Personality characteristics of male and female executives: Distinct pathways to success?

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ABSTRACT

It is widely believed that female and male leaders have fundamentally different characteristics and styles, which are thought to explain why organizations with more gender-diverse top management teams perform somewhat better. Unfortunately, few studies have concretely specified such differences or examined whether men and women in leadership roles, particularly executives, indeed differ on core psychological characteristics such as personality traits. Drawing on three alternative perspectives on the roles of personality and gender in leadership ascendancy, this study (a) examined whether men and women are more similar among executives than among non-executive employees, and (b) tested whether similar traits distinguish executives from lower-level employees across genders. Data were from a large ($N = 577$) sample of European executives (434 male, 143 female) and 52,139 non-executive employees (34,496 male, 17,643 female) who completed high-stakes personality assessments. Results generally supported a gender-similarities perspective. Gender differences on leadership emergence-relevant traits (i.e., Conscientiousness, Emotional Stability, Extraversion) were smaller among executives compared to non-executives. Further, similar traits distinguished executives from non-executives across genders. Both male and female executives tend to demonstrate an archetypical "leader personality" focused on assertiveness, high-level strategic thinking, and decisiveness. However, results also showed that hierarchical level differences in personality were much more strongly pronounced among women than men. Implications for gender equity in organizational leadership are discussed.

1. Introduction

There is growing interest among organizations and society at large for increasing the representation of women among organizational top management teams and providing more equitable opportunities for women to advance to critical organizational leadership roles (McKinsey & Company, 2015; Noland, Moran, & Kotschwar, 2016). Beyond moral and ethical arguments for the intrinsic value of ensuring equitable leadership opportunities for women, numerous meta-analyses have found that organizations whose top management teams are more gender diverse tend to perform somewhat better than other organizations (Hoobler, Masterson, Nkomo, & Michel, 2016; Post & Byron, 2015). Organizations and researchers have explored a variety of methods for

encouraging and supporting women's advancement to executive leadership positions (Ely, Ibarra, & Kolb, 2011; Hillman, Shropshire, & Cannella, 2007).

Despite these efforts, beliefs that female leaders are fundamentally different from male leaders remain widespread (Eagly, 2007). Such beliefs range in valence from stereotypes that women are too passive, too emotional, or otherwise unable to lead (Carli & Eagly, 2016) to more positive beliefs that women possess unique worldviews, cognitive frames, or personal competencies that make them uniquely qualified and capable as leaders (Eagly, 2016; Lammers & Gast, 2017). Many proponents of the latter view argue that women leverage unique skills to advance and perform in leadership roles. Underlying full range of such beliefs is an assumption that male and female leadership reflect two distinct populations with unique characteristics. Unfortunately, very few studies have concretely tested this assumption by examining the extent to which men and women in leadership, particularly high-level executive, positions indeed differ on measurable psychological characteristics (Hoobler et al., 2016).

Early studies finding gender similarities (cf. Hyde, 2005, 2014) among managers regarded these results as quite radical. For example, Templeton and Marrow (1972) noted that "the dilemma for a woman having managerial aspirations is often to deny her femininity or her managerial authority" (p. 32). It is unclear whether these similarities persist in contemporary organizational contexts. Larger-sample, contemporary investigations of gender differences among executives, applying modern advances in personality structural theory (John, Naumann, & Soto, 2008) are needed to evaluate early findings. The current study uses a large sample of top-level executive and non-executive employees assessed using a comprehensive framework (the Pan-Hierarchical Five Factor Model; Stanek & Ones, 2018) and at multiple levels of the personality trait hierarchy (Markon, 2009). Examining gender differences in both broad and narrow traits is critical because substantial differences in narrow traits may be diminished, or even zeroed out or reversed, when traits are aggregated to assess broader constructs at a higher hierarchical level (e.g., McCrae et al., 2005; cf. Kostal, Wiernik, Albrecht, & Ones, 2018). It is also critical to examine differences in relevant compound personality traits combining variance from multiple Big Five domains, as these traits are often the most predictive of work and career outcomes (Ones, Viswesvaran, & Dilchert, 2005). This study investigates gender similarities in executives' complete personality profiles in two ways. First, we compare the personality profiles of male and female top (C-level) executives and quantify the degree to which these groups are similar or different on a broad set of stable personality traits. The magnitude of these personality differences between male and female executives is compared against gender-based personality differences in a large non-executive sample. Second, we consider potential gender differences in the leadership ascendancy process that may create two distinct populations of male and female executives by examining whether distinct personality profiles differentiate executives from lower-level occupationally-diverse employees among men and women. Together, these investigations can inform theoretical accounts of leadership advancement among women and guide career development practice for women pursuing leadership roles and organizations seeking to diversify their management teams. These investigations can also suggest new directions for research on the mechanisms through which gender diversity in leadership impacts organizational success.

To guide our research questions, we draw on three alternative perspectives on the roles of gender and personality in leadership ascendancy. The first argues that executive positions are strong situations (Judge & Zapata, 2015) that exert consistent job demands and selection pressures, regardless of gender. The second argues that evaluations of individuals' behavior are driven by congruity with gender roles, leading to different job demands and evaluation criteria for male and female leaders. The third perspective argues that leadership role demands are consistent across genders, but that changing standards for leadership behavior permit men and women to leverage distinct profiles of traits to ascend to executive positions. Before outlining these alternative perspectives in greater detail, we highlight research on gender differences in personality traits and the critical role of personality for leadership ascendancy and success.

