

Women and competition: can random selection break the deadlock?

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January 15, 2017

Abstract

Despite well-intentioned efforts, the supply of women into senior positions has changed little. While most gender studies have focused on the demand side (direct and indirect discrimination), we concentrate on the supply side, in particular on women's aversion to compete with men because of negative self-stereotypes. This paper explores a radical idea to try to change the conditions under which this is the case; it is to use random selection of candidates out of a pre-selected pool. We argue that selective randomness could encourage women to enter tournaments, offer women 'rejection insurance', lessen 'the chosen one' factor, improve diversity of people and ideas, and make managers more pro-socially inclined. It also contributes to the efficiency of organizations.

Keywords: Leadership, gender stereotypes, aversion to compete, random selection.

Introduction

Women continue to be underrepresented at the top of all kinds of hierarchies; be it in corporations, the public sector, government bodies (e.g. Ely, Ibarra and Kolb, 2011), editorial boards (Metz and Harzing, 2009) or in senior positions in academia (Fotaki, 2013). The hope that a sizeable influx of female graduates would close the gender gap at senior levels has not materialized (Rader Sipe et al., 2016). Even in countries considered progressive, for example in Norway, women have much lower promotion rates than men across all ranks after controlling for individual characteristics (Miller, 2014). The consulting firm Grant Thornton reported (2015) that women in the US in 2004 held 19 percent of senior management positions; by 2015 it had increased by only 2 percent.

The absence of women in senior positions persists even though the landscape has been altered in several ways. First, diversity education and training has been widely introduced, since it became clear that discrimination comes at a high cost. A myriad of programs now exist, starting at university, through to the workplace and at board level (e.g. Bezrukova, Jehn and Spell, 2012). Second, in educational achievement today there is a reverse gender-gap; school girls now outperform boys in many subjects (Goldin, Katz and Kuziemko, 2006; Gropper, 2007; OECD, 2015), and, the majority of college graduates in OECD countries are now female (Dawson, Kersley and Natella, 2014). In the UK in 2014, 150,000 males graduated from university, the number for females was 200,000. In a wide range of settings, girls have been shown to be more self-disciplined, and better able to defer gratification compared with boys (Castillo et al., 2011; Duckworth and Seligman, 2006). Third, there is evidence that female representation in top management is positively associated with organizational performance (Dawson, Kersley and Natella, 2014), and the corporate pursuit of innovative strategies (Deszö and Ross, 2012). Diversity has also been shown to have a positive impact on performance in

turbulent times (Rost and Osterloh, 2010). In studies of groups, performance is reported to be affected more by the proportion of women in the group, than by the average or maximum individual intelligence of each member (Woolley et al., 2010; Engel et al., 2014). Fourth, numerous global corporations today declare that they are committed to diversity in management (e.g. Chevron, and Procter and Gamble, see Catalyst Group, 2015). Yet, despite these corporate proclamations, diversity programs and tales of educational success, women are still missing at the top.

New ideas are apparently needed. This paper proposes one.

We begin by asking why women are less likely to apply for senior management roles. Do they shy away from competition with men, thereby diminishing their chance of promotion? By focusing on these questions, we shift from demand side factors such as discriminatory practices or negative stereotypes - though we acknowledge that these problems are important - to an analysis of the supply side. What stops women from throwing their hats into the leadership ring?

Next we look at institutional measures that are used to encourage women to enter competitions with men, in particular the use of quotas. Quotas seem to work, but they have considerable downsides. Instead, we introduce a radical new idea: it is to use random selection from a preselected pool of candidates, to place women into management positions as a way to mitigate possible aversion to competition.

Random selection has a long though little-known history. It was successfully applied in ancient Athens and the “golden times” of Venice. Recently the idea has gained some attention in management research (Zeitoun, Osterloh and Frey, 2014; Liu and De Rond, 2016). In this paper we explore how to apply random selection as a tool to raise the number of female candidates for management positions. We believe random selection could offer advantages for women, and also efficiency gains for organizational performance as a whole.

