

Women Professors as Intellectual Leaders

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1.0 Executive summary

This is the final report relating to this LFHE small development project. The study sought to analyse how women see their role as full professors through autobiographical accounts of their intellectual and career histories. Whilst work has emerged in recent years on professors as leaders, there has been comparatively little research on how women professors define and practice their role as intellectual leaders. The underrepresentation of women in the UK professoriate means it is important to consider this as one of the important ‘absences’ in university leadership. Interviews were conducted with 30 (full) professors, including five men as a small comparison group. Interviewees identified a range of freedoms and responsibilities connected with the professorial role including four personal qualities: resilience, confidence, negotiation skills, and assertiveness. Findings indicate that both female and male professors understand their role principally in terms of research leadership but that women were more likely to emphasise the importance of academic citizenship, especially mentoring, compared to their male counterparts. Those with intersectionalities of identity, in terms of working in science, technology, engineering, and mathematics subject areas where females are most under-represented, also felt a particular obligation to fulfil service roles. While these findings are indicative of the continuing effect of so-called ‘academic housework’ beyond lower ranked academic positions, the more rounded view of the professorial role supported by women should be seen as a positive and indicator of what *all* professors should do. If universities are serious about tackling the historic under-representation of women at the highest levels within the academy there is a need to ensure that reward and recognition criteria applied at professorial level is transparent, is not dependent on tacit knowledge, and adequately reflects the importance of the academic citizenship role.

2.0 Background

This study investigates the ways in which female professors define their identity and role as intellectual leaders. Currently, women account for just 21.7 per cent of full professors¹ in the UK (Equality Challenge Unit, 2014). Women constitute 56 per cent of students in British higher education and about 39 per cent of university academics. Yet, less than a quarter of university professors are women. Despite gender inequality being characterised as a critical deficiency in higher education leadership (Morley, 2013), there remains comparatively little research on how female professors define and practice their roles. A larger cadre of research-focused professors has emerged in UK higher education in recent years linked to the growing importance of the research excellence framework (REF). These professors have been appointed to enhance the research capacity of institutions in this context and so often do not occupy formal management roles. The de-coupling of the professorial role from formal management responsibilities at departmental and faculty level has, in turn, led to growing interest in the concept of intellectual leadership (Macfarlane, 2011, 2012; Evans, Homer and Rayner, 2013).

The emphasis within the higher education leadership literature has historically been on formal management roles and functions with studies often focused on middle and senior managers such as heads of department, deans, pro vice chancellors and vice chancellors (e.g. Bright and Richards, 2001; Knight and Trowler, 2001; Smith *et al.*, 2007). There has been logic in this inasmuch that the role of professor was historically linked in a British context with that of head of department. Massification has led to greater student numbers, from about 10 per cent of the UK population in 1960 to about 45 per cent today (Department of Education, 2016). This has, in turn, expanded the size, numbers and scope of universities. Neo-liberal economic policies and a shift in the understanding of higher education as principally bringing private rather than public benefits has led to decreased public funding and a more entrepreneurial and competitive system (Carpentier, 2012; Marginson, 2006). Globalisation has increased competition for funding, and pressure to attract the best students and academic staff on a global rather than domestic basis. These changes

¹ The term ‘professor’ will be used subsequently in this report in a UK context to refer to a full professorial appointment.

have forced universities to operate more like businesses (Bok, 2009) via a professional management structure, and growing numbers of hybrid academic/managerial roles (Whitchurch, 2006). Given this background, it is not surprising that leadership research has tended to focus mainly on how these changes have impacted on the formal leadership of higher education institutions.

Until recently there was little research on the informal leadership of senior academics with professorial titles. Tight's (2002) analysis of the professor's role and purpose is a rare exception identifying the connection between professorial leadership and a broader set of collective responsibilities, closely associated with helping less experienced colleagues develop through mentoring processes, sometimes termed academic citizenship (Slaughter and Leslie, 1997). This is one of four orientations to intellectual leadership identified by Macfarlane (2012) in addition to being a knowledge producer, a boundary transgressor and a public intellectual. Informal and distributed leaders, such as professors, are generally not thought of as strategically central they do not occupy formal roles within university management structures. While some professors do occupy 'multi-professional' or hybridised management roles (Whitchurch, 2006), such as head of department or dean, their influence mainly stems from their managerial rather than academic position (Macfarlane, 2011). Rayner *et al.* (2010) reveal that the literature is scarce on a professor's leadership role, though they possess a sense of being intellectual leaders. Macfarlane (2011), in elaborating this concept further, defines an intellectual leader as someone who has the ability to influence and inspire others based on the power of their ideas as opposed to position power. This form of leadership is widely perceived to be the most effective means of developing the next generation of academic leaders (Ryan and Peters, 2015).

