Limits to meritocracy? Gender in academic recruitment and promotion processes

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Abstract

According to the literature, women researchers are sometimes at a disadvantage in academic recruitment due to insufficient network ties and subtle gender biases among evaluators. But how exactly do highly formal recruitment procedures allow space for mobilizing informal, potentially gendered, network ties? Focusing on the preliminary stages of recruitment, this study covers an underexposed aspect of women’s underrepresentation in academia. By combining recruitment statistics and interviews with department heads at a Danish university, it identifies a discrepancy between the institutionalized beliefs among managers in the meritocracy and the de facto functioning of the recruitment procedures. Of the vacancies for associate- and full professorships, 40% have one applicant, and 19% are announced under closed procedures with clear implications for gender stratification. The interviews reveal a myriad of factors explaining these patterns showing how department heads sometimes exploit decoupling processes to reduce external constraints on management function and ensure organizational certainty.

Key words: faculty; gender; networks; academic recruitment and promotion; mixed methods.

The university is elitist in the sense of a quest for the best knowledge. When one starts to fiddle with the rules by privileging applicants on the basis of gender, one will ruin an important mechanism in the quest for excellence on the basis of the meritocracy. This is a system where only actual capabilities and efforts are rewarded. (Professor Hans Bonde)¹

1. Introduction

In the late 2000s, two Danish universities, Aarhus and Copenhagen, initiated comprehensive affirmative action programmes providing financial incentives to departments and faculties promoting women researchers to associate- and full professorships. These initiatives gave rise to extensive public disputes over the fairness and legality of ‘discriminative’ measures in academic promotion, rekindling a long-standing discussion of whether the underrepresentation of women among associate- and full professors should be ascribed to individualistic matters, such as personal ambition, motivation and merit, or to discriminative mechanisms deeply layered in the institutional practices of the research institutions.

The debate was further intensified by the recent European Research Council decision to include gender balance in research groups as a criterion when evaluating proposals for the Horizon 2020 funding programme and the Danish Council for Independent Research’s concurrent allocation of DKK110 million (10% of its total budget for 2014) for an affirmative action programme targeting female researchers.

As the introductory quote illustrates, much of the current controversy revolves around the notion of academia as a meritocracy. While sceptics of preferential treatment, in line with the quote above, depict the existing university selection procedures as being at the core of the meritocratic ethos—a system in which gender is without relevance—most supporters of such measures oppose this argument, pointing out the differential impact of existing selection practices on women and men. In short, the current debate thus represents two opposing views. One, conforming to the argument of Professor Bonde, perceives preferential treatment as a threat to the stability of a well-functioning, objective, promotion system, where only the ‘best’ and ‘brightest’ succeed, while the other considers preferential treatment to be a necessary means to fixing a dysfunctional system that disadvantages women.

But what exactly is an academic meritocracy? How is the concept represented in the beliefs and ideas of academic leaders about recruitment and promotion and to what extent do existing organizational practices related to recruitment adhere to the theoretical premises of this concept—from a gender perspective? On the basis of a mixed-methods case study combining 24 interviews with department heads and a comprehensive dataset including statistical information about all academic appointments for positions at associate- and full professor level at Aarhus University (henceforth AU) in the period 2004–13, this paper takes a step towards answering these questions by examining the role of recruitment and promotion practices in the reproduction of gender inequalities. Drawing on insights from the feminist literature and concepts of networks and legitimacy derived from sociological institutionalism, we show that subtle gender practices in recruitment and selection often take
place even before applicants are assessed and the final candidates are appointed to associate- and full professorships.

The remainder of this paper is organized into seven main sections. Section 2 briefly outlines and discusses the concept of the meritocracy in the context of the academy. Section 3 provides an overview of the existing literature on gender and scientific recruitment and elaborates on the topicality and relevance of the study. Section 4 presents the selected theoretical perspectives which may aid the empirical analysis. Section 5 touches upon methodology and outlines the empirical scope. Section 6 provides contextual specifications on the gender composition of research staff at AU and draws together the central characteristics of the organization’s academic job structure, career progression model and recruitment procedures. Section 7 is dedicated to answering the above-mentioned questions, while Section 8 discusses the main findings and draws conclusions.

2. Meritocracy

Since its first introduction in the classic dystopia, The Rise of the Meritocracy (Young 1958), British sociologist Michael Young’s satirical vision of the merit-based society has gained a prominent space in the vocabularies of many modern institutions and enterprises. The early pejorative connotations of this neologism (meritocracy) have, however, now developed into more positive depictions of:

… a social system in which merit or talent is the basis for sorting people into positions and distributing rewards. (Scully 1997: 413)

According to the proponents of the meritocratic ethos, this system provides everyone—regardless of gender, race and class—with equal opportunity to advance and obtain rewards on the basis of individual merits and efforts. Functionalist sociologists have even stressed that the meritocracy has a built-in mechanism directing the very best and suitable talents into society’s most functionally important occupations (Scully 1997). In this sense, the meritocratic ethos represents a distributive principle adhering to the logic that:

… success comes to those whose energies and abilities deserve it. (Mann 1970: 427)

While:

… failures have only themselves to blame. (Mann, 1970: 427)

It goes without saying that the idea of the meritocracy also constitutes a key principle structuring many aspects of university life—from the admission and evaluation of students to the employment and promotion of staff. Classical scientific ideals such as ‘disinterestedness’ (Merton 1973) and ‘meritocratic universalism’ (Cole and Cole 1973) not only direct the research agenda of functional sociologists but also reverberate in the corridors of many academic institutions. The image of science as a gender-neutral ‘culture of no culture’ (Traweek 1988: 162) is widespread among both male and female scientists and research leaders to whom academic advancement is mainly a question of hard work, talent and merit (Bagilhole and Goode 2001; Czech and Blair-Loy 2010; Dryburgh 1999). However, the prevailing logic of the meritocratic reward system does not rest alone on the principle of:

… job placement that awards jobs to individuals on the basis of merit. (Daniels 1978: 207)

Another fundamental principle relates to the idea that all organizational actors should have the same opportunities to display their merits and advance within the system (Scully 1997). In other words, ideally vacancies for associate- and full professorships should be advertised in open competition, enabling all of the relevant candidates to show their worth and rise through the ranks. As becomes evident in the following, however, this principle often appears to be at odds with how academic recruitment and selection actually works.

3. Gender and scientific recruitment: A brief overview of the literature

Existing research reveals a myriad of factors contributing to the persistent gender disparities in the higher ranks of the university system. These factors range from subtle gender stereotyping and discrimination, over patterns of socialization and upbringing, via issues of family and domestic responsibilities, to the structuring of academic work and career paths (Roth and Sonnert 2010). Of particular relevance in this regard are the cultural and systemic factors affecting academic recruitment and selection practices. Citing experimental studies from the social sciences, Walian (1999), convincingly illustrates how subtle ‘gender schemas’ (i.e. non-conscious assumptions about gender characteristics resulting from cultural socialization) operate to create advantages for men in academia by slightly under-valuing the legitimacy, skills and performance of women. Another prevalent theoretical explanation for the slow advancement of women relates to the question of ‘male closeness’ and the ‘homosocial reproduction’ of gendered power relations in organizations. As illustrated by Kanter (1977) male decision-makers’ desire for organizational certainty, in terms of shared values and behavior, may often lead to homosocial reproduction and the exclusion of individuals (including women), who are considered different from the norm. Following this logic, scholars have argued that formal policies are more likely to prevent gender discrimination, since gender homophily (i.e. to prefer someone similar to oneself), when out in the open, is more difficult to sustain (Smith-Doerr 2004a; Roth and Sonnert 2010; Reskin and McBrier 2000).

