

**CIPD Applied Research Conference 2020**  
The shifting landscape of work and working lives

**‘Women in...’: do internal  
and external women’s  
networks contribute to  
equality in engineering?**

Dr Vanda Papafilippou, Senior Lecturer in HRM,  
UWE Bristol

## Women engineers and the lack of access to informal influential networks

Women comprise just 12% of the UK engineering workforce ([EngineeringUK 2018](#)), and despite the efforts of both the state and the industry, it remains one of the most male-dominated sectors. This has led organisations to function in ways that do not support women’s career patterns, thus maintaining and reproducing the gender-segregated status quo in formal or covert ways ([Acker 1990](#)).

An additional barrier for women in all male-dominated sectors including engineering is the persistence of ‘old-boys’ networks’ ([Durbin 2011](#)). These are informal, essentially closed, male-dominated networks where strategic, tacit knowledge is exchanged. Women appear to be at a disadvantage in terms of visibility, the ability to form alliances and gaining critical organisational knowledge that can lead to career progression ([Greguletz et al 2018](#), [Ibarra 1993](#)). A technique that HR, and the industry in general, has employed to address this issue is a very popular diversity management practice: *formally organised women’s networks*.

## Women’s networks: definition of terms

Women’s networks can be *internal* (that is, intra-organisational) and *external* (that is, inter-organisational/industry-wide). The author identified 23 external women’s networks for engineers (for example Women in Property, Women’s Engineering Society, Women In Science and Engineering) currently in the UK, but could not find an exact number for the number of companies that have set up internal women’s networks. Most women’s networks tend to organise a series of different activities, such as inspirational talks, access to tailored training, formal or informal career coaching, as well as simply socialising. These activities appear to be organised mostly by (volunteer) network board members and their success often depends on the commitment of these volunteers.

Formal women’s networks have been argued to provide instrumental, social and psychological support ([Villesèche and Josserand 2017](#)) and mitigate what is often referred to as ‘Queen Bee Syndrome’ by giving more senior women the opportunity to support more junior ones ([Singh et al 2006](#)). They are also argued to bolster women’s self-confidence, thus contributing to retention. However, the effectiveness of women’s networks has also been repeatedly contested as they appear to lack power due to their formality ([Durbin 2015](#)) and the fact that they are not always taken seriously. Internal women’s networks, specifically, have been argued to focus on implementing strategies which address only the symptoms of discrimination (for example individual career development, isolation), instead of the roots of the problem. It is argued that they do not truly challenge the status quo ([Dennissen et al 2018](#)) and that they might potentially increase the sense of isolation and division between men and women, thus strengthening gender-based behaviours and differences ([Pini et al 2004](#)).

Nevertheless, despite their wide use and critiques of them, the value of such networks, their ability to contribute to gender equality, and their capacity to challenge the gendered nature of both organisations and the profession itself remains a particularly *under-researched* area. The few empirical studies that address this diversity management practice focus mostly on internal women’s networks, while the literature around external women’s networks is extremely scarce and tends to focus on grassroots, activist ones rather than professional ones.

## The contribution of women’s networks to gender equality in engineering: an analysis

The aim of the present study was to establish the contribution of formal internal and external women’s networks to gender equality in engineering and understand how we, as HR practitioners, can improve them. In order to do so, the author, from a critical diversity perspective and by adopting Amartya Sen’s capability approach, attempted to see whether these networks give women engineers *effective* opportunities to be who they really want to be and do what they really want to do by paying careful attention to the power relations at play.

The author conducted 48 semi-structured interviews either face-to-face or via Skype/telephone. The participants were all active in external and internal networks (if their company had one) and were recruited mostly via LinkedIn and the researcher’s personal network. The majority of women worked in the UK (44), plus one in the USA and two in Australia. Most were in the construction sector (31), although other sectors were also represented, with four in gas and oil, two in the army, one in nuclear, three in aviation, three in electronic/software engineering, and so on. In terms of ethnicity, the majority of the participants were white (44) and only four were from BAME backgrounds. There were ten participants at an early stage in their career, 24 mid-career and 12 seniors (up to director level). The interviews were analysed thematically, that is, by identifying the common themes emerging from the women’s narratives. All the names are pseudonyms.