Furthermore, there are a range of other concepts relevant to this study that relate to gender, leadership and women in academe. It has long been recognised that women in the workplace face a range of informal or invisible barriers to career progression expressed via the phrase 'glass ceiling'. In a higher education context the metaphor 'ivory ceiling' is a synonym in widespread use (Forestier, 2002; Misra, *et al.*, 2011). The reasons for this ivory ceiling have been much discussed, and the sector has set up initiatives to tackle it, such as the Athena Swan charter, established in 2005 to

advance the careers of women in science, technology, engineering, and mathematics (STEM), and expanded in 2015 to cover the humanities and social sciences. Some observers regard increasing numbers of women both studying and working in formerly male dominated fields of study and across higher education as grounds for optimism that this will lead to greater equality in the labour market via the so-called pipeline theory (Mariani, 2008). However, critics contend that ‘leaks’ or ‘blocks’ in the pipeline mean that while women may enter the pipeline they subsequently leave or do not achieve their full potential due to a range of reasons including different personal priorities, inadequate support, and a lack of self-confidence (eg Pell, 1996; Aiston, 2014). By contrast, other research has highlighted the continuing existence of direct gender-related bias as a block to the careers of senior academic women (Manfredi, *et al*, 2014).

Despite growing numbers of women studying in higher education and in academe this has not resulted in the unblocking of the ‘pipeline’ leading to women acquiring an equitable share of professorships. In many UK universities support groups for women academics have sprung up in response to this realisation such as *Women in Academia Group* at the University of Reading, *Wonder Women* at the University of Manchester, or *NU Women* at Newcastle University (see appendix 9.2 for detail). Some of these groups were originally intended for women in STEM subjects where under-representation is most severe (eg *Women in Science, Engineering and Technology* at the University of Southampton) but now serve a wider constituency including academics from the humanities and social science. This is a reflection, at a meso-level, of the way in which the Athena Swan charter has recently been extended to include women in non-STEM subjects. The percentage of women professors has crept up in recent years from 19 per cent in 2009 to just under 24 per cent in 2014. In some STEM subjects though, such as engineering, the proportion of women professors remains stubbornly low. One of the barriers to progression for women within higher education is captured by the phrase ‘academic housework’ (Heijstra, Steinthorsdóttir and Einarsdóttir, 2016). This refers to women taking on gendered responsibilities associated with caring in the workplace that can result in an excessive amount of time-consuming and lowly esteemed service work inhibiting, or at least delaying, their promotion chances (Acker and Feuerwerker, 1996; Grant and Knowles, 2000; Misra, *et al*, 2011). Moreover, intersectionality or marginality/multiple marginality

means that women may be disadvantaged in respects other than their sex by, for example being members of a racial or ethnic minority (Turner, 2002).

3.0 Aims and objectives

This project had the following aims and objectives:

1. To analyse the ways in which women professors define and exercise their role as intellectual leaders locally, nationally and internationally
2. Build on conceptual understandings of the role of professors as intellectual leaders with particular reference to the work and identity of women academics
3. Support the 'Catalysing Change' strategy by developing institutional learning and case study materials of benefit to both national and international delegates (eg mentorship and intellectual leadership case studies)
4. Influence development programmes and policies at the institutional level and wider debate at the national and international level concerning the role of women professors
5. Disseminate findings through publications and presentations at academic and professional forums

4.0 Research methods

The study draws primarily on 30 semi-structured interviews with professors based in the UK. 25 of these interviews were with women professors while the remaining five were conducted with male professors. Both female and male professors were asked an identical set of questions. These reflected a balance between matters relevant to *becoming* a professor and those pertinent in *being* a professor. First, this balance was important in valuing the perspectives of interviewees in their personal journey in becoming a professor, through gaining an understanding of their experiences of the application process or any mentoring they had received. Second, it led the participants

to reflect on any barriers they had encountered, such as a lack of access to tacit knowledge about the written criteria and/or discouragement from key individuals. Thirdly, it was also important to focus on how participants understood and interpreted the role of a professor. This took place during the second part of the interview.

The decision to interview a small number of male professors was made in order to create a comparison group to help determine if there are any differences in perspective between the interviewees based on their sex. The same set of questions was asked to both female and male professors. Care was taken to ensure that participants represented a balance between STEM and non-STEM disciplines (15 from each). The participating professors were drawn from nine universities including both research-intensive members of the Russell Group and more teaching-focused universities created since 1992. However, a greater proportion of interviewees were drawn from research-intensive institutions in order to provide more comparable data in respect to the institutional ‘home’ of the project team. As such, the study does not seek to make comparisons across the higher education sector by reference to institutional types that cannot be adequately reflected within the constraints of such a small-scale project.

In order to add a biographical perspective to the interviews, an analysis of CVs was conducted prior to the interviews. CVs have been used as a complementary method in social science research for a number of years (eg Dietz *et al.*, 2000; Canibano, *et al.*, 2008) providing additional information in narrative work (Bawazeer and Gunter, 2016:2). Thus CVs are a useful tool in learning about career paths and what may impact research productivity and career progression (Gaughan and Ponomariov, 2008, Bawazeer and Gunter, 2016).

The small, stratified sample on which this study is based seeks to represent a range of disciplinary and institutional contexts. Whilst this does not reflect the full complexity and potential effect of discipline and university contexts, interviewees were drawn from across a wide range of backgrounds connected with their academic and institutional identities. In analysing the interview data inductively the constant comparison method was used. This involved comparing the datum several times

through coding and recoding in order to identify overarching common themes and patterns.

5.0 Key findings

5.1 Freedoms and responsibilities

The interviews started by exploring the career trajectory that had led to *become* a professor after which the main focus was on how interviewees understood what it meant to them to *be* a professor. After coding and recoding by each of the two researchers and the clustering of themes, three overarching themes were identified in respect to freedoms, responsibilities and, less expectedly, a series of personal qualities that professors identified as important to possess. There was a recognition that freedoms and responsibilities are intertwined and that, as one interviewee expressed it, a balance needs to be struck between the two. Interviewees tended to define their roles principally in terms of research and research leadership normally explaining the role of a professor as about activities mainly focused on gaining funding and publication.