While the literature provides useful theoretical concepts for interpreting the persistent gender gap in the academic recruitment and selection outcomes, very few empirical studies have thus far investigated the underlying organizational practices and procedures causing these disparities. As noted by Van den Brink (2011), such practices are often treated with a high degree of confidentiality and sensitivity, and many social scientists therefore also experience difficulty gaining access to relevant qualitative and quantitative data on the topic (Husu 2000; Van den Brink et al. 2006). A few scholars have, however, contributed with important knowledge of relevance to this study.

In a PhD dissertation, Van Den Brink (2010) provides a thorough and systematic analysis of the subtle gender practices underpinning procedures related to the appointment of full professors in the Netherlands. Her results show that more than half of the professorial recruitments at Dutch universities take place under closed procedures, which reduce accountability and transparency in the appointment process resulting in various gender effects. Moreover:

… gatekeepers deliberately lobby or construct new positions, framing the profile to suit a particular candidate and resisting or undermining the policy measures of administrative staff. (Van Den Brink 2010: 229)

Drawing on 23 qualitative interviews with assessment committee members and applicants for research vacancies at an Irish University, O’Connor and O’Hagan (2015) explore the varying
conceptions of excellence operating in academic selection and promotion processes. They convincingly illustrate the lack of awareness among gatekeepers concerning the potentially gendered nature of prevailing assessment criteria and conceptions of excellence. Husu (2000) investigates appointment procedures for professorships in Finland (n = 179), showing how women’s chances of being appointed increase considerably when appointments take place in open competition as opposed to closed, invitation-based procedures. In line with the work of Kanter (1977), she concludes that this possibly relates to male networks and the mutual support systems enjoyed by men in academia (Husu 2000). On the basis of a qualitative study including 33 interviews with Spanish researchers in the fields of psychology and engineering, Wazquez-Cupeiro and Elston (2006) illustrate how the academic advancement of female researchers in Spain is considerably disadvantaged due to organizational inbreeding and pre-selection processes, which similarly points to the gendered implications of the stronger formal and informal network ties enjoyed by male academics. In a recent qualitative study of gender and gatekeeping practices among deans and research managers in Dutch academia, Van den Brink and Benschop (2014) introduce the theoretical concept ‘mobilizing masculinities’ as a starting point for exploring how male (and female) academics practice networking in recruitment and selection processes. The study illustrates a multiplicity of gender practices affecting who is invited to apply for research positions, whose reputations are built, and whose visibility is promoted through the recommendations of eminent (male) colleagues. While the authors note that such practices are clearly acknowledged by the recruiters as being intrinsic to the academic promotion game, their gendered consequences do not arise from conscious choices; rather, they reflect:

… liminal practices that men are not fully aware of. (Van den Brink and Benschop 2014: 475)

This points to the continued relevance of the work by Walian (1999) on the subtle gender bias in academia. Her notion of ‘gender schemas’ has also been reaffirmed in a widely cited American study by Moss-Racusin et al. (2012) describing the subtle gender bias in academic recruitment. In a randomized, double-blind study (n = 127), scientific faculty were asked to rate the application materials of a fictive applicant for a lab manager position. The fictive applicant was randomly assigned either a female or male name. Interestingly, both male and female participants rated the fictive male applicant’s merits significantly higher than the identical material of the assumed female candidate. Steinpreis et al. (1999) have reached similar results in an experimental study among academic psychologists (n = 238). As illustrated in the work of Castilla and Benard (2010), unconscious gender bias may be a particular problem in settings permeated by a strong institutionalized belief in the meritocracy. They show that organizations explicitly priding themselves on being meritocratic will ultimately encourage gender bias at the managerial level by creating a culture which discourages organizational actors from being attentive to their own potential prejudices. On the basis of an experimental study similar to that of Moss-Racusin et al. (2012) (n = 445), they show how managers in self-acclaimed meritocratic organizations are more likely than their colleagues in less meritocracy-driven enterprises to favor male employees over equally performing female colleagues (Castilla and Benard 2010).

In sum, the literature clearly raises doubts about the adherence of scientific institutions to the basic principles of the meritocratic system by illustrating that scientific merits are not the only basis for advancement in the system and that male and female researchers are not always provided with the same opportunities to demonstrate their worth. Existing studies have, however, mainly been qualitative or experimental in their approaches, thus limiting their focus to organizational ideas and experiences of scientific advancement or subtle mechanisms of unconscious gender bias taking place in closed academic appointment processes. The main contribution of this study lies in its integrated (gender-) perspective on the academic meritocracy as both idea and practice together with its particular focus on illuminating the complex institutional procedures, practices and decision-making processes through which academic leaders identify, encourage and select the relevant research candidates for positions equivalent to associate- and full professorships. The mixed-methods methodology applied in this study provides a unique opportunity to identify quantitative patterns and regularities indicative of gendered recruitment practices while at the same time reaching an in-depth, qualitative understanding of the internally related processes and procedures explaining these patterns and regularities. More specifically, this analysis will focus on the following aspects in its gender comparison: number of male and female applicants, number of appointments with merely one applicant, temporary vs. permanent positions and type of job announcement (open or closed procedures).

4. Networks and institutions

As illustrated in the literature, formal and informal network ties appear to be of crucial importance in academic recruitment and promotion, and women researchers may sometimes be disadvantaged when employment decisions are made due to insufficient social capital (i.e. the accumulation of resources or status based on networking and personal relationships) (Bagilhole and Goode 2001; Etzkowitz et al. 2000; Sadl 2009) and managers’ implicit assumptions about gender characteristics. As should be obvious to anyone working in the academy, a myriad of decisions and activities take place outside the formal channels of authority in what can be described as the organization’s:

… soft underbelly of friendship cliques and tacit workplace norms. (Smith-Doerr and Powell 2005: 384)

As noted by Owen-Smith and Powell (2008: 616), networks are both:

… the pipes through which resources circulate and the prisms that observers use to make sense of action.

They represent the informal workplace relationships shaping work-related outcomes, and they are the critical avenues through which:

… purposive activity becomes entangled with friendship, reputation and trust. (Smith-Doerr and Powell 2005: 379)

Social network ties to mentors with organizational authority may, for instance, be crucial for women’s career advancement. In an American study of managers’ networks, Burt (1998) shows that women are able to increase the pace of their career advancement by borrowing the social capital of an established mentor, while men profit more from building independent network ties.

It is crucial to recognize, however, that the impact of organizational network ties is highly contingent upon context. In other words, the function and outcomes of network ties should be understood in the context of actors embedded in organizational cultures characterized by certain socially constructed beliefs, norms and rules...
organizations in highly institutionalized environments, such as universities, demonstrate adherence to collectively valued purposes. However, to integrate ‘rationalized myths’ (e.g. the idea of the meritocracy) in network-intensive biotech firms are:

\[ \text{... \text{nearly eight times more likely to lead scientific projects than in more hierarchically organized academic and pharmaceutical corporate settings. (Smith-Doerr 2004a: 6).} \]

This leads her to conclude that flatter, less hierarchical organizations are better workplaces for women researchers, since:

\[ \text{... \text{hierarchy and rules hide gender bias, while reliance on ties outside the organization provides transparency and flexibility. (Smith-Doerr 2004b: 25) }\]

Put differently, informal network ties and local visibility to relevant gatekeepers may appear to be particularly crucial in (relatively) closed hierarchical organizations, such as the academy, where reputation and peer-recognition is valued above all (Bagilhole and Goode 2001). And, as mentioned, this may have implications for the advancement of women in the system.

