting other women	**59**
Women's networks	**39**
Career and professional development	**38**
Raising awareness	**23**
Training	**16**
Involvement in Aurora	**11**
Increasing women's visibility	**11**
Researching gender issues	**6**

The most commonly cited action was serving on formal coordinating committees or groups working to bring about changes that would strengthen applications for an **Athena SWAN** award or contributing to self-assessment for Athena SWAN.

> "I lead our Athena SWAN institutional group. This work attempts to address barriers to career progression and leadership in a range of ways. We are currently working on a project to identify issues for progression for part-time women or those who have taken career breaks…We are also trying to strengthen women's promotion prospects via specific workshops and better information sharing in advance of applications regarding benchmarking and expectations."
>
> **(Cohort 3 T2 post-Aurora survey)**

> "I have helped with Athena SWAN initiatives in our department, including developing support materials for students taking maternity/paternity/adoption/parental leave."
>
> **(Cohort 5 pre-Aurora survey)**

> "Initiated an Athena SWAN working group for professional services staff in the faculty."
>
> **(Cohort 5 pre-Aurora survey)**

Another popular action was addressing **gendered practice**s, which in some instances seem to be associated with Athena SWAN. Respondents described taking a formal role in addressing equality and diversity issues or seeking to influence senior staff or challenging through their behaviour in meetings. Recruitment, promotion, pay and working practices were referred to as the focus of such activity. In most instances the respondents wrote about challenging the status quo for all women in their institution:

> "I raised concerns about whether jobs that could be shared or part time were being advertised as such with our Head of HR."
>
> **(Cohort 3 T2 post-Aurora survey)**

> "I have addressed the issue of gender discrimination in several meetings with senior managers and colleagues."
> **(Cohort 4 T1 post-Aurora survey)**

> "I have challenged the notion that people need to work at least four days per week in order to progress beyond Grade 7 into more senior positions. I have also tried to encourage more acceptance of home working which reduces commute times and helps with external commitments."
>
> **(Cohort 5 pre Aurora)**

> "Highlighted discrimination in reward for teaching activities as opposed to research activities to line managers. Provided evidence that women often get higher teaching responsibilities than men, which is detrimental to career progression since teaching is undervalued."
>
> **(Cohort 5 pre Aurora)**

Similarly, many respondents reported their action as **supporting other women**, often by mentoring or encouraging them in their career development.

> "As a result of the Action Learning Set and other training from Aurora, I have informally peer mentored two colleagues and encouraged them to pursue career progression activities, which I feel has given them increased confidence and greater responsibilities or acknowledgement of their work."
>
> **(Cohort 4 survey T1 post Aurora)**

> "I have trained as a mentor, and mentored two colleagues, one in the same faculty and one outside. In both cases, I feel I have been able to support them in advancing their career."
>
> **(Cohort 3, T2 post Aurora)**

> "I have supported/mentored women in my organisation who have been facing difficulties at work or who have been considering promotions."
>
> **(Cohort 5 pre Aurora)**

Similar to the more informal practice of supporting other women, respondents reported joining existing university **women's networks** or setting up such networks, mostly within their employing institution.

> "I have set up a Lean In Circle along with another colleague who attended Aurora. We run this for women within our department and another department we work closely with. We meet monthly to discuss issues or content off the Lean In website."
>
> **(Cohort 4 T1 post Aurora)**

> "Part of a woman's network which aims to provide support and a safe space for discussing problems, this is more engaged and authentic than the Athena work."
>
> **(Cohort 5 pre-Aurora survey)**

Mentoring and networking are advocated by the literature (eg Gallant, 2014; MacFarlane and Burg, 2018; Edwards, 2017). The difference here is that women themselves are being proactive in seeking to mentor others and engage in networking for its mutual benefits.

Some respondents reported undertaking **career and professional development** activity such as expanding their knowledge and skills around unconscious bias and diversity, changing their behaviour as leaders and challenging decisions that negatively impacted on their attempts to seek promotion.

> "I have volunteered for courses, eg on unconscious bias, both for my own benefit and also to encourage others."
>
> **(Cohort 4 T1 post-Aurora survey)**

> "I have challenged my own thinking as a manager regarding work/life balance and family commitments. My previous experience was influenced by non-flexibility and I have had to stop and ask myself what is right for the individual and institution and not make decisions for my staff based on what I have personally experienced or been led to believe is the right course of action. Particularly eliminating the idea of gender roles in family commitments."
>
> **(Cohort 4 T1 post-Aurora survey)**

> "Started challenging my own behaviours and thinking – would I apply for that job vacancy if I was a man? What would I say in my appraisal if I was a man? Are there differences? Would I behave differently?"
>
> **(Cohort 5 pre-Aurora survey)**

Some respondents described how they sought to **raise awareness** among colleagues and students.

> "I take the time to discuss gender equality challenges and opportunities in HE with colleagues."
>
> **(Cohort 3 T2 post Aurora)**

> "I work with PhDs and research staff and have initiated a workshop on working as an academic with a family, which seeks to address some of the real or perceived barriers to career development."
>
> **(Cohort 3 T2 post Aurora)**

> "I have called out unconscious bias behaviour when I saw it – not sure it had effect, or if it was even understood."
>
> **(Cohort 5 pre- Aurora)**

A few respondents promoted **Aurora**, encouraged colleagues to apply, became involved in selecting applicants or engaged in post Aurora activity.

> "I am a member of the Aurora alumni group in my organisation, supporting new cohorts of women starting on this programme."
>
> **(Cohort 4 T1 post-Aurora survey)**

> "I have encouraged colleagues to apply to the Aurora programme, as I felt it gave me important perspective and reflection opportunities."
>
> **(Cohort 4 T1 post-Aurora survey)**

In a few instances, respondents reported **training staff** to improve career progression and promotion practices and using workshops to support women to apply for promotion.

> "I have been actively involved in organising mentoring training and other actions related to career progression."
>
> **(Cohort 4 T1 post-Aurora survey)**

> "We are also trying to strengthen women's promotion prospects via specific workshops and better information sharing in advance of applications regarding benchmarking and expectations."
>
> **(Cohort 5 pre Aurora)**

A few respondents reported actions to increase women's **visibility**, by increasing women's opportunities to share their research or celebrate their work, or by using more images of women researchers in posters and teaching materials.

> "I have several times nominated specifically women colleagues for plenary lectures and awards to help improve the gender balance."
>
> **(Cohort 5 pre-Aurora survey)**

> "...I was tasked to... change the …decorations in my university building with the aim to remove the male bias by inserting equal numbers of women scientists' quotes and more photos showing women students."
>
> **(Cohort 5 pre-Aurora survey)**

> "I try to make female researchers more visible in…teaching materials …and to introduce gender perspectives where possible."
>
> **(Cohort 5 pre-Aurora survey)**

6.1 Perceived impact of actions

Not all respondents who wrote about their actions commented on the impact. Most of those who did reported limited change, that it was too early to judge or that there was much to be done. Limited change was reported mainly around career development and promotion, although workload allocation, flexible working and pay were also mentioned. In some cases, the perceived impact was negligible or even perverse:

> "I challenged the promotion form: that rather than training women to be more like men to succeed in this process, we should change the process to better reflect how women talk about themselves. I was told by senior management that women should learn to be more like me. So absolutely no effect whatsoever."
>
> **(Cohort 3, T2 survey)**

> "I have tried to raise the issue of career progression and got advised "it will happen when it happens.""
>
> **(Cohort 4, T1 survey)**

> "Have requested a process for promotion for professional services staff similar to what is in place for academic staff. No response received as yet."
>
> **(Cohort 5 pre Aurora)**

Disturbing (although perhaps not surprising) are the few reports of institutions pursuing Athena SWAN awards without commitment to gender equality:

> "I feel they are taking action for appearances rather than genuinely wishing to respond to issues."
>
> **(Cohort 5 pre- Aurora)**

Conversely some respondents attributed positive change to success with Athena SWAN.

> "Since the start of the departmental Athena SWAN submissions I have been an active member of the advisory group. We hold a silver award, and since this year our department is headed by a gender-balanced leadership group. The culture and attitudes are changing, albeit still very slowly."
>
> **(Cohort 5 pre- Aurora)**

Some respondents found that their actions had affected other women, themselves, or had changed policy or practice. Actions that led to change in policy or practice tended to focus on careers, promotion and working practices.

> "I made the gender taskforce at my institution aware of structural barriers and, as a result, more women have been promoted in the last round."
>
> **(Cohort 3, T2)**

> "I have personally openly challenged the lack of opportunity and transparency in promotion for fixed term research staff with senior leaders... this has led to workshops and changes in policy on promotion…"
>
> **(Cohort 4, post T1)**

> "We have had some structural impact (work to be included in hours allocation; committees) and cultural impact through buy-in at different sub-departments and visible discussion of potential issues."
>
> **(Cohort 5 pre- Aurora)**

> "We have made changes to our department including introducing core hours of 10-4 for meetings and clarifying the process for promotion through appraisals."
>
> **(Cohort 5 pre- Aurora)**

Impact on other women included increased confidence, better pay, promotion or career development activity.

> "Supporting female team members to take advantage of coaching/mentoring opportunities and to go for promotions. Many have been successful in promotions."

> "I have supported…women with flexible working applications… This allowed them to fit their caring commitments around full-time work and continue progressing in their careers."
>
> **(Cohort 5 pre Aurora)**

> "I encouraged a colleague to apply for Aurora this year and I'm pleased that she has been accepted onto the programme. She is very competent but didn't feel she could compete with some of the males on a similar level."
>
> **(Cohort 4 post Aurora T1)**

A few respondents found taking action to be "draining", "disheartening" or were "out of energy", reinforcing the need for collective action in order to secure change. However, some respondents reported positive effects on their self-awareness and knowledge.

> "Joined Women Leaders in Higher Education Network… has increased my awareness of gender issues."
>
> **(Cohort 5 pre Aurora)**

> "Increased confidence and a willingness to think more openly and creatively, with a greater understanding of others' motivations and values."
>
> **(Cohort 5 pre Aurora)**

> "Helped me understand that I can sometimes create my own barriers and assume that I am less competent than I am. I hope that this will give me more confidence to pursue opportunities when they arise."
>
> **(Cohort 5 pre Aurora)**

7. Associations between Athena SWAN status and women's leadership and work experiences

The purpose of the Athena SWAN charter is to ensure that institutional practices facilitate full opportunities for women in higher education workplaces. It is also intended to raise awareness of the importance of this, and how to achieve it.

Previous evaluations have considered the impacts of Athena SWAN in the UK HE context (see Munir et al, 2013), while others have indicated the Charter's success in putting gender inequalities on the agenda in the sector (Barnard, 2017). This study has therefore taken the opportunity to explore Athena SWAN from the perspectives of women in higher education.

