

Editorial

Gender Influences on Career Development

A Brief Review

Annett Hüttges¹ and Doris Fay²

¹Helmholtz Centre Potsdam, GFZ German Research Center for Geosciences, Potsdam, Germany,

²Department of Psychology, Work and Organizational Psychology, University of Potsdam, Germany

Most organizations, regardless of sector or industry, still suffer from an underrepresentation of women at top- or midlevel managerial positions. This review presents a cursory overview of current findings on the potential reasons of this gender segregation. We organize the findings along a framework of career success being a joint function of three groups of factors: *career success = f (can-do × want-to × permission-and-support-to)*. The overall pattern suggests negligible differences in capability and motivational factors; but there are gender differences with regard to the *impact* of these motivational states and actions on career development and career success.

Female Underrepresentation in Top Positions Persists

Despite numerous political and economic efforts, the number of women at top- or midlevel managerial positions is still scarce. This phenomenon is widespread such that the underrepresentation of women can be found in almost all industries, in the public as well as private sector, in educational as well as research institutions (e.g., European Commission, 2012; Graf, Dautzenberg, Büttner, & Schmid, 2011). Thus, it is a vital interest for academics, practitioners, and policy makers alike to better understand why women are still vastly underrepresented in top positions.

Prior to discussing potential reasons, we present some data illustrating the extent of current gender segregation in top positions, using Germany as an example. According to the latest Female Executive Barometer

(Holst & Kirsch, 2014a), in 2013 the percentage of women on the supervisory boards of the 200 largest companies reached about 15%. At the same time, the percentage of women on the executive boards of the 200 largest companies stagnated at about 4%. Particularly striking is the underrepresentation in sectors that have a large female workforce. In Germany's financial sector 57% of employees are female; despite this, the share of women on executive boards of major German financial institutions was only 6% in 2013 (Holst & Kirsch, 2014b).

The underrepresentation of women in top position is a pervasive phenomenon which exists also beyond the corporate sector, for example, in contexts like academia and research. The Joint Science Conference (GWK, 2013) reports that in 2004, the share of females who were awarded a PhD was 39%; since then, the proportion has reached and maintained a level of 40%. Despite this, only 19% of professorships at universities and 13% of leadership positions at nonuniversity research institutions are currently held by women. Thus, even though there is a significant number of qualified female scientists available, women do not move up the career ladder to an extent that could be expected given their qualifications. The figures illustrate that, despite notable improvements over the past decades (GWK, 2013; Holst & Kirsch, 2014a) women are still considerably underrepresented in challenging managerial positions in the private and public sector in Germany.

The reasons why women's careers become stalled are neither fully understood, nor have they been successfully addressed. The public debate around this issue draws on a wide range of theories. Some argue that women lack the qualifications necessary to cope with the demands of

challenging leadership positions, while others maintain that the number of suitable female candidates for top positions is too low because women have the “wrong” occupational interests; and others again make a lack of female motivation to invest in time-consuming leadership positions responsible for the present picture. Furthermore, structural barriers (i.e., lack of childcare) that purportedly prevent women from climbing up the career ladder are repeatedly discussed. In the following, we present our organizing framework before presenting recent research.

Performance = $f(KSA \times Motivation \times Situation)$

John Campbell and colleagues proposed the now seminal formula of job performance, which defines performance as a function of two multiplicatively connected sets of determinants: knowledge, skills, and abilities (KSAs), and motivation to perform (Campbell, McCloy, Oppler, & Sager, 1993). This formula was later extended to acknowledge the role of situational factors, which are again multiplicatively connected to KSAs and motivation. This implies that in the presence of a constraining situation, performance will be poor even if the other determinants – KSAs and motivation – are high. We apply this formula to understand successful career development and the likelihood to move into leadership positions. In doing so, we conceptualize successful career development as a process “in which a person moves upward through a series of positions that require greater mastery and responsibility, and that provide increasing financial return” (Perlmutter & Hall, 1992, p. 384). Building on Campbell, we suggest that career success and the likelihood to become a leader can also be described as a function of KSAs – which we call here: “can-do factors” –, motivation – which we call here “want-to factors” –, and situation – called here “permission-and-support-to” factors. In the following, we use the formula *career success* = $f(\text{can-do} \times \text{want-to} \times \text{permission-and-support-to})$ as a heuristic to understand differences in male and female careers. In the following we present recent research evidence along the three sets of success-determinants.