One question, however, remains unanswered. How do highly formal academic recruitment processes, structured around scientific ideals such as disinterestedness and meritocratic universalism, allow space for the mobilization of informal network ties? Institutional theory provides a useful starting point for grasping this apparent paradox. As illustrated in the work of Meyer and Rowan (1977), pressures exerted by external institutional constituents in the wider society have led many modern organizations to integrate ‘rationalized myths’ (e.g. the idea of the meritocracy) into their structures, policies and procedures to gain legitimacy and demonstrate adherence to collectively valued purposes. However, organizations in highly institutionalized environments, such as universities, may face challenges in maintaining legitimacy for two reasons:

First, technical activities and demands for efficiency create conflicts and inconsistencies in an institutionalized organization’s efforts to conform to the ceremonial rules of production. Second, because these ceremonial rules are transmitted by myths that may arise from different parts of the environment, the rules may conflict with one another. These inconsistencies make a concern for efficiency and tight coordination and control problematic. (Meyer and Rowan 1977: 354)

In view of the recent decades’ New Public Management (NPM)-inspired reforms of the European higher education systems (Meek et al. 2010), it is reasonable to contend that many universities are experiencing increased levels of conflict in linking the generalized rules of the institutional environment with its technical activities; but also in combining inconsistent ceremonial elements with one another (i.e. structures, policies and procedures signaling legitimacy). The formal structure of universities traditionally derived:

\[ \text{... \text{less from demands for technical efficiency than from needs to maintain their legitimacy in society. (Meyer and Rowan 2006: 3) }\]

However, the technical environment has now come to the fore, which has resulted in more tightly coupled and narrowly controlled practices in universities (Meyer and Rowan 2006: 2). Put differently, external demands for efficiency, quality and economic relevance increase the pressure on the day-to-day activities and at the same time spawn conflicting rationalized myths. A concrete example concerns the prevailing managerial ethos of meritocracy and efficiency. While universities nowadays are expected to signal legitimacy by adhering to both of these ‘rationalized myths’, this may be difficult, since the principles of the meritocracy sometimes tend to be at odds with efficiency-driven rationales for action. Another example concerns organization members’ conformity to gender equality policies. Such initiatives are:

\[ \text{... \text{assumed to be oriented to collectively defined and often collectively mandated ends. (Meyer and Rowan 1977: 349) }\]

However, their implications (e.g. in terms of revised criteria for assessments of scientific merits) may conflict with other rationalized myths, such as the prevailing ideas about meritocracy and excellence (O’Connor and O’Hagan 2015). Such inconsistencies and conflicts create enormous uncertainties in organizations and may in some situations lead managers and professionals to decouple their everyday practices from the formal ceremonial purposes of the organization (Dobbin et al. 2009; Meyer and Rowan 1977).

As the analysis below illustrates, the shared goal of hiring the best and brightest through objective, fair and transparent procedures is sometimes at odds with other rationales for action, possibly opening the space for managerial decision-making based on personal connections and network ties, which as illustrated in the work of Kanter (1977) may lead to homosocial reproduction and the exclusion of candidates who are considered different from the norm.

5. Data and methods

This study unfolds within the framework of a larger single case study focusing on structural challenges to gender equality at AU, the second largest university in Denmark. Aarhus has approximately 40,000 students and 4,000 research employees and includes a wide range of disciplinary domains and fields of research (from the humanities to the natural sciences).

In examining the potentially gendered recruitment and selection procedures at AU, this study adopts a pluralist methodology mixing quantitative and qualitative methods. Similar to Mills’ famous vision of a ‘sociological imagination’ enabling actors to identify connections between individual experiences and larger social structures and processes (Mills 1959), the mixed methodology can be regarded as a useful strategy for problem-driven research combining the nuanced empirical overview provided by quantitative methods with the more in-depth and interpretive understandings generated by qualitative approaches (Nielsen 2005).

The empirical starting point of the quantitative part of the analysis is an organizational dataset including information about all appointments for positions at associate- and full professor level at AU in a period stretching from late 2004 to early 2013 (N = 1007). The dataset provides a unique opportunity to identify quantitative patterns and regularities indicative of the existing gender inequalities at the university. As noted earlier, the analysis is based on a gender comparison focusing on different types of job announcement (open or closed), number of male and female applicants, appointments with merely one applicant and temporary vs. permanent positions. The appointment data have been analyzed in SPSS using descriptive statistics (frequency, mean, median and percentages) as well as binary logistic regression.

I have also conducted qualitative interviews with 24 of the university’s 27 department heads,1 using an open-ended approach, mixing structured questions and guided conversation. The questions revolve around the different steps in the academic hiring process, with particular emphasis on gaining an in-depth understanding of the underlying organizational processes causing the patterns and regularities identified in the quantitative part of the analysis. Most of the interviews...
equivalent to postdoctoral-, associate professor- and full professor level

model and recruitment procedures, which are considered necessary of Aarhus University’s academic job structure, career development

The following subsections draw together the central characteristics ing case for exploring the persistent gender inequalities in academia.

which makes Aarhus University (and the Danish context) an interest-
sors level in Denmark and at AU is below the European average,
situation in Denmark and in Europe, the Aarhusian share of female ranging national and international trend. In line with the overall
searchers at the upper levels of the academy represents a wide-

6. Contextual specifications
For many years, Denmark has been considered one of the most advanced societies in terms of gender equality (Nielsen 2015). The country is rated at the top, second only to Sweden, in the most recent European Gender Equality ranking (European Institute of Gender Equality 2013), highlighting Danish women’s relatively high general employment rate in the labor market, high tertiary educational attainment, full-time childcare facilities, 52 weeks of family leave per child (with financial cover), relatively high levels of representation in the Parliament and good average health conditions (European Institute of Gender Equality 2013; European Commission 2013).

However, despite a leading position on composite measures of gender equality, Denmark is characterized by persistent patterns of vertical and horizontal gender stratification (European Commission 2013; Nielsen 2015), which also resonates in the country’s academic system. Aarhus University’s share of female researchers in positions equivalent to postdoctoral- associate professor- and full professor level with the national and European averages for women in these positions.

As appears from Table 1, AU’s modest share of female researchers at the upper levels of the academic structure represents a wide-

6.1 Job structure for academic staff at Aarhus University
The Danish academic job structure distinguishes between the following three hierarchically ordered occupational categories: positions at the postdoctoral/assistant professor level, positions at the associate professor level, and positions at the full professor level. Moreover, it makes a distinction between temporary and permanent appointments. In most cases, positions at postdoctoral level take the form of fixed-term research posts that may be filled for a maximum period of four to five years. Positions at associate- and full professor level are normally permanent (78% of the appointments for associate professorships and 66% of the appointments for full professorships within the period 2004–13 have been permanent at Aarhus University). Academic recruiters, however, also have the option of using fixed-term positions for associate- and full professorships when hiring visiting scholars and researchers for externally funded projects. Moreover, fixed-term full professorships can be established with a view to appointing particularly talented researchers to take on special responsibilities for developing new and promising fields of research. Such appointments are normally limited to three to five years and may not exceed eight years (Aarhus University 2013).

Table 1. Share of female researchers in positions equivalent to levels of postdoctoral fellow, associate professor and full professor

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<td>Aarhus University</td>
<td>43% (2013)</td>
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EU15 represents average for ‘early’ EU member countries (i.e. 15 member countries before EU enlargements in 2004 and 2007). EU27 denotes average for total of 27 member countries in 2010.

Sources: European Commission 2013; Nielsen 2015.