In year 3 of the project we added two questions to the survey. We asked respondents whether their (i) department and (ii) institution held an Athena SWAN award, and if so at what level (gold, silver or bronze, or not applicable to them). This was answered by Cohort 5 pre Aurora, Cohort 4 soon after Aurora, and Cohort 3 longer after Aurora. Responses were as follows:

Table 5: Respondents' reports of the Athena SWAN status of their workplaces

	Department/School/Section	Institution
Don't know	**183**	**200**
No award	**396**	**112**
Bronze	**167**	**516**
Silver	**93**	**126**
Gold	**4**	**8**
Not applicable	**122**	**7**

It is perhaps notable that about 20% of respondents did not know the Athena SWAN status of their section, or of their employing institution. About 12% knew neither. This suggests a need for more publicity and clarity concerning Athena SWAN awards, perhaps mainly by employing institutions to their own staff. The relatively high "Not applicable" response for departmental Athena SWAN status is almost entirely from professional services staff as they do not have departmental award schemes.

To what extent does an Athena SWAN award translate into the experiences reported by academic and professional services women working in higher education? Our survey questions offer ample opportunity to examine this question. We focused on three groups:

+ No award

+ Bronze award

+ Silver award

These had sufficient numbers for analysis and gave a clear answer (less than five respondents stated that their department or university had a gold award and are therefore omitted from this analysis).

The general picture is that Athena SWAN status does not seem to make a thorough-going difference to the reported leadership and other work experiences of women in academic and professional services roles. However, a few statistical trends are strong and pervasive enough to be taken seriously.

The statistically significant relationships tend to be more pronounced for department/section Athena SWAN status than for institutional status. The most consistent finding was that respondents in departments with a silver Athena SWAN award were more likely than those in departments with a bronze award or no award to report that flexible and family friendly policies and practices are available and functioning, and that making use of them is not taken as a sign that you are not serious about your career.

For example, among Cohort 5 for the item "Flexible working opportunities are readily available", the mean score for no award and bronze award was about 3.5, and for silver award it was 4.0. This was on a 1-5 scale where 1 = strongly disagree and 5 = strongly agree. A similar, though somewhat weaker, trend was visible for Athena SWAN institutional award status, though here having a bronze award seemed to be somewhat better than having no award.

Although not often statistically significant, there was a consistent tendency for a silver Athena SWAN award at departmental level to be associated with somewhat more favourable perceptions of local culture and practices beyond family friendly ones. For example, again for Cohort 5 (the biggest one), for the item "Women and men have equal opportunities in promotion", the mean score for no award and bronze award was 2.8, and for silver award it was 3.0. For "Teamwork and cooperation are encouraged" it was around 3.6 for no award and bronze award, and 3.9 for silver award.

Regarding career trajectories, there was no discernible trend for departmental or university Athena SWAN award status to be associated with reported career moves (eg promotions, sideways moves) either in the last year or over career so far. However, there was a highly statistically significant tendency for departmental Athena SWAN award to be associated with future intentions. Those working in a silver award department were less likely to say they intended to seek a new job in the coming year than others, and those working in a bronze award department were slightly less likely than those working in a no award department. This pattern was replicated for Athena SWAN award at university level, though somewhat less strongly. One plausible explanation for these findings is that although perceived differences between workplaces with different levels of Athena SWAN award (or none) were not huge survey item by survey item, their cumulative effect may have been enough to make a difference to respondents' desire to stay or leave.

Specifically regarding leadership, respondents working in a department with a silver award were significantly more likely than those in no award or bronze award departments to say that leadership was a major part of their official job duties. This suggests, but does not prove, that an Athena SWAN silver award increases access to such roles. Other than that, there was little evidence that Athena SWAN award status made a difference to the reported experiences of leadership (one's own, or that to which one was exposed).

Among the perceptions where there was no relationship with Athena SWAN status are:

+ Men have a better chance than women of attaining leadership roles (bronze departmental award workplaces were in fact worse than no award departments on this).

+ Men and women leaders receive equal respect.

+ Women tend to get the least prestigious leadership roles.

+ My line manager supports my development.

+ I have been placed in leadership situations where success has been almost impossible to achieve.

+ My current circumstances are compatible with taking on substantial leadership roles at work.

+ I feel confident in putting myself forward for positions of responsibility.

Athena SWAN status had no discernible statistical association with experiences of stress or work-life balance. However, respondents working in institutions with silver or bronze status were more likely than others to report seeking mentoring and feedback. There was a tendency for a departmental or institutional award to be associated with <u>less</u> self-reported knowledge of how the organisation runs. This is difficult to explain, but perhaps signals that women are willing to take more on trust where there is an Athena SWAN award.

8.   Leadership discourses

We drew on survey returns and two sets of interviews with individual participants in order to develop case studies. In the interviews we can identify particular ways of talking about themselves as leaders, which we have analysed as discourses of leadership. Interview questions such as "Which aspects of your work would you describe as leadership activities?" and "How would you describe your leadership skills?" generated responses that helped to inform the discourse categories. Case studies were constructed by analysing interviews with Aurorans from Cohorts 2 and 3. As we had interviewed these women twice since they completed Aurora, we had more data about them and an indication of changes in the way they talked about themselves as leaders.

The categorisation of discourses used in this analysis include: power holder; knowledge producer; people developer; professional role model; influencer/change agent; relationship builder; and the adaptive leader. These categories are defined in more detail below. Categories of discourse are drawn from the data and the literature, particularly Macfarlane (2011). Being only concerned with academic or intellectual leadership, Macfarlane (2011) and Juntrasook (2014) have limited scope relative to this project which also includes professional services staff. Usually more than one of these discourses was evident in the data, and most interviewees presented with more than one discourse of leadership. This may indicate breadth, adaptability, or maybe they identify with a complex combination of leadership discourses or are exploring different ones as they construct their own authentic discourse. The movement through different kinds of leadership is an interesting avenue to explore in our longitudinal data as the study progresses further.
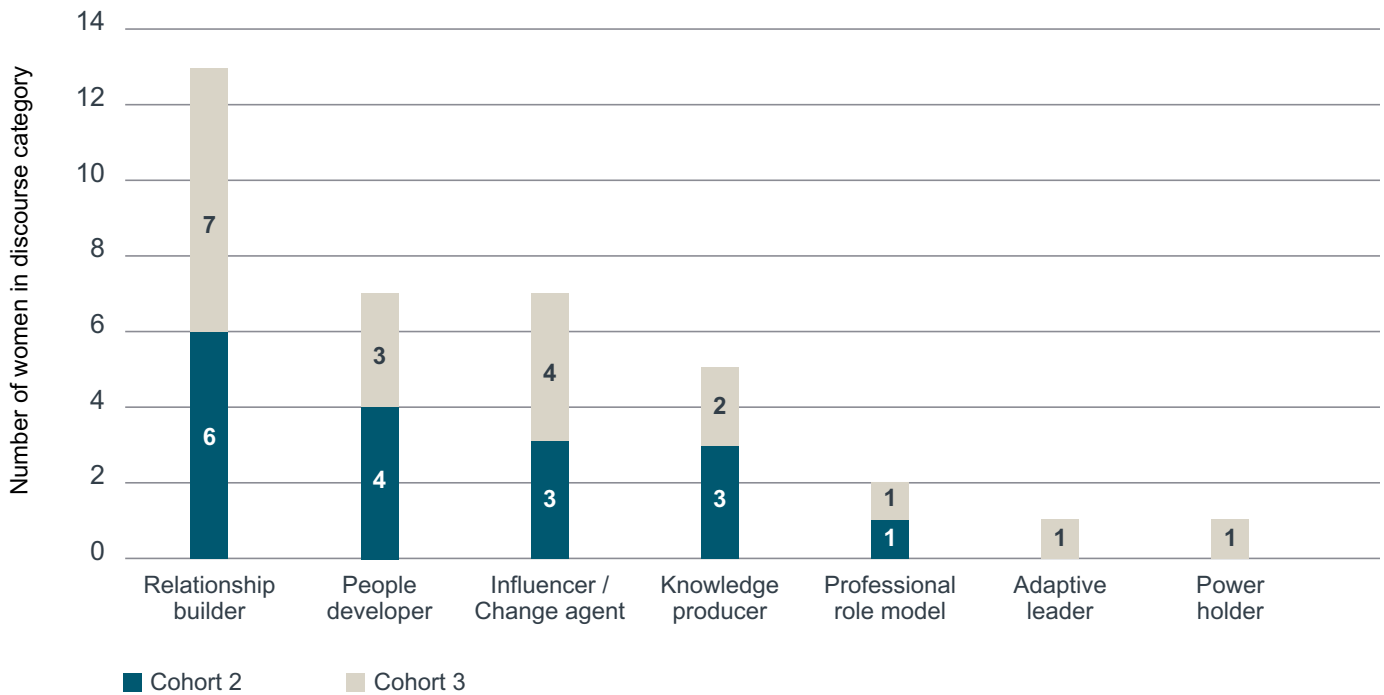
The categories of discourse suggest that interviewees' views of leadership tend to fit into existing conceptualisations. This is not surprising and may reflect their interpretation of leadership as presented on Aurora. Alternatively, their conceptualisations may reflect their experience of leadership in higher education and their perception that these institutions only lend themselves to certain types of leadership.

The prevalence of these discourses is indicated in Figure 1 below. Interestingly, six out of the eight Cohort 2 interviewees presented themselves as relationship builders and three of these were also influencers. Four presented as people developers and two as knowledge producers, with one who aspired to be. None regarded herself as in a position to lead by exerting power or talked about adapting her leadership according to the situation.

As with Cohort 2, none of the Cohort 3 interviewees identified as a power holder, although one indicated her wish to be in this position. Two identified themselves as knowledge producers. Three saw themselves as people developers, with two changing their discourse in this respect between interviews. One expressed a wish to conduct exemplary research, which may indicate that she sees herself as being (or aspiring to be) a professional role model. Four identified as influencers, and seven as relationship builders. At the second interview, one saw herself as a situational leader.

A sample of case studies, not the full 16, is included below.

Fig 1: Discourses of own leadership

Relationship builder

A relationship builder discourse focuses on the importance of initiating and managing ongoing relations with people in the workplace, which includes collaborating with colleagues and broader networking. There are some similarities with interpersonal leadership, but with less emphasis on staff welfare and more on trust and using informal channels.

People developer

A people developer discourse refers to coaching, mentoring, supervising, and motivating others. There are some elements of Juntrasook's leadership through practice although his category also includes committee work and securing resources. Not surprisingly, those interviewees with people development responsibilities identified as people developers. Four of those with management responsibilities were people developers but, interestingly, none saw themselves as power holders.

Influencer / change agent

Influencers and change agents described how they are involved in committee work and devising and/or implementing new systems or ways of working in the institution. Change management as a leadership activity was only referred to by one interviewee whose discourse was as an influencer and relationship builder. Those engaged in teaching and curriculum development did not use the discourse of an influencer, perhaps because they did not associate influencing

with the content and delivery of programmes and impact on students. Public engagement (which is similar to Macfarlane's public intellectual) did not feature, perhaps because it is a relatively new area of development and may be associated with more senior staff. Therefore, this discourse of leadership tends to be more inward-facing than the title might suggest.