Can-Do Factors

Can-do factors are robust predictors of career success. Meta-analytic evidence has shown that level of education, work experience, political skill, or career planning predicts objective and subjective career success (Ng, Eby, Sorensen, & Feldman, 2005; Ng & Feldman, 2014). We refer to these factors as “can-do factors” of career success. They denote a wide range of individual career-relevant knowledge, skills, and abilities. Different career theories, in particular the “contest mobility” perspective, rely on can-do factors to explain success. The contest mobility perspective holds that upward mobility is the consequence of the amount of

contributions to organizational goals, and that the accomplishments that a person demonstrates are based on their own abilities and efforts (Turner, 1960). Can gender differences in top positions be explained by differences in can-do factors?

A meta-analysis that explored individual contributions and accomplishments in terms of job performance ratings of supervisors (Roth, Purvis, & Bobko, 2012) as well as a study on work sample exams (Roth, Buster, & Barnes-Farrell, 2010) revealed, in fact, a *lack* of disadvantages for women. On the contrary, even small-scaled advantages in performance ratings were found for women compared to men; furthermore, when work samples addressed a broad array of KSAs higher overall scores were assessed for women (Roth et al., 2010, 2012).

This picture is also evident with regard to leadership skills. A meta-analysis of 45 studies on contemporary leadership styles provided gender comparisons on transformational, transactional, and laissez-faire leadership (Eagly, Johannesen-Schmidt, & van Engen, 2003). Women consistently exceeded men in transformational leadership and in the contingent reward component of the transactional leadership facet. This result is in so far striking as these are the very leadership styles that are, according to a later meta-analysis, substantially associated with leadership effectiveness and with desirable employee outcomes (Judge & Piccolo, 2004). Furthermore, with regard to two dysfunctional leadership styles – the transactional management-by-exception-passive and laissez-faire style (Judge & Piccolo, 2004) – men scored higher than women (Eagly et al., 2003).

Going one step further by focusing directly on leadership effectiveness, a recent meta-analysis showed *no* overall gender differences in perceived leadership effectiveness (Paustian-Underdahl, Walker, & Woehr, 2014). More detailed analyses showed that – contrary to the idea of women being less qualified to lead people – that in specific contexts (e.g., in business corporations in comparison to governmental institutions) and at specific hierarchical levels (i.e., mid-level positions) women were perceived as more effective leaders.

A different approach to understanding the role of can-do factors is by focusing on more specific career-related KSAs, that is, on those KSAs that enable the person to actively manage and influence his or her career. Studies on political skill (Blickle et al., 2012) or career planning (Hüttges & Fay, 2013b) reveal more similarities than gender differences.

One of the factors enhancing career success and opportunity to move up to leading positions is the ability to develop strong and powerful professional networks (Wolff & Moser, 2009). Whether men and women have the same ability to build such networks and which factors influence the characteristics and quality of professional networks have long been of interest in this domain. One theory to explain the gender composition of a professional network is the attraction similarity model (Byrne, 1971). The theory holds that interpersonal attraction is largely determined by perceived similarities in attitudinal or demographic

characteristics. Applying this theory to the context of networks and career development, it suggests that women and men should choose same-gender role models and same-gender contacts to build their occupational networks.

Spurk, Meinecke, Kauffeld, and Volmer (2015) applied the attraction similarity hypothesis to the gender composition of professional support networks in a sample of doctoral candidates at German universities. According to the perspective of sponsored mobility (Turner, 1960), sponsoring activities by team members, supervisors, or mentors facilitate career success (Ng et al., 2005). In line with Burt (1998) it was hypothesized that relatively more male contacts within one's network should open up better career opportunities because men typically occupy more influential positions in organizations (we presented supporting data earlier in this paper). Indeed, results showed that male doctoral candidates possessed networks with a higher proportion of male supporters compared to female doctoral candidates. In turn, the higher proportion of male supporters was positively related to subjective career success. This pattern still emerged when controlling for alternative explanations such as network size and career ambition. Interestingly, at the same time, men and women reported networking behavior of comparable intensity which is in line with other gender similarities in can-do factors we discussed earlier in this paper. The study of Spurk et al. (2015) adds to our understanding of a very subtle mechanism. Women are as capable to show networking behaviors, and they use the same strategies as men (i.e., building same-sex networks). But the resulting network does not appear as functional.

Networking may also play a role when searching for a new job. Lang and Zapf (2015) show that when searching for a new job, job-seekers can employ "active" search strategies (e.g., sending out unsolicited applications to potential employers), as well as rather "passive" job search strategies which entail making use of their professional networks. Passive strategies are considered effective predictors of job offers; for example, networking leads to a higher number of job offers (Hoye, van Hooft, & Lievens, 2009). Lang and Zapf (2015) explored the extent of passive job search strategies in a heterogeneous sample of employed people. Their results revealed a gender difference: women used passive job search strategies less frequently than men did. This gender difference in a can-do factor may be a result of the less powerful network composition as demonstrated by Spurk et al. (2015). Because women have reduced access to influential networks that can provide organizational sponsorship, they have to switch to less successful active job search strategies.