6.2 Academic career development
The Danish academic career system assumes the structure of a pyramid, with significantly fewer vacancies available as one moves up the academic ladder. As opposed to the Anglo-American academic promotion model, the tenure-track system is rarely employed in Denmark. In other words, Danish postgraduate researchers often embark upon an academic career without any prospective formal career path in place. The usual Danish academic career trajectory therefore involves considerable uncertainty, as rising through the ranks not only depends on scientific merits, performance and external funding but also on the relevant number and timing of vacant research positions at the university.

6.3 Open and closed recruitment procedures
As a general rule, all vacant academic positions at Aarhus University should be announced in a manner such that they are open to everyone. v Table 2 provides a brief overview and description of the five different types of recruitment procedures reported in the appointment statistics from Aarhus University. Four of these are placed under the common category of ‘closed procedures’, while the last type adheres to ‘open competition’ recruitment. ‘Open competition’ refers to vacancies advertised in newspapers, labor-union journals, scientific journals and internet websites, opening an opportunity for everyone to apply. ‘Closed procedure’ promotions and recruitments are unadvertised, and applicants are mainly recruited on the basis of their existing employment in the organization or as a result of professional or informal network relations.

As illustrated in Table 3, the average number of applicants is considerably lower for announcements under closed procedures (on average one applicant per position) than for open vacancies (on average 4.6 applicants per position), indicating that some degree of pre-selection is at play when closed recruitment procedures are employed. During the period 2004–13, this was the case in 19% of all recruitments for positions at associate- and full professor level. Despite the university’s increased emphasis on organizational

(20 out of 24) were conducted face-to-face during the fall of 2013, the rest were carried out over the phone. They typically lasted 30–90 minutes and have been coded in Nvivo using a thematic coding scheme. Six of the 24 interviewees were women.

I have chosen to interview department heads, since they, in correspondence with the faculty deans, are responsible for coordinating and managing the hiring of candidates for positions equivalent to associate- and full professorships at the university. Since the beginning of the 2000s, the role of the assessment committee has been delimited to identifying the qualified applicants for the given vacancy, which renders the qualitative investigation of department heads’ ideas about, and approaches to, recruitment and selection particularly relevant. After a major reform of Danish universities in 2003, department heads went from being elected by their peers to being appointed by the faculty deans, with increasing administrative duties and responsibilities to follow.
transparency and accountancy—as a result of NPM-driven organizational reforms—the share of closed vacancies has increased over time. On average, 30% of the appointments within the period 2009–12 took place under closed procedures (see Appendix, Table A.6), which indicates a loose coupling to the formal institutional and legal requirements ensuring transparent and open recruitment and selection processes at the university. As will be returned to below, the ceremonial conformity of the academic recruiters to the rationalized myth of the meritocracy may not always correspond to how academic recruitment and selection practices actually work.

7. Results

As numerous scholars note, the rationalized myth of science as a meritocratic, gender-neutral realm tends to permeate both the perceptions of the academic career system among scientists and research managers, which also appears to be the case among many of the department heads interviewed in this study. When asked about whether and how gender issues influence their own recruitment and selection practices, several interviewees respond along the lines of the quotes below:

Well, for us it’s all about getting the best. If that’s a woman with children – well, that’s fantastic. But we don’t look at that much. We mainly look at their research and teaching qualifications. (Medical Sciences)

To put it bluntly, gender doesn’t play any role, but I’m glad that we’ve been able to hire some talented women. But, well – they’re all hired on their merit, that’s for sure. (Social Sciences)

The reflections among the department heads on these issues clearly illustrate strong reliance on the image of the university as a realm of the justly unequal (Young 1958).4 The idea of the academic meritocracy, in other words, not only represents a vision of how the university promotion system should work, but an institutionalized belief in how the system actually works (Castilla and Benard 2010). In contrast to the experimental work by Castilla and Benard (2010), this study does not provide empirical grounds for drawing conclusions on the implicit bias triggered by the ceremonial conformity of department heads to the rationalized myth of meritocracy. Instead, it investigates and discusses how existing recruitment and promotion procedures at AU adhere to the aforementioned meritocratic principle claiming that:

… all researchers should be provided with the same opportunities of displaying their merits and advancing within the system.

The presentation of the results below is structured in three parts. First, I present recent developments in how women’s representation among applicants for positions at associate- and full professor level responds to their presence in the potential pool of candidates available at the university. Second, I juxtapose the chances of women and men of being appointed to positions at associate- and full professor level relative to their representation among applicants. Third, light is shed on how the existing recruitment and promotion procedures and practices adhere to the aforementioned meritocratic principles and the potential ways in which these procedures and practices disadvantage women.

7.1 Gender inequality: A supply-side problem?

Fig. 1, which juxtaposes the share of women applying for positions at associate professor level at AU in the period 2008–13 with the potential pool of female applicants occupying postdoctoral fellowships or assistant professorships at the university,5 reveals that a considerable number of women (8–16%, depending on year) hesitate to

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<td><strong>Type of procedure</strong></td>
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<td>Evaluation of assistant professors for associate professorships (closed)</td>
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*N = number of appointments within this category of procedures.
apply for the available associate professorships. As Fig. 2 illustrates, the relative proportions of applicants and potential applicants for positions at full professor level are more balanced, indicating that this problem specifically relates to the critical transition from temporary (i.e., postdoctoral fellowships and assistant professorships) to the, in most cases, permanent positions at associate professor level.

Four interviewees from the Faculty of Science and Technology, which is the scientific area with the lowest number of female applicants at the university (see Appendix, Table A.1), also highlight the lack of junior female candidates for research positions as a central explanation for the underrepresentation of women in their fields. One department head explains:

Well, we clearly face a problem ... We have many female students, PhD students and postdocs ... But when we reach the associate professor level, we have far fewer women ... And what happens at this level? Well, they're not applying. There are generally very few women among the applicants. And if we look at the applications that we receive, well then I would say ... of those we appoint, women are overrepresented. (Natural Sciences)

As the interviewee notes, the relative share of women among appointees outnumber their representation in the group of applicants, meaning that the relative chance for a female applicant being appointed is greater than that of her male competitor. Interestingly, this trend is also confirmed in the appointment data. Table 4 provides an overview of the relative shares of female and male applicants being appointed to positions at associate- and full professor level. While 25% of the male applicants for full professorships are finally hired, this is the case for 30% of the female applicants. While the success rate of male applicants for associate professorships is 23%, 28% of the female applicants end up as the final candidate for positions at this rank.

A hasty interpretation of these findings allows for the conclusion that no mechanisms of indirect gender discrimination are at play when departments hire candidates for associate- and full professorships and that the existing appointment and selection procedures are actually slanted in favor of female researchers. However, a simple gender comparison of the applicants’ relative success rates provides no adequate evidence for drawing such conclusions due to the differential drop-out and self-selection rates of women and men. As one department head from the natural sciences notes:

Looking at the numbers, we can conclude that we have a 50-50 representation of women and men at the PhD level and almost 30-50 at the postdoc level. But we haven’t got a 50-50 level for permanent positions. And – all other things being equal – this means we’re losing resources. Imagine that we have 10 vacancies and appoint the 10 best applicants, nine of whom are men and one is a woman. Well, then there must be four women ... that are better than the last four appointees – if we accept the premise that women and men are equally capable. I’m convinced that it’s not our selection process that’s wrong, but rather our ability to attract the best female researchers. (Natural Sciences)

Following the logic of this quote, the low representation of women among the applicants may serve to explain their relatively higher chances of being appointed, since only the very best women remain in the system. One should, however, be careful about interpreting the lack of female applicants as merely a result of a deliberate decision to opt out. As becomes evident in the following, examining the data more closely reveals that institutional pre-selection practices may add important insights to our understanding of this pattern.