Knowledge producer

As one might expect in higher education institutions, some of the women focused on their role as knowledge producers when talking about their leadership practice – here we can see links to one of Macfarlane's intellectual leader categories and Juntrasook's leadership by performance. This discourse was particularly evident in those women whose main activity was research.

Professional role model

The professional role model discourse refers to setting an example, inspiring and setting professional standards in the institution. Again, similarities to Juntrasook's concepts of leadership are found. There is the potential in this discourse to talk about more outward facing leadership, for example becoming known more widely in society.

Adaptive leader

The adaptive or situational leader is used in this study to refer to the interviewee who adapts her style in line with her (or the project's) aims and the individuals she is working with. The idea of a situational leader is very common in the leadership literature (Thompson and Vecchio, 2009). Often it means adapting the leadership style employed to the level of follower development rather than to broader aspects of the situation. A similar concept is contingent leadership (see Fiedler and Garcia, 1987), though for Fiedler leadership style is fixed and its effectiveness depends on how well the personal characteristics and motivation of the leader interact with the current situation that the group faces. The term adaptive leadership has been used in the literature before to emphasise process and stakeholder involvement (Randall and Coakley, 2007). However, we use the term adaptive leadership slightly differently (see above), and we argue this terminology better fits the discourse identified in our data.

Power holder

The power holder discourse emphasises the leadership that results from structural and hierarchical positions, similar to Juntrasook's positional leadership. The absence of power holders in our data may be a reflection of the organisation level of women who are recruited to the Aurora programme, interviewees' perceptions of their relative power or their views of the appropriateness of using power to lead. The prominence of relationship and people development may say something about how these interviewees prefer to operate, what they see as possible and practical or perhaps was influenced by their experience of the Aurora programme, which values soft skills.

Case study: influencer, people developer, relationship builder

Susanne is in her late 30s, white-British and works in a professional / managerial role. She has pre-school age children.

In the survey Susanne reports some negative perceptions around gender equality, transparency, teamwork and consultation. She is positive about leadership capabilities, including comfort with power. Her work impacts on home life. She is proactive in career self–management, confident about seeking promotion and aspires to a leadership position.

Over the course of the interviews she reports moving from a service managerial role to a mid-management role in the same institution. She sees herself as tough, fair, assertive and empathetic. Susanne tries to get to know her staff, build their confidence and develop them. In her view, a leader needs to build relationships. She thinks that leaders need resilience and emotional intelligence. Leadership can be lonely when you act on your convictions in the face of opposition. Soft skills are not sufficiently valued in higher education, perhaps – she reflects – because there are too many men in senior positions. However, she argues that you need emotional intelligence to attend to people's wellbeing and take them with you.

In terms of barriers, she talked about snobbery regarding academic background and nepotism, but also about the lack of career pathways for professional service staff and the need for sponsors. Networking to find sponsors is time-consuming and not something she enjoys. At times she feels like an imposter. Susanne suggests she would be able to achieve more if she had more confidence in herself, her experience and in expressing her opinions even when others disagree. The need for job and financial security, and limitations on her working hours (because she has young children) also restrict the jobs she feels able to apply for.

Case study: professional role model, people developer

Amanda is in her late 40s, White British and works in a professional/managerial role. She has secondary school-aged children.

In the survey Amanda is positive about equality issues and support at work. Her work is project-based and therefore subject to change. Over the different survey years, Amanda is confident about her leadership skills but is not satisfied with her career. She experiences some work-related stress and feels home responsibilities interfere with work life

Over the course of the interviews Amanda reports her responsibilities as advising staff and managing individual projects. As Amanda returned to work part-time after maternity leave, she was given project work rather than management and this type of work has not significantly changed over the years. Amanda initially lacked confidence in her leadership and avoided challenging others. She also lacked confidence in applying for jobs with a wider remit. But since Aurora, her confidence is growing, and she has the support of individual directors who give her feedback and opportunities. However, her leadership approach is one of 'people pleaser' and she enjoys training and inspiring others – including those she has no power over – addressing their concerns and leading by example.

In the changing context of higher education, workloads have become unmanageable and debate has closed down. Amanda has adapted her leadership skills to be one of 'subconscious leadership' whereby she carefully presents herself as being available and visible and adapting her behaviour according to context.

Case study: knowledge producer, relationship builder

Jana is in her mid-30s, classes her ethnicity as White Other and works in an academic role as a lecturer in a STEMM (science, technology, engineering, medicine, mathematics) subject. She has no caring responsibilities.

In the survey Jana is positive about equality issues and support at work. She is engaged in leadership both officially and unofficially and she must influence others over whom she has no power. Jana is confident about her leadership skills and enjoys the cut and thrust of organisational politics at work although she experiences some work stress due to workload. However, she feels that she does not have to behave in ways that feel uncomfortable to her. Work is important to Jana and she is keen to be an expert in her field. She is proactive in seeking visibility, development and mentoring.

Over the course of the interviews Jana reports being promoted and taking on new responsibilities within her school/ department. Research is important to Jana and being good at it is imperative. She has had recent successes in securing external research funding for her work which has boosted her confidence. She is self-assured in her leadership skills and feels she has strong organisational and communication skills. Jana has mentors and finds them useful and supportive in her career progression. She has a positive view of leaders with 'people knowledge' ie those who allocate work according to strength, deal with conflict, develops others and gives credit to individuals.

Jana has a positive attitude toward her career progression both within academia and outside of academia. She is confident that her academic skills and knowledge and her transferable skills, experience and knowledge will serve her well in a job outside of academia should she wish to leave.

Case study: aspiring power holder

Jennifer is in her late 40s, white and works in a professional / managerial role. She has school age children.

Jennifer engages in limited career management activity. She is not satisfied with her career and aspires to be expert and of service to her organisation. She is confident about putting herself forward for more responsibility and career advancement. Her circumstances are compatible with substantial leadership responsibilities. She is task focused and thinks that more power will help you to get more done.

Initially she states "frustration about the very common assumption that working part-time or flexibly is incompatible with management or leadership roles. This assumption has prevented me from progressing my career to an appropriate level for my experience and skills and has kept me 'treading water' during the years I have chosen to work part-time and flexibly in order to fulfil family commitments. I want to be able to seek promotion without committing to full time work."

Working part-time has been a disadvantage because of attitudes towards part-time working in leadership positions and discomfort with unconventional work patterns such as job-sharing and home-working. Indeed, a year after she related her frustration she had changed from working part-time to full-time due to a promotion. She sought this change for seniority, responsibility and to expand her skills and experience.

At this time she is more positive than before about equal opportunities in terms of recruitment and promotion. Aurora has helped her to apply for a job she would not have otherwise considered and to make this job move. She is more confident about her leadership skills and is more actively managing her career. Career satisfaction, clarity, aspiration and confidence are all much greater than they were.

The above case studies illustrate how defining and categorising leadership can be elusive in the flux of individual careers and day to day working life. Nevertheless, they also illustrate the dominance of collaborative and relational discourses of leadership. It could be argued that these are partly a product of both gender self-concepts and cultural expectations of what is supposed to be "good" leadership in higher education settings – despite many respondents being able to give examples of aggressive leadership by others which violated the supposedly collaborative cultural value. The cultural and systemic barriers many of our respondents report facing at work may also contribute to a preference for relationship building, almost as the only way to get anything done because formal mechanisms aren't likely to be helpful.

One distinction that does not come through very clearly in the leadership discourses is that between relationships with people in the group or team, and relationships with those outside it. In the quantitative survey responses, it was notable that women reported most confidence about collaborative within-team relationship building and maintenance. This included role modelling, which was somewhat separate from relationship building in the discourses. They were somewhat less confident about the more assertive and innovative elements of leadership, though still quite confident. This matches well with the lower prevalence of influencer/change agent and power holder discourses. A third cluster of survey questions concerned the cognitive skills and knowledge needed to identify ways ahead that can work and gain acceptance in the organisation. As with assertion and innovation, our respondents' confidence in these areas was somewhat lower than for their within-team collaboration skills. At first sight, this cluster of questions might be thought to find expression in the influencer/change agent discourse, but this is not particularly the case because they reflect thinking and social awareness rather than social influence. If the knowledge producer discourse is de-coupled from research and applied instead to knowledge of the organisation and the people in it, it is the closest expression to that cluster of survey questions.

9. Near-impossible leadership situations

One of the survey questions asked of all participants reads "I have been placed in leadership situations where success has been almost impossible to achieve". Cumulating responses from all cohorts so far in their first questionnaire (N = 2898), 12% strongly agreed with this statement, and a further 28% somewhat agreed. For first follow-up questionnaires, these figures dropped to about 8% and 20% respectively. This was the case for the comparison group as well as Aurora Cohorts 2 and 3, suggesting that perhaps the incidence of women feeling they were put in these positions was dropping, independent of any influence Aurora might have on women's experiences of leadership.

However, in year 3 of the project, it looks as if the feeling of being put in near impossible leadership positions is somewhat on the rise again. Our Year 3 data show that Cohort 4 did not report the reduction in this experience that the previous Aurora cohorts did over the year in which they took part in Aurora. Further, data from the second follow up of Cohort 3 show that during this last year (for them, entirely post Aurora), they report a highly significant increase in being placed in near impossible leadership positions.

There are few statistically significant differences at any stage of our project so far between different subgroups of women regarding their reported experiences of being placed in a near impossible leadership situation. None of ethnic identity, professional services vs academic, department/function worked in, country, type of institution or sexual orientation made any difference. However, respondents who considered that they had a disability or impairment were somewhat more likely to say they had experienced being in a near impossible leadership situation. There was also a slight though statistically significant tendency for older respondents (aged 45 and over) to report this experience more than younger ones. This might be expected because the longer you have been around, the more time has passed during which this could happen. On the other hand, it might suggest that older women are given the toughest assignments.

Women in Cohort 2 (second post- Aurora), Cohort 3 (first post- Aurora), comparison group (second survey) and Cohort 4 (pre Aurora) were invited to respond to the following question:

> "If you somewhat agreed or strongly agreed that you have been placed in leadership situations where success has been almost impossible to achieve, please give a brief example of such a situation, how it came about and how you dealt with it."

Responses were analysed in terms of the near-impossible situations (both the context and the activity), and their causes and consequences. Sub-categories are discrete as far as possible, although some degree of overlap is inevitable. Context and activity are described briefly below, with more attention being given to reported causes and consequences.

9.1 Leadership context and activity

Seventy-two respondents provided data in the survey open text box describing the context of their near-impossible situation. As Table 6 below shows, where the context was unambiguous (often this was not the case), such situations arose mainly in the context of team management, with some being associated with working at institutional or multi-departmental level. Rather fewer occurred in working with external organisations. This may simply reflect of the nature of respondents' work rather than team leadership being more problematic.

Table 6: The most common reported contexts of the leadership situations where success was almost impossible to achieve

Context	Number of respondents
Team management Line managing staff or project managing teams of colleagues or senior staff.	37
Institutional or multi-departmental level Leadership roles which involved the whole of the employing institution or more than one department within it.	25
Working with external organisations Leading on projects in collaboration with other universities or organisations eg local government, hospitals.	10

Regarding the activity itself, 116 responses were categorised showing that staff coordination was most commonly reported to be problematic, perhaps because respondents did not have authority over these staff. The same may apply to the next most common category – project management. The dominance of issues to do with students and teaching over research is clear.