1.1. Gender differences in personality and their implications for leadership

Robust evidence abounds supporting small to moderate mean gender differences on a range of personality traits (Hyde, 2014; McCrae et al., 2005; Schmitt, Realo, Voracek, & Allik, 2008). Women tend to score weakly to moderately ($ds \approx 0.20$–0.55) higher on more "communal" traits, such as Agreeableness, the Enthusiasm aspect of Extraversion (sociability, positive emotionality), and the Orderliness aspect of Conscientiousness (organization, cautiousness), and lower on Emotional Stability, as well as "agentic" traits, such as the Assertiveness aspect of Extraversion (dominance, energy), and the Industriousness aspect of Conscientiousness (achievement, persistence; Stanek & Ones, 2018). These differences are consistent across personality measures and raters (McCrae et al., 2005) and larger in countries with greater economic development and gender equality (Schmitt et al., 2008).

Importantly, career and organizational research has linked many of the traits showing gender differences with leadership and upward career mobility, including extrinsic career success (Ones & Dilchert, 2009), leader emergence (Judge, Bono, Ilies, & Gerhardt, 2002), and leadership performance (Bono & Judge, 2004). Thus, gender personality differences might suggest that fewer women would enter leadership roles and that those women who do might be less effective than men. However, several meta-analyses have concluded that gender differences on leadership effectiveness tend to be small and potentially favor women (Eagly, Johannesen-Schmidt, & van Engen, 2003; Paustian-Underdahl, Walker, & Woehr, 2014). Thus, it is possible that men and women who ascend to leadership positions demonstrate different suites of traits; such gender-specific pathways have not been previously considered in large-scale studies of personality and leadership success.

1.2. Perspectives on personality and gender roles in leadership ascendancy

Multiple theoretical and empirical perspectives can be brought to bear to inform our investigations of the personality profiles of male and female executives. Whereas some perspectives predict similar personality profiles and ascendancy pathways for men and women, others suggest at least partly gender-specific trait profiles.

1.2.1. The gender-invariant role demands perspective

Implicit leadership theory predicts that we choose as leaders people who display tendencies we perceive as "leader-like" (Hogan, Curphy, & Hogan, 1994; Rosenthal & Pittinsky, 2006). In other words, we select leaders who match our stereotypical conception of the leader role (Lord, Foti, & De Vader, 1984; Shondrick, Dinh, & Lord, 2010). These processes influence not only selection for leadership roles by others, but also self-perceptions of leadership ability and pursuit of leadership opportunities (Carbonell & Castro, 2008; Dickerson & Taylor, 2000). Studies have consistently found that heightened levels of agentic qualities (e.g., assertive, competitive) and reduced levels of communal qualities (e.g., compassionate, friendly) are most associated with perceptions of leadership ability, potential, and effectiveness (Carli & Eagly, 2016). These qualities are stereotypically "masculine" and ascribed more to men than women (Koenig, Eagly, Mitchell, & Ristikari, 2011; Schein, 1973; Spence & Buckner, 2000).

These masculine, agentic evaluative standards appear to be applied relatively equally to both men and women, potentially leading many women to receive lower leadership ratings due to perceptions that they are less agentic and more communal (Melamed & Bozionelos, 1992; Pullen & Vachhani, 2018). Indeed, women often face pressure to adapt their interpersonal style to be more masculine in order to compete against men (e.g., for higher-level employment; Pullen & Vachhani, 2018; Wessel, Hagiwara, Ryan, & Kermond, 2015). Consistent with impression formation models, which emphasize the need for clear, unambiguous information about a person's counter-stereotypical attributes to overcome stereotypes (Uleman & Kressel, 2013), women often must possess (or simply present) exaggerated levels of confidence, independence, and assertiveness to be judged as qualified for leadership (Wessel et al., 2015). Thus, implicit leadership theory and impression formation models suggest that leadership roles exert strong selection pressures that consistently emphasize agentic characteristics across genders. As a result of these gender-invariant pressures, the personality profiles of both men and women who have attained executive positions might indeed be highly similar.

The consistency of leadership role demands is further supported by job analytic research and practice, which finds similar task responsibilities and employee characteristic demands across a wide range of managerial, leadership, and executive occupations (Campbell, 2013). Occupants of managerial positions at all levels show similar trait profiles that become increasingly pronounced at higher organizational levels (Ones & Dilchert, 2009). Leadership positions appear to present relatively clear and consistent guidelines for behavior and effective performance. Taken together, these three approaches (i.e., implicit leadership theory, impression formation models, and job analysis) suggest that executive leadership roles are similar for men and women, potentially leading to similar psychological profiles for male and female executives, as well as similar leadership ascendancy pathways across genders.

Several early, small-sample studies comparing male and female managers on isolated personality characteristics have provided initial support for the gender similarities perspective. These studies found that managers were high on agentic traits, such as dominance, responsibility, achievement, and self-assurance, and low on communal nurturance, regardless of gender (e.g., Brenner, 1982; Brenner & Greenhaus, 1979; Offermann & Beil, 1992; Sachs, Chrisler, & Devlin, 1992; Steinberg & Shapiro, 1982), with managerial samples showing smaller gender differences than in the general population (Melamed & Bozionelos, 1992).

1.2.2. The gender-role congruity perspective

Men and women are judged against different standards when evaluating their leadership potential and effectiveness. Social role congruity theories (Eagly, 1987; Eagly & Karau, 2002) posit that there are clear expectations for both men's and women's behavior, and social and economic sanctions (i.e., backlash) may occur when an individual displays counter-stereotypical or social norm-violating behavior. For example, men who display high levels of communal traits may be evaluated as weak or overly sensitive (Moss-Racusin, Phelan, & Rudman, 2010), whereas women who present themselves as self-confident, assertive, and competitive may be perceived as bossy, arrogant, cold, "shrill," or unfeminine (Phelan, Moss-Racusin, & Rudman, 2008) and face social and economic reprisals (Rudman & Phelan, 2008).