Overall, empirical evidence suggests that career-relevant KSAs of women are at a level comparable (or even superior) to the KSAs of men, but sometimes, they do not deliver the same results (Spurk et al., 2015). Therefore, female underrepresentation at top positions cannot be satisfactorily explained by a "weakness" of career-relevant can-do factors.

Want-To Factors

The second set of factors determining success are motivational variables (Campbell et al., 1993). They comprise, for example, job attribute preferences, work values, occupational self-efficacy, or motivation to lead. They regulate goal orientation, effort expenditure to advance the career as well as persistence in the occurrence of career setbacks. Can motivational variables explain the underrepresentation of women in top positions? There is a mixed body of research referring to these motivational aspects, with some studies indicating gender differences detrimental for female careers while other studies are more suggestive of gender similarities.

A large number of studies exploring gender differences in those "want-to factors" have a biological perspective as a conceptual root (Browne, 1998). According to the biological perspective, women have a lower level of work-related ambitions because these types of ambitions are in conflict with their innate desire to care for children and family. Female work values and job preferences run counter to career advancement because female values are aligned with their wish to fulfill family responsibilities (Konrad, Ritchie, Lieb, & Corrigan, 2000). These and related findings underlie the controversial statement of Lisa Belkin: "Why don't women run the world? Maybe it's because they don't want to" (Hoobler, Lemmon, & Wayne, 2014, p. 703). A meta-analysis of US samples from 1970 to 1998 actually produced significant gender differences in 33 of 40 job attribute preferences. These gender differences were consistent with gender roles (Konrad, Ritchie, et al., 2000). For example, men placed higher relevance on power and influence in their jobs in comparison to women, while women placed relatively more emphasis on having good coworkers.

While those differences (which beautifully match our stereotypical expectations on gender differences) appear to be such an easy explanation for the underrepresentation of women in leadership positions, one needs to consider two points: first, that "the effect sizes were small" (Konrad, Ritchie, et al., 2000, p. 593). And second, are these values and preferences *at all relevant* for career success?

One of the values that has consistently shown a substantial relationship with career success is work centrality (see meta-analysis by Ng & Feldman, 2014). It captures the centrality of the work-role in a person's life and it is traditionally more strongly associated with the male breadwinner role than with the female homemaker role. Data from the World Values Survey (Warr, 2008) demonstrated overall few gender differences in job attribute preferences and particularly in work values. Most importantly, however, among full-time employees and self-employed respondents there were *no* gender differences in work-role centrality. Furthermore, demographic factors like age or cultural heritage were far more influential in predicting work-role centrality compared to gender.

However, even though values are an interesting factor to study in this context, they are also a somewhat elusive

phenomenon. Culture and age shape gender-related differences, and they are subject to change over time (Konrad, Corrigan, Lieb, & Ritchie, 2000; Konrad, Yang, Goldberg, & Sullivan, 2005; Schwartz & Rubel-Lifschitz, 2009). Konrad and colleagues' meta-analysis that used data collected between 1970 and 1998 indicated that women assigned a higher importance to intrinsic job components (e.g., opportunity to be creative, self-fulfillment) while men assigned a higher importance to extrinsic components (e.g., promotion, freedom/autonomy) (Konrad, Ritchie, et al., 2000). The World Values Survey, published in 2008, already indicated a smaller number of differences between genders (Warr, 2008); and more recent data also suggests that this pattern is changing. Data collected among postdoctoral scientists showed that female scientists assigned extrinsic rewards-oriented work values (promotion, autonomy) a *higher* relevance than male scientists (Hüttges & Fay, in press).

More important than mean differences in work values is the fact that their *impact* on relevant outcomes appears to differ by gender. For example, Lyness and Judiesch (2008) showed (for low gender egalitarianism countries) that work-life-balance orientation was *positively* related to career advancement potential for men, but not for women (Lyness & Judiesch, 2008, Figures 2 and 3). A similar finding was reported by Hüttges and Fay (in press) who revealed a gender-differential impact of extrinsic values on career prospects. The positive relationship between extrinsic rewards-oriented work values and career prospects was stronger for male researchers than for female researchers, indicating female disadvantages in career development.

Other streams of research in the area of want-to factors have focused more strongly on proximal motivational factors, such as occupational self-efficacy and motivation to lead. The results reveal a complex picture. In a longitudinal study with professionals, Abele and Spurk (2009) found no gender differences concerning occupational self-efficacy and career-advancement goals. However, De Pater, Van Vianen, Fischer, and Van Ginkel (2009) described gender differences in student samples at an early stage of a career: During their internships, female students reported fewer challenging job experiences compared to males. Challenging job experiences in turn were positively related to supervisors' evaluations of interns' potential for career advancement. These results are explained by fewer self-efficacy beliefs of women, a lower female motive to approach success and a stronger female motive to avoid failure in task choice.