7.2 Temporary professorships: A gendered phenomenon?

In this regard, it should also be mentioned that while 48% (31/65) of the female full professors obtaining their title in the period 2004–13 were appointed to temporary professorships, this was only the case for 30% (81/267) of the male appointees.1 As several department heads note in the interviews, temporary professorships are frequently used as a strategy for providing potential ‘prospects’ for permanent full professorships with an opportunity to enhance their experience as research leaders and prove their worth before potentially being promoted to a full, permanent professorship. In this sense, the fact that almost half of the female appointees to full professorships end up in this type of temporary professorship indicates that women applicants, despite their apparently high success rates when it comes to appointments, are still less likely to obtain permanent full professorships. This is also illustrated in Table 5, which

Table 4: Relative shares of male and female applicants evaluated as qualified or appointed for associate- and full professorships (2004–13)

<table>
<thead>
<tr>
<th>Position</th>
<th>Gender</th>
<th>Applicants</th>
<th>Qualified</th>
<th>Hire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full prof.</td>
<td>Male</td>
<td>895</td>
<td>550 (62%)</td>
<td>267 (25%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>264</td>
<td>124 (47%)</td>
<td>65 (30%)</td>
</tr>
<tr>
<td>Assoc. prof.</td>
<td>Male</td>
<td>1914</td>
<td>1247 (66%)</td>
<td>426 (23%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>884</td>
<td>587 (65%)</td>
<td>249 (28%)</td>
</tr>
</tbody>
</table>

Figure 1. Share of women applying for associate professorships relative to share of potential female candidates occupying postdoctoral level positions (i.e. Grade C staff).

Figure 2. Share of women applying for full professorships relative to share of potential female candidates occupying associate professorships (i.e. Grade B Staff).
displays the relative shares of male and female applicants appointed to temporary, positions at full professor level. This situation at AU reflects a larger pattern in the Danish scientific system, where 62% of the female appointees for full professorships within the period 2011–13 ended up in temporary positions, whereas this was the case for 35% of the male appointees (Staahle 2014).

7.3 Aarhus: A university of the justly unequal?

As already noted, when asked to reflect on the persistent gender disparities in their own organization, many of the department heads ceremonially conform to the rationalized mythology of the university as a meritocratic realm of the justly unequal, where appointment and promotion come to the deserving. As shown in Table 6, however, a remarkably high number of advertisements for positions at associate- and full professor level merely receive one application, illustrating how the existing recruitment procedures may not always be as meritocratic and open as one might assume. Surprisingly, 47% of all vacancies for full professorships in the 2004–13 period had only one applicant, while this was the case for 37% of the vacancies for associate professorships (for an overview of the annual distribution over time see Table A.4 in the Appendix). Glancing over the gender distributions, slightly more men than women obtain positions at full professor level without engaging in any competition (female 45%, male 48%), while the opposite trend is the case for positions at associate professor level (female 38%, male 36%). These findings also reflect a larger pattern in the Danish scientific system, where merely 31% of all vacancies for full professorships and 17% of associate professorships had only one applicant in the period 2011–3 (Staahle 2014). As returned to below, this indicates a gap between the apparent ceremonial conformity to the rationalized myth of the meritocracy and the de facto functioning of Danish universities recruitment and selection procedures, as not everyone enjoys the same opportunities to display their merits and advance in the system.

Although the relative shares of male and female candidates appear quite balanced, this does not necessarily mean that the existing recruitment practices are not slanted in favor of male researchers. This shortage of female applicants for positions at associate professor level may, for instance, partly be due to institutional pre-selection practices and the activation of informal network ties for recruiting candidates. As seen below, the dataset and interviews provide indication that such practices are actually at play.

In this case, it is also relevant to note that the share of appointments with merely one applicant varies considerably, depending on the faculty. As illustrated in Table 7, which outlines the most recent developments, the faculties of Science & Technology and Health constitute the main contributors to this overall pattern.

7.4 Women’s presence among applicants and appointees for closed and open procedures

Table 8 displays the average share of female researchers applying for positions under closed and open procedures at AU in the period 2004–13. While women constitute 23% of the applicants for announcements under closed procedures, their representation in open positions extends to 32%. The gender balance is more skewed for full professorships (closed 12%, open 23%) than associate professorships (closed 33%, open 36%), indicating that this is mainly an issue related to the advancement from the associate professor level to the full professor level.

The pattern identified in Table 8 is further confirmed in the binary logistic regression model presented in Table 9, displaying the effect of closed and open vacancies for female researchers’ success rates when applying for associate- and full professorships. As illustrated, women’s chances of obtaining a promotion increase significantly when recruitment procedures are open instead of closed (see Table 9, Exp (B): 1.790), and this holds true when accounting for the number of male and female applicants as well as the scientific area. In this case, it is relevant to note that the university departments affiliated with the Faculty of Business and Social Science merely appointed seven candidates on the basis of closed procedures in the period 2004–13, which renders the findings irrelevant for this scientific area.

These findings must be interpreted carefully as proof of explicit and intentional (same-) gender preferences among department heads. On the basis of similar findings, Husu (2000: 225) notes that there may be:

... more subtle, hardly conscious, and hidden processes at play, which have to do with male networks and the mutual support systems of men, the academic sociality of men, and the relative ‘visibility’ of women in regard to their male colleagues.

The issue of informal network ties can be viewed as particularly crucial in this regard, since academic recruitment under closed procedures largely depends on one’s reputation and visibility to the relevant gatekeepers (i.e. the department heads) (Merton 1973),

Table 6. Appointments with only one applicant and more than one applicant (2004–13)

<table>
<thead>
<tr>
<th>Vacancy</th>
<th>Appointee</th>
<th>&gt; 1 Applicant</th>
<th>1 applicant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full prof.</td>
<td>Male</td>
<td>140 (52%)</td>
<td>127 (48%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>36 (55%)</td>
<td>29 (45%)</td>
</tr>
<tr>
<td>Assoc. prof.</td>
<td>Male</td>
<td>271 (64%)</td>
<td>155 (36%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>154 (62%)</td>
<td>95 (38%)</td>
</tr>
</tbody>
</table>

Table 7. Annual number of academic vacancies with merely one applicant (2010–13)

<table>
<thead>
<tr>
<th>Main area</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science &amp; Technology</td>
<td>28</td>
<td>26</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Arts (humanities)</td>
<td>26</td>
<td>6</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Business &amp; Social Science</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>9</td>
<td>23</td>
<td>35</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 8. Average share of female applicants distributed on closed and open announcements (2004–13)

<table>
<thead>
<tr>
<th></th>
<th>Closed (N)</th>
<th>Std.Dev.</th>
<th>Open (N)</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>23% (184)</td>
<td>0.421</td>
<td>32% (813)</td>
<td>0.346</td>
</tr>
<tr>
<td>Full prof.</td>
<td>12% (87)</td>
<td>0.324</td>
<td>23% (242)</td>
<td>0.324</td>
</tr>
<tr>
<td>Assoc. prof.</td>
<td>33% (97)</td>
<td>0.471</td>
<td>36% (573)</td>
<td>0.348</td>
</tr>
</tbody>
</table>

* N = number of vacant positions.
because the initial screening and identification of eligible candidates often occurs prior to the actual announcement of a vacancy. In other words, appointment success under such procedures is not only a question of what you know but also who you know (Sadl 2009), which has implications for gender stratification.