With regard to ascendancy to leadership, the gender-role congruity perspective thus posits that women advance to high-level positions not through agentic actions, but through work behaviors that exemplify gender-role congruent communal qualities, such as interpersonal facilitation, teamwork, and participative decision-making. Indeed, there is voluminous evidence showing that violating feminine niceness prescriptions adversely affects women's promotion prospects (Heilman, 2001; Judge, Livingston, & Hurst, 2012; Lyness & Judiesch, 1999) and leadership effectiveness evaluations (Eagly, Makhijani, & Klonsky, 1992), as well as studies finding that female leaders are more negatively evaluated when they use more assertive strategies, such as intimidation (Bolino & Turnley, 2003) or discipline (Atwater, Carey, & Waldman, 2001; Brett, Atwater, & Waldman, 2005).

1.2.3. The changing leadership roles perspective

A third perspective argues that the nature of leadership roles themselves are changing. Similar to the first perspective (and unlike the second perspective), this changing leadership roles perspective argues that there are clear role demands associated with

leadership positions which are consistent across genders. However, unlike the first perspective, the changing leadership roles perspective assumes that these role demands have gradually changed over time. More specifically, leadership and management performance are increasingly recognized to be multidimensional, with distinct performance facets that require unique personal characteristics and competencies (Campbell, 2013; Campbell & Wiernik, 2015). Thus, while traditional agentic, "masculine" traits may be important for some leadership criteria (e.g., leader emergence, Judge et al., 2002; idealized influence, inspirational motivation, Bono & Judge, 2004; initiating structure, Campbell, 2013), more communal traits are equally important for other criteria (e.g., consideration, empowerment, coaching, Campbell, 2013; intellectual stimulation and other aspects of "transformational leadership," Bono & Judge, 2004). In light of increasing recognition of the importance of consideration, transformational leadership, and related constructs (e.g., servant leadership; Sendjaya & Sarros, 2002), as well as technological changes requiring more democratic leadership styles (Lipman-Blumen, 2000; McCauley, 2004), Koenig et al. (2011) meta-analytically showed that leader stereotypes are becoming gradually less masculine and more inclusive of feminine (communal) qualities, such as sensitivity, understanding, and warmth.

In sum, evidence suggests that, subsequent to the early studies on gender differences in management described above (e.g., Brenner & Greenhaus, 1979; Templeton & Marrow, 1972), societal and cultural shifts have fostered a broadening of leadership roles which may in turn enable women in high-level positions to demonstrate distinct personal strengths emphasizing more communal dimensions of leadership performance. This perspective offers a complementary explanation to the gender-role congruity perspective for the occurrence of potential gender differences in contemporary leadership ascendancy.

1.3. Hypotheses

The alternative perspectives described above produce competing hypotheses regarding gender differences in personality traits among executives, as well as gender differences in the leadership ascendancy process.

1.3.1. Gender differences among executives and non-executives

The first set of two competing hypotheses address the occurrence of gender differences in personality traits between male and female executives, and more specifically how these compare to gender differences in personality traits in the larger, non-executive population. The theoretical question at stake here is whether executive positions exert similar personality demands across genders, such that leadership ascendancy has a homogenizing effect.

1.3.1.1. Gender similarities. The *gender-invariant role demands perspective* posits that executive positions exert strong role demands that lead organizations to select (and individuals to self-select) for high levels of agentic traits for both male and female executives. Because these selection pressures are posited to be consistent across genders, this perspective theorizes that leadership ascendancy has a homogenizing effect on gender personality distributions—men and women in higher corporate ranks are selected for (or adapt to) increasingly severe and similar job demands (Melamed, 1996). In terms of observed personality profiles, this perspective predicts that male and female executives are more similar (as compared to male and female non-executives) in their personality traits.

Hypothesis 1a. *Personality gender differences are smaller among C-level executives than among non-executive samples.*

1.3.1.2. Gender differences. The *gender-role congruity perspective* posits that men and women are evaluated according to gendered behavioral norms, such that men are expected to demonstrate agentic traits and women to exemplify communal traits. Individuals who violate these norms, such as women high on assertiveness and competitiveness, are judged harshly and face backlash, hindering their advancement and leading personality gender differences to persist even among high-level executives. The *changing leadership roles perspective* can complement this process by suggesting that one way through which women can advance in the face of selection against women with traditionally "leader-like" agentic traits is by emphasizing emerging aspects of leadership performance, such as transformational and democratic leadership, that rely on more traditionally-feminine communal traits. Thus, these perspectives predict that gender differences in observed personality profiles that are present in the general population will persist among individuals at high levels of organizational leadership hierarchies.

Hypothesis 1b. *Personality gender differences among C-level executives are similar to those among non-executives, with men showing higher levels of agentic traits and women showing higher levels communal traits.*

1.3.2. Gender differences in the leadership ascendancy process

The next set of two competing hypotheses address the occurrence of gender differences in the personality profiles that differentiate executive from non-executive employees. In other words, are the traits that differentiate between executives and non-executives the same for men and women?

1.3.2.1. Gender similarities. The *gender-invariant role demands perspective* similarly posits that men and women follow similar leadership ascendancy pathways, such that individuals higher on agentic traits will tend to advance to higher organizational levels. Thus, this perspective predicts that similar patterns of (high agentic, low communal) traits will distinguish executives from non-executive employees across genders.