We acknowledge that random selection is an unfamiliar concept; however, far-reaching ideas may be necessary to break the current deadlock. Here we offer a proposition that can be tested in organizations as well as in laboratory experiments.

Women and Competition

The literature finds that women compete less than men. They more often opt out of competitions or tournaments, even when they are equally or more qualified (Gneezy, Niederle and Rustichini, 2003; Niederle and Vesterlund, 2007; 2010; Niederle, Segal and Vesterlund, 2013; Guenther et al., 2010; Balafoutas and Sutter, 2012; Cadsby, Servatka and Song, 2013). Cognitive skills play no role; there are insignificant differences between men and women (see e.g. Kimura, 2004; Fine, 2010). Therefore non-cognitive factors, such as women's resistance to competition, must be considered.

Two key areas have been identified.

Women's networks are less advantageous to their career development than those of men. Appropriate networks facilitate tournament entry. Men typically develop professional networks that encourage advancement and offer support whilst in the role. Women's network positions typically differ; they contain fewer highly-ranked individuals, and tend to be more emotionally supportive but less instrumental (Brass, 1985; Downey and Lahey, 1988; Ibarra, 1992; 1993; Bevelander and Page, 2011).

Second, women on average seem less willing to enter competitions compared with males. This was first shown in a seminal study by Niederle and Vesterlund (2007), who asked: "Do women shy away from competition? Do men compete too much?". The authors address these questions in an experimental setting that uses the choice between pay for performance versus tournament-based compensation. They find that among men and women of equal

abilities, men chose tournament-based compensation schemes twice as often as women. Niederle and Vesterlund (2007) show that the tournament-entry gap between males and females is mainly driven by women's preference not to compete due to negative self-stereotyping. Our paper focuses on this competition gap.

The literature on stereotypes largely explains why women shy away from competition. Stereotypes can be defined as “cognitive structures that contain perceiver's knowledge, beliefs, and expectancies about some human group” (Hamilton and Trolier, 1986: 133). Most studies focus on *demand side stereotypes* that are imposed on women externally, mainly through direct discrimination (e.g. Becker, 1957; Goldin and Rouse, 2000; Eagly, 2007; Beaman et al., 2009; Bohnet, van Geen and Bazerman, 2012), or statistical discrimination (e.g. Phelps, 1972; Arrow, 1973; Lazear and Rosen, 1990), and through unconscious biases (Bohnet, 2016). Today direct discrimination in organizations is prohibited; however, powerful invisible barriers remain. Women are estimated to be less ambitious, less assertive and less self-reliant (e.g. Rudman and Phelan, 2008), and family-work-conflicts are often viewed as inevitable. These stereotypes are not congruent with idealized leadership roles (Eagly and Karau, 2002), regardless of whether these expectations are justified or not (Banerji and Greenwald, 2013). To de-bias superiors and colleagues from stereotypes is hard, though there exists a number of insights from social psychology (e.g. Ely, Ibarra and Kolb, 2011) and behavioral economics (Bohnet, 2016) how to deal with this problem. They help reduce stereotypes at the demand side.

But how to deal with self-stereotypes and stereotype threats at the *supply side* which discourage women from applying for demanding jobs? Negative stereotypes undermine self-confidence. Stereotype threats arise when individuals are anxious to behave according to negative stereotypes about their social group which hinders their ability to perform at a high level. This is the case even if the individual does not subscribe to the stereotype (Schmader and Johns, 2003). Both forms of adverse self-verification restrain females in several ways.