7.5 Institutional selection and pre-selection practices

As noted earlier, the main purpose of the qualitative interviews was to investigate the organizational processes and procedures explaining the patterns and regularities identified in the appointment statistics. This sub-section focuses specific attention on the subtle selection and pre-selection processes raised in the interviews and provides illustrative examples of the multiplicity of interests and circumstances affecting the decisions of department heads about how (and whom) to recruit for associate- and full professorships. While these practices, as will become evident, do not provide evidence of any direct differential treatment on the basis of gender, their reliance on formal and informal network relations may disadvantage women somewhat.

7.5.1 Open vacancies with only one or very few applicants

Pointing to the high frequency of appointments with merely one or very few applicants, I specifically asked the interviewees to reflect on whether and how this pattern resonated in the recruitment practices of their own departments. As illustrated in the following, this question spurred a number of examples adding to the overall hypothesis that practices of pre-selection—despite the department heads’ ceremonial conformity to the rationalized myth of the academic meritocracy—are in fact taking place in the organization.

7.5.2 Framing the position profile

As many of the department heads note, a widely used strategy for moderating the expected number of applicants for vacancies relates to the framing of the job profile. Broad profiles are often framed to address a department’s overall area of expertise (e.g. professorship in physics and astronomy), while narrow profiles clearly specify the particular sub-field to which a given position is bound (e.g. professorship in a particular sub-area of biomolecules). It goes without saying that a considerable part of the many one-applicant vacancies identified in the appointment statistics may have been advertised in more or less narrow terms, which the interviews confirm. One of the more pragmatic arguments for making narrow profiles relates to the specificity of the overall tasks and subject areas covered by a department, as exemplified in the following quotes:

In most cases, we frame the profiles very broadly. However, once in a while we have a special situation where we have a gap… where we need to cover a specific task. In such a situation, you’d have to make the job profiles narrow.

Usually we have a few applicants for professorships, but we rarely have more than that. I don’t know why, but I think it may be due to the specificity of the subject areas related to these professorships.

While the framing of job profiles as a means to fill particular gaps in a department’s existing research and teaching activities will often imply some degree of institutional pre-selection, as very few candidates are considered relevant for the announced position, it is reasonable to contend that such procedures are, at least to some extent, inevitable in academic organizations.

Table 9. Effect of closed and open recruitment procedures on female candidates’ success rates for appointments

<table>
<thead>
<tr>
<th>Procedure</th>
<th>B</th>
<th>Std.Dev.</th>
<th>P</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed/open recruitment</td>
<td>0.582</td>
<td>0.221</td>
<td>0.01</td>
<td>1.790</td>
</tr>
<tr>
<td>Number of male applicants</td>
<td>-0.787</td>
<td>0.066</td>
<td>0.00</td>
<td>0.455</td>
</tr>
<tr>
<td>Number of female applicants</td>
<td>1.102</td>
<td>0.094</td>
<td>0.00</td>
<td>3.010</td>
</tr>
<tr>
<td>Faculty (Science &amp; Technology)</td>
<td>-0.506</td>
<td>0.242</td>
<td>0.04</td>
<td>0.603</td>
</tr>
<tr>
<td>Faculty (Health Sciences)</td>
<td>-0.380</td>
<td>0.231</td>
<td>0.10</td>
<td>0.684</td>
</tr>
<tr>
<td>Faculty (Bus. and Social Sciences)</td>
<td>0.055</td>
<td>0.249</td>
<td>0.82</td>
<td>1.057</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.692</td>
<td>0.243</td>
<td>0.00</td>
<td>0.500</td>
</tr>
</tbody>
</table>

R^2 = 0.432.

The specificity and narrowness of the profile also appears to be driven by more explicit pre-selection and inbreeding practices as illustrated in the examples below. When asked to outline the most recent promotion process at his department, an interviewee responds:

I spend a lot of time figuring out which of the assistant professors and postdocs we’re going to promote for associate professorships, and who to promote for full professorships. One of our most recent professor appointments… well, we had a very, very good associate professor and I’ve known him for years. And I’ve wondered… It’s actually unfair that he didn’t get a professorship. And he’s not that young anymore. But his research is very good… In that situation, we announced the job profile narrowly, since we had a particular interest in him. And we ended up with only two applicants.

Describing a somewhat similar promotion strategy, a colleague from another department adds:

Sometimes you can – and this is no secret – you can narrow it down in such a way that people will almost recognize: … listen, there’s probably only one or two persons in this country qualified for this position.

That happens once in a while. It does… In principle, it’s not the right way to do it. You ought to announce it in such a way that many are provided with an opportunity to apply.

This particular manner of decoupling recruitment practices from formal, institutionalized procedures in order to reduce external constraints on management function, is also exemplified in another interview depicting a concrete promotion scenario in which a department head, in correspondence with an appointment committee consisting of staff members, ends up framing a job profile to fit the qualifications and expertise of a particularly excellent local candidate.

These examples illustrate that, even when formal institutional procedures are in place, department heads’ desire for organizational certainty (i.e. the decision to promote and retain a well-known and internally favored candidate while reducing the potential risks and additional expenses related to the appointment of an external candidate) opens space for managerial decision-making based on personal connections and network ties, which in view of the findings of the existing literature, may disadvantage women as a result of liminal practices of homosocial reproduction and the relative ‘invisibility’ of women in academic environments.
7.5.3 Screening for local talent
In-depth analysis of the 24 interviews reveals that vacancies for positions equivalent to associate- and full professorships often involve a preceding identification of one or more relevant candidates in the local research environment. This does not necessarily mean, however, that external candidates have no chance of obtaining such positions. Two department heads note:

We’ve had vacancies directed at certain internal candidates… and when we announce a professorship, we always have a certain person in mind. But we actually had a really good external candidate applying for such a position, and if this person hadn’t decided to go somewhere else, he’d probably have gotten the position.

Well, a typical example would be a professorship within one of our sub-areas, where we already have a qualified internal candidate… an associate professor who’s been doing very well. This is a person who is now at a point in their career where it seems relevant to announce a professorship – also to retain the person. Sometimes we receive few applications for such positions, but in most cases there will be more applicants. Well, five, eight applicants usually, sometimes more. We HAVE been in situations with only one or two.

While this type of recruitment strategy does not necessarily prevent external candidates from applying for a given vacancy, it may potentially limit the number of local applicants, since the ‘right person for the job’ is already identified before advertising the position. In this sense, department heads occasionally come to play a gatekeeper role, screening the local environments for research talent before making decisions on which types of positions to announce, thus indirectly preventing some local candidates from displaying their scientific merits to an allegedly impartial assessment committee. Once again, this demonstrates the crucial importance of a potential candidate’s visibility and reputation, which may help explain why female researchers tend to be more reluctant than male researchers to apply for the available vacancies. It also illustrates how non-conscious assumptions about gender characteristics, which have been proven to bias the assessment of individual researchers, will potentially already be in play prior to the formal evaluation and appointment process.

7.5.4 Closed vacancies
In the interviews, I also specifically asked the department heads to provide concrete examples of situations in which vacancies were announced under closed procedures. Most department heads responded by referring to the overall university policy, stating that vacancies for associate- and full professorships should always be announced internationally in open competition, thus rendering the question irrelevant. As illustrated earlier, however, exceptions to this rule occur, and approximately 30% of all appointments in the period 2009–12 took place under closed procedures. In this sense, the responses of the department heads can be interpreted in terms of decoupling and what institutionalists describe as:

... symbolic gestures designed to give the appearance of satisfying regulatory requirements and enhance external legitimacy while still allowing ‘business as usual’. (MacLean and Benham 2010: 1500)

A large share of the appointments under closed procedures (approximately 8–13%) relates to externally funded vacancies. The medical science departments represent a special case in this sense, as many of the clinical professorships are announced as shared positions between the Danish hospitals and AU. One department head describes the nature of this type of recruitment procedure in the following:

The last recruitment we had concerned a clinical professorship. In that situation, a section at one of the hospitals contacted us and said:

Listen, we have a man that we’d like to become a professor. We actually have the money ourselves.