Table 7: The activity associated with the almost impossible leadership situation

Activity	Number of respondents
Teaching coordination or development Usually as a module lead.	30
Project management Includes managing research or facility development.	24
Student recruitment and satisfaction Responsible for improving student recruitment or retention or satisfaction.	19
Change agent Implementing (and sometimes developing) changes in processes, practice, culture or attitudes.	18
Performance management Tasked with addressing poor performance, relationships or behaviour.	13
Programme or curriculum development Developing or reviewing existing programmes or modules, developing new programmes.	12

9.2 Causes

Most respondents (341) commented on causes, sometimes at length, and many identified more than one reason for success being almost impossible to achieve. As indicated in Table 8 below, other people (colleagues, team members, line managers and senior managers) were cited most commonly as contributing to lack of success. Resources and institutional practices also figured quite prominently. Workload and targets might, at least to some extent, be regarded as a result of institutional practice, suggesting that senior managers are able to positively affect women's experience of leadership. Although the framing of the question steered respondents towards external attributions for the near-impossibility of their leadership situation, it is perhaps notable how few respondents saw themselves as a major cause. Given known gender differences in attributions for success and failure, especially in "masculine" tasks (eg Beyer and Bowden, 1997), perhaps this is an encouraging finding: women not blaming themselves. Conversely, there is a risk that a sense of helplessness arising from the external attributions serves to limit women's proactivity in leadership positions.

Table 8: Reported causes of the almost impossible leadership situations

Causes	Number of respondents
Colleagues – uncooperative or resistant colleagues who are not line managed by respondent.	**60**
Authority – lacking authority over staff who the respondent is expected to influence.	**46**
Line manager – who is unsupportive, micromanages, delegates inappropriately or undermines the participant.	**43**
Resources – not having access to, or control over, budget, staff etc.	**40**
Institutional issues – bureaucracy, lack of clarity about roles, responsibilities, goals or success criteria; poor communications, too much change.	**35**
Senior management – practices or behaviours.	**34**
Targets – unrealistic timescales or expectations.	**25**
Workload – insufficient time to do the volume or range of work expected.	**23**
Team – line managing difficult individuals or dysfunctional teams.	**21**
Inadequately experienced – lacked experience, knowledge or skills to carry out task.	**10**
Disagreed with decision they were required to implement.	**4**

Colleagues

Sometimes overlapping with the lacking authority theme were situations in which colleagues in the same or other departments were uncooperative or resistant to change or failed to do what was required or expected of them.

> "…it felt like colleagues within different departments (whose support was critical to the project success) were working against me and not with me. "
>
> **(Cohort 3 survey)**

> "Diverse expectations between academic and professional services colleagues made this situation almost impossible to lead. It certainly led to some stressful situations."
>
> **(Cohort 4 survey)**

Authority

Requiring action from others over whom they had no authority was problematic if these people were unwilling or unable to cooperate. Respondents described lacking authority over colleagues on a higher grade, those on a lower grade but not line managed by them, or colleagues from other departments or institutions:

> "I discovered that my line manager thought it was my job to check people were in work because of students finding their tutors hard to contact. I had no line management responsibility for these people."
>
> **(Cohort 2 Survey)**

> "I collaborate with colleagues, but this depends entirely on distributed leadership. Whether this works or not depends on the individuals and their willingness to collaborate."
>
> **(Cohort 3 survey)**

> "I am in a position where I am leading a strategy to raise standards. I need to lead, manage and influence change with a group of colleagues but I have no line management responsibilities [over them]."
>
> **(Cohort 3, survey)**

Line manager

Respondents referred to line managers who were 'unsupportive', micro-managed or undermined them.

> "Feeling unsupported by my line manager did not help the situation as I often felt isolated when dealing with some fairly fundamental issues that should not have arisen if effective management had been in place previously."
>
> **(Cohort 4 survey)**

> "…my manager doesn't back me up when they complain about how things need to be done for the project; and actively undermines my authority in the project."
>
> **(Cohort 4 survey)**

Resources

Some respondents attributed lack of success to being allocated an additional responsibility or project without an increase in resources, budget and/or staff.

> "I have recently been asked to lead on a national programme of research… there were numerous, fundamental issues with the programme and – given the timescales in which it needed to be completed, the lack of appropriate resources and complete lack of support from our management team – it was impossible to deliver the calibre of work it required."
>
> **(Comparison group survey)**

> "Designated to lead on implementation and development of a project without resource, authority and only nominal support."
>
> **(Cohort 4 survey)**

Institutional issues

A wide range of institutional practices were identified as contributing to impossible situations, including: excessive change; slow or inappropriate university processes; unclear or conflicting roles and responsibilities; unclear goals or success criteria; and /or lack of consultation with staff and poor communications.

> "The processes and systems in place are so time consuming and badly implemented."
>
> **(Cohort 4 survey)**

> "The situation was difficult due to bureaucratic processes of the institution that slowed or stopped the process at times."
>
> **(Cohort 3 survey)**

> "…conflicting roles and responsibilities with others in senior management positions – leading to being undermined."
>
> **(Cohort 4 survey)**

> "The university implemented multiple large-scale change initiatives contemporaneously. The project I managed was just one of these change projects, but it was impossible to implement it successfully due to the plethora of change initiatives underway."
>
> **(Cohort 2 survey)**

Senior management

When some respondents referred to senior managers or senior management it is not always clear who they meant in terms of job role or level of responsibility, or whether they were referring to specific individuals or senior management teams. Other respondents specifically mentioned directors or heads of department. Senior management were perceived in some cases as failing to provide support or undermining respondents.

> "Undermined by senior management decisions."
>
> **(Cohort 2 survey)**

> "Without any senior backing or support at the time, I felt quite isolated dealing with it day to day."
>
> **(Cohort 4 survey)**

Targets

Related to resources, although less frequently mentioned, are targets that are unrealistic in terms of timescales or expectations, or where outcomes are not within the control of person responsible.

> "I have been set targets which are completely outside of my control (dependent upon two separate outside partners) so although I can try to influence them, ultimately whether I achieve my targets is mostly out of my control."
>
> **(Comparison group survey)**

> "As a new programme director I was expected to improve student satisfaction within a very short timescale with no additional resources or support provided to enable this to take place."
>
> **(Cohort 4 survey)**

> "Research group leader required to increase research outputs at 4/3* level with staff clearly not interested or with sufficient time to achieve that."
>
> **(Cohort 4 survey)**

Workload

Some respondents referred in general terms to excessive workloads, while others specifically mentioned the range of activities expected of them (seeking grants, researching, publishing and teaching) or being given new responsibilities in addition to their existing workload.

> "I have been asked to take on a more leadership role but there is no one to undertake the operational day-to-day work that still needs to be done. I either focus on the operational work and keep the majority happy but not my line manager or I focus on the strategic and keep my line manager happy but get lots of complaints from the majority in the institution."
>
> **(Cohort 4 survey)**

> "To increase the number of large externally funded grant applications coming from my group during times of staff shortage … and our student cohorts were over-recruited, giving a real time and double felt increase in day to day workload, never mind time for research."
>
> **(Cohort 4 survey)**

> "I am in a situation where I need to demonstrate excellence in leadership and research to get promotion to SL but am overloaded with teaching to the point where it is difficult to find time to carry out my leadership… roles and make it impossible for me to find time for research and publish."
>
> **(Cohort 2 survey)**

Team

For some respondents, the main problem was their team or individuals within the team for which they had line management responsibility. Several instances were reported of pre-existing performance management or disciplinary issues.

> "I inherited a very difficult situation arising from 20 years of non-existing staff management during which bad behaviours, unprofessional conduct were standard and job roles, responsibilities were ill defined resulting in poor performers in roles for which they were under skilled."
>
> **(Cohort 4 survey)**

> "…the challenge has been performance management and addressing historical staff behaviours/culture."
>
> **(Cohort 4 survey)**

> "Leading a programme with a team member who is regularly off sick but where HR's response is ineffective…"
>
> **(Cohort 4 survey)**

Inadequate experience

A few respondents reported being given responsibilities for which they lacked appropriate experience, knowledge skills or training to conduct the work successfully.

> "I am responsible for things that are entirely outside my power and for which I have no expertise, experience or background."
>
> **(Cohort 2 survey)**

Disagreed with decision

Only a handful of respondents had to implement a decision about which they had not been consulted or with which they disagreed.

> "I have been responsible for leading on activities where I had no influence on the decision to do them in the first place."
>
> **(Cohort 4 survey)**

9.3   Consequences

Many of those who described near-impossible situations did not write about the consequences. Where they did (48 respondents) refer to consequences, these were rarely positive. Even when the project or task was 'successfully' completed, the respondent did not necessarily benefit. Consequences are summarised in Table 9 with a brief description, or a quote.

Table 9: Reported consequences of the almost impossible leadership situations

Consequences	Number of respondents
Work or career affected Increased workload and the adverse effect on teaching or engagement in career-enhancing activities such as research, publishing and grant applications.	10
Stress "I feel like I'll end up as collateral damage." **(Comparison group survey)**	10
Unsatisfactory outcome Including feeling dissatisfied with the quality of their work	10
Successful outcome Changes implemented	5
Role or job change "…decided to relinquish the role due to non-cooperation of colleagues, which became too stressful." **(Comparison group survey)**	8
Learning "…adopted a stance …of stating very precisely at the start what action I am looking for from the agenda item I'm presenting…" **(Cohort 2 survey)** "I was asked to lead a project that I did not see would succeed. My training with Aurora helped me to voice my concerns and I declined the offer." **(Cohort 3 survey)**	5

10. Stress

Stress-related questions were introduced in the surveys from September 2016 onwards. The questions were selected from the Perceived Stress Scale (Cohen et al, 1983). This meant that for the pre-Aurora survey, Cohort 4 was the first to answer these questions; and for the first follow-up surveys, cohorts 2 to 4 and the comparison group responded to the stress questions. In total over 1200 respondents have reported on their stress at least once.

It is important to note that the stress measure refers to how the respondent is feeling generally. Therefore, work will be just one of a number of influences on stress, and statistical relationships between reports of work experiences and of stress are unlikely to be especially strong.

The six questions with their mean scores for Cohorts 4 and 5 pre Aurora are shown in Table 10. The response options were 1=Never, 2=Almost Never, 3=Sometimes, 4=Fairly Often, 5=Very Often

Table 10: Reported stress levels for each question

In the past month, how often have you felt nervous or stressed?	**3.70**
In the past month, how often have you felt confident about your ability to handle personal problems?	**3.75**
In the past month, how often have you found that you could not cope with all the things you had to do?	**3.12**
In the past month, how often have you been able to control irritations in your life?	**3.57**
In the past month, how often have you felt that you were on top of things?	**3.15**
In the past month, how often have you been angry because of things that happened that were outside your control?	**3.09**

The fact that the mean scores of both positively worded and negatively worded questions were above 3 (the midpoint of the scale) suggests that the respondents felt they had a lot to cope with, but that on the whole they managed to. Of course, that is a big generalisation. Computing total stress scores by reversing the scores for positively worded items produces a median of 17 and an inter-quartile range of 14-20. (Total stress scores can range from 6 to 30).

