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# Gender at Work across Nations: Men and Women Working in Male-Dominated and Female-Dominated Occupations are Differentially Associated with Agency and Communion

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Abstract

Occupational gender segregation is a worldwide phenomenon. Research from Western regions such as the U.S. and Europe shows that the observation of occupational gender segregation can perpetuate gender stereotypes (social role theory; men are ascribed agentic traits, whereas women are ascribed communal traits). However, predictions from social role theory have not been well-tested in non-Western nations. In a study with 1,918 participants from ten nations systematically differing in gender inequality, we investigated the extent to which target men and women in gender-segregated occupations are associated with stereotype-relevant traits. Results showed that 12 preselected occupations were perceived as gender-segregated in all nations. In line with social role theory, across nations, target men and women in male-dominated occupations were associated with agentic traits, whereas targets in female-dominated occupations were associated with communal traits. Targets' gender, but not national-level gender inequality, moderated these results. The relevance of cross-national research for understanding gender stereotypes and pathways to reduce gender inequality are discussed.

*Keywords:* social role theory, occupational gender segregation, gender stereotypes, agency, communion, cross-cultural psychology

**Gender at Work across Nations: Men and Women Working in Male-Dominated and Female-Dominated Occupations are Differentially Associated with Agency and Communion**

Despite recent societal changes towards more gender equality in the labor market worldwide, men and women are still unevenly distributed across different occupations (e.g., Cortes & Pan, 2017). Occupational gender segregation is a central aspect of gender inequality – that is, women and men's unequal access to and control over the material and non-material assets and resources of society (European Commission, 2009). Although the extent of occupational gender segregation varies over time and between nations, it is visible to some extent in most (if not all) nations around the world (e.g., Blackburn, 2000; Blackburn & Jarman, 2006; Borrowman & Klasen, 2019; Cortes & Pan, 2017). A vast amount of interdisciplinary literature has identified factors contributing to occupational gender segregation. Among these are individual-level factors such as gender differences in preferences for job attributes (e.g., Cortes & Pan, 2017) or life goals (e.g., Diekman et al., 2017; Gino et al., 2015), as well as structural factors such as lack of affordable childcare and lack of gender quotas (e.g., Pološki Vokić et al., 2019).

One factor contributing to occupational gender segregation is gender stereotypes. As outlined by *social role theory* (e.g., Eagly & Wood, 2012), a combination of individual-level and structural factors creates gendered divisions of labor. Women are more likely to occupy caretaking and nurturing roles (e.g., caring for children or the elderly), whereas men are more likely to occupy roles associated with authority and power (e.g., taking on leadership positions). Individuals assume that particular traits related to these roles (e.g., being warm and caring vs. being dominant and assertive) are characteristic of the group of people occupying these roles (i.e., women vs. men). Thus, gendered divisions of labor contribute to *gender stereotypes* (i.e., beliefs about innate and stable trait characteristics of women and men; e.g., Eagly & Steffen, 1984; Williams & Best, 1990) that associate women with communion (i.e.,

an emphasis on close interpersonal relationships, connectedness, and cooperation; e.g., Abele et al., 2008) and men with agency (i.e., an emphasis on self-expansion, assertiveness, and control; e.g., Abele et al., 2008; Bosak et al., 2012).

**The Relationship between Occupational Gender Segregation and Gender Stereotypes**

Gender stereotypes can in turn contribute to the maintenance of occupational gender segregation (e.g., Cejka & Eagly, 1999; He et al., 2019) as they are internalized and guide men and women towards gender-role congruent career paths (e.g., Evans & Diekman, 2009). Previous research from the U.S. has investigated the link between gender stereotypes and perceived occupational gender segregation.

Cejka and Eagly (1999) showed that people's belief that gender-stereotypic attributes are necessary for success in different occupations predicts perceived occupational gender segregation. People who more strongly endorsed gender stereotypes also perceived greater occupational gender segregation. Taking the reverse approach, Koenig and Eagly (2014) found that stereotypes about social groups were associated with the groups' typical occupational roles, showing that people's observations of group members' occupational roles are an important basis of stereotypes.