First, women often accept a less ambitious career path with lower salaries (Eagly and Karau, 2002) in order not to deviate from internalized self-stereotypes and to avoid psychological “identity costs” (Akerlof and Kranton, 2011; Heilman and Okimoto, 2007). In a laboratory experiment it was shown that men dislike women who negotiate over their salary (Bowles, Babcock and Lai, 2007). This explains, why only ten percent of females negotiate their salary after the first job offer following graduation, in contrast to 50 percent of male candidates (Babcock et al., 2006). Further, divorce rates are higher in couples where women are the main breadwinners (Bertrand et al., 2013; Dawson, Kersley and Natella, 2014). Second, additional “identity costs” accrue if women try to compensate negative attitudes towards “out of role” behavior by attempting to display greater sociability in a bid to be liked (Rudman and Phelan, 2008). Third, women who adopt counter-stereotypical behavior can be accused of lacking social skills. They then suffer professionally when attention is diverted away from functional competence to social skills (Phelan, Moss-Racusin and Rudman, 2008). Finally, gender self-stereotypes become “self-fulfilling-prophecies” (Merton, 1948: 195; Ely, Ibarra and Kolb, 2011). If they lead to stereotype-consistent behavior, they perpetuate the stereotypes (Dar-Nimrod and Heine, 2006).

Ample evidence demonstrates the effects of self-stereotypes and stereotype threats on the behavior of women: Girls’ math performances decline when their gender is made salient (Spencer, Steele and Quinn, 1999; Dar-Nimrod and Heine, 2006). The same is true for performance in competitions (Guenther et al., 2010). Female self-stereotypes reduce both women’s appetite to compete with men (Gupta and Bhawe, 2007) and their leadership aspirations (Davies, Spencer and Steele, 2005). For women “...being competitive in “male settings” includes a negative stigma of being bitchy” (Guenther et al., 2010: 400). At best these extra pressures on women discourage them from competing for management and leadership

roles; at worst, women may feel punished when competing with men and winning (Phelan, Moss-Racusin and Rudman, 2008).

What can be done to mitigate women's aversion to compete?

The findings of Niederle and Vesterlund (2007) have led others to examine what reduces women's antipathy towards tournaments. Given that men and women have similar cognitive abilities and levels of education, the gender gap in competitiveness stands out as a possible explanation for the gap in pay and career success. High-ability women under-enter tournaments whereas low-ability men over-enter. Studies show that both cultural and institutional factors play a role.

Cultural factors are examined in a field experiment by Gneezy, Leonard and List (2009). They find that in a patriarchal society, such as the Maasai in Tanzania, preferences for women to enter competitions are low. However, in a matrilineal society – the Khasi in India – women's tendency to compete is higher even than men. Institutional influences are manifold: aversion to compete and stereotype threats disappear when women compete against women, when typical female tasks are involved, or when the task is framed gender-neutral (Booth and Nolen, 2012). Women also improve their performance when they compete in all-female groups compared to mixed-sex groups (Gneezy, Niederle and Rustichini, 2003). Fryer and Levitt (2010) found that in Middle Eastern countries there is no gender gap in math in same-sex schools. Similarly, having a female math or science teacher seems to improve girls' results in these subjects, particularly among those who are gifted (Dee, 2007; Carrell, Page and West, 2010; Niederle and Vesterlund, 2010).

Culture-specific preferences are not easy to change, and single-sex competition is infeasible in the workplace. Therefore other institutional measures that may increase the supply of women into management positions need consideration.

A much debated measure is the use of quotas. Quotas are put in place by some governments when other forms of self-regulation have failed to alter gender or ethnic distributions (Krook, 2005; Dahlerup, 2006). A recent high-profile example is the requirement for all boards of public companies in Norway to include at least 40% women. The German Parliament has also recently decided to introduce a 30% quota for women on the boards of large public companies; and an attempt by the UK government to impose a voluntary obligation of 25% female board membership on all public companies by 2015 just met its target (Sealy, Turner and Vinnicombe, 2013). Quotas have also been used successfully to promote female leadership to the voting population in India (Beaman et al., 2009; 2012). Though quotas are a mainly demand-oriented measure, two recent laboratory experiments show that quotas can also increase the supply of highly qualified women (Balafoutas and Sutter, 2012; Niederle, Segal and Vesterlund, 2013), mitigating their aversion to enter competition. These experiments are insofar important as they show, that it makes sense to reduce competition of women against men in order to encourage women to throw their hat into the ring.