I see myself very much as a research professor... I see it as a research leadership role, and so I see that partly in terms of doing and being seen to do good quality research (Zoe, Birmingham).

Charlotte expands on this idea of leadership and research and, unprompted, used the term 'intellectual leadership' to describe her vision of what it means to be a professor.

I suppose your role is mainly about intellectual leadership. So I think it's about authority, credibility, publishing, being out there and bringing home what credibility and leadership and authority you have developed through knowledge building and through writing and disseminating, bringing some of that home as well as externally exerting influence (Charlotte, Solent).

Interviewees were conscious of the freedoms that professors are afforded partly as a result of being acknowledged via their professorial title as an authority in their field and having, as Charlotte expressed it, an enhanced sense of ‘credibility’.

As soon as you put ‘professor’ in front of your name people actually almost treat you like a human being (Zoe, Birmingham)

I think people see you differently (Chloe, Manchester).

Interviewees expressed the feeling that part of the difference in the way they are treated as a professor is being listened to as an authority, whereas as a lower ranked academic they did not feel they had necessarily been accorded the same respect.

It’s very striking that in Britain once you get the title ‘professor’ suddenly stuff that you’ve been saying for years people start listening to, and the only difference is the title (Madelyn, Birmingham).

you’ve got a bit more clout... so you can throw your weight about a bit... You say the same things at a more junior level, but people are more inclined to listen to you (Ethyl, Edinburgh).

This ability to ‘throw your weight’, as Ethyl described it, enables a professor to better control their environment at the university and gain a stronger sense of independence and potential impact.

So when I was a reader and I wanted to be a professor... I wouldn’t have dared challenge my head of college... Whereas as soon as I got prof, I kind of felt I was more able to fight...before I was prof I might have got slapped down, because I’m now a prof he had to take it on board (Trudy, Birmingham).

This exercising of authority, however, can take quite different forms. The ability to pursue these differences is what allows for that independence. Some professors see their role as freedom *from* managerial forms of authority.

I'm always best to make my own decisions. I think I've always been a bit resentful of people telling me what to do. And I think that's probably one of the nice things about being a professor, generally you can do that (Charles, Solent).

The respect with which professors feel they are treated and the impact this can lead to allows them to enjoy a second freedom, that of intellectual independence. This could be described as the ability to define their role as they see fit.

I guess I feel pretty much completely free to be honest...I can choose how I run the patterns of my days (Audrey, UCL).

I'm endlessly curious about things, and I can't think of anything better than being paid to follow my curiosity (Penny, Birmingham).

We have more freedom to pursue our interests... I see my main duty as being to exercise what authority and influence I have for change for the better (Paul, UCLAN).

'Be a professor, make a difference' that's my motto (Christine, Southampton).

Intellectual independence means the freedom to conduct the research that professors consider to be important or meaningful to their personal intellectual agendas and passions, something referred to by all participants.

I always thought that what professors were supposed to do was to be passionate, to have a particular research interest, to drive that research interest forward (Isabelle, UCLAN).

The research is different, you can branch out, you can maybe have new ideas, ... so it's more exciting from my point of view (Stephanie, Edinburgh).

Intellectual independence is often linked to a greater sense of real or imaginary security of employment that brings with it the freedom to define a long-term vision.

I remember phoning my mum to tell her that I'd got a non-temporary job for the first time, so she was quite relieved because she didn't understand that I'd been temporary for 17 years (Christine, Southampton).

However, with the freedom to define your research agenda comes the connected responsibility to find the funding to pay for it. This was recognised by interviewees across the STEM and non-STEM subjects as an important responsibility or duty that comes with being a professor. This sense of responsibility can be linked to the need to attract sufficient funding in order to support other junior members of a research team.

Academic freedom comes from income generation (Amy, Manchester).

I guess yes there are greater expectations for you bringing in the research money, which is one of our biggest challenges (Abigail, UCLAN).

You have to put in bids (Audrey, UCL).

But the bottom line is you've got to be bankable, that seems to be the way this university works (Christine, Southampton).

The higher up you get the more you're have to think 'OK I'm also leading this group, I'm also having to take on more students, I'm also have to bring in more grant money' not just for me but for the department because the department has goals of grant income (Trudy, Birmingham).

The results of not getting the funding can be personally painful and appears to be driven, at least in part, by a fear of being seen as under-performing and even raise anxieties, at extreme, about loss of employment.

I was aware of colleagues... who you know if they didn't bring in the money within their first three years their contracts were terminated...I've been quite successful in capturing grants, but I would feel that if that didn't happen, if I wasn't able to capture research funding. I would like to think that I wouldn't be fired....., there would be some support mechanism put in place to help me

be more successful, which is nice, but probably a bit of wishful thinking.
(Abigail, UCLAN).

Other responsibilities identified by professors include helping their university or academic unit and in respect to outreach. This outreach mission can have both a social and economic dimension. It can involve crossing disciplines, connecting research with the interests and concerns of industry, and a sense of the civic mission of research to make a positive difference to society.