Stress levels were very similar between Cohorts 4 and 5 and did not significantly change over time for Cohort 4, which is the only cohort for which longitudinal data is currently available. There were no statistically significant differences in stress levels between sub-groups of respondents based on type of employer, country worked in, ethnic identity, sexual orientation, age, or department/section.

However, there was a highly statistically significant, though numerically small, difference in mean stress levels between academic and professional services respondents. The academics were the higher ie more stressed group (17.9 vs 17.0). Not surprisingly, among full-time workers those working longer hours reported significantly more stress. At the extremes, those reporting working 37.5 hours per week or less averaged 16.8 whereas those reporting working 52.5 hours per week or more were at 18.8.

It is, of course, impossible to be sure of the causal direction, if any, between reported stress and reported experiences. For example, the experience most strongly statistically associated with reported stress was "When I get home from work, I am often too tired to participate fully in home activities". The correlation was 0.45, which is very high, but arguably this is a manifestation of stress rather than a cause or consequence of it. The only other item that approached this strength of statistical relationship was "My work keeps me from other activities more than I would like" (0.37). There is perhaps a case for this being a cause of stress rather than a consequence or symptom. In general, the questions in the survey about the relationship between work and non-work life were the ones most strongly statistically associated with reported stress. The closest rival was "I need to behave in ways that don't come naturally to me in order to get on in this organisation" (0.29). Again, this seems a plausible cause of stress. It suggests the importance of workplace culture and experiences.

10.1 Experiences of stress and leadership

Regarding women's own engagement with leadership approaches in their work, there is evidence that overall this tended to be either unrelated to stress or slightly negatively related ie more engagement with leadership was associated with <u>less</u> stress.

Having leadership as part of one's official or unofficial job duties and having to influence people over whom the respondent had no power or authority were reported experiences that were statistically unrelated to stress. Being comfortable with using power, enjoying organisational politics, and seeking out leadership opportunities in day to day work all tended (weakly) to go with lower stress.

An exception is the reported experience of being placed in leadership situations where success is almost impossible to achieve. This was, not surprisingly, positively statistically associated with stress.

The kind of leadership the respondents felt they were on the receiving end of and how it manifested in workplace culture and practices also mattered. Responses to most of the questions about workplace culture and practices were statistically associated with reported stress. When put into a multiple regression equation in order to identify which aspects of workplace culture and practices were most robustly associated with stress, the following six emerged.

1. My line manager backs me up when I need him/her to do so

2. Teamwork and cooperation are encouraged

3. Staff review and development processes work well

4. Family-friendly policies are in place

5. Men and women leaders receive equal respect

6. Aggressive leadership styles are the norm

As one would expect, for all except the last of these, the more that respondents reported this experience, the lower their reported stress tended to be. Probably because of its centrality to respondents' day to day experiences, the first item was easily the most strongly associated of this set with stress, hence it is in bold. Another similar item, "my line manager supports my development," did almost the same job, but was just pipped at the post by the one shown above in the statistical workings of the regression analysis.

There were small differences in these associations between academic and professional services respondents. It is not possible to be sure whether these are just statistical "noise" or whether they signal an experienced difference in perspective between the two groups. If the latter, one could say that the professional services women were slightly more concerned about organisational processes (eg representation of women on decision-making bodies) whereas the academics focused a little more on their own day to day experience (eg the opportunity afforded them to work flexibly). However, this is nuance rather than an endemic difference. It would fit with our observation in earlier stages of this project that professional services women report more awareness than academic women of how the organisation as a whole functions.

11. Individual differences between respondents

Of course, it is likely that not all academic and professional services women experience leadership, work and career in the same way. Their demographic characteristics and employment situations are likely to make a difference (eg Johansson and liwa, 2014; ECU, 2009). Despite the prominence of gender in debates about employment opportunity, it would be dangerous to assume that all women working in academic and professional services roles have the same experience and encounter the same barriers. However, it is a big step from saying that to being able to specify which differences between women make a difference to their experiences. Our quantitative data enables us to examine the potential roles of various individual differences and situational variables in influencing experiences at work.

In previous reports we have commented on differences between academics and professional services respondents in terms of their reported experiences of leadership, work and career. We will not go over that ground again this time, though we will comment on demographic differences between the two groups.

In previous reports we have also reported some comparisons between ethnic identity, type of employer, disability, sexual orientation and country. This time we take a somewhat more comprehensive look at those factors, as well as discipline/ department, age and earnings.

Where mean scores are given in this section, they generally refer to a 1-5 scale where 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree nor Disagree; 4 = Agree; and 5 = Strongly Agree.

11.1 Ethnic identity

As noted in our previous reports, our respondents predominantly identify as White and British or one of the countries of the UK (see Table 1a in Appendix A). To form groups of sufficient size for analysis, we formed the other respondents into three groups: White Irish, White Other (eg South African), and any BAME. We acknowledge the heterogeneous nature of the latter two groups, especially the last one, but it was necessary to facilitate analysis.

Professional services respondents were significantly more likely to be White British than academic respondents (75% vs 59%), whereas the reverse was true for White Other (9% vs 23%). Respondents working part-time were more likely to be White British than those working full-time (79% vs 64%). Those who considered themselves to have a disability were also more likely to be White British than those who did not (77% vs 66%).

BAME respondents were the least likely to be 55 years old or more. Inevitably, White Irish respondents were hugely more likely than other groups to be working in a university in the Republic of Ireland. Restricting the analysis to UK universities, White British respondents were slightly more likely to be in post-1992 universities than in Russell group or other pre-1992 universities, while the reverse was true for White Other respondents. There were no differences between ethnic identity groups in their reported sexual orientation.

Among **professional service respondents**, the most 'White British' context was library services, and the least was IT services. BAME respondents were relatively highly represented in HR and marketing, external relations and communications. They rarely reported working in the VC's office/governance and library services. The proportions of White Irish respondents in HR and research office were higher than average. Respondents of Other White background were relatively likely to be working in the research office, VC's office/governance, and IT services.

There were comparatively few differences between ethnic identity groups in professional services respondents' reported experiences of their workplaces. Where they did occur, White British respondents tended to report more positive experiences than other groups. For example, their mean response to the item "Men have a better chance than women of attaining leadership roles" was 3.45, compared with around 3.9 for the other three groups.

BAME respondents were:

+ More likely than White British to report wanting to rise to a very senior position (BAME 3.81; White British 3.31).

+ Least likely to say there were supportive people they could confide in at work (3.73 compared with 3.94 to 4.12 for the other three groups).

+ Less likely to report a within-HEI promotion than White British (BAME 2.13; White British 2.48).

White Irish respondents were more likely than both White British and BAME respondents to report that using family-friendly or flexible working is taken as a sign that you are not serious about your career (3.38, compared with 2.84 for BAME).

Among **academic respondents**, discipline areas with the highest proportions of White British respondents were education and medicine and related subjects. Those with the lowest proportions of White British were business and management, and engineering. Both had correspondingly relatively high proportions of BAME respondents. Other White respondents formed a higher proportion than average of those in arts and humanities and physical sciences.

There were slightly more ethnic group differences among academic than among professional services respondents. Within-HEI promotions, wanting to rise to a very senior position, and men having a better chance than women of attaining leadership positions showed similar differences to those found among professional services respondents. For example, in the last case, the mean score for White British was 3.80, whereas for BAME it was 4.21. Other differences were thematically similar. So, for example, White British were somewhat less negative than others about representation of women on decision-making bodies and about equal opportunities in promotion.

BAME respondents tended to report that work was more central in their life, their career goals were clear and that they engaged in skill development than other groups, especially White British. For example, BAME respondents' mean score for "I know what I want from my career" was 3.97, whereas for White British it was 3.57.

11.2 Disability or health impairment

We asked respondents whether they were registered disabled and, separately, whether they considered themselves to have a disability or health impairment. Only 39 reported being registered disabled, while 229 said they considered themselves to have a disability or health impairment. Therefore, we compared that group of 229 with those who reported they did not consider themselves to have a disability or health impairment. There were a lot of differences between the two groups in their reported experiences. Examples include for those reporting a disability or health impairment who were:

+ More unsuccessful promotion attempts (2.52 vs 2.11)

+ More unsuccessful other job moves applications in the higher education sector (3.44 vs 2.96)

+ More unsuccessful attempts at sideways or downward moves within the same HEI (1.58 vs 1.42)

+ More likely to report that they intended to seek a new job in the next year

+ Less satisfied with their careers (3.15 vs 3.41)

+ More likely to report that they were often too tired after work to participate fully in home-activities (4.12 vs 3.69)

+ Less support for their development from their line manager and less confidence to put themselves forward for a salary increase

+ Somewhat more stressed than others though perhaps, given the differences described above, not as much as one might expect (18.3 vs 17.4)

Regarding leadership, respondents who said they had a disability or health impairment reported higher incidence than others of being put in a leadership situation where success was nearly impossible to achieve (3.33 vs 3.12). They also reported that they felt women tended to get the least prestigious leadership roles (3.54 vs 3.32), and they were less likely to perceive that men and women had equal opportunities in promotion. Perhaps as a consequence, they were more likely to report that they made a point of behaving in ways that challenged organisational culture (3.07 vs 2.86). There were no statistically significant differences between those with a self-reported disability or health impairment and other respondents in their reports of their leadership approaches and skills.

There are, of course, some unknowns here. We do not know the nature of the disabilities or health impairments the 229 women considered that they had. We also do not know whether these impairments were a cause or a consequence (or both, or neither) of some of their perceptions and experiences. On the face of it, though, it does suggest that the higher education sector has not yet succeeded in creating a level playing field for women with and without disabilities/impairments working in academic and professional services roles.

11.3 LGBT

In the first questionnaire they received, we asked respondents "Do you identify as LGBT?". 194 replied in the affirmative. They reported considerably fewer caring responsibilities at home than other respondents, having made somewhat fewer job moves for family or relationship reasons (1.28 vs 1.46), and having current circumstances that created less difficulty in relocating for work (3.35 vs 3.67). Perhaps partly because of this relative absence of constraint, they also reported having made slightly more unsuccessful job applications in higher education.

Statistically significant differences between those who described themselves as LGBT and other respondents in terms of perceptions of leadership, workplace and career were few and far between. However, there were some signs that those describing themselves as LGBT felt a little more at home in their workplace than other respondents. They were somewhat less likely to report that they conformed to the organisational culture more than they really wanted to (2.96 vs 3.13), and that they needed to behave in ways that did not come naturally to them if they wanted to get on (3.31 vs 3.50). They reported using social media to enhance their profile to a greater extent than other respondents (2.88 vs 2.60). On the other hand, they reported feeling somewhat less able to anticipate how colleagues would react than other respondents did.