Unfortunately there are downsides to quotas. They may be perceived as unfair “reverse discrimination” by men (Rader Sipe et al., 2016); and, most women who go into management and leadership do not want to be viewed as “token” (Cohen and Swim, 1995) exactly because it might entrench negative stereotypes. It therefore seems unlikely that quotas will be widely adopted as a tool to encourage women into management. We therefore propose the use of an innovative, yet traditional instrument – the random selection of candidates from a pre-selected pool as a mechanism to encourage more women to compete for middle management positions.

An introduction to random selection

Random selection has been used in politics, first by the Athenians, over two and a half thousand years ago, and later during the “golden age” in Venice, and in other medieval city states. Although its use has greatly declined, some institutions still use random processes; for example, the Coptic Pope is selected randomly out of three candidates (Boochs, 2009), and it is commonly used in the selection of juries, or to decide tiebreaks in national and local elections. However, it is relatively new to social scientists and management scholars (for exceptions see Manin, 1997; Buchstein, 2009; Sintomer, 2011; Frey and Steiner, 2014; Zeitoun, Osterloh and Frey, 2014; Frey and Osterloh, 2016; Liu and De Rond, 2016; Van Reybrouck, 2016), and it is barely if ever used as a decision-making mechanism in business.

In the following sections we advocate for the introduction of random draw from a pre-selected pool of qualified candidates to encourage women into middle management positions. We believe that women may be more likely to enter such a pool because random selection suppresses competition and reduces identity costs, for example being disliked, or being seen as “pushy”. Also, male non-winners in random selection do not lose face.

Frey and Osterloh (2016) summarize the strengths and weaknesses of using random mechanisms in social and political settings. First, and of most relevance to this paper, random decisions produce representativeness in the population (McCormick, 2006). This is why it is used in national surveys. Groups, based on gender or ethnicity, are represented according to their significance in the general population, avoiding discrimination.

Second, random processes prevent an illegitimate influence on decisions by interest groups. Personal influence, cronyism and corruption are no longer worthwhile (Hayek, 1979). Old boys’ networks lose importance. Once the short list is decided, there is little sense spending time or money trying to influence a random process.

Third, selecting people randomly gives a chance to groups that otherwise have no voice and thus enables neglected aspects, ideas and perspectives. It is a way to protect against homophily and it encourages new talents into the pool. A diverse talent pool will generate diversity of ideas and decisions, allowing creativity to surface (Fishkin and Farrar, 2005; Jeppesen and Lakhani, 2010).

Fourth, random selection out of a preselected pool may lead to a ‘balanced portfolio’. The risks associated with choosing the wrong kind of person (and personalities) will be lowered if applied regularly. This is an application of the famous algebraic theorem ‘Jensen’s Inequality’ (Jensen, 1906). It shows that if panels cannot distinguish between poor and outstanding talents, and outstanding talents are able to accelerate performance, it would be more favorable to apply random selection than to choose the average, or the sound candidate.

Fifth, random selection promotes stability and continuity of representation. Each group has the chance of being chosen in the future. For example, in organizations where the core workers are experts and professionals, it is common to find an unwillingness to take up management and leadership positions (Empson and Langley, 2015). An option to include candidates through a random process may motivate reluctant managers into the pool.

Sixth, and importantly, random selection implies that the “losers” of the selection process do not lose face, inducing more well-reputed individuals to stand for office. In addition, there may be greater willingness to cooperate with the winners. This experience occurred in the 18th century at the University of Basel, which appointed professors by lot among the top three candidates (Burckhardt, 1916; Stolz, 1986: 670). In our context, females who win the lottery may be less exposed to negative stereotypes and stereotype threats that may result when women outperform men.

A further possible argument that supports the use of random selection is that it guards against hubris. Managers and their stakeholders tend to overestimate the ability of individuals

(Liu and de Rond, 2016) whilst underestimating the role of luck in explaining success. This leads to under-learning from failure and overconfidence by “the lucky ones”. Men more than women tend to overestimate their abilities (Kay and Shipman, 2014). As a consequence the influence of “stars” rises as do their salaries (Khurana, 2002). If successful people recognize that luck has played an important role, they more often express humility, gratitude and a pro-social focus (Bartlett and De Steno, 2006; Frank, 2016). This could have a positive impact on the intrinsic motivation of their coworkers (Frey, Homberg and Osterloh, 2013).