## The value of internal and external women’s networks: findings

### Internal women’s networks

The main contribution of internal women’s networks was the invaluable social and psychological support that they provided to the women involved. The participants, and especially those on part-time contracts, felt ‘siloes’ within their organisation. Through their participation in the network, though, these women felt free to interact and connect socially with their female colleagues, thus enhancing their feeling of belonging to the organisation and thus their job satisfaction:

*I’ll stop and have a chat with so many more people now in the corridors and it just means that the work environment’s a friendlier place. (Amelia)*

Also, through participating in the network, the women in the study gradually became closer. Within this ‘safe space’ where everyone had a voice, they took responsibility for changing the injustices they experienced and observed in their organisation, and gave and received social support:

*We’ve just started doing these coaching sessions where one of us just comes with like a problem that we have, and then we all listen and then we come up with a plan. (Luna)*

In other words, these networks contributed towards a sense of solidarity and empowerment of the women:

*I suppose I really stand taller, it’s made me think about who I am and that I’ve got to strive to be who I am and just keep doing what I’m doing. I don’t feel like I’m battered down. (Olive)*

Other important benefits of the participation in internal networks included the development of skills through mentoring and tailored training, but also help with career progression:

*It’s given a little bit more clarity about the promotion procedure, because [...] there’s whispers here and whispers there about what you need to do to get to the next level, so it’s been quite nice that we’ve been quite open about what everybody’s had to do to get promoted. (Amelia)*

It needs to be noted at this point, though, that these benefits were not accessible to all women. The women who were based in more peripheral offices felt more isolated and struggled to convince their line managers of how these events and networks could benefit them.

But did these networks contribute towards gender equality within the organisation? Unfortunately, not to a great extent. Internal networks still appeared *not* to have access to power resources which would eventually allow them to achieve organisational change. More specifically, all participants admitted that no matter how hard they tried, they failed to challenge the gendered nature of their organisations as these networks did not have *effective* support from senior leadership and HR:

*So, it’s been very well to ... how do I put this ... they make it seem that they support it but then when it comes to actively ... like for example they were looking at the parental leave, actually changing it and being paid, but that hasn’t changed. (Carmen)*

*And we are trying in the company [...] to push for HR to be including some inclusive and equality things, that’s really slowly kind of saying, ‘yes, yes, yes,’ but then no progress is made, so ... we’re pushing a boat uphill. (Nadia)*

Any change seemed to be blocked by their line managers and gender-biased performance management practices:

*We are trying to do what we can try and do, organising training, having mentoring opportunities amongst ourselves, but as far as providing opportunities it’s difficult because you’re still fighting against the same people. It’s really being able to get responsibility on a project so that you can prove yourself. If you’re not even given that responsibility in the first place, how on earth do you prove yourself? (Amelia)*

Internal networks appeared to contribute to varying degrees towards individual and group development, through solidarity and potentially creating opportunities for women to have a say. However, they were not effective, because women and their demands were not heard. Therefore, internal women’s networks seemed to be contributing only partially and very slowly to gender equality as women felt that indeed these networks paid only lip-service to diversity and inclusion (O’Neil et al 2011):

*It sometimes feels like it’s a box-ticking exercise for diversity, that ‘this is something that we should do’, rather than this is something that’s very valuable. But it feels like [...] [the professional culture] could be shifting [...]. But very, very, very slowly. (Melina)*

### **External women’s networks**

As with internal networks, external women’s networks helped women to (re)build their confidence and (re)establish their sense of belonging to the profession:

*I feel, when I was a young engineer [...] I would have denied any sort of feeling of being left out in a man’s world sort of thing [...]. But I think as I’ve got older I’m sort of finding this 35–40-something male-dominated company a bit wearing really. (Lilian)*