11.4 Age

We grouped respondents into four broad age categories: Up to 34, 35-44, 45-54 and 55+ (see Table 1a for numbers of respondents of different ages). There were many statistically significant associations between age and other variables. These were similar for academic and professional services respondents.

A few of the statistical associations were almost necessarily true due to the number of years the groups had been working and/or the stage of life they were at. For example, the number of promotions experienced in the same higher education institution and the number of job moves made primarily for family or relationship reasons rose with age (the latter levelled off after 54). However, there were no significant age trends for the number of unsuccessful attempts to move. Older respondents had not generally made more.

Under 34s reported the fewest caring duties, the 35-44 group was most likely to report caring roles with pre-school and primary school children, the 45-54 group with secondary school children, and the 45-54 and 55+ for adults (presumably usually elders).

The under 35s were most likely to report having a time-consuming leisure interest, least likely to say that work kept them from other duties more than they would like, and most likely to report that they intended to seek a new job in the next year. Both overall caring roles and constraints on ability to relocate for work were at an extended peak from 35 to 54, after which they dropped somewhat for the 55+ group, but not back as low as the under 35s.

Age differences were common in reports of one's own leadership approaches and skills, career self-management strategies, and career motives. They were less common (but not non-existent) in reported perceptions of workplace culture and practices. The 55+ respondents were most likely to say that leadership was part of their job duties (3.88) and the under 35s least likely (3.41). The 35-44 and 45-54 respondents were both around 3.6. Most of the self-reported leadership approaches and skills tended to increase with age, and in most cases this was linear ie a steady increase through the age groups. For example, mean scores for "I challenge others to think about old problems in new ways" were about 3.8, 3.9, 4.0 and 4.1 for the four ascending age groups. Similar trends were evident for (among other things) mentoring others, inspiring others, feeling comfortable with power, knowing how the employing organisation runs, seeing

innovative solutions to problems, and involving people in important decisions. For example, in response to "When I have power, I am comfortable using it", 55% of respondents aged 34 or less agreed or strongly agreed, compared with 58% for 35-44, 64% for 45-54, and 72% for 55+.

In contrast to leadership approaches and skills, engagement in career self-management tended to reduce with age. The exception was seeking opportunities to mentor, which increased with age. For some of these activities, the pattern was for the under 35s to be highest, the 35-44 and 45-54s to be a little lower than the under 35s, and the 55+ to be lowest. For example, mean scores for the item "I volunteer for tasks that will get me better known" were respectively about 3.9, 3.6, 3.6, 3.4. Career satisfaction dropped steadily with age from 3.50 for the under 35s to 3.15 for the 55+ respondents. This runs counter to theory and research (eg O'Neil and Bilimoria, 2005; Clark et al, 1996) that career satisfaction dips in mid-career and then rises again.

It is, of course, possible that our respondents, most of whom had undertaken Aurora, were untypical and that for the older women it tended to be a last throw of the dice to energise an unsatisfactory (to them) career. If so, the stakes might be relatively high, because the 55+ group were most likely to say work was more important than home life. On the other hand, this was not necessarily aimed at achieving seniority. Mean responses to the item "I want to rise to a very senior position" dropped more or less linearly through the age categories: in round figures 3.8, 3.5, 3.3, and 3.1. This is one of several elements of our data which emphasise that interest in leadership is not confined to those reaching for the top.

As noted above, there were few age trends in perceptions of workplace culture and practices. However, there was a tendency for reported perceptions of aggressive leadership to increase and teamwork and cooperation to decrease with age. Finally, a possible concern for age discrimination at work is that mean scores in response to the item "My line manager supports my development" dropped a little with age – about 4 up to age 45, and 3.8 thereafter.

11.5 Earnings

We discovered at an early stage of the project that it was impossible to devise a clear or effective way of assessing respondents' job grades. There were simply too many different systems in use. Therefore, instead we asked respondents what band (in GBP or Euro equivalent) their gross annual earnings fell into. The lowest band range was £0 to £4,9999 and the highest £90, 000 plus. We are treating earnings as an approximation to seniority/status. Clearly it is not the whole story, but it is as near as it is possible to get. Its significance at this juncture is that it naturally correlates with age (about 0.4 in our case). Therefore, it may be that the age effects reported in the previous section are really due to seniority or status in the organisation. Also, because on average the academic respondents earn more than professional services respondents, apparent age effects may, to some extent, really be due to type of work.

In order to tease out these effects, we took a closer look at the parts of the data where there appeared to be age differences. We re-analysed these using a three-way analysis of variance with the factors broad age band, broad salary band (the same bands in GBP as in years of age, as it happened), and academic vs professional services. In most cases the age effects reported in the previous section remained even when taking earnings and type of job into account. Often one or both of those other two factors were statistically significant as well, but not at the expense of age, which also remained significant.

However, there were several exceptions and nuances. First, age remained positively associated with responses to most of the survey items about approaches to leadership such as feeling comfortable with power and being able to see innovative solutions to problems. However, for some leadership activities most closely associated with authority, earnings made a difference. For example, higher earners (rather than older respondents) were likely to agree that they "tell others what I think they need to do to be rewarded for their efforts". Also, it was earnings, not age per se, that was associated with leadership being a major part of the respondent's job duties. On the other hand, it seems that age was the key factor in feeling comfortable with using power. Perhaps counter-intuitively, earnings did not affect responses to that survey item after statistically controlling for age. Overall it does seem that self-reported engagement in day to day leadership activities is more a product of maturity than of seniority.

Second, while age was strongly associated with caring responsibilities, earnings were too. Higher earners tended to have more caring responsibilities after statistically controlling for age and type of work. It appears that earning a lot of money did not require the avoidance of family and other personal commitments. Third, earnings and age operated in different directions for career satisfaction. Despite age and earnings being positively correlated with each other, older respondents tended to report lower career satisfaction (as noted already) but higher earnings tended to go along with higher career satisfaction. Fourth, although older respondents tended to report less interest in moving between jobs, it was in fact earnings rather than age that was at work here. Self-reports of proactively searching for job opportunities and intention to seek a new job in the next year reduced as earnings increased, after controlling for age.

12. Differences between respondents in different work contexts

12.1 Discipline/department

For **professional services respondents** we compared 16 types of work setting: academic registry; alumni; enterprise and business development; facilities management; finance; general departmental, school or faculty management; human resources; IT services; learning and teaching support/development; library services; marketing, external relations and communications; planning and policy; research office or research management; student services; VC's office, secretariat, governance; other.

Statistically significant differences were few and far between. However, two general phenomena were evident. First, there were several statistically significant differences between departments regarding job moves made and attempted. For example, library and academic registry respondents tended to report having made more unsuccessful applications for promotions or other job moves within the same HEI than others, especially facilities management and human resources. As well as being low on unsuccessful applications, human resources were low on reported within-HEI promotions, suggesting low attempted and actual within-HEI mobility in human resources relative to other areas. Marketing and research office staff also tended to be low on within-HEI promotions, especially compared with academic registry and general departmental, school or faculty management. Between-HEI promotions were most commonly reported by respondents in academic registry, alumni, learning and teaching support and development, and least by finance, IT services, human resources and facilities management.

The second phenomenon was the tendency for respondents in general departmental, school or faculty management to report more engagement in leadership than others. For example, they were comfortably highest on "Leadership is an official part of my job duties" and "I work constructively with leaders higher than me in the organisation".

For **academic respondents**, we combined some of the options listed in the questionnaire for department/school to create eight general categories: medicine and related areas; biological sciences; physical sciences; engineering; social sciences; business and management; arts and humanities; and education. As with professional services respondents, differences between departments were not numerous. However, there were a few and, unlike the professional services staff, several concerned workplace culture regarding how women and men are treated.

Education and to a lesser extent medicine and related areas tended to come out best on these. For example, on the item "Women and men leaders receive equal respect," respondents in education departments scored 3.11 on average, medicine 2.92, and most of the others were around 2.6. There were big differences in the number of unsuccessful within-HEI job move applications. Medicine was easily the lowest (2.30) and arts and humanities easily the highest (4.14). Similar differences emerged, albeit slightly less starkly, for within-HEI promotions. Arts and humanities also fared relatively badly regarding family-friendly and flexible working.

Regarding leadership, those in business and management reported to a greater extent than others feeling comfortable with using power and challenging others to think about old problems in new ways. Along with arts and humanities they were also relatively likely to report behaving in ways that challenged the organisational culture, though the real outlier here was biological sciences, where respondents were considerably less likely than others to report doing so. Medicine and business and management respondents were the most likely to report they wanted to be of service to the organisation.

12.2 Type of employer

We grouped respondents according to whether they worked in a Russell group university, other pre-1992 university, post-1992 university, university in the Republic of Ireland, or other type of HEI. Differences in responses between types of employer were more prevalent for academic than professional services respondents but were thematically similar. Among **professional services respondents**, the smattering of statistically significant differences that were observed favoured post-1992 universities. They reported somewhat more within-HEI promotions and more positive perceptions about the position of women relative to men. For example, in response to the item "Women and men leaders receive equal respect" the mean score for post-1992 universities was 3.12 compared with 2.67 for Republic of Ireland universities, 2.76 for Russell group and 2.89 for other pre-1992 universities.

Among **academic respondents** there were more differences between employer types, and slightly more variety in the nature of those differences. Post-1992 university respondents again reported most favourably about the opportunities for women relative to men, though on the whole the only employer type where the difference was statistically significant was universities in the Republic of Ireland. For example, for the item "Women and men have equal opportunities in promotion", post-1992-university academic respondents averaged 2.87 whereas academics in Republic of Ireland universities averaged 2.38. On the other hand, academics in post-1992 universities reported most intention to leave their job in the next year, and most fatigue when they got home after a working day. Academic respondents working in Russell group universities were most likely to report that aggressive leadership styles were the norm, and least likely to say that team working was encouraged. On the other hand, they were most likely to report that family-friendly policies were in place (3.51, compared with around 3.2 for other types of university) and somewhat less likely than others to say that using these policies was taken as a sign that you are not serious about your career. Finally, academics in Republic of Ireland reported stronger motivations than others in several respects: to rise to a very senior position, to be a leading expert in their domain, and to be of service to their organisation.

12.3 Country of employment

The above analyses of ethnic identity and type of employer overlap a great deal with working in Ireland. This is because one of the ethnic identity groups was White Irish and one of the types of employer was university in the Republic of Ireland. Therefore, when making comparisons between England, Northern Ireland, Republic of Ireland, Scotland and Wales, it is not surprising to note that respondents working in the Republic of Ireland reported some significantly less positive perceptions than those in England and Scotland. These concerned the equality of men and women in promotion opportunities, and the availability of family-friendly practices (and the consequences of using them). They were also less positive than those in Wales, but sample sizes meant this difference was not always statistically significant. Republic of Ireland respondents were significantly more likely than those in England, Scotland and Wales to say they wanted to be leading experts in their domain, and to a greater extent than those in England they reported that they wanted to be of service to their organisation. Respondents in Scotland reported statistically significantly more aggressive leadership than those in England.