Hypothesis 2a. *The traits that differentiate C-level executives and non-executives are generally the same for men and women.*

1.3.2.2. Gender differences. By contrast, both the *gender-role congruity* and *changing leadership roles perspectives* posit that men and women demonstrate different competencies in the process of hierarchical advancement. Whereas men may follow traditionally "leader-like" agentic pathways to leadership ascendancy, women instead emphasize communal traits and more interpersonally-sensitive leadership behaviors, such as teamwork, consideration, and participative decision-making, to get ahead. While female leaders may, relative to female non-leaders, still exhibit more agentic qualities (as these traits are necessary for setting and achieving high advancement goals; Fuller & Marler, 2009), negative selection will cause such differences to be smaller than among men.

Hypothesis 2b. *Traits that differentiate C-level executives from non-executives are gender-specific. Male executives will be differentiated by agentic traits, whereas female executives will be differentiated less by agentic traits and more by communal traits.*

2. Method

2.1. Setting and participants

A large international consultancy firm specialized in recruitment and assessment provided European assessment data. Anonymized data were obtained for 577 European executives (434 male, 143 female) and 52,139 non-executive employees (34,496 male, 17,643 female) who completed high-stakes personality assessments between 2002 and 2008. Participants were primarily located in Belgium (466 executives [397 male, 69 female], 42,930 non-executives [27,433 male, 15,497 female]), with a smaller number located in other European countries (111 executives [37 male, 74 female], 9209 non-executives [7063 male, 2146 female]).
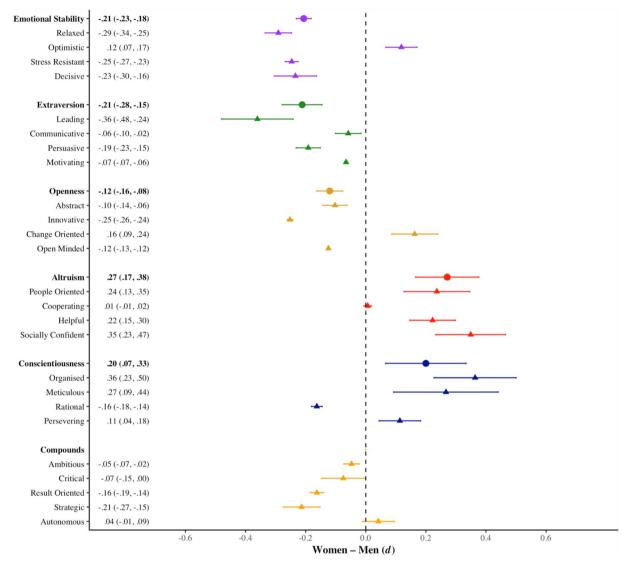
2.2. Measure

Personality was assessed using the Business Attitudes Questionnaire (BAQ; Bogaert, Trbovic, & Van Keer, 2008; Vrijdags, Bogaert, Trbovic, & Van Keer, 2014), a workplace-contextualized personality instrument developed for organizational applications, such as personnel assessment and screening. The BAQ includes 25 work-related personality scales. BAQ scales assess 20 personality facets subsumed under the Big Five traits (see Appendix), as well as 5 compound personality traits (cf. Ones et al., 2005; Stanek & Ones, 2018) that are particularly relevant for work contexts (Ambitious, Critical, Result Oriented, Strategic, Autonomous), collectively grouped under the label "Professionalism". The 25 BAQ-scale scores are computed as the mean of six item scores per scale, with each item rated on a 5-point Likert scale (*1 = totally disagree; 5 = totally agree*). Big Five domain scores are computed by averaging scale scores for their four respective facet scales. Descriptions of the 25 BAQ facets are provided in the Appendix.

The psychometric properties of the BAQ have been reviewed and certified by the Psychological Testing Centre of the British Psychological Society (BPS), an independent and leading organization for setting standards in psychological testing. BPS-certification involves a multi-round revision process through which reliability, construct validity, and predictive criterion-related validity are established. The BAQ scales have been shown to predict critical job performance criteria, including subordinate (direct report) evaluations of executives' job competencies and non-executives' first-year performance appraisal scores, consistent with meta-analytic findings (Barrick, Mount, & Judge, 2001; Ones et al., 2005). In terms of convergent validity, the BAQ manual reports substantial correlations with Big Five dimensions as assessed by other work-contextualized personality inventories (cf. Shaffer & Postlethwaite, 2012), such as the OPQ32 (SHL, 2006)—0.46 (Emotional Stability), 0.51 (Extraversion), 0.47 (Openness), 0.64 (Agreeableness), and 0.55 (Conscientiousness). The BAQ manual also reports similar correlations with non-contextualized personality scales, such as the NEO PI-R (Costa & McCrae, 1992)—0.43 (Emotional Stability), 0.53 (Extraversion), 0.45 (Openness), 0.08 (Agreeableness),[1] and 0.47 (Conscientiousness). These values are consistent with meta-analytic estimates of mean convergent validities and 95% credibility intervals for Big Five scales (Pace & Brannick, 2010).

2.3. Analyses

To test our hypotheses, we computed standardized mean differences (Cohen's *d*) on the BAQ scales for four sets of group