Random selection also has potential disadvantages. The first and most common criticism is its failure to discriminate between able and not so able people. However, this is easily mitigated, through a prior screening process to filter out those who fail to match the selection criteria. To filter out the “bad apples” is easier than to identify the outperformers (e.g. Siler, Lee and Bero, 2015).

A second disadvantage may reside in the belief that random selection is “irrational” or “arbitrary” compared to other mechanisms like voting, decisions by senior authorities, or the price system (Frey and Pommerehne, 1990). But so-called “rational” selection processes are themselves prone to many weaknesses: for example, biases and prejudices of the appraisers (e.g. Latham et al., 2005), the Peter Principle (e.g. Lazear, 2001), and the performance paradox (e.g. Meyer and Gupta, 1994). Thus we believe that random processing, which includes screening to filter out inappropriate candidates, can be used in many settings in management.

Zeitoun, Osterloh and Frey (2014) propose developing a corporate governance model using random selection procedures to appoint stakeholder representatives to corporate boards. Pluchino, Rapisarda and Garofalo (2011) suggest using partial random selection as a promotion strategy that protects against the Peter Principle. Liu and De Rond (2016) argue that random selection out of a pool of qualified candidates is more effective than selecting the highest performers, particularly for CEOs. To filter out the “bad apples” is easier than to identify the

outstanding performers, which was empirically demonstrated e.g. for scholarly performance (Siler, Lee and Bero, 2015).

Random selection as a tool to encourage women into the management ring

As has been noted above, there continues to be a dearth of women in leadership positions. It is here that we believe random selection can be used successfully to appoint managers from among pre-chosen candidates, to encourage women to enter competitions, thereby raising the female talent pool. In the next section we highlight two key benefits to its deployment in organizations. This is followed by a description of how the mechanism should be applied.

Random selection offers 'rejection insurance'

We have argued that women are exposed to extra pressures when they compete with men. Studies also suggest that women are more likely to suffer psychologically from failure or rejection (e.g. Steele, Spencer and Aronson, 2002; Buser and Yuan, 2016).

Random selection acts as 'rejection insurance' against these factors in two key ways. First, it protects against any personal pressure a woman may be subjected to; for example, husbands or partners might welcome their wives' success with less negative feelings when randomly selected. Second, if a candidate loses, he or she cannot 'blame themselves' for not winning, thus reducing the likelihood of internalizing failure into one's self-perception.

Random selection reduces 'the chosen one' factor

Random selection also reduces the possibility of attributing success of winning solely to oneself. Overconfidence in men is well documented (Lichtenstein, Fischhoff and Phillips,

1982; Kay and Shipman, 2014). It is more pronounced when men undertake tasks that are considered to be masculine (Moore and Small, 2007); arguably men may consider leadership as such a task. The characteristic of ‘hubris’ is often associated with organizational leaders (Hayward and Hambrick, 1997; Khurana, 2002; Hiller and Hambrick, 2005). Individuals who regularly win tournaments may start to believe that they are ‘the chosen one’. Consistent winners may over-attribute their success to personal talent, and under-represent the role of luck and cumulative “success breeds success” dynamics (Van de Rijt et al., 2014). The important but contrasting characteristics of humility or humbleness, viewed as being desirable in managers and leaders, (Sally, 2002; Van Buren and Safferstone, 2009; Goodall and Pogrebna, 2014) will be advanced through the use of random selection (Bartlett and De Steno, 2006; Frank, 2016; Liu and De Rond, 2016).

How to apply random selection in organisations

The procedures for how to apply random selection of candidates must be developed according to firm specific needs and with great openness to unexpected experiences. Some suggestions are provided.

Entry to the short list

Random selection would, we argue, encourage women to allow their names to go onto the short-list after a candidate pool has been composed. There are two possible ways to compose this pool. The first approach is random selection from a short-list involving conventional procedures where there may not initially be an equal number of men and women. Conventional procedures mean that the position might be advertised internally, or a committee might choose male and female candidates.