This was especially so for those returning from maternity leave, where women felt overwhelmed. External networks seemed also to play an important role in individual career progression as they helped women to enhance crucial skills, such as networking and public speaking. Also, and perhaps most importantly, they enabled women to recognise the discrimination they experienced and reach out to other, more equal and inclusive organisations:

*Sometimes it’s just nice to bounce things off people and say, ‘this is what I’m experiencing in my company, do you experience the same, do you think this is right, should this be happening?’ Sort of like a sense-check about things. And through one of my contacts with the women’s group I got my job with [company]. (Amanda)*

Or fight for a promotion within their own organisation:

*Being in a women’s network has helped me think it was possible to stay, otherwise I might not have stayed, and helped me think it was possible to, you know, get promotion, otherwise I might not have fought for that. (Nadia)*

What seemed to be the most important contribution of external women’s networks, though, was the fact that they enabled and encouraged women to actually *challenge the status quo and start reshaping the professional culture*. More specifically, the participation in these networks gave the opportunity to many women to ‘build bridges’ to other professional bodies (for example the Institution of Engineering and Technology, the Institution of Civil Engineers) and networks, and participate actively in equality and diversity (E&D), and not only policy-making. Also, all women

were very committed and actively involved in promoting engineering and science, technology, engineering and mathematics (STEM) professions more generally to young girls and other minorities, and supporting younger female colleagues.

Last but not least, by sharing experiences and working together, the women started challenging the dominant gendered discourses and practices. Instead of adapting in order to fit in, they chose to reframe what an ‘engineer’, and especially a female engineer and a leader in engineering, can be. The women in the study, through their participation in external women’s networks, were able to ‘cast [their] net out to other options and alternatives’ (Grace) and realise that ‘actually, no, there are these other voices, there are other ways [...] I don’t have to be kind of autocratic in the way I lead, I can lead in a different style’ (Sue). The women’s views about the dominant leadership model in engineering not only critiqued the dominant masculinised discourses of leadership (Due Billing and Alvesson 2000), but also potentially the leadership process itself:

*I think in construction, like you still have the strong banging on tables kind of leaders and that’s a way to get things done – I don’t agree with it.*  
(Danielle)

Therefore, external women’s networks, apart from the benefits for individual members, appeared to contribute significantly more towards gender equality in the industry than internal networks. This was not only because women managed to make their voices heard but also because they all contributed in varying degrees in organisational and professional culture change.

Why were the women so successful in doing so in external networks and not in internal ones? Perhaps we should start reflecting on the extent to which we, HR practitioners, challenge or comply with the dominant organisational culture, and the extent to which we empower or impede minorities to progress and thrive in our organisations.

## **Contribution of women’s networks to well-being, career progression and gender equality**

Women’s networks, internal and external, seemed to contribute, each in their own way, to women’s well-being, career progression and gender equality. Internal networks enabled women to come together and build an equal community: within the network all women felt that they could be themselves, express opinions openly and plan together to address inequality. However, their efforts met three major obstacles: senior management, their HR and line managers.

External networks, on the other hand, by being free of the male-dominated culture, offered women the opportunity to contribute to the wider community and challenge gender stereotypes. It also enabled them to build bridges with other organisations and professional bodies and influence policy. The key learnings for HR are:

### **Commitment to equality and diversity**

The main implication for HR practitioners, especially in relation to internal women’s networks, is quite straightforward: HR should listen carefully to the women’s stories, support them and their networks, and respond to the requests of internal women’s networks, even if this means

‘upsetting’ senior leadership. Also, E&D policies and all diversity management practices, such as women’s networks, should be an integral part of our strategy and not just to ‘tick boxes’.

### **Employee voice**

As indicated, internal women’s networks, despite their huge potential for empowerment and contribution to organisational change, were not taken seriously by some of the organisations that ran them. However, women’s networks, and all diversity networks, could act as a means to increase employees’ voice and, as a result, increase their engagement and commitment and reinforce organisational culture. Therefore, HR should encourage and facilitate these networks as much as possible and make sure that their activities and comments feed directly to organisational policies, practices and strategy.