[1] The low correlation between Agreeableness measures on the BAQ and NEO likely reflects that the BAQ Altruism (Agreeableness) scale includes items related to warmth and social connection, which the NEO PI-R includes on its Extraversion scale. However, warmth and social connection reflect compound traits tapping both Agreeableness and Extraversion (see Davies, 2013; Stanek & Ones, 2018). Their inclusion with Agreeableness facets is consistent with many other widely-used personality inventories (e.g., the Hogan Personality Inventory; Hogan & Hogan, 1992; the OPQ; SHL, 2006). This correlation is also consistent with the stronger correlations observed between OPQ and BAQ Agreeableness and between OPQ and NEO Agreeableness, two scales that are both widely-regarded as assessing the Agreeableness construct (mathematically possible correlations between BAQ and NEO Agreeableness, given correlations between BAQ and OPQ Agreeableness and between BAQ and NEO Agreeableness [*r* = 0.575; SHL, 2006] range –0.26 to 0.99).
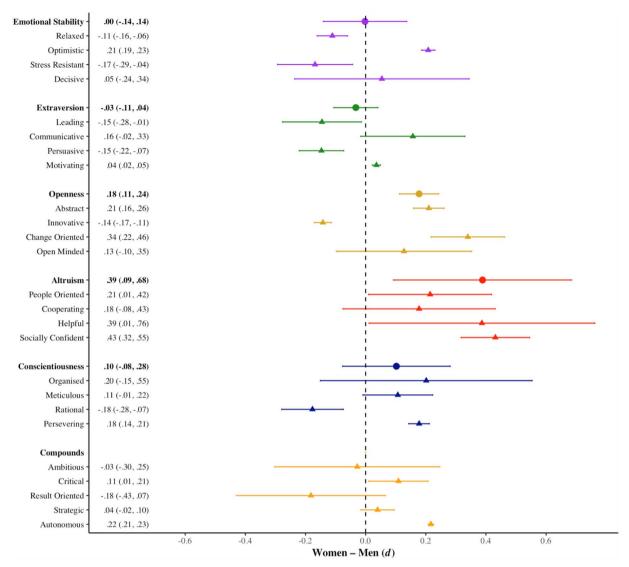
Fig. 1. Gender differences among non-executives (*N* = 17,643 women, 34,496 men). Values are inverse variance-weighted mean Cohen's *d* values, with 95% confidence intervals. Positive values indicate that women score higher.

comparisons. To test whether men and women are more similar among executives than among non-executive employees (Hypothesis 1a vs. 1b), we compared male–female differences among C-level executives to gender differences among non-executive samples (i.e., gender differences in personality across hierarchical levels). To test whether similar traits distinguish executives from lower-level employees across genders (Hypothesis 2a vs. 2b), we compared executive to non-executive groups among male and female samples (i.e., hierarchical level differences in personality across genders). Because sample sizes were widely divergent for executive and non-executive groups, we estimated sampling error for *d* values using the formula accounting for unequal group sizes (Schmidt & Hunter, 2015).

To control for possible country-level mean differences on personality traits which might affect observed gender and hierarchical level differences (Ostroff & Harrison, 1999), we computed comparisons separately within the Belgian (BAQ administered in Dutch or French) and other European (BAQ administered in English) samples, then combined the within-country *d* values using psychometric meta-analysis (Schmidt & Hunter, 2015; cf. Ones et al., 2012) with the *psychmeta* package in R (Dahlke & Wiernik, 2017). For each comparison, we computed the inverse variance-weighted mean effect size and its confidence interval.[2] We interpreted effect size magnitudes using the empirical effect size distributions of applied psychological research established by Paterson, Harms, Steel, and Credé (2016), characterizing *d* values less than 0.24 as negligible, between 0.25 and 0.41 as small, between 0.42 and 0.65 as

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[2] As each meta-analysis was based on two samples, we focused our interpretations of results on the mean effect and its confidence interval, rather than estimates of true variability (Wiernik et al., 2017). For most comparisons, confidence intervals for the Belgian and other European samples overlapped substantially.

Fig. 2. Gender differences among executives (N = 143 women, 434 men). Values are inverse variance-weighted mean Cohen's d values, with 95% confidence intervals. Positive values indicate that women score higher.

moderate, and d values of 0.65 and greater as large (cf. Wiernik, Kostal, Wilmot, Dilchert, & Ones, 2017), noting that most relations with demographic characteristics tend to be small (mean d = 0.24, SD = 0.18).

3. Results

3.1. Gender differences in personality across hierarchical levels

Comparisons of men and women for C-level executive and non-executive samples are shown in Figs. 1 and 2. Among non-executive samples, women scored somewhat higher on Altruism (Agreeableness, d = 0.27) and Conscientiousness (d = 0.20) and somewhat lower on Emotional Stability (d = −0.21) and Extraversion (d = −0.21). Facet-level traits generally showed similar differences, with some exceptions (e.g., women scored slightly higher on Change Oriented, d = 0.16, but slightly lower on Rational, d = −0.16). Among C-level samples, differences on Conscientiousness, Emotional Stability, and Extraversion were more muted or absent altogether (ds range −0.03 to 0.10). These smaller gender differences on leadership-relevant traits among executives support the gender-invariant role demands perspective, which argues that executive positions have a homogenizing effect. Thus, Hypothesis
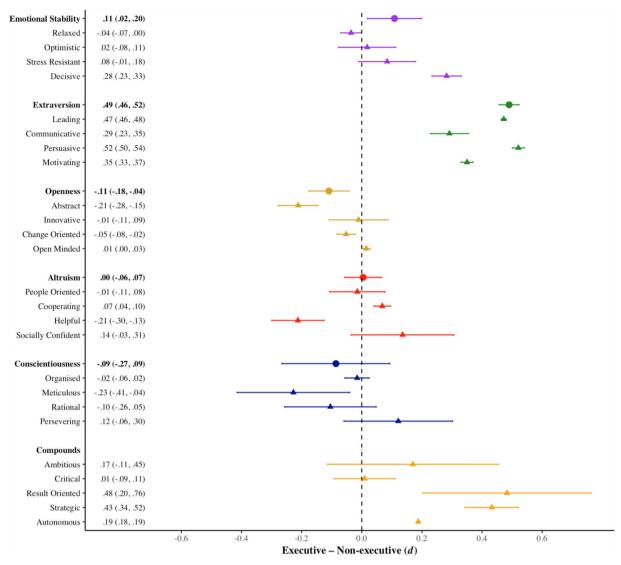
Fig. 3. Hierarchical level differences among men (N = 434 executives, 34,496 non-executives). Values are inverse variance-weighted mean Cohen's d values, with 95% confidence intervals. Positive values indicate that executives score higher.