The second approach requires a pool that is made up from the start with a predefined number of men and women, i.e. a quota. As outlined above, there is evidence that quotas can change the gender landscape (Jones, 2004; Chattopadhyay and Duflo, 2004; Powley, 2007; Balafoutas and Sutter, 2012; Niederle, Segal and Vesterlund, 2013; Beaman et al., 2009; 2012); however, as we have argued, there are disadvantages also.

Irrespective of which method of selection is chosen, candidates who enter the pool should have equal approximate ability and have extensive knowledge of the core business of the organization (Goodall, 2011; Goodall and Bäker, 2014). This would help to ensure against potential ‘glass cliff’ scenarios (Ryan and Haslam, 2005; Mulcahy and Linehan, 2014;), where women are inappropriately picked for a task and therefore fail – a situation that increases negative stereotyping.

Randomly selecting into the post

Once the short list has been finalized the random selection of the candidate can occur. Either a stratified sampling (Mueller, Tollison and Willett, 1972) takes place in which male and female candidates have a chance according to their numbers in the pre-selected pool. Or men and women have the same chance of being selected. Both approaches are designed to encourage women to compete without crowding-out high-performing men by “reverse discrimination.” The process needs to be open and trustworthy and should perhaps happen in a public or semi-public setting.

Discussion and Conclusion

The tide has not turned for women in leadership. Firms committed to diversity could choose to use affirmative action, such as quotas, as a mainly demand-side tool to ensure women

are placed into management positions. There is evidence that quotas work, but they have associated costs. Women may feel that they acquired the job merely because of their gender, and men may view it as unfair “reverse discrimination”, or another form of overt interest-group influence. Thus affirmative action may result in the persistence of women’s negative self-stereotyping and stereotype threats with the attendant “identity costs” and aversion to compete.

In this paper we offer an inventive solution to help narrow the gender gap. We first shift attention from demand side causes, such as discrimination, to the supply side: we ask why and under which conditions women shy away from competing for management positions. We identify self-stereotypes, stereotype threats and psychological identity costs as the main barriers. Next we look at institutional ways to encourage women to enter competitions with men, such as quotas. However there are downsides; specifically, they may strengthen women’s negative (self-) stereotypes.

Finally, and with this in mind, we propose an innovative new mechanism – the use of random selection to choose middle managers from a pre-chosen pool of candidates. We argue that random selection may encourage women to throw their hat into the management ring because it avoids direct and public competition within the ring. Crucially, we believe that random selection will increase females’ willingness to allow their names to go onto the short list; as a consequence, it mitigates the “identity costs” of women falling “out of role” and offers “rejection insurance” against failure to be selected.

Choosing candidates fairly through random selection also levels the gender field by reducing the influence of male networks that offer support for men into and during promotion; and, importantly, it protects against the propensity for managers to feel that they are “the chosen one”, thus reducing hubris and encouraging greater humility and collegiality.

This paper has limitations that offer opportunities for future research. First, there is apparently no empirical evidence on the effects of random selection in the field of gender

policy. Such evidence is by necessity restricted because the application of random selection in this field is a novel idea. Future endeavors may apply various methodologies to gather empirical evidence, starting with laboratory experiments and vignette studies, and continuing to in-depth case studies of real-world implementations.

Second, although random selection of management candidates represents a generic concept, its adoption needs to take into account the cultural subtleties in different countries. For instance, random selection procedures are likely to be accepted more readily in cultures that emphasize equality of opportunity. Where cultural beliefs associate random selection with “irrationality”, it may be helpful to emphasize the instrumental benefits of this procedure, especially when compared to conventional selection procedures that are often only partially “rational”. Also it could be argued that conventional selection processes lead to hubris and the overestimation of managerial performance, which causes a lack of compassion and prosocial behavior.

Although the suggestion made in this paper may seem unconventional, we believe that the time is ripe for radical endeavors. It is clear that the gender gap is proving difficult to close. We hope our innovation is viewed as an opportunity to discuss new avenues for increasing the supply of female leaders and at the same time to contribute to a more efficient and prosocial management.

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