So far, we highlighted research that dealt with a number of distal and proximal motivational aspects to explore their role in the female underrepresentation in leadership positions. Obviously, the most proximal want-to factors are power motivation and the motivation to lead. We consider them now in turn. Being ready to exert power and influence over people is one key element of leadership activities. However, it has repeatedly been shown that women have lower power motivation (Konrad, Ritchie, et al., 2000). Schuh et al. (2014) conducted several studies in order to test the assumption whether females' lower level of power motivation is one factor that contributes to a lower likelihood of leadership role occupancy. Their findings suggest that this

may be the case. Across all samples, women scored lower on power motivation, and this difference accounted for differences in leadership role occupancy.

Similar to the power motive, studies with various samples tend to show that female participants have a lower preference for further leadership components in their job (Hong, Catano, & Liao, 2011; Konrad, Ritchie, et al., 2000). Elprana, Felfe, Stiehl, and Gatzka (2015) explored motivation to assume leadership roles and managerial responsibilities among students, a want-to factor that accelerates leadership emergence. Consistent with a number of studies that have been conducted in diverse cultural settings, with a wide range of professions and age groups, small differences in motivation to lead emerged: female participants scored lower on affective motivation to lead. The authors also went beyond the exploration of mean differences in order to explain *why* female participants develop lower affective motivation to lead than male students. To this end, they draw on two seminal theories in the domain: social role theory and role congruity theory.

Role congruity theory (Eagly & Karau, 2002) was developed as an extension of Eagly's social role theory (1987) of sex differences and similarities. This perspective holds that the perception, the interpretation, and the evaluation of work behaviors and work results is biased by gender (Eagly & Karau, 2002). This bias is based on the social roles assigned to men and women: men are supposed to be "breadwinners" and women "homemakers," and each role is associated with expectations toward attributes. Women are believed and expected to act in a communal way (e.g., show kindness, supportiveness), whereas men are believed and expected to act in an agentic way (e.g., demonstrate self-assertion, dominance). According to role congruity theory individuals will be devalued or penalized if they do not act in accordance with their social role (Heilman, 2001). Behaviors that are critical for career advancement match male-agentic behaviors (e.g., to assert oneself). If exhibited by women, the behaviors are not congruent with the gender role, resulting in a risk of penalty.

Drawing on this body of theories, Elprana et al. (2015) tested the impact of sociocultural variables, namely traditional gender role beliefs, a lack of same-sex-role models, and awareness of gender equality, on women's affective motivation to lead. Based on social role theory it is argued that these predictors reinforce perceived incongruence between the female gender role and leader roles. In turn, stereotype-confirming behaviors can occur. The results of Elprana and colleagues show that differences in want-to factors like motivation to lead are influenced by gender stereotypes; stereotypes do not only negatively influence others' perception, but also women's self-assessments. These findings make it clear that the artificial separation of factors for gender stereotyping into individual factors – like motivation – and contextual, sociocultural factors – like traditional gender beliefs – falls short to improve our deeper understanding of female underrepresentation in top positions. Rather, these factors have to be considered as interrelated.

What makes the motivational aspects even more complex, are findings on motivational barriers. Women

report higher motivational barriers than men with regard to leadership positions. Motivational barriers are described as biographical life plans which entail a focus on private life and regular working hours; those motivational barriers are to some extent in conflict with the pursuit of leadership positions. Individuals who have a high level of both – motivational barriers and motivation to lead – have been described as ambivalent. There is some evidence that among women the proportion of ambivalent individuals is higher than among men (Felfe & Gatzka, 2013).

Even though the picture on differences in want-to factors is mixed, it speaks overall *for* the existence of gender differences in specific motivational variables, which are, however, subject to change with societal and cultural changes. While there is no agreement on the magnitude of differences – some studies found larger effect sizes in, for example, power motivation related factors (Schuh et al., 2014), while others noted smaller effects (Konrad, Ritchie, et al., 2000) – even small effects can become relevant in the course of a life. The corresponive principle holds “that the most likely effect of life experience on personality development is to deepen the characteristics that lead people to those experiences in the first place” (Roberts, Caspi, & Moffitt, 2003, p. 583). For example, a multi-wave study revealed that highly proactive people tend to work in demanding jobs with high levels of degrees of freedom; over the years, this reinforces (“deepens”) their level of proactive personality (Li, Fay, Frese, Harms, & Gao, 2014). On this background it seems plausible to expect that higher levels of power motivation (Schuh et al., 2014) or affective motivation to lead (Elprana et al., 2015) enhance the likelihood of people searching situations in which they can exert leadership – even on a small level. These “corresponive” situations will be experienced as rewarding and validating, and therefore, reinforce level of power motivation or motivation to lead over time. Thus, even small initial motivational differences may result in different trajectories in terms of leadership occupancy; this notion needs, however, yet to be examined with sound longitudinal studies.