1a was supported, whereas Hypothesis 1b was not.

However, personality traits that are likely to be under weaker selection pressure (i.e., less relevant for leader emergence; Judge et al., 2002) did not show a similar homogenizing pattern. Executive women continued to show higher levels of Altruism/Agreeableness (d = 0.39) and the Change Oriented (d = 0.34) and Abstract (d = 0.21) Openness facets, compared to executive men, though confidence intervals for Altruism/Agreeableness were quite wide.

3.2. Hierarchical level differences in personality across genders

Comparisons of C-level executive to non-executive respondents for men and women are shown in Figs. 3 and 4. Among men, C-level executives scored much higher than non-executives on Extraversion (d = 0.49, facet ds range 0.29 to 0.52) and the Decisive facet of Emotional Stability (d = 0.28), as well as somewhat lower on the Abstract (d = −0.21), Helpful (d = −0.21), and Meticulous (d = −0.23) facets. Male C-level executives also scored higher on the Results Oriented (d = 0.48), Strategic (d = 0.43), and Autonomous (d = 0.19) compound traits.
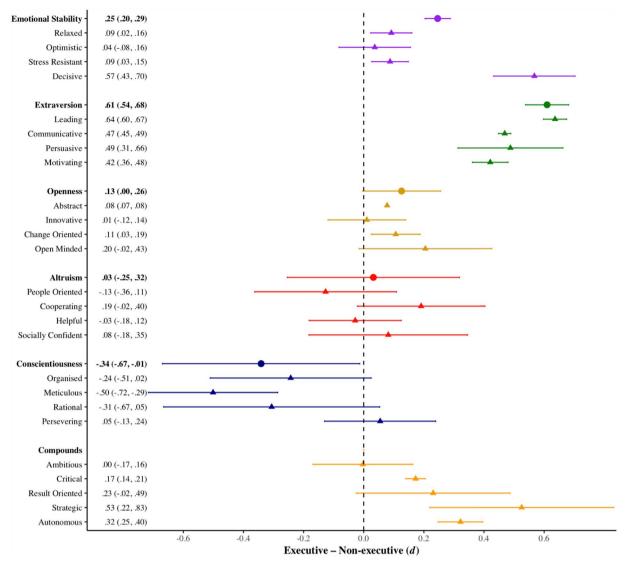
Fig. 4. Hierarchical level differences among women (N = 143 executives, 17,643 non-executives). Values are inverse variance-weighted mean Cohen's d values, with 95% confidence intervals. Positive values indicate that executives score higher.

Among women, executives showed a similar overall pattern of differences compared to non-executive respondents as men, but the magnitudes of these differences were often much exaggerated. Executive women scored much higher than non-executive women on Extraversion (d = 0.61, compared to 0.49 for men), Decisive (d = 0.57, compared to 0.28 for men), Results Oriented (d = 0.23, compared to 0.48 for men), Strategic (d = 0.53, compared to 0.43 for men), and Autonomous (d = 0.32, compared to 0.19 for men). Executive women also scored lower than non-executive women on Meticulous (d = −0.50, compared to −0.23 for men).

This pattern of differences suggests that women ascending to leadership positions demonstrate similar personality characteristics as ascending men. Both male and female executives tend to demonstrate an archetypical "leader personality" focused on assertiveness, high-level strategic thinking, and decisiveness. However, we found that this pattern of hierarchical level differences was much more pronounced among women than among men, which may suggest that selection pressures on agentic traits are even stronger among women than among men to be chosen for (and self-select into) high-level leadership roles. The picture that emerges is one of the C-suite as a professional role with strong demands for an agentic personality profile, with the threshold to fit this leadership profile being further away for the average woman compared to the average man.

4. Discussion

In this study, we used a large sample of male and female executives and non-executive occupationally-diverse employees to examine gender differences among top-level managers in organizations, as well as potential gender differences in leadership ascendancy processes. Our results show that male and female leaders are not fundamentally different populations. We found that gender differences on broad, narrow, and compound personality traits are smaller among executives than among lower-level occupationally-diverse employees, which is in line with the idea that executive roles exert similar selection pressures for men and women. We also found that similar patterns of traits distinguished executives from non-executives among men and women and, importantly, that executives (male and female) are consistently characterized by mainly agentic personality features. Our findings thus generally do not support the idea that women ascending to leadership roles demonstrate a distinct profile of more communal characteristics, either to conform to gender-role norms or in response to broadened leader role demands. Instead, our findings support a gender-similarities perspective where men and women in executive positions demonstrate a similar pattern of classically masculine personality traits.

Interestingly, consistent with impression formation models, the pattern of hierarchical level differences was much more strongly pronounced among women than men, which may suggest that women in particular face pressure to adopt masculine interpersonal styles in order to be judged (by themselves or others) as qualified for leadership. The personality traits that distinguish female executives support a conclusion that women must be truly exceptional in their display of "leader-like" qualities to advance to the highest organizational ranks; to advance to executive roles, women "must do everything men do, backwards and in high heels" (cf. Richards, 1988; Thaves, 1982).