My department has eight professors. I'm one of eight people who in my estimation are responsible primarily for keeping the doors open and the lights on... I feel a very heavy responsibility actually towards my institution (Penny, Birmingham).

I want to engage industries ... I want to enjoy the science, but sometimes the engineering is weak or the other way. I want to engage for both fundamental things and the practical things to advance both (Michael, Southampton).

I really think that professors is an ambassador type role ... I think we need to be able to, especially when you're at this level, communicate with non-academics but also with academics in other disciplines (Trudy, Birmingham).

In addition to outreach, a number of professors also identify with the importance of informing the public about new research advances or giving expert opinions on events that may be in the news, an idea that is closely connected to that of a public intellectual, a role that can include being a critic of the university.

It's communicating to everybody from my students to the readers of the newspapers what things economists can validly say about the world (Kimberly, Manchester).

At a personal level I think there's a really important role in terms of standing up as a leader and pushing back against what I would probably call the excesses of neo-liberalism and marketisation (Christine, Southampton).

Many of the participants talked about their service work or academic citizenship as creating extra administrative and management responsibilities within their institutions that they felt went largely unappreciated.

Contributing to strategy within the department and perhaps doing things like Personal Development Reviews and that kind of thing (Beatrice, Birmingham).

We have to do more admin in terms of what we get asked to do. I'm the Chair of the Board of Examiners... I was head of Graduate School, and oh that was not torture but that was three years of something on the shoulder... like a weight on your shoulder, it doesn't go away (Stephanie, Edinburgh).

You need to be initiating new projects, new areas of work. And there's probably a bit more of a sort of managerial role to it I think, you know you're responsible for a subject area, you've probably got several staff who are working with you, you need to be able to, don't know whether I like the word 'manage' but yeah you need to be able to manage them properly (Charles, Solent).

Nurturing, encouraging and directly mentoring junior colleagues and research students is an important part of the work of a professor, mainly but not exclusively seen as occurring within their institutional context. Trying to inspire the next generation of scholars and helping them to advance their academic careers is seen as a crucial responsibility but there is also recognition that this work involves a considerable time commitment.

I mean you have a kind of duty, also responsibilities of encouraging and promoting other people (Amy, Manchester).

For me, I've got a particular interest in early career researchers... in terms of giving them guidance, as I say things like getting a mentor, things like running workshops to help people publish (Hannah, Manchester).

Everybody has the power to inspire other people, but as a professor you have the power because of your position ... you're a good or bad professor, to be able to make or break careers if you like. And so if you can actually do that creatively, if you can bring people along creatively then I think you can grow other people (Isabelle, UCLAN).

There was an awareness that mentoring adds considerably to workload but is, nonetheless, a vital role. Women professors tended to identify this aspect of being a professor more frequently than male counterparts when asked to explain how they saw their role. Here there is a strong sense of moral commitment to mentoring among female interviewees, perhaps intensified by a desire to redress the historic under-representation of women professors in higher education.

I like to help younger colleagues, particularly women as much as I can. Obviously, I feel a moral responsibility to have a leadership role in the department (Mia, Southampton).

Some felt that advising junior colleagues is more than just career advice. It is also about helping some to find a better work-life balance.

There's a lot more advising people about their careers, so you know you have to try and get that right, give the right advice. A lot of morale building, a lot of my job here has been about raising morale, trying to retrieve morale when it's been damaged ... I think that there's a considerable responsibility for, you know, the health even of my colleagues, my junior colleague, trying to ensure that they're not half killing themselves and take some time off and that they do things outside the institution (Madelyn, Birmingham).

There was an awareness among many of the participants that the responsibility of mentoring does not get distributed evenly among professors and that women tend to take on this duty more often than their male counterparts.

and that bloody pastoral thing that the woman always seem to get dumped with the students, which I don't really mind doing but it's always the women

that are doing it, and you notice that the students prefer to come to the women for the most part anyway about that (Theresa, Southampton).

While more participants discussed aspects of helping junior colleagues individually others mentioned the importance of support groups among peers too. For example, Emily describes the benefits of a peer support group at her previous university in the United States.

There was a female professorial group that got together, like a support group of female professors there. And so they were for all female professors ... and we met once a month and had dinner ... and talked about what was going on at the university. The Vice Chancellor would come twice a year, and I know it made him nervous but he would come and he would buy us wine and, you know hang out a bit and say awkward things, but that was OK bless him-he got in the room ... that was actually quite supportive, I wish we had something like that (Emily, Birmingham).

5.2 Personal qualities

In addition to identifying the freedoms and responsibilities of being a professor interviewees also spoke about what they regarded as the personal qualities that were needed for career success which may be summarised as resilience, confidence, negotiation skills, and assertiveness. These qualities appear to relate both to *becoming* and *being* a professor. Here it is not suggested that all these qualities will necessarily be found in any one individual or are static in the sense that some may be developed over time, such as confidence.

Academe is an industry of setbacks involving unsuccessful funding bids and rejected journal papers and so the first quality, resilience, perhaps comes as no surprise. However, resilience can come in many forms. A number of women professors felt that their route to professorship had been harder than their male counterparts and taken longer to attain. Part of the problem, as they saw it, was that the nature of promotion criteria in lacking precision and being open to interpretation. These women

felt that they had achieved the professorial title despite the barriers that they had faced, and often belatedly.