Permission-and-Support-To Factors

The final component of the “success-formula” suggests taking the situation into account. The chance of moving into a leadership position is not only affected by can-do and want-to factors. Situational factors, which we call “permission-and-support-to factors,” can overrule or negate the potential impact of can-do and want-to factors. They cover a broad range of situational aspects such as structural barriers, subtle psychological processes in day-to-day interactions as well as in personnel selection and in promotion situations.

Employment conditions differ by gender, such that women are more likely to receive signals that their work contributions are not as much valued and appreciated as the contributions of their male colleagues. This is likely

to reduce female career ambitions. The gender pay gap, as it is documented worldwide, higher percentage of temporary contracts, and other less desirable employment terms for women compared to men are by now well established facts (Hüttges & Fay, 2013a; Kulik & Olekalns, 2012). More informal factors in organizations can also make women feel that there is little “permission-and-support” for their career ambitions, for instance a limited access to strategic informal networks such as “old boys” networks (Durbin, 2011) or psychological climates of gender inequity in teams and organizations (King, Hebl, George, & Matusik, 2010).

Other situational factors refer to structural aspects, such as the lack of formal work-family policies and initiatives to reduce work-family conflict (Kelly et al., 2008). Here, supervisors play a key role. For instance, they foster employees’ perceptions of whether – in the case of issues around work and family – there will be organizational support to deal with it, in particular support that can be used without penalty; this perception is a better predictor of low work-life conflicts than the mere presence of formal work-family policies and initiatives (Kelly et al., 2008). Furthermore, supervisors provide access to powerful networks, tacit career knowledge and resources (Durbin, 2011), or challenging developmental experiences (King et al., 2012), and thus facilitate career success (Ng et al., 2005).

Situational or “permission-and-support-to factors” unfold their effects also through a process of a differential, gendered evaluation process. It has often been observed that female performance is devalued and female success is explained by external or temporary factors. Long ago, Deaux and Emswiller (1974) titled “What is skill for the male is luck for the female.” Differential rewards for men and women for comparable organizational contributions and performance still seem to persist nowadays (Castilla & Benard, 2010; Heilman & Chen, 2005; Ng et al., 2005); and the differential effects of work values on outcomes reported earlier are also testimony to this (Hüttges & Fay, in press; Lyness & Judiesch, 2008). To work against this process Heilman and Haynes (2008) suggested that supervisors should base their career-relevant selection and promotion decisions on objective sources of information and transparent assessment criteria.

However, the social environment is a very powerful component. Role congruity theory already highlighted the relevance of the social environment’s expectations. Implicit leadership theories held by potential followers are yet another component of the social situation in which leadership can unfold. Coworkers and subordinates hold implicit expectations and naïve conceptions about prototypical traits and behaviors of leaders, for instance intelligence or masculinity – so-called implicit leadership theories (Lord & Maher, 1993). It is assumed that leaders who fulfill these implicit expectations can rely on highly motivated and supportive subordinates. In the long run, prototypical leaders should be able to achieve higher success (Lord & Emrich, 2000; Lord & Maher, 1993). Applied to the field of female underrepresentation in leadership positions, it

has been proposed that female leaders are perceived as less prototypical by their subordinates and therefore face obstacles on team motivation and team performance. In her seminal “think manager-think male” paradigm Schein (1973) demonstrated that traits which are important for leadership success are attributed to men, while women are supposed to lack such leadership-relevant traits. This paradigm highlights a mismatch between people’s beliefs about what a leader “looks like,” and what women “look like,” making it harder for women to emerge as leaders.

Fischbach, Lichtenthaler, and Horstmann (2015) applied the logic of Schein’s paradigm to a new set of characteristics: the expression of emotions. Their goal was to explore prototypes about men and women’s emotion expression qualities in order to test whether the male and female prototypes are in accordance with leadership prototypes. In their field-based experiment with more than 1,000 employees they obtained descriptions of different types of targets’ emotions. Results show that Schein’s pattern generalizes to prototypes of emotion expression. There was a higher similarity in the descriptions of emotion expressions between “men” and “successful managers” than between “women” and “successful managers.” In other words, our prototype of women’s emotion expression is to a lesser extent in agreement with our beliefs about successful managers than our prototype of a man’s emotion expression. Think manager-think male? It seems so.