Comparisons between the Republic and Northern Ireland are instructive. The low number of respondents from the latter (41) means that statistically significant differences between them and the other countries are very few and far between. However, inspection of mean scores on the experiences discussed above makes it clear that in nearly every respect Northern Ireland was very similar to, or slightly worse than, the Republic. This suggests that the somewhat more negative perception of family-friendly policies is a phenomenon of the island of Ireland relative to the island of Great Britain, rather than the Republic of Ireland relative to the UK.

13. Conclusions and recommendations

13.1 Conclusions

The qualitative data collected in the surveys indicates some key issues that women face around near-impossible leadership situations and the kinds of activities they are involved in that try to address gender inequalities in HE. Unhelpful colleagues and managers, institutional practices, resources, workload and targets were commonly identified as placing Aurorans in near impossible leadership situations. Colleagues and managers may seem to be uncooperative because they are overloaded and reluctant to take on additional work. Lack of clarity about roles within a project or its benefit and purpose may also affect willingness to engage and be supportive.

Clearly Athena SWAN is having an impact on the HE sector as many women refer to this scheme and are involved in it in some way. However, some activities that are less mentioned by women may be very important. Raising awareness of unconscious bias and inequalities and increasing women's visibility might have a more significant and long-term impact than the numbers suggest.

The qualitative data shows that some Aurorans are challenging barriers to women's careers and leadership prior to participating in the programme. Others reported taking action as a result of Aurora. Action was at an interpersonal level for some and involved supporting, mentoring and networking with other women and promoting Aurora. Others addressed challenges at an institutional level by working towards gaining Athena SWAN awards and challenging gendered practices. Not surprisingly, interpersonal activity seemed to be more effective than institutional change, which may suggest the need for greater commitment and urgent action within senior management.

The in-depth case study method has allowed the project to identify not only distinct discourses of leadership, but also evidence of changes over time in individual women. To a certain extent we can see a broadening, or narrowing, of how leadership is conceived, dependent upon the starting position of the individual. Perhaps these case studies reinforce the importance of self-awareness – knowing your strengths and weaknesses as a leader – applying strengths and identifying a complementary team with the strengths that compensate for your weaknesses. There is some indication of growing confidence and self-awareness, which may lead to aspiring to act in a wider context where there is more potential for greater impact eg moving from managing a team to engaging in committee work and university-wide projects and influencing upwards. Perhaps a discourse of adaptive or situational leadership demonstrates confidence and maturity?

The illustrative case studies presented in the report focus on the very common discourses around relationship building, but also outlined the power-holding discourse, if only in an aspirant form. Indeed, this case study also clearly highlights a crucial issue for many women in HEIs, as the lack of career paths or routes of progression for professional services staff is significant.

The dominance of relationship building leadership discourses in relation to others in the women interviewed may be a product of the Aurora programme's content, format and style. It would be interesting to compare how women who have not taken part in Aurora talk about their own leadership and, of course, a comparison with men in higher education.

There are systematic differences in perspectives and experiences between academic and professional services staff, reinforcing our findings in year 1 of this project. Overall, the latter are more positive with those working in schools/departments engaging in more leadership activities. The academics experienced more stress than professional staff. However, across all groups, workplace culture and practices were statistically associated with reported stress whereby aggressive leadership styles caused the most stress and those with line manager support, good teamwork, family-friendly policies and gender equality were less likely to be stressed.

There are also some systematic differences in perspectives and experiences between ethnic groups. BAME groups are less likely to work in certain schools or departments, they more likely to be younger, and more ambitious by wanting to rise in senior positions regardless of whether they worked in professional services or in an academic role. However, BAME groups were less likely to have supportive relationships at work and slightly more likely to hold negative views about gender equality. Similarly, those reporting disability or health impairment were less likely to view opportunities as gender equal. More significantly, however, they reported experiencing more unsuccessful promotion and other job move applications in the higher education sector along with more 'being put in a leadership situation where success was nearly impossible to achieve'. In contrast LGBT groups reported a less negative experience but it was unclear whether this was because they had not disclosed their sexuality or sexual orientation to others.

13.2 Recommendations

We made a large number of recommendations for individuals and institutions in our year 2 report. On the basis of our data this year, we wish to emphasise the following:

1. The Athena SWAN bronze award should be reviewed to ensure that it makes a discernible difference to workplace practices and opportunities.

2. The Aurora programme should continue to grapple with workplace cultures and systems, and how to deal with them. The programme might include in the final session (if it doesn't already) an activity that helps women identify specific, realistic actions that they might take to promote equality in their institutions and who they might work with to achieve this.

3. Line manager training should make it clear just how important the line manager is to women (and probably men) reporting to him/her, perhaps placing more emphasis on relationship building.

4. Institutions may wish to consider the effects of managerialist approaches on collegiate behaviour.

5. It is important to recognise that many older women are interested in leadership and feel equipped for it, and that those who are interested in leadership are not necessarily those who are conspicuously "ambitious."

6. Institutions need to carefully scrutinise whether they treat people with disabilities and significant health impairments, recognising that this does not refer only to those who are registered as disabled.

7. Women should consider the discourses of leadership discussed in this report, to review where they think they sit, and where they would like to be.

8. Institutions should also consider the leadership discourses they use, their effectiveness and the value of 'discourse diversity' to promote different legitimate ways of leading. They should review what they say they want, and whether that is really what gets rewarded.

13.3 Limitations

Most of the material presented is based upon the experiences and perceptions of women in higher education. We do not have objective information about the leadership skills and activities of respondents, although some data has been collected with mentors. We acknowledge that respondent attrition rates over time are higher than would be ideal, which may limit the generalisability of our findings despite the large numbers overall. The increasing difficulty in encouraging respondents to commit to interviews, and especially diaries, means that our qualitative data may be somewhat less rich than they would otherwise have been. Finally, as the project has gone on, the salience of the question "how much of this also applies to men?" has increased. We have a comparison group of women who have not undertaken Aurora, but not a comparison group of men.

A more detailed acknowledgement of the limitations of the study has been outlined in the Year 1 report.

13.4 Next steps

The three years of the project have delivered a large amount of interesting data. Our next report will build on this work by identifying trends over time related to leadership and work outcomes.

In summary, data collection activities from October 2018 to autumn 2019 are as follows:

+ Pre-Aurora survey with Cohort 6 (autumn 2018 to spring 2019).

+ Post-Aurora survey with Cohorts 4 and 5 (winter/spring 2018-19).

+ Post-Aurora survey with Cohorts 2 and 3, and with the comparison group (June 2019).

+ Post-Aurora survey with Cohorts 5 and 6 (autumn 2019).

+ Interviews with Aurorans from Cohorts 2, 3, 4 and 5 (winter/spring 2018-19).

+ Mentor interviews with Cohort 5 winter/ /spring 2018-2019).

13.5 Acknowledgements

Throughout the project we have appreciated the great support of, and inputs from, staff at the Leadership Foundation for Higher Education (now Advance HE). This has continued despite the major changes of organisation and personnel. We are also grateful for the diligent and constructive work of members of the project advisory group. Most of all we thank the many women who have given, and continue to give, their time to participate in this project.

14. References

Barnard, S. (2017) The Athena SWAN Charter: Promoting Commitment to Gender Equality in Higher Education Institutions in the UK. In *Gendered Success in Higher Education* (pp. 155-174). Palgrave Macmillan, London.

Beyer, S. and Bowden, E. M. (1997) Gender differences in self-perceptions: Convergent evidence from three measures of accuracy and bias. *Personality and Social Psychology Bulletin, 23*(2), 157-172.

Clark, A., Oswald, A. and Warr, P. (1996) Is job satisfaction U shaped in age?. *Journal of Occupational and Organizational Psychology*, 69(1), 57-81.

Cohen, S., Kamarck, T., and Mermelstein, R. (1983) A global measure of perceived stress. Journal of Health and Social Behavior, 24, 386-396.

ECU (2009) The experiences of lesbian, gay, bisexual, and trans staff and students in higher education. London: ECU http://www.ecu.ac.uk/publications/ lgbt-staff-and-students-in-he

Edwards, A. F. (2017) Achieving gender equity for women leaders in Community Colleges through better communication. New Directions for Community Colleges, 179, 23-34. https://doi.org/10.1002/cc.20259

Gallant, A. (2014) Symbolic interactions and the development of women leaders in higher education. *Gender, Work & Organization*, 21(3), 203-216.

Juntrasook, A. (2014) 'You do not have to be the boss to be a leader': contested meanings of leadership in higher education. *Higher Education Research & Development*, 33(1), 19-31.

Macfarlane, B. (2011) *Professors as intellectual leaders*: Formation, identity and role. *Studies in Higher Education*, 36(1), 57-73.

Macfarlane, B. and Burg, D. (2018) *Women Professors as Intellectual Leaders*. Leadership Foundation for Higher Education: London

Munir, F., Mason, C., McDermott, H., Morris, J., Bagilhole, B. and Nevill, M. (2013) Advancing women's careers in science, technology, engineering, mathematics and medicine: Evaluating the effectiveness and impact of the Athena SWAN charter. *London: Equality Challenge Unit*.

Fiedler, F. E. and Garcia, J. E. (1987) New approaches to effective leadership: Cognitive resources and organizational performance. John Wiley & Sons, Chichester.

O'Neil, D. A. and Bilimoria, D. (2005) Women's career development phases: Idealism, endurance, and reinvention. *Career development international*, 10(3), 168-189.

Randall, L. M. and Coakley, L. A. (2007) Applying adaptive leadership to successful change initiatives in academia. *Leadership & Organization Development Journal*, 28(4), 325-335.

Johansson, M. and liwa, M. (2014) Gender, foreignness and academia: An intersectional analysis of the experiences of foreign women academics in UK business schools. Gender, Work & Organization, 21(1), 18-36.

Thompson, G. and Vecchio, R. P. (2009) Situational leadership theory: A test of three versions. *The Leadership Quarterly*, 20(5), 837-848.

15. Research team biographies

Dr Sarah Barnard is lecturer in sociology of contemporary work in the School of Business and Economics at Loughborough University. Sarah's fields of research and consultancy include organisations, gender, higher education, sociology of science, engineering and technology, private higher education and communications and media. Particular interests include gendered aspects of careers and career choice, organisational practices and policies and the ways organisational culture are related to these aspects.

John Arnold is professor of organisational behaviour at the School of Business and Economics, Loughborough University. He is a fellow and chartered occupational psychologist of the British Psychological Society. John's research, teaching and consultancy involve all areas of careers and their management from both individual and organisational perspectives. Particular interests include career choice, personal development and adjustment, work role identities and transitions (including the transition into working life), career success and failure, mid/late career issues, and the impact of career management interventions such as mentoring, development centres and succession planning.

Dr Sara Bosley is a research associate and academic supervisor at the School of Business and Economics, Loughborough University. Her fields of research and consultancy include careers, learning and development in higher education, the National Health Service and community contexts. Her particular interests are career coaching and how people navigate careers.