I think male professors get promotion easier and are given more authority more readily for whatever reason, and I don't know the reason, it may well be that they're more skilled, but I'm not always sure that they are. But yeah, I think it depends on who is the leader, and it's not always the male leader that promotes the males (Elizabeth, Manchester).

A number of male colleagues who definitely don't want to promote people ... didn't deem me to fit their notion of an interpretation of criteria ... I certainly had people who weren't generous in their interpretation (Zoe, Birmingham).

I felt that the whole process was not transparent in the previous promotion process. I felt as though decisions were made on whether they liked your face (Charlotte, Solent).

While part of the concern may lie with a perceived lack of transparency, participants that have received mentoring and have acquired the tacit knowledge needed to understand the system better explain how promotion guidelines do not always match with how promotions are handled in practice.

Well you're dealing with two things. You're dealing with first of all explicitly what does it say, and then implicitly what do we know. And also, whereas in terms of competencies it will mention teaching the weighting...despite what they say or what used to be said about teaching, that an awful lot of emphasis is placed on research (Simon, Southampton).

Research grant income is a much larger factor maybe than is specially laid out within the criteria ... there's an implicit sort of acknowledgement that its incredibly important (Beatrice, Birmingham).

Some interviewees discussed the way that academic careers can be held back through factors such as dual-career relationships or even being discouraged to apply for

promotion by female as well as well male mentors and senior colleagues. In this respect the importance of resilience is recognised as critical in overcoming such obstacles.

My husband is in the same field and I actually turned down a full professor position around eight or nine years ago... it was for family reasons because I didn't want to live in a different country. And I would say both of us were abused by the dual career issues because correspondingly his career was also delayed (Emma, Southampton).

I would say that at certain points I felt that ... I was told that I shouldn't be applying for promotion, that I wasn't ready, and you know I didn't always necessarily agree with that position ... along the way you get knockbacks, don't you and sometimes even things like grant review processes, papers, and that can always feel discouraging (Elizabeth, Manchester).

I got blocked a few times from leadership positions, perhaps because the person who got to decide you know hated me ... She blocked me from going on the senior leadership training, which would have been really useful (Trudy, Birmingham).

But I think in a sense it's a strength because people who are discouraging make you stronger, so I turned this into something positive (Amy, Manchester).

I think as a woman because you're in the minority you just have to fight your ground and have very thick skin and have to tell what you think (Stephanie, Edinburgh).

A second personal quality that many professors referred to is confidence. This is closely related to resilience in that many, if not most professors, will have applied more than once before succeeding in gaining a professorial title. Confidence is needed to overcome setbacks. Confidence though does not always come naturally and it sometimes takes a gentle nudge from a senior colleague to encourage women to apply

for a professorial position with some participants noting that there seems to be a gender difference when it comes to confidence.

I must have just looked at the criteria and thought ‘well I meet those criteria, so I’ll go for it’ (Isabelle, UCLAN).

It was actually a colleague of mine ... who was aware of the research I was doing ... This colleague said you’ve been a senior lecturer for a long time, why don’t you apply for a Readership? And that was the first time I’d actually thought about it, you know I had never really imagined that the sort of Reader, Professor, was something I should be aspiring to (Abigail, UCLAN).

Men tend to be a bit louder, they tend to have more confidence, even when they don’t know how to go to a place they will pretend they know or they will just learn and try it out, and then it’s not there. They just do that. Well maybe a woman would not do that; they will think a bit more (Stephanie, Edinburgh).

And part of that I think is because women are not as confident. It’s that old story I think where you go to an interview, a promotion or something, and there will be three men and they will have ticked four out of six of the criteria and still expect to get the job, whereas the women have not applied because they haven’t got one of the criteria. You see that all the time. I see it on panels, I see it on promotion and I see it in the REF (Theresa, Southampton).

Whilst confidence may come naturally to some, Zoe is an example of someone who emphasised the need to work on a sense of inner self-assurance.

There is a sense that you’re constantly having to make sure that you’re confident about the basis that allows you to deem yourself a professor (Zoe, Birmingham).

Interviews also revealed how several women professors did not feel at all confident. This observation was most starkly conveyed by Olivia who went as far as saying that she felt ‘grateful’ for being made a professor.

I use this word but it's not very good, 'grateful' for getting there (Olivia, Winchester).

Well barriers of my own generation, like not having the confidence to do it, and it takes a lot of time and you feel that you need to discuss it with a lot of people (Chloe, Manchester).

A third quality identified as important for professors to possess is the ability to negotiate. This is critical in successfully managing large workloads and coping with many competing demands on their time. The ability to prioritise is crucial in climbing up the career ladder. Negotiation skills include the ability to make trade-offs or *quid pro quos* in ensuring that saying 'yes' is not simply unconditional, a strategy described by Penny from Birmingham. It was also recognised that sometimes it may be easier to get promoted by moving institutions.

We say 'I will do this but I need to have teaching relief, or marking relief or whatever, but not everybody is able to do that kind of negotiation for lots of reasons...My sort of mantra is always 'never tell them you're tired, never tell people you're busy'...because you don't want other people to think that you have to do that to succeed. And also, everybody's busy, nobody cares that I'm busy (Penny, Birmingham).