This study may shed light on the subtle processes that take place on a day-to-day basis when interacting with colleagues and supervisors. Results offer some insights into what hinders female leadership emergence. Given the mismatch in prototypes, will a woman be as easily acknowledged as a leader when, for example, stepping in temporarily for the supervisor in comparison to the acknowledgment obtained by a male colleague? The results suggest that women may probably have a harder time asserting their leadership role. This might make leadership positions appear less attractive to women.

Concluding Remarks

We have presented a cursory review of recent research along the formula *career success* = *f* (*can-do* × *want-to* × *permission-and-support-to*). Taken together, results suggest that there are many similarities in the can-do factors and want-to factors, but also small differences. From our point of view, they are not sufficient to explain women’s underrepresentation in leadership positions. However, combined with the processes we briefly touched in the last section they present a powerful set to explain gender-differential career paths. In particular, the social setting with its power to give “permission” to emerge as a leader (or not), to encourage or discourage leadership aspirations, is the most promising stream of research.

There is, however, some tendency for gendered societal norms, roles, expectations, and prototypes to be changing.

Some research suggests a move toward more similarity between men and women (Konrad, Corrigan, et al., 2000; Konrad, Ritchie, et al., 2000; Paustian-Underdahl et al., 2014); but other studies highlight that matters get more complex with increasing gender egalitarianism (Schwartz & Rubel-Lifschitz, 2009). The future will show whether these changes will – or will not – work in favor of resolving the female underrepresentation in leadership positions.

References

- Abele, A. E., & Spurk, D. (2009). The longitudinal impact of self-efficacy and career goals on objective and subjective career success. *Journal of Vocational Behavior, 74*, 53–62. doi: 10.1016/j.jvb.2008.10.005
- Blickle, G., Meurs, J. A., Wihler, A., Ewen, C., Plies, A., & Günther, S. (2012). The interactive effects of conscientiousness, openness to experience, and political skill on job performance in complex jobs: The importance of context. *Journal of Organizational Behavior, 34*, 1145–1164. doi: 10.1002/job.1843
- Browne, K. (1998). *Divided labours: An evolutionary view of women at work*. New Haven, CT: Yale University Press.
- Burt, R. S. (1998). The gender of social capital. *Rationality and Society, 10*, 5–46.
- Byrne, D. (1971). *The attraction paradigm*. New York, NY: Academic Press.
- Campbell, J. P., McCloy, R. A., Oppler, S. H., & Sager, C. E. (1993). A theory of performance. In N. Schmitt & W. Borman (Eds.), *Personnel selection in organizations* (pp. 35–70). San Francisco, CA: Jossey-Bass.
- Castilla, E. J., & Benard, S. (2010). The paradox of meritocracy in organizations. *Administrative Science Quarterly, 55*, 543–676. doi: 10.2189/asqu.2010.55.4.543
- De Pater, I. E., Van Vianen, A. E. M., Fischer, A. H., & Van Ginkel, W. P. (2009). Challenging experiences: Gender differences in task choice. *Journal of Managerial Psychology, 24*, 4–28. doi: 10.1108/02683940910922519
- Deaux, K., & Emswiller, T. (1974). Explanations of successful performance on sex-linked tasks: What is skill for the male is luck for the female. *Journal of Personality and Social Psychology, 29*, 80–85.
- Durbin, S. (2011). Creating knowledge through networks: a gender perspective. *Gender, Work and Organization, 18*, 90. doi: 10.1111/j.1468-0432.2010.00536.x
- Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Erlbaum.
- Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin, 129*, 569–591. doi: 10.1037/0033-2909.129.4.569
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review, 109*, 573–598. doi: 10.1037/0033-295x.109.3.573
- Elprana, G., Felfe, J., Stiehl, S., & Gatzka, M. (2015). Exploring the sex-difference in affective motivation to lead: Furthering the understanding of women’s underrepresentation in leadership positions. *Journal of Personnel Psychology, 14*, 142–152. doi: 10.1027/1866-5888/a000137
- European Commission. (2012). *Women in economic decision-making in the EU: Progress report*. Retrieved from http://ec.europa.eu/justice/gender-equality/files/women-on-boards_en.pdf