Dr Fehmidah Munir is a reader in health psychology at the School of Sport, Exercise and Health Sciences, Loughborough University, UK. She is a chartered psychologist with the British Psychological Society and a registered practitioner with the HCPC. Fehmidah's research expertise is in workplace health. She has several strands of research in this field including prevention of work-related ill-health, managing long-term health conditions at work, and rehabilitation. She has designed and delivered workplace interventions to improve health and work outcomes. She has also designed and tested policies and practices in how organisations can reduce and manage ill-health that impacts work. She has published over 100 scientific journal articles, book chapters and reports and is involved a several European and international research projects.

16. Appendices

Appendix A

Table 1a: Descriptive information for all survey respondents (n= 2898)

		Major differences between academics (AC, n=1588) and professional services (PS, n=1310)
Cohort	*Aurora Cohorts n=2525* C1 (2013-14, n=195); C2 (2014-15, n=408); C3 (2015-16, n=667); C4 (2016-17, n=597) C5 (2017-18, n=658); not undertaken Aurora (CM), n=373	Low proportion of PS in C1
Country where working	England 1856; Northern Ireland 41; Republic of Ireland 245; Scotland 504; Wales 108; Other 6. Note: 138 unknown.	High proportion of PS in Scotland;
Contracted hours	Full-time: 2461; Part-time: 413	AC more full-time
Type of employment contract	Permanent: 2510; Fixed-term: 268; Open-ended: 86; Other: 34	AC more fixed-term
Hours per week typically worked	Up to 30 hours: 236; 31-37.5 hours: 701; 38-45 hours: 1143; Over 45 hours: 781; unknown: 37	AC higher
Promotions experienced	**In same HEI:** None: 990; 1: 1016; 2: 526; 3 or more: 354 **Between HEIs:** None: 2159; 1: 529; 2: 133; 3 or more: 67	**Same HEI:** PS higher **Between HEIs:** AC higher
Sideways/downward moves experienced	**In same HEI:** None 2075; 1: 548; 2: 169; 3 or more: 92 **Between HEIs:** None 2238; 1: 504; 2: 90; 3 or more: 42	**Same HEI:** PS higher **Between HEIs:** AC higher
Caring responsibilities (children and/or adults)	No: 1176 Yes: 1722	None
Job moves made primarily for family or relationship reasons	No: 2005; Yes: 893	None
Age	20-34 years: 590; 35-44 years: 1295; 45-54 years: 831; 55-64 years: 171; 65+ years: 6	AC older
Ethnicity	White (Countries in UK): 1877; White Irish: 277; Other White: 460; Any BAME: 218	PS more likely to be White British AC more likely to be Other White Background
Disability and health	Registered disabled: 39 Consider self to have disability or health impairment: 229	–
Sexual orientation and gender identity	LGBT: 194	–

Appendix B

Table 2a: Survey respondents completing two surveys approximately 12 months apart (n=750)

Cohorts 2, 3; 4 and comparison group	First survey completion	Major differences/changes at second survey
Academic/ professional	Academic: 387; Professional: 363	
Country where working	England 499; Northern Ireland 8; Republic of Ireland 57; Scotland 121; Wales 31; Other 3	
Contracted hours	Full-time: 636; Part-time: 114	Change in part-time or full-time: 44 Higher proportion of PS changed contract hours with more moving from part-time to full-time (n=26) than vice versa (n=11) Proportionately more C4 women went full-time (n=22) compared to other cohorts
Type of employment contract	Permanent: 665; Fixed-term: 59; Open-ended: 15; Other: 11	No major changes
Hours per week typically worked	Up to 30 hours: 69; 31-37.5 hours: 175; 38-45 hours: 307; over 45 hours: 191; unknown: 8	Change in work hours: 28 Higher proportion of PS changed contract work hours with more increasing their hours; Proportionately more C4 women changed their contracted hours (n=11)
Promotions experienced	**Same HEI:** None: 247; 1: 239; 2: 154; 3 or more: 110 **Between HEIs:** None: 573; 1 or more: 177	Promotions: 122 No major differences between PS and AC for successful or unsuccessful promotions Lower proportion of CM were promoted compared to C2, C3 and C4
Sideways/ downward moves experienced	**In same HEI:** None 516; 1 or more: 234 **Between HEIs:** None 577; 1 or more: 173	Yes: 25
Caring responsibilities (children and/or adults)	Yes: 462	32 women have taken maternity leave in last 12 months No major differences between PS and AC

Cohorts 2, 3; 4 and comparison group	First survey completion	Major differences/changes at second survey
Job change in last 12 months	N/A	Job change: 78. Doing a significantly different job: 30
		Higher proportion of PS changed jobs (63 PS women vs. 15 AC women);
		180 PS and 171 AC were unsuccessful in their job applications
		Proportionally more PS changed or tried to change for more money; whereas proportionately more AC changed or tried to change for job security
		Proportionately more C4 women changed or tried to change jobs to expand skills. for more responsibility, or for a change in career direction
Changed institutions	N/A	Yes: 20
Age	20-34 years: 149; 35-44 years: 337; 45-54 years: 209; 55-64 years: 51; 65+ years: 3	N/A
Ethnicity	White (Countries in UK): 537; White Irish: 62; Other White: 104; Any BAME: 36	–
Disability and Health	Registered disabled: 7	No major changes
	Consider self to have disability or health impairment: 63	
Sexual orientation and gender identity	LGBT: 42	No major changes

Notes:

Aurora Cohorts: C2 n =172; C3 n=262 C4=192 Not undertaken Aurora, n=124. Cohort 2 data were collected 3-9 months post Aurora (depending on which Aurora subgroup the respondent was in) and then 1 year later (ie 15-21 months after completing Aurora). Cohort 3 and 4 are the first cohorts to have both pre Aurora and post Aurora data (approximately 12 months apart).

Appendix C

Interview topic guide (T2) Cohort 3

1. You may remember that we interviewed you about a year ago. Please can you tell me about any changes in your work since then?

2. What styles of leadership have you encountered in the last year or so? Can you give examples of how this style was used and by whom? (How – if at all – do other people seem to vary their style according to the situation?)

3. How has the way you see leadership changed? (What do you see as the characteristics of leadership? How do you know that you are engaging in leadership?)

4. What (if any) cultural and structural barriers have you encountered in your work and engaging in leadership approaches

5. What (if anything) have you done to address these challenges? What (who) has enabled you to address these challenges?

6. What are your plans for engaging in leadership approaches over the coming 12 months?

7. What one thing would help to make it easier for you to engage in leadership approaches?

8. Is there anything else you would like to add?

Appendix D

Interview topic guides for (T1) Cohort 4

First group

1. Please can you give me a brief overview of your current job?

2. Which aspects of your work would you describe as leadership approaches?

3. How would you describe your leadership skills?

4. What (who) has enabled you to
   — gain leadership experience
   — gain leadership positions
   — succeed in leadership roles and positions
   — progress your career in other ways

5. How have you made the most of these opportunities?

6. What (who) has hindered you in
   — gaining leadership experience
   — gaining leadership positions
   — succeeding in leadership roles and positions
   — progressing your career in other ways

7. How have you addressed these challenges?

8. I would be interested to know why you volunteered to be involved in the interview part of our research.

9. Is there anything else you would like to add?

Second group

1. Please can you give me a brief overview of your current job?

2. Which aspects of your work would you describe as leadership approaches?

3. How would you describe your leadership style?

4. How would you evaluate your leadership skills?

5. Please describe a workplace experience that took place either during or after you participated in the Aurora programme that changed the way you saw yourself as a leader or in relation to your job. (What was the experience? What did you do? What did you not do that you wish you had done? How did you feel? How did this experience change the way you think about or see yourself at work?)

6. What (if anything) do you think might have made this a more positive experience?

7. What (if anything) do you plan to do as a result of the experience?

8. Is there anything else you would like to add?

We would also like to speak to your mentor. If you are happy for us to contact her/him, please can you send us an email address or phone number.

Appendix E

Diary template 1

Name:

Date of diary entry: Time of diary entry:

Date of leadership activity: Time of leadership activity:

Please read the accompanying guidance sheet. Choose one leadership activity that you were involved in during the specified week and write an account of this event.

Use the questions to help you structure your account. Feel free to omit any questions that do not apply to the activity that you are describing and include additional points not covered by the questions.

If you have any questions, please contact us at: onwardsandupwards@lboro.ac.uk

1. Briefly, please describe the leadership activity and context in which it occurred.

2. How visible is this activity within and beyond the university?

3. How did you come to be involved in this?

4. What aspects of your workplace structures and culture helped you to tackle this leadership activity successfully? In what way did they help?

5. What aspects of your workplace structures and culture made it hard for you to tackle this leadership activity successfully? In what ways did they make it difficult?

6. What aspects of this leadership activity did you feel most comfortable with? Why?

7. What aspects of this leadership activity did you feel least comfortable with? Why?

8. What did you learn from engaging in this activity? What did you achieve?

Returning your completed diary sheet

Please send your diary sheet within a week of completion to the research team.

You can send it:

+ electronically to: onwardsandupwards@lboro.ac.uk

+ or by post to: Dr Sarah Barnard, The School of Business and Economics, Loughborough University, Loughborough, LE11 3TU.

If you encrypted your diary sheet, please let us know your password. We can arrange a phone call for this purpose if you do not want to send it by a separate email message.

Thank you very much for giving your time and energy to be a diarist on this project.

Other comments

Please add anything else you would like to say about the writing your diary entries. You may wish to include suggestions for improving the guidance and support we have provided.

Diary template 2

Name:

Please read the accompanying diary guidance sheet and contact us at: onwardsandupwards@lboro.ac.uk if you have any questions.

Over the next 3 months, we would like you to write about workplace experiences which change the way you see yourself in relation to your work role, job and/or career. You might want to include experiences that give rise to powerful or unexpected emotional responses and that result in you questioning your priorities, recognising your expertise, or envisaging yourself in a different role.

The number and length of diary entries will depend on your experiences. We suggest that you write between 2 and 6 entries, with each entry being around 500 words. Altogether, your entries might amount to between 1,000 and 3,000 words.

Please date each entry and describe

+ the experience

+ what you did

+ what you did not do or wish you had done

+ how you felt

+ how it changed the way you think about or see yourself at work

+ what (if anything) you plan to do as a result of the experience

If any of the points are not relevant to your experience, please leave them out and include those reflections that are important to you. Please expand the following space as required.

Returning your completed diary sheet

Please send your diary sheet within a week of completion to the research team.

You can send it:

+ electronically to: onwardsandupwards@lboro.ac.uk

+ or by post to: Dr Sarah Barnard, The School of Business and Economics, Loughborough University, Loughborough, LE11 3TU.

If you encrypt your diary sheet, please let us know your password. We can arrange a phone call for this purpose if you do not want to send it by a separate email message.

Thank you very much for giving your time and energy to be a diarist on this project.

Other comments

Please add anything else you would like to say about the writing your diary entries. You may wish to include suggestions for improving the guidance and support we have provided.

Contact us

+44 (0)3300 416201

www.advance-he.ac.uk

🐦 in f @AdvanceHE