A colleague of mine picked up ... it was a new role; it was Faculty Teaching or Undergraduate Teaching Director, or some crappy horrible thing. I said 'why did you do that?' and he said 'well I was told if I did it I would be promoted at the end of it'. ... I've heard it lots of times, lots of people choose the administrative role to get promotion because internal promotion is actually quite difficult. I think it's much easier probably to leave a university and go somewhere else to get promoted (Theresa, Southampton).

The final personal quality that the participants mentioned is assertiveness. This is the ability to make a stand against perceived wrongs or unwanted tasks. This was seen, to some extent, as a more male quality by some interviewees although there were women professors who clearly possess it as well. It was illustrated by interviewees by

reference to getting promoted, trying to strike a balance in dealing with workload demands or simply saying ‘no’ to them especially if they are more lowly esteemed by the university.

I applied to be a principal lecturer and I didn’t get appointed in the one year and I was cross about that ... but I made a bit of a fuss and a moan about it and I re-applied again the following year and got it (Charles, Solent).

I think it’s that the men say no. I think the women say yes because they like doing it, they want to do it. I mean I know a female professor that’s run a graduate school for several years because she loves doing it, but running a graduate school is not going to get you bright lights as far as the university is concerned (Christine, Southampton).

The leadership thing, you know trying to do good leadership that’s fair and supportive while not being a doormat (Trudy, Birmingham).

I refuse to do things; I say ‘no’ to things (Olivia, Winchester).

5.3 Analysis and discussion

The findings of this study indicate that while all professors tend to define their role in terms of knowledge production – principally via publication and grant getting – they also recognise the importance of other roles such as working as an academic citizen, a public intellectual and as a boundary transgressor by crossing disciplinary borders strongly iterating with the previous research of Macfarlane (2012) into intellectual leadership. Women professors tended to identify with the academic citizenship role more strongly than their male counterparts especially in respect to mentoring, committee and administrative work within the institution. Whilst male professors focus mostly on the freedoms associated with the role, women professors tend to place a greater emphasis on the responsibilities or duties it brings. Here, there is a clear connection with the work of Misra *et al* (2011) who showed that women get promoted to associate professor level later than men due, in large part, to taking on more service roles and responsibilities than male assistant professors. The findings of

this small-scale study suggest that the same pattern of gendered academic labour may also be occurring at the professorial level.

Multiple marginality (Turner, 2002) or intersectionalities of disadvantage appear to exacerbate the effects of so-called ‘academic housework’ (Heijstra, Steinhorsdóttir and Einarsdóttir, 2016). While this is usually associated with race and ethnicity and social class, our small sample did not lend itself to an analysis of such women. However, we did find that women professors in STEM subjects, such as physics, where female representation at professorial level is less common than in the humanities and social sciences, added an intersectional pressure or added sense of ‘responsibility’ to fulfill service commitments as a role model. This is an added pressure that a male professor rarely, if ever, will face on top of meeting demanding performance targets in respect to publication and funding. However, if women professors are committed to a more rounded view of intellectual leadership incorporating academic citizenship this may have adverse implications for the gender pay gap. Professorial pay scales tend to reward activities associated principally with academic capitalism, notably grant getting, as opposed to academic housework. Professorial pay can vary considerably and at the University of Southampton, for example, it can range from around £63,000 to as high as £120,000 per annum. Our investigations indicate that while some UK Russell Group universities, such as Birmingham, do publish formal criteria related to professorial pay criteria that includes academic citizenship others are less transparent.

The personal qualities identified in this research may have a gendered dimension to them with a number of interviewees reporting that they lacked confidence or perhaps the assertiveness to put themselves forward for professorial position in the first place. This observation iterates with previous research that has indicated that a lack of support and self-confidence can play a role in retarding the career progression of women (eg Pell, 1996; Aiston, 2014).

Male professors are generally more directive and less collegiate... the female colleagues they usually make sure that everybody’s on board with what they want to do. So male colleagues have the tendency to say ‘OK let’s do this’ and just order staff around. (Daniel, Newcastle)

It needs to be recognised, though, that other research points to more direct evidence of discrimination (eg Manfredi, *et al*, 2014). Although this was not a theme that came out strongly in interviewees, some instances of this behaviour were reported by interviewees. Here it needs to be acknowledged that some of our interviewees might not have chosen to share such instances of ‘everyday sexism’ with us.

Well I’m in a field which is about less than 5% female so I would say gender is an issue every day, every day, every day sexism in every way actually. So it’s an issue in terms of finding collaborators, writing papers, getting invited to conferences, getting invited to be on organising committees for conferences, being invited to be parts of grant panels... (Emma, Southampton)

Finally, negotiation skills are also recognised as important in securing agreements around workload and pay. Confidence in making a professorial application may further be connected with access to colleagues with the tacit knowledge to understand the criteria for promotion something that male academics may currently be in a better overall position to acquire given the continuing under-representation of women in the professorial ranks. The micro-politics of the academy may represent a clue to understanding the embedded nature of disadvantage as well as the potential for positive change (Lumby, 2015) within which there is still evidence of what Ledwith and Manfredi (2000:7) refer to as a ‘subtle homosocial culture’.