- Felfe, J., & Gatzka, M. (2013). Führungsmotivation [Motivation to lead]. In W. Sarges (Ed.), *Managementdiagnostik* (pp. 308–315). Göttingen, Germany: Hogrefe.
- Fischbach, A., Lichtenthaler, P. W., & Horstmann, N. (2015). Leadership and gender stereotyping of emotions: Think manager-think male? *Journal of Personnel Psychology, 14*, 153–162. doi: 10.1027/1866-5888/a000136
- Graf, P., Dautzenberg, K., Büttner, N., & Schmid, S. (2011). Frauenkarrieren in der Wissenschaft: Eine vergleichende Analyse des Status quo [Women's careers in science: A comparative analysis of the status quo]. In K. Dautzenberg, D. Fay, & P. Graf (Eds.), *Frauen in den Naturwissenschaften: Ansprüche und Widersprüche* (pp. 19–46). Wiesbaden, Germany: VS.
- GWK. (2013). *Chancengleichheit in Wissenschaft und Forschung: 17. Fortschreibung des Datenmaterials (2011/2012) zu Frauen in Hochschulen und außerhochschulischen Forschungseinrichtungen* [Equal opportunities in science and research: 17th update of data (2011/2012) on women in universities and non-university research institutions]. Bonn, Germany: GWK.
- Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues, 57*, 657–674. doi: 10.1111/0022-4537.00234
- Heilman, M. E., & Chen, J. J. (2005). Same behavior, different consequences: Reactions to men's and women's altruistic citizenship behavior. *Journal of Applied Psychology, 90*, 431–441. doi: 10.1037/0021-9010.90.3.431
- Heilman, M. E., & Haynes, M. C. (2008). Subjectivity in the appraisal process: A facilitator of gender bias in work settings. In E. Borgida & S. T. Fiske (Eds.), *Beyond common sense: Psychological science in the courtroom* (pp. 127–155). Malden, UK: Blackwell.
- Holst, E., & Kirsch, A. (2014a). Frauen sind in Vorständen großer Unternehmen in Deutschland noch immer die Ausnahme – moderat steigende Anteile in Aufsichtsräten [Women are still the exception in large company executive boards in Germany – moderately rising representation in boards of directors]. *DIW Wochenbericht, 74*, 19–31.
- Holst, E., & Kirsch, A. (2014b). Finanzsektor: Verbesserungen beim Frauenanteil in Spitzengremien allenfalls in Tripelschritten [Financial sector: Improvements in women's representation on top level bodies at best in tiny steps]. *DIW Wochenbericht, 74*, 33–41.
- Hong, Y., Catano, V. M., & Liao, H. (2011). Leader emergence: The role of emotional intelligence and motivation to lead. *Leadership & Organization Development Journal, 32*, 320–343. doi: 10.1108/01437731111134625
- Hoobler, J. M., Lemmon, G., & Wayne, S. J. (2014). Women's managerial aspirations: An organizational development perspective. *Journal of Management, 40*, 703–730.
- Hoye, G. V., van Hooff, E. A. J., & Lievens, F. (2009). Networking as a job search behaviour: A social network perspective. *Journal of Occupational and Organizational Psychology, 82*, 661–682.
- Hüttges, A., & Fay, D. (2013a). Karrierebedingungen weiblicher und männlicher Postdocs in der außerhochschulischen Forschung [Career conditions of male and female postdoctoral researchers in non-university research institutions]. *Arbeit – Zeitschrift für Arbeitsforschung, Arbeitsgestaltung und Arbeitspolitik, 22*, 224–235.
- Hüttges, A., & Fay, D. (2013b). One size fits all? Erfolgsfaktoren für männliche und weibliche Karrieren [One size fits all? Success factors of male and female careers]. *Personal Quarterly, 65*, 27–31.
- Hüttges, A., & Fay, D. (in press). The gender-differential impact of work values on prospects in research careers. *Journal of Career Development*. doi: 10.1177/0894845315582246
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89*, 755–768.
- Kelly, E. L., Kossek, E. E., Hammer, L. B., Durham, M., Bray, J., Chermack, K., ... Kaskubar, D. (2008). Getting there from here: Research on the effects of work-family initiatives on work-family conflict and business outcomes. *The Academy of Management Annals, 2*, 305–349. doi: 10.1080/19416520802211610
- King, E. B., Botsford, W., Hebl, M. R., Kazama, S., Dawson, J. F., & Perkins, A. (2012). Benevolent sexism at work: Gender differences in the distribution of challenging developmental experiences. *Journal of Management, 36*, 1835–1866. doi: 10.1177/0149206310365902
- King, E. B., Hebl, M. R., George, J. M., & Matusik, S. F. (2010). Understanding tokenism: Antecedents and consequences of a psychological climate of gender inequity. *Journal of Management, 36*, 482–510. doi: 10.1177/0149206308328508
- Konrad, A. M., Corrigan, E., Lieb, P., & Ritchie, J. E. Jr. (2000). Sex differences in job attribute preferences among managers and business students. *Group & Organization Management, 25*, 108–131. doi: 10.1177/10596601100252002
- Konrad, A. M., Ritchie, J. E. Jr., Lieb, P., & Corrigan, E. (2000). Sex differences and similarities in job attribute preferences: A meta-analysis. *Psychological Bulletin, 126*, 593–641. doi: 10.1037/0033-2909.126.4.593
- Konrad, A. M., Yang, Y., Goldberg, C., & Sullivan, S. E. (2005). Preferences for job attributes associated with work and family: A longitudinal study of career outcomes. *Sex Roles, 53*, 303–315. doi: 10.1007/s11199-005-6754-3
- Kulik, C. T., & Olekalns, M. (2012). Negotiating the gender divide: Lessons from the negotiation and organizational behavior literatures. *Journal of Management, 38*, 1387–1415. doi: 10.1177/0149206311431307
- Lang, J., & Zapf, D. (2015). Quotas for women can improve recruitment procedures. Gender as a predictor of the frequency of use of passive job search behavior and the mediating roles of management aspirations, proactivity, and career level. *Journal of Personnel Psychology, 14*, 131–141. doi: 10.1027/1866-5888/a000124
- Li, W.-D., Fay, D., Frese, M., Harms, P. D., & Gao, X. Y. (2014). Reciprocal relationship between proactive personality and work characteristics: A latent change score approach. *Journal of Applied Psychology, 99*, 948–965.
- Lord, R. G., & Emrich, C. G. (2000). Thinking outside the box by looking inside the box: Extending the cognitive revolution in leadership research. *Leadership Quarterly, 11*, 551–579. doi: 10.1016/S1048-9843(00)00060-6
- Lord, R. G., & Maher, K. J. (1993). *Leadership and information processing: Linking perceptions and performance*. Boston, MA: Unwin Hyman.
- Lyness, K. S., & Judiesch, M. K. (2008). Can a manager have a life and a career? International and multisource perspectives on work-life balance and career advancement potential. *Journal of Applied Psychology, 93*, 789–805. doi: 10.1037/0021-9010.93.4.789
- Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success. A meta-analysis. *Personnel Psychology, 58*, 367–408.
- Ng, T. W. H., & Feldman, D. C. (2014). Subjective career success: A meta-analytic review. *Journal of Vocational Behavior, 85*, 169–179.
- Paustian-Underdahl, S. C., Walker, L. S., & Woehr, D. J. (2014). Gender and perceptions of leadership effectiveness: A meta-analysis of contextual moderators. *Journal of Applied Psychology, 99*, 1129–1145. doi: 10.1037/a0036751.supp
- Perlmutter, M., & Hall, E. (1992). *Adult development and ageing* (2nd ed.). Chichester, UK: Wiley.