### **Recruitment and retention of talent**

As indicated by the stories of women participating in external networks, organisational culture and justice played a key role when changing jobs. Hence HR, with the help of their internal women’s networks, can build an effective E&D strategy and an inclusive working culture and thus manage to attract and retain female talent.

### **Performance management**

All the women talked about how their exposure to the external networks highlighted the need to change the way we view leadership in engineering and also the discriminatory practices experienced within their organisations. This finding has clear and serious implications for recruitment for senior roles and, above all, performance management and career progression.

More specifically, all line managers should be trained in how to manage, support and review the progress of women and all minority employees in a way that empowers rather than impedes them. It appeared from the women’s narratives that most, if not all, line managers were seeking and rewarding only specific behaviours (for example assertiveness, over-confidence, networking, working long hours) and results (for example ‘big’ contracts) that practically reflected the male majority. Therefore, HR could first of all start from evaluating carefully its performance management system and, using an E&D lens, to identify where and why injustices may occur and work together with the groups affected to resolve them.

### **Learning and development (L&D)**

The women in the study highlighted the benefits of some tailored training, as they found it particularly empowering. Therefore, L&D practitioners could contribute even more to women’s development by attending women’s networks events to understand better their needs and challenges. This could also help L&D practitioners improve their understanding about what training they need to develop to raise awareness around E&D and specifically how gender bias might affect all HR functions (for example recruitment and selection, performance management, and so on).

Gloria Steinem said that *‘without leaps of imagination, or dreaming, we lose the excitement of possibilities. Dreaming, after all, is a form of planning.’* I would like to encourage all of you to dream a fairer, more equal and inclusive workplace – and start planning it.

## References

- Acker, J. (1990) Hierarchies, jobs, bodies: a theory of gendered organization. *Gender and Society*. Vol 4, No 2. pp139–58.
- Dennissen, M., Benschop, Y. and van den Brink, M. (2018) Diversity networks: networking for equality? *British Journal of Management*. Vol 00. pp1–15. doi: 10.1111/1467-8551.12321.
- Due Billing, Y. and Alvesson, M. (2000) Questioning the notion of feminine leadership: a critical perspective on the gender labelling of leadership. *Gender, Work and Organisation*. Vol 7, No 3. pp144–57.
- Durbin, S. (2011) Creating knowledge through networks: a gender perspective. *Gender, Work and Organization*. Vol 18, No 1. pp90–112.
- Durbin, S. (2015) Women who succeed: strangers in paradise? Basingstoke: Palgrave Macmillan.
- EngineeringUK (2018) Engineering UK: the state of engineering. London: EngineeringUK.
- Greguletz, E., Diehl, M.-R. and Kreutzer, K. (2018) Why women build less effective networks than men: the role of structural exclusion and personal hesitation. *Human Relations*. Vol 72, No 7. pp1234–61.
- Ibarra, H. (1993) Network centrality, power, and innovation involvement: determinants of technical and administrative roles. *Academy of Management Journal*. Vol 36. pp471–501.
- O'Neil, D.A., Hopkins, M.M. and Sullivan, S.E. (2011) Do women's networks help advance women's careers? Differences in perceptions of female workers and top leadership. *Career Development International*. Vol 16. pp733–54.
- Pini, B., Brown, K. and Ryan, C. (2004) Women-only networks as a strategy for change? A case study from local government. *Women in Management Review*. Vol 19, No 6. pp286–92.
- Singh, V., Vinnicombe, S. and Kumra, S. (2006) Women in formal corporate networks: an organisational citizenship perspective. *Women in Management Review*. Vol 21, No 6. pp458–82.
- Villesèche, F. and Josserand, E. (2017) Formal women-only networks: literature review and propositions. *Personnel Review*. Vol 46, No 5. pp1004–18.