6.0 Resources and tools

In addition to the research based on interviews reported, the study includes five case studies designed to support the LFHE’s Catalysing Change strategy that focus on the activities of support groups for women academics (see appendix 2 and the project website). These are intended to feed into and influence development programmes of the LFHE. Dissemination activities have included a paper presented at the Society for Research into Higher Education (SRHE) Annual conference in December 2016, other presentations within the University of Southampton and meetings with key members of Faculty Athena Swan committees. The project findings have been further disseminated via an opinion article for *Research Fortnight* (Macfarlane and Burg, 2016) and coverage in the *Times Higher Education* (Grove, 2016). Finally, a journal

paper is currently under development. These activities have helped to disseminate the project's work at an institutional and national level. The opinion article and the paper presented at the SRHE annual conference are also available at the project website and further communication activities are planned including a dissemination workshop.

7.0 Recommendations

Recommendation 1: Enhance perceptions of the transparency of criteria for promotion to professor via a strong commitment to formal and informal mentoring processes for women academics

Universities need to understand that whilst formal written criteria for professorial appointments may be transparent, there is a belief among many of those we interviewed that women may be largely excluded from the tacit knowledge needed to interpret the criteria. Moreover, the degree to which women are under-represented at professorial level, especially in some of the STEM subjects, means that few women will have access to female professorial level mentors in their specialist area. This points to the vital importance of formal and informal mentoring processes to ensure that women academics feel well supported and encouraged to make professorial level applications.

Recommendation 2: Recognise the broad range of roles fulfilled by professors more explicitly within reward and recognition criteria

Professors appreciate the freedoms that come from the possession of a professorial title while recognising the attendant responsibilities it brings in respect to service to the public, the institution and the discipline or profession. Their roles can be various, and remain relatively poorly defined. Professors without a significant formal management role work for and are paid by their universities largely in the expectation that they will provide research leadership. Fulfilling this role demands individual achievement as well as a commitment to a collective service ethic in producing new knowledge, working with and developing colleagues, communicating with the wider public and building bridges between disciplines and within professional fields of practice. While a professor has a broad set of responsibilities, the majority of

professors get rewarded mainly as a result of their knowledge production achievements closely linked to the expectations of the REF.

Recommendation 3: Align reward and recognition criteria for professors to place more emphasis on academic citizenship in determining professorial pay

Professors from all disciplines are now judged on the basis of the amount, and prestige attached, to the funding they acquire, not simply their publications. However, the universities that hire these professors need people that do more than fulfil individual research targets through commitment to other orientations that help institutions fulfil their wider social mission and contribute to the nurturing of the talent of the next generation of scholars including research students and academic colleagues. There is a need to understand that professors have a broad range of orientations connected with intellectual leadership in addition to publication and income generation.

In looking at how women professors see their role as professors it is clear that they embrace a rounded view of what a professor should be including a stronger emphasis on academic citizenship than their male counterparts. It is important that this orientation is understood positively as an asset to the university and the wider higher education system rather than a deficit that fails to fit with a narrow view of the role of the professoriate, linked to the REF, that currently prevails in the UK. Universities need to respond by ensuring that reward and recognition criteria for professors are aligned with their social as well as their economic mission and that the important task of mentorship is embedded into criteria related to academic citizenship.

Recommendation 4: Ensure that reward and recognition criteria for professors is transparent

If universities are going to tackle the under-representation of women as professors it is important that mentoring of academic colleagues, in particular, is seen as central, rather than peripheral, to the work of a professor. This might go some way to ensuring that the additional sense of obligation that many women professors feel in this respect, especially those with intersectional identities, is rewarded rather than, in

effect, penalised. Going forward there is a need for more research into the reward and recognition criteria applied at professorial level to ensure that it is transparent and adequately reflects the importance of the academic citizenship role. It is essential that this criteria reflects the *all-round* role of a university professor as an intellectual leader, a conceptualisation to which women professors are firmly committed.

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9.0 Appendices

Appendix 9.1: Participant Chart

	Participant	University	Area
1	Emma	Southampton	STEM
2	Olivia	Winchester	Non-STEM
3	Isabelle	UCLAN	STEM
4	Mia	Southampton	Non-STEM
5	Zoe	Birmingham	Non-STEM
6	Emily	Birmingham	STEM
7	Madelyn	Birmingham	Non-STEM
8	Chloe	Manchester	Non-STEM
9	Charlotte	Solent	Non-STEM
10	Simon	Southampton	Non-STEM
11	Audrey	UCL	Non-STEM
12	Abigail	UCLAN	STEM
13	Ethyl	Edinburgh	STEM
14	Trudy	Birmingham	STEM
15	Hannah	Manchester	Non-STEM
16	Amy	Manchester	STEM
17	Penny	Birmingham	Non-STEM
18	Bernadette	UCLAN	Non-STEM
19	Victoria	Southampton	STEM
20	Christine	Southampton	Non-STEM
21	Josephine	Southampton	STEM
22	Charles	Solent	STEM
23	Stephanie	Edinburgh	STEM
24	Kimberley	Manchester	Non-STEM
25	Elizabeth	Manchester	STEM
26	Theresa	Southampton	Non-STEM
27	Daniel	Newcastle	STEM
28	Beatrice	Birmingham	Non-STEM
29	Michael	Southampton	STEM
30	Paul	UCLAN	Non-STEM

Appendix 9.2: Case studies of support groups for women academics

Women in Science, Engineering and Technology: WiSET

What is it?

It is a network of academic staff from across the University of Southampton to encourage and enable women in their careers at the University.

What do they do?