Similarly, a recent study by Kim et al. (2020) with participants from New Zealand showed that gender ratios in occupations were associated with occupational stereotypes. Communal traits were associated with female-dominated occupations, whereas agentic traits were associated with gender-neutral occupations (Kim et al., 2020). Furthermore, perceived and actual occupational gender segregation were highly correlated (Adachi, 2013; Cejka & Eagly, 1999; Garnham et al., 2015; Koenig & Eagly, 2014). In sum, these studies support social role theory's prediction that perceptions of occupational gender segregation and gender stereotypes are mutually related (Eagly & Wood, 2012). This is also supported by psycholinguistic studies on the gender stereotypicality of role nouns (Carreiras et al., 1996; Misersky et al., 2014).

**Occupational Gender Segregation and Gender Stereotypes across Nations**

Social role theory posits that situational factors such as the economy, social structure, culture, and ecology play a role in shaping occupational gender segregation and the variability in occupational gender stereotypes between societies (e.g., Eagly & Wood, 2012). However, social role theory has predominantly been investigated in Western societies, such as the U.S. and Europe (e.g., Bosak et al., 2012; Cejka & Eagly, 1999; Gustafsson Sendén et al., 2019; Koenig & Eagly, 2014, but see Bosak, Eagly et al., 2018). Research systematically investigating social role theory's predictions about occupational gender segregation and gender stereotypes in different national contexts is limited.

Cross-cultural research in anthropology and ethnography has shown that in most societies, the majority of activities are performed predominantly by either men or women. However, the specific activities that men and women undertake vary between societies (for a review, see Wood & Eagly, 2002). In more developed nations, women's underrepresentation in historically masculine domains has weakened as women's participation in education and the labor force has increased (e.g., Black & Spitz-Oener, 2007; Blackburn & Jarman, 2006; Cortes & Pan, 2017).

In line with social role theory's predictions, studies conducted in Western, more economically developed nations (i.e., Germany, Spain, Sweden, and the U.S.) as well as non-Western, less developed nations (i.e., Brazil, Chile, and Ghana; Bosak, Eagly et al., 2018; Gustafsson Sendén et al., 2019) showed that perceived changes in women's occupational roles were associated with greater ascriptions of agentic traits to women (a similar argument is discussed by Kim et al., 2020). As men have not moved into communal social roles to the same extent that women have moved into agentic social roles (e.g., England, 2010), stereotypes of men have not changed to the same extent as stereotypes of women have; that is, in most nations men have not been associated with more communal traits over time (Diekman et al., 2005; Eagly et al., 2019; Gustafsson Sendén et al., 2019; Koenig & Eagly, 2014;

Twenge, 1997, but see Haines et al., 2016 showing stereotype maintenance in the U.S., and Bosak, Eagly et al., 2018 showing that men are increasingly associated with communion in Ghana). Thus, there is some evidence suggesting that in support of social role theory the extent of societal and economic changes facilitating men and women's equal participation across different social roles may be associated with the strength of individuals' gender stereotypes.

However, contrary to social role theory, recent research has shown that gender differences in various outcomes are larger in more gender-equal nations, what has been called the *gender equality paradox*. For example, gender differences in basic human values, personality traits, and preferences were less pronounced in less developed, more economically disadvantaged nations (Falk & Hermle, 2018; Fors Connolly et al., 2019; Mac Giolla & Kajonius, 2019; Schwartz & Rubel-Lifschitz, 2009). The current research aims at contributing to the literature by systematically investigating the relations among national-level gender inequality, perceived occupational gender segregation, and gender stereotypes.

**The Present Research**

As reviewed above, there is evidence from Western nations for social role theory's predictions about occupational gender stereotypes. In contrast, evidence from non-Western world regions is scarce. Scholars have noted that psychological research relies heavily on WEIRD (i.e., Western, Educated, Industrialized, Rich, Democratic; Henrich et al., 2010a) samples. Researchers in cross-cultural psychology have therefore called for psychological theories to be tested across nations (e.g., Henrich et al., 2010a; Jones, 2010). More industrialized and developed nations typically show less gender inequality and less occupational gender segregation (e.g., United Nations Development Programme, 2018a, 2018b). It is therefore relevant to test whether occupational gender stereotypes are related to the national level of gender inequality.