4.1. Implications for gender equity in organizational leadership

Our findings have implications for organizational efforts to promote gender equity among their leadership. First, organizations must ensure that female executives are not penalized for demonstrating agentic, typically masculine personality traits. In contrast to widespread beliefs that female leaders have distinct characteristic personalities and styles (Eagly, 2016), we found that gender differences among executives are generally small and that the same pattern of elevated traits distinguished executives from non-executives across genders. In light of research showing that women are penalized for agentic traits (Phelan et al., 2008), our findings suggest that female executives (as well as women pursuing executive positions) are at particular risk for sanctions and backlash. Organizations must strive to counter these biases, such as by raising awareness of gender stereotypes, taking a zero-tolerance approach to gender-based devaluations, and implementing more-structured evaluation and promotion systems (Ely & Thomas, 2001; cf. Hoffman et al., 2012).

Second, in the general population, women tend to be lower on the traits that lead individuals to pursue and be selected for leadership roles (McCrae et al., 2005; Schmitt et al., 2008). As a consequence, a relatively small pool of women is likely to be represented among organizational leaders (particularly high-level executives), even in the absence of bias effects. As women rise in the hierarchy, they become increasingly scarce, making them more visible and subject to greater scrutiny (Ely et al., 2011). Organizations, therefore, must ensure that current and rising female leaders are given adequate resources, support, and mentoring to foster development and success (Tharenou, 2005). There are diverse perspectives on how such female-leadership development programs should be organized (cf. the "add-women-and-stir" approach discussed by Martin & Meyerson, 1998, p. 312; versus the "fix-the-woman" approach presented in Ely & Meyerson, 2000). A recent framework presented by Ely et al. (2011) is consistent with the overall message of the current study. This framework is grounded in theories of both gender and leadership; it shows how gender shapes women's paths to leadership without either victimizing or blaming women, while at the same time cultivating in women a sense of agency. In this approach, leadership development is seen as an identity transition (Day, Harrison, & Halpin, 2008), with gender having an impact on the processes of both claiming *and* granting a leader identity. For example, just as women may need to (learn how to) proactively negotiate for promotions they might otherwise not get, managers as gatekeepers can (learn how to) reconsider the relevance of the implicit criteria they use to fill critical upper-level roles.

Third, in addition to preventing adverse treatment by others, organizations should also strive to ensure that women with high leadership potential and interest do not self-select out of high-level positions. In addition to providing female mentors and role models (Carbonell & Castro, 2008; Tharenou, 2005), organizations might also consider providing formal leadership potential feedback to reduce misperceptions of ability (Brands & Fernandez-Mateo, 2017), adopting career planning programs that explicitly direct employees to explore leadership pathways (Wiernik & Wille, 2018), and implementing practices that enhance work–family balance (Lyness & Judiesch, 2008).

4.2. Theoretical implications for gender diversity and organizational success

Our results also have implications for ongoing research and theoretical development exploring when and how gender diversity in leadership impacts organizational success (Knight et al., 1999). Much of the research finding higher performance for firms with female leaders attribute these effects to unique "cognitive frames" (Post & Byron, 2015) or "worldviews" (Mensi-Klarbach, 2014) that

female leaders may bring into organizations because of their unique developmental experiences. However, our results suggest that male and female executives reflect fundamentally similar populations, at least in terms of underlying personality traits. Thus, higher performance among female-led firms may not reflect the influence of women per se, but instead reflect broader benefits and covariates associated with merit-based governance, equitable organizational cultures, and corporate social responsibility (Aguinis & Glavas, 2012).

4.3. Limitations and future directions

Five limitations of this study should be noted. First, we focused on how people describe their own personality traits. Personality self-perfections are critical drivers of people's identities, the interactions and activities they are willing to enter, the roles they are willing to perform, and how they perform them (Hogan & Roberts, 2000), and they converge strongly with personality other-ratings (Connelly & Ones, 2010). However, personality other-ratings (i.e., their "reputation"; Hogan & Shelton, 1998) also provide unique insights and incremental validity (McAbee & Connelly, 2016). Future research should consider gender differences in supervisor-, peer-, and subordinate-ratings of executive personality, particularly with regards to the interaction of gender and personality other-perceptions on executive selection decisions.

Second, beyond considering alternative personality rater sources, future research should also consider using alternative personality instruments. The current study relied on actual organizational testing data which were collected using a proprietary personality instrument. As an applied field, it is critical that we consider psychological instruments that are used primarily in organizational practice, and that we be open to the insights that can be drawn from practitioner data (Ones, Kaiser, Chamorro-Premuzic, & Svensson, 2017). This is particularly the case when the research topic requires data which are difficult (or impossible) to obtain without practitioner collaboration, such as C-level personality information (Cycyota & Harrison, 2006; Resick, Whitman, Weingarden, & Hiller, 2009). Nevertheless, it remains to be examined to which extent the findings resulting from these data replicate with other personality instruments. One potential concern with the current study is the low correlation of the BAQ Altruism scale with NEO PI-R Agreeableness (but note its substantial correlation with OPQ Agreeableness; see Footnote 1).

Third, while this study found strong evidence that similar traits distinguish executives from non-executives across genders, it investigated the ascendancy process only indirectly. We were unable to disentangle personality traits' impacts on self-selection/executive career goal pursuit versus other-perception, evaluation, and selection. It is possible, for example, for our findings to reflect that only particularly agentic women are willing to persist through discouraging discriminatory experiences to attain leadership roles. Future research should examine these nuances in the ascendancy process using longitudinal designs wherein hierarchical transitions are systematically monitored over time. Such designs should consider non-linear trait effects (e.g., women face backlash unless they are exceptionally high on agentic traits) and interactions among agentic and communal traits (e.g., communal traits might compensate for agentic traits). Longitudinal designs can also control for potential maturational effects caused by leadership role experiences (i.e., individuals becoming more agentic as they climb the corporate ladder; e.g., Bleidorn, Hopwood, & Lucas, 2018; Nieß & Zacher, 2015), which might also make executives more homogeneous and divergent from non-executives.