And when you bring in external funding, then you don’t have to advertise the position publicly… This is a position where he’s a half-time research professor and half-time chief physician/surgeon. This is the latest one. We have lots of similar examples... VERY many.

As the quote illustrates, recruitment for clinical professorships will often involve closed procedures due to shared expenses between public hospitals—which, in terms of the Smith-Doerr (2004a) analysis, is an example of another closed hierarchy organization—and the university. Interestingly, this type of recruitment involves pre-selection at the hospital level, which may often conflict with the overall university principles concerning open recruitment procedures. A comparison of the current gender distributions among clinical associate professors (female 35% [n = 112], male 65% [n = 207]) and full professors (female 14% [n = 10], male 86% [n = 64]) and full-time medical associate professors (female 40% [n = 80], male 60% [n = 101]) and full professors (female 18% [n = 18], male 82% [n = 83]) also reveals that women may be particularly disadvantaged when this type of hospital-level pre-selection occurs.

Similarly, department heads from other faculties describe a scenario where externally funded research centers are provided with a particular option to recruit and appoint researchers under closed procedures for fixed-term positions. An interesting feature of this type of recruitment relates to how such appointments can be extended to permanent positions when an externally funded research project expires. One of the department heads notes:

The Centres of Excellence [i.e. temporary research entities funded by foundations or councils under the Ministry of Higher Education and Science, Technology and Innovation] often have ‘embedded positions’ attached to them in the sense that you say: Within this area, we spend DKK 80 million, but we would like to see that the activities that we’re funding will continue when the research project ends.

In such a situation, you make a promise that one or two of the temporary positions are extended to permanent positions at the department. In these situations, it’s up to the basic research centres to decide whether these positions should be announced in narrow or broad terms.

As the quote makes clear, in some cases an appointment to an externally funded, temporary position may function as a shortcut to permanent employment, since positions advertised in narrow terms will often limit the number of additional applicants. In this sense, the procedures related to this type of ‘embedded vacancies’ allow decentralized research entities to decouple their practices from the university’s formal organizational procedures, leaving extra space for potentially gender-biased practices of informal networking, as indicated in the results of the binary logistic regression shown in Table 8.

In certain situations, personal invitations for temporary positions may also be used as an indirect decoupling strategy. For instance, one interviewee refers to a particular scenario where this type of
procedure was used to retain a researcher employed in a temporary professorship funded by one of the Centres of Excellence. While the candidate was ‘an outstanding talent on many parameters’, one of the underlying motivations for using closed procedures related to the department’s economic latitude. As the department head notes, here, recruitment in open competition would potentially mean the appointment of an external candidate, thus significantly increasing the department’s payroll expenses. As with the abovementioned examples, this example clearly illustrates how the ceremonial conformity to the rationalized myth of the meritocracy is sometimes at odds with other organizational rationales, resulting in a decoupling which allows the space for managerial decision-making based on personal connections and networks ties, with potential gender consequences.

8. Conclusions
With a particular focus on the preliminary processes taking place before the actual assessment of applicants for research positions at associate- and full professor level, this study has provided important new insights into the otherwise-closed realm of gender in academic recruitment and promotion.

Thorough examination of the AU appointment statistics reveals subtle pre-selection patterns. During the period 2004–13, there was only a single applicant for 47% of all vacancies for full professorships and 37% for associate professorships, indicating a gap between the apparent institutionalized beliefs in the meritocracy and the de facto functioning of the university recruitment procedures. Despite increased emphasis on organizational transparency, the share of closed vacancies (with on average one applicant per position) still constitutes 30% of all appointments for positions at associate- and full professor level, and, as illustrated in the study’s binary logistic regression analysis, women are particularly disadvantaged when appointments take place under such conditions.

The qualitative analysis reveals a myriad of factors and concerns explaining these quantitative patterns. It adds to the burgeoning literature on institutions and networks by showing how highly formal academic recruitment procedures open managerial space for mobilizing personal network ties through decoupling processes, with clear implications for gender stratification.

Department heads can choose to exploit narrow job profiles, local screenings for talent and closed recruitment procedures as means to reduce external constraints on management function and ensure organizational certainty in institutional environments characterized by inconsistent rationalized myths. In some situations, these direct and indirect deviations from the university’s formal organizational procedures and rationalized myths (i.e. transparency and meritocracy), widen the space available to department heads to make decisions on the basis of personal idiosyncrasies, in-group favoritism and informal networks, potentially resulting in the reproduction of gendered power relations (Reskin and McBrier 2000).

In other words, subtle gender bias may disadvantage women even before the formal assessment and appointment process through the mobilization of masculinities (i.e. the liminal practices of male homosocial relatedness, which university gatekeepers are not fully aware of) as described by Van den Brink and Benschop (2014).

In summary, we can conclude that scientific merits are not always the sole basis for advancing in the research system and that women are not always given the same opportunities to show their worth as their male colleagues. In this sense, one of the prevailing points of criticism directed against the use of financial incentive programmes in the promotion of gender equality highlighted in Section 1 (i.e. that such initiatives undermine a fundamental mechanism in the academic meritocracy) appears to be based on a flawed image of how academic recruitment and promotion actually works.

8.1 Implications for policy
These findings have important implications for policy and practice, as they illustrate how formalized rules in the form of open recruitment and selection procedures, by reducing subjectivity and managerial reliance on personal connections, increase women’s chances of appointment. However, conflicting interests and demands appear to be challenging research managers’ commitment to such rules, which illustrates the crucial importance of making transparency, disclosure and continuous oversight invariable principles in academic recruitment and selection processes.

As illustrated in the quantitative component of this study, the share of appointments with merely one applicant and the prevalence of the use of closed recruitment procedures vary considerably dependent on faculty, with the faculties of Science & Technology and Health being the main contributors. These findings lend support to the work of Van den Brink and Benschop (2012) and Musselin (2002) illustrating noteworthy field-specific differences in recruitment and selection practices and their gendered outcomes. In view of the particularly low proportion of women at the associate- and full professor level in the natural and medical sciences across Europe (including Denmark and Aarhus University) (European Commission 2013; Nielsen et al. 2013), an increased policy emphasis on transparency, disclosure and continuous oversight thus seems particularly crucial in these fields of research.

8.2 Perspectives for future research
Despite increasing emphasis on transparency and accountability, academic recruitment and selection practices, as illustrated in this paper, still play an important role in explaining the persistent inequalities in university settings. However, since such practices may vary considerably across national and institutional contexts, a more broad-ranging international perspective on academic recruitment and selection, and the gendered practices involved, could provide much needed information on the varying nature of the gender equality problem across countries and institutions. Moreover, ethnographic studies, illuminating each of the procedural steps in a selected number of recruitment and promotion processes (from the framing of the position to the appointment of the final candidate), could contribute to further elaboration and specify some of the subtle and potentially gendered practices described.