- Roberts, B. W., Caspi, A., & Moffitt, T. E. (2003). Work experiences and personality development in young adulthood. *Journal of Personality and Social Psychology, 84*, 582–593.
- Roth, P. L., Buster, M. A., & Barnes-Farrell, J. (2010). Work sample exams and gender adverse impact potential: The influence of self-concept, social skills, and written skills. *International Journal of Selection and Assessment, 18*, 117–130. doi: 10.1111/j.1468-2389.2010.00494.x
- Roth, P. L., Purvis, K. L., & Bobko, P. (2012). A meta-analysis of gender group differences for measures of job performance in field studies. *Journal of Management, 38*, 719–739. doi: 10.1177/0149206310374774
- Schein, V. E. (1973). The relationship between sex role stereotypes and requisite management characteristics. *Journal of Applied Psychology, 57*, 95–100. doi: 10.1037/h0037128
- Schuh, S. C., Hernandez Bark, A. S., Van Quaquebeke, N., Hossiep, R., Frieg, P., & Van Dick, R. (2014). Gender differences in leadership role occupancy: The mediating role of power motivation. *Journal of Business Ethics, 120*, 363–379.
- Schwartz, S. H., & Rubel-Lifschitz, T. (2009). Cross-national variation in the size of sex differences in values: Effects of gender equality. *Journal of Personality and Social Psychology, 97*, 171–185. doi: 10.1037/a0015546
- Spurk, D., Meinecke, A. L., Kauffeld, S., & Volmer, J. (2015). Gender, professional networks, and subjective career success within early academic science careers: The role of gender composition in inside and outside departmental support networks. *Journal of Personnel Psychology, 14*, 121–130. doi: 10.1027/1866-5888/a000131
- Turner, R. H. (1960). Sponsored and contest mobility and the school system. *American Sociological Review, 25*, 855–867.
- Warr, P. (2008). Work values: Some demographic and cultural correlates. *Journal of Occupational and Organizational Psychology, 81*, 751–775. doi: 10.1348/096317907x263638
- Wolff, H.-G., & Moser, K. (2009). Effects of networking on career success: A longitudinal study. *Journal of Applied Psychology, 94*, 196–206. doi: 10.1037/a0013350

Annett Hüttges

Helmholtz Centre Potsdam
 GFZ German Research Centre for Geosciences
 Telegrafenberg
 14473 Potsdam
 Germany
 Tel. +49 331 288-28985
 Fax +49 331 288-1619
 E-mail huettg@gfz-potsdam.de