Fourth, this study examined the roles of personality and gender in leadership ascendancy in a large sample of employees from numerous organizations in Belgium and other European countries. It is possible that gender-invariant and gender-specific influences of personality traits on leadership emergence and ascendancy may vary across national and organizational contexts. For example, one might hypothesize that gender differences in leadership ascendancy pathways might be larger in more gender egalitarian countries and organizations, as such contexts may have more progressive attitudes about women's equality and provide female leaders with more freedom to express more feminine qualities (e.g., Hoobler et al., 2016; cf. Schmitt et al., 2008; though note that Belgium, the country for most of the current sample, is among the most gender-equitable countries [12/160 according to the UN Gender Inequality Index]; UNDP, 2016).

Finally, this study focused on executives' personality profiles, rather than on other antecedents of leadership behavior or on evaluations of performance or effectiveness. Preliminary research suggests that perceptions of "potential" (including personality traits, abilities, and other characteristics) and prior experiences and successes differentially influence leadership selection judgments for male and female applicants (Barsh & Yee, 2011; Player, Randsley de Moura, Abrams, & Tresh, 2017). An interesting avenue for future research would be to consider interactions between personality and experience in driving executive selection decisions and whether these effects differ across genders.

5. Conclusion

This study found that male and female C-level executives represent similar populations with a common profile of characteristic agentic, strategic personality traits. Ongoing research and practice should acknowledge that gender similarity, not difference, characterizes leader personality and potential (cf. Hyde, 2014). Continued organizational attention to reducing gender biases and remove structural barriers will help both men and women to realize their similar leadership potentials.

Appendix

Table A1
Descriptions of Business Attitudes Questionnaire (BAQ) scales.

Scale	Low pole	High pole
Emotional Stability		
Relaxed	Feels anxious or guilty in the event of failure; worries, lacks calm, is nervous	Free from anxiety, maintains calm in the face of failure, is calm and relaxed
Optimistic	Expects things to go badly, worries about how things will turn out; is pessimistic	Confident that things will turn out well; does not worry about how things will turn out; remains cheerful
Stress-resistant	Susceptible to stress; has difficulties coping with tension and pressure; becomes affected by situations quickly	Is not susceptible to stress, particularly bothered by tension and pressure, or easily affected by situations
Decisive	Hesitates over decisions; needs time to reach conclusions	Makes decisions quickly; draws conclusions quickly
Extraversion		
Leading	Lets others take the lead; lacks initiative; does not like giving instructions	Likes to lead; shows initiative; instructs others
Communicative	Is averse to speaking; has difficulty keeping a conversation going; is not very articulate	Likes speaking; keeps conversations going easily; is very articulate
Persuasive	Is a poor salesperson; is ill-at-ease during negotiations; is not convincing	Is able to sell; is at ease during negotiations; is persuasive
Motivating	Is uninspiring; is not a motivating influence; does not motivate others during a task	Inspires others, is a motivating influence, fills others with enthusiasm for a task
Openness		
Abstract	Deals in concrete things; has both feet on the ground, is practical-minded	Theoretical, is intellectually curious, likes complex, abstract things
Innovative	Lacks inventiveness and creativity; rarely comes up with new ways of looking at things	Is creative; generates new ideas and comes up with new ways of looking at things
Change-oriented	Prefers routine, needs security; prefers regularity to variety	Likes change, tries out new things; prefers variety to regularity
Open-minded	Does not see many possibilities; has trouble thinking up alternatives and options	Sees various possibilities; thinks up alternatives and options
Altruism (Agreeableness)		
People-oriented	Enjoys being alone; does not need and is not very fond of company; focuses on self	Enjoys group situations, is fond of and seeks out company, focuses on others
Cooperating	Rarely consults or involves others, does not seek out cooperation, places own interests above those of the group	Consults and involves others; seeks out cooperation, places group's interests above own
Helpful	Self-involved, lacks a helpful attitude, is unconcerned about others, lacks consideration, leaves others to fend for themselves	Helps when others face problems; gives advice and is considerate

Socially confident	Finds it hard to establish contacts; does not always get along with people; can at times be unfriendly and unpleasant	Establishes contacts easily, is cheerful; gets along with people; is friendly, pleasant, and spontaneous
Conscientiousness		
Organized	Does not work to a plan, pays insufficient attention to time limits, pays little attention to routine tasks	Plans carefully, taking priorities into account; sets time limits, pays attention to routine tasks
Meticulous	Not very methodical or meticulous; has little eye for detail	Works methodically and meticulously; pays attention to details
Rational	Pays little attention to facts; relies on intuition, tends not to quantify; speaks or acts	Sticks to the facts; evaluates, measures, and quantifies; thinks twice before speaking or acting
Persevering	Loses heart quickly, gives up when opposed; drops tasks quickly; rarely sees things through to a successful conclusion	Does not give up in the face of setbacks; keeps trying and perseveres; is persistent in the face of opposition, gets stuck into tasks
Compounds ("Professionalism")		
Ambitious	Not very career-minded, lacks ambition; sets moderate objectives	Career-minded and ambitious; sets difficult objectives; wants to go far and to get ahead
Critical	Does not take a very critical mindset; accepts information or ideas from others without questioning them	Examines information critically; identifies potential drawbacks and limitations
Results-oriented	Is not very results-oriented; feels little need to achieve great results; is not competitive	Likes to achieve results and to stand out; is very competitive
Strategic	Sets short-term objectives; looks at things from an operational or short-term perspective	Sets long-term objectives, looks at things from a strategic or long-term perspective
Autonomous	Adapts to situations; takes circumstances into account; does not have own approach or opinions	Influences and leaves own mark on situations; has own approach and opinions

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