They have contributed to reviews of promotion processes, as well as diversity and career development activities. Through these activities they have three main objectives: celebrating success, ensuring success and supporting success. To celebrate success they try to increase the visibility of women scientists and academics. In ensuring success, they address barriers and facilitate career development. By supporting success, they develop and advise on training and resources for women in respect to equality issues. To meet these goals, they have a mentoring programme for female academics, hold workshops, invite speakers and hold meetings. These meetings can be formal and informal meetings over a meal or coffee. In addition, the group is active on social media.

Who is it for?

It was founded in 2002 and designed for the promotion of female academics in STEM fields. The group is now open to female academics university wide.

How is it organised?

The group has a formal steering group of around 20 academics. The majority of the steering group are from STEM disciplines though the members rank from professors to research fellows.

Analysis:

This is an active group that promotes equality, career development and mentoring. As the name suggests, the group was formed to promote women academic needs in the STEM fields as these fields are among the least gender balanced. However, the group has now expanded to include all disciplines. Despite this, the majority of its work remains STEM focused. Among the group's successes has been the creation of childcare vouchers for University employees. They do review and promote the academic literature on gender inequalities and senior members' experience with the hope that it can be used for improvement. They are committed to improving their member's careers and the working environment at the University.

Wonder Women

What is it?

It is an annual feminist festival at the University of Manchester to highlight achievements of female students, alumni and faculty member.

What do they do?

This is an annual campaign each spring, culminating with an event each March to celebrate the contributions of women across the University of Manchester. The campaign's final event, scheduled to coincide with the anniversary of women winning the partial right to vote in the UK in 1918, is usually a panel discussion or debate on women at the university or in UK higher education.

The festival includes events on campus and in the city of Manchester. They include: academic talks, art exhibitions, theatre, music and women's groups and networks. The academic talks centre on women's rights, women in academia and gender differences in the workplace. The art exhibitions, theatre and music are intended to showcase local female artists. This festival is open to the wider community in the Greater Manchester area. The women's groups that meet are mainly from academic disciplines on campus. This gives the various groups a chance to come together to learn from each other and to co-ordinate activities to improve the university environment.

Who is it for?

The festival is open to anyone in the University of Manchester and the Greater Manchester area.

How is it organised?

The group has a formal steering group of academics, administrators, students and alumni from every area of the university.

Analysis:

This is a joint effort from the University and the local authority in working together to form a series of events around International Women's Day to promote women's contributions and achievements. This is a relatively young event that began in 2015 in an attempt to create an entertaining and educational experience for those that take part in the festival activities. It is also used to bring various women's groups together, as it appears that in the past there have been many separate groups working towards the same goal. This collaboration between the groups has helped to create greater awareness of women's issues than before.

Women in Academia Group (WinA)

What is it?

This is a campus organisation designed to enable women at the University of Reading

What do they do?

The group holds meetings four times a year. The events are held over an hour at lunchtime and comprise a discussion centred on a topic and a guest speaker. The topics are designed around workplace issues and career development.

Who is it for?

The events are open to all University staff and postgraduate research students.

How is it organised?

There is an eight member organising committee consisting of academics and local women's club members.

Analysis:

This organisation is designed to help women academics in career development. It appears that the group is part of the University's Athena Swan initiatives.

NU Women

What is it?

Newcastle University's network for women staff

What do they do?

This group supports the career development and advancement of women across the University. They organise activities throughout the year including talks, workshops, a Professors' network and writing groups. Their aim is to increase awareness and engagement in gender equality at the University and in the community.

Who is it for?

This group is for any staff member, academic or professional support staff member at Newcastle University.

How is it organised?

The group is organised by a 13 member steering group comprised of academics from around the university.

Analysis:

The group provides a platform for communication and action in terms of promoting gender equality on campus. It organises a variety of events from career related advice to empowerment seminars. The group has high visibility across campus as the events have good attendance. The group also maintain a busy schedule to help cater to the needs of the University community.

Women@TUOS NET

What is it?

This is an organisation for women academics at the University of Sheffield

What do they do?

This organisation has a diverse range of activities and subcommittees designed to aid female academics in aspects of work, work-life balance and working towards gender equality on campus. They put on a large range of events including: a lunchtime talk series with external speakers, training workshops, role model events, speed networking, a working parents talk series, women and the media, International Women's Day celebrations, a writing club and help in developing a CV. In addition, the group works with female academics in other universities in the UK to create academic organisations for women.

Who is it for?

As the group formed from the science and technology fields, it was originally for academics in those areas. However, the group has expanded across the university and is now comprised of female academics from across disciplines, and also includes professional support staff and PhD students.

How is it organised?

The group is organised by a 21 member steering group of academics and professional support staff from around the university. Due to the great breadth of its activities, the group has four subcommittees to organise the workload associated with the events and programmes being run. In addition, the steering group and its leadership group works with the University Equality and Diversity Board and the University's Athena Swan committee.

Analysis:

This organisation has high visibility and impact on campus. It is well-organised and distributes tasks to its members to organise events and programmes that appeal to the various needs of women academics, professional support staff and PhD students at Sheffield. In addition, the group is able to work within the university structure to implement its goals. The group has been successful to the point of creating web-based informational publications geared towards other universities thinking of forming similar organisations. This information includes tips on organisational structure and how to influence others to bring about change.