Notes
1. As of 22 August 2011 the University of Copenhagen’s newspaper Uniavisen listed an interview with Bonde on their website. The quote is taken from this interview [my translation]. <http://universitetsavisen.dk/debat/ligestilling-fra-rettighedertil-privilegier> accessed 12 Sep 2014.
2. Three department heads did not find the time to participate in the study.
3. For a brief introduction to the national legislation on this matter, see Table A.5 in the Appendix).
4. Young uses this term satirically to depict the idea of a society in which social status is a direct expression of intellectual worth and efforts.
5. For an overview of the distributions across scientific fields, see the Appendix.
6. For an outline of the distributions across faculties, see Tables A.2 and A.3 in the Appendix.

7. The shares of male and female appointees obtaining temporary positions equivalent to associate professorships are more similar (female 21%, male 22%).

8. In this case, it is relevant to note that several of the interviewees, especially within the business and social sciences, did not consider one-applicant appointments to be an issue of much relevance in their part of the organization, which is also confirmed by examining the appointment statistics for the last four years (see Table 4).

9. As several of the interviewees note, the appointment of external candidates often involves more expenses for a department than internal recruitment, as external hiring increases the total number of ‘mouths to feed’, whereas a well-known internal promotion merely increases the salary level of one particular local candidate.

References


Appendix

Table A.1. Actual share of women applying for associate professorships and potential female applicants holding postdoctoral-level positions distributed on faculties (2008–12)

<table>
<thead>
<tr>
<th>Main area*</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall:</td>
<td>30%  (39%)</td>
<td>30%  (42%)</td>
<td>23%  (39%)</td>
<td>31%  (43%)</td>
<td>34%  (42%)</td>
</tr>
<tr>
<td>Science &amp; Technology</td>
<td>18%  (31%)</td>
<td>31%  (35%)</td>
<td>18%  (33%)</td>
<td>19%  (35%)</td>
<td>16%  (32%)</td>
</tr>
<tr>
<td>Arts (humanities)</td>
<td>47%  (48%)</td>
<td>33%  (50%)</td>
<td>37%  (50%)</td>
<td>39%  (51%)</td>
<td>37%  (53%)</td>
</tr>
<tr>
<td>Business &amp; Social Sciences</td>
<td>29%  (47%)</td>
<td>21%  (44%)</td>
<td>12%  (41%)</td>
<td>29%  (46%)</td>
<td>35%  (48%)</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>33%  (52%)</td>
<td>39%  (54%)</td>
<td>36%  (52%)</td>
<td>51%  (59%)</td>
<td>47%  (57%)</td>
</tr>
</tbody>
</table>

*Numbers in bold represent female share of applicants. Numbers in parentheses represent potential pool of women occupying postdoctoral-level positions.

Table A.2. Relative share of male and female applicants evaluated as qualified for and appointed to full professorships distributed by faculties (2004–13)

<table>
<thead>
<tr>
<th>Main area</th>
<th>Gender</th>
<th>Applicants</th>
<th>Qualified</th>
<th>Hired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>Male</td>
<td>895</td>
<td>550 (61%)</td>
<td>267 (25%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>264</td>
<td>124 (47%)</td>
<td>63 (25%)</td>
</tr>
<tr>
<td>Science &amp; Technology</td>
<td>Male</td>
<td>223</td>
<td>135 (60%)</td>
<td>76 (34%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>18</td>
<td>7 (39%)</td>
<td>5 (28%)</td>
</tr>
<tr>
<td>Arts (Humanities)</td>
<td>Male</td>
<td>342</td>
<td>267 (44%)</td>
<td>98 (16%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>18</td>
<td>7 (39%)</td>
<td>5 (28%)</td>
</tr>
<tr>
<td>Business &amp; Social Sciences</td>
<td>Male</td>
<td>311</td>
<td>181 (58%)</td>
<td>62 (20%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>87</td>
<td>57 (65%)</td>
<td>22 (25%)</td>
</tr>
<tr>
<td>Health</td>
<td>Male</td>
<td>616</td>
<td>453 (74%)</td>
<td>175 (28%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>331</td>
<td>237 (72%)</td>
<td>82 (25%)</td>
</tr>
</tbody>
</table>

Table A.3. Relative share of male and female applicants evaluated as qualified and appointed for associate professorships distributed on faculties (2004–13)

<table>
<thead>
<tr>
<th>Main area</th>
<th>Gender</th>
<th>Applicants</th>
<th>Qualified</th>
<th>Hired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>Male</td>
<td>1914</td>
<td>1247 (66%)</td>
<td>426 (23%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>884</td>
<td>587 (65%)</td>
<td>249 (28%)</td>
</tr>
<tr>
<td>Science &amp; Technology</td>
<td>Male</td>
<td>742</td>
<td>519 (70%)</td>
<td>51 (34%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>177</td>
<td>119 (67%)</td>
<td>171 (28%)</td>
</tr>
<tr>
<td>Arts (Humanities)</td>
<td>Male</td>
<td>342</td>
<td>191 (56%)</td>
<td>98 (29%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>255</td>
<td>148 (63%)</td>
<td>87 (34%)</td>
</tr>
<tr>
<td>Business &amp; Social Sciences</td>
<td>Male</td>
<td>403</td>
<td>242 (60%)</td>
<td>84 (21%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>170</td>
<td>108 (66%)</td>
<td>48 (29%)</td>
</tr>
<tr>
<td>Health</td>
<td>Male</td>
<td>427</td>
<td>295 (70%)</td>
<td>73 (17%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>282</td>
<td>206 (73%)</td>
<td>63 (22%)</td>
</tr>
</tbody>
</table>

Table A.4. Annual number of academic vacancies with only one applicant for associate- and full professorships (2004–13)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1 applicant:</td>
<td>13</td>
<td>59</td>
<td>59</td>
<td>83</td>
<td>77</td>
<td>72</td>
<td>68</td>
<td>84</td>
<td>69</td>
<td>17</td>
</tr>
<tr>
<td>1 applicant:</td>
<td>7</td>
<td>16</td>
<td>30</td>
<td>39</td>
<td>48</td>
<td>64</td>
<td>65</td>
<td>58</td>
<td>64</td>
<td>15</td>
</tr>
</tbody>
</table>
Table A.5. Danish Ministerial Order on the Employment of Scientific Staff (no. 284, 2008)

Advertisement: ‘Professorships and associate professorships must be advertised internationally, except under special circumstances of an academic nature’.

Externally funded projects: Foundations, councils or non-governmental funds that ‘have made at least half the funding available for the appointment of a person nominated by the funders in question . . . [are] entitled to appoint this person without advertising the post’.

Fixed-term appointments: ‘[F]ixed-term appointments for a period of up to one year . . . and reappointments for up to one year are allowed without advertising’.

Personal invitations: If a ‘candidate is clearly better qualified than any others who might be considered for the post . . . the Rector [in this case the department head in correspondence with the dean] is empowered to offer the candidate the post without advertising it’.

Table A.6. Development in share of open and closed recruitment procedures over time (2004–13)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Open:</td>
<td>20 (100%)</td>
<td>73 (97%)</td>
<td>83 (93%)</td>
<td>116 (95%)</td>
<td>106 (85%)</td>
<td>99 (73%)</td>
<td>92 (69%)</td>
<td>107 (75%)</td>
<td>97 (73%)</td>
<td>22 (69%)</td>
</tr>
<tr>
<td>Closed:</td>
<td>0 (0%)</td>
<td>2 (3%)</td>
<td>6 (7%)</td>
<td>6 (5%)</td>
<td>19 (15%)</td>
<td>37 (27%)</td>
<td>41 (31%)</td>
<td>35 (25%)</td>
<td>36 (27%)</td>
<td>10 (31%)</td>
</tr>
</tbody>
</table>