The present research adopted a cross-national perspective with two major goals. First, we intended to provide researchers with a selection of occupations that are perceived to be gender-segregated across different nations to facilitate further cross-national research. We selected 12 occupations that had been identified as either male- or female-dominated in previous research conducted in the U.S. (Cejka & Eagly, 1999; Koenig & Eagly, 2014). We investigated whether these occupations are also perceived to be gender-segregated by participants across ten Western and non-Western nations (i.e., Chile, China, Colombia, Indonesia, Japan, Mexico, Russia, Spain, Sweden, and the U.S.).

Second, we investigated occupational gender stereotypes by examining the extent to which individuals ascribe agentic and communal traits to target men and women in male- and female-dominated occupations across nations. In an exploratory analysis, we further related gender inequality on the national level to perceptions of occupational gender segregation and occupational gender stereotypes on the individual level (Charles, 1992; Eagly & Steffen, 1984). The nations were systematically selected to reflect a continuum from very low to moderately high gender inequality according to the Gender Inequality Index (United Nations Development Programme, 2018a). We explored whether perceived occupational gender segregation and occupational gender stereotypes are more pronounced in nations with higher gender inequality.

Participants within 10 nations ($N = 1,918$) were recruited to be representative for the population according to age and gender. The method, including the sampling procedure, was pre-registered. Participants rated the perceived proportion of men working in 12 occupations that have been shown to be male-dominated or female-dominated in the U.S. (Cejka & Eagly, 1999; Koenig & Eagly, 2014). We expected participants across nations to rate the proportion of men in male-dominated occupations as higher than the proportion of men in female-dominated occupations. Furthermore, we explored whether the extent of perceived occupational gender segregation varied depending on national-level gender inequality.

Participants also rated the extent to which target men and women in the 12 occupations possessed communal and agentic traits (i.e., occupational gender stereotypes). Based on social role theory's prediction that gender-segregated occupational roles predict gender-stereotypic trait perceptions, we expected targets in male-dominated occupations to be rated as more agentic than communal and targets in female-dominated occupations to be rated as more communal than agentic. Finally, we explored the extent to which trait ratings differed depending on the gender of the target or national-level gender inequality.

The present research speaks to the social issue of women's underrepresentation in male-dominated occupations as well as men's underrepresentation in female-dominated occupations from a cross-national perspective. The investigation of stereotypical traits associated with male and female targets in gender-segregated occupations in less industrialized nations with greater gender inequality as well as in industrialized, more gender-equal nations provides knowledge about whether barriers to occupational gender equality are similar across national contexts.

One of social role theory's central propositions is that gender segregation predicts gender stereotypes. Based on this proposition, previous research has investigated to what extent gender stereotypes change when gender segregation is reduced over time (Bosak, Eagly et al., 2018; Diekman et al., 2005; Diekman & Eagly, 2000; Eagly et al., 2019; Haines et al., 2016; Koenig & Eagly, 2014). The current study takes a cross-national perspective and investigates whether variation in perceived occupational gender segregation across nations with high or low gender inequality predicts the strength of occupational gender stereotypes. This work, therefore, may lead to a better understanding of the cross-national generalizability of social role theory's predictions about how gender roles affect gender stereotypes, which may aid in efforts to increase gender equality.

## Method

### Participants and Procedure

A total of 2,046 participants from ten nations (i.e., Chile, China, Colombia, Indonesia, Japan, Mexico, Russia, Spain, Sweden, the U.S.) completed the study via an online questionnaire in September 2018. Data were collected by the panel provider Toluna (https://de.toluna.com). Nations were systematically selected to reflect high variation in gender inequality according to the Gender Inequality Index of 2017 (http://hdr.undp.org/en/content/gender-inequality-index-gii). We selected nations that had sufficiently large Toluna panels (> 50,000) and only one official language. The available 115 nations were ranked according to their values on the Gender Inequality Index of 2017, and one nation per block of 10 (respective 15) nations was selected. This procedure resulted in the following selection (nations sorted according to gender equality according to the GII): Sweden (rank 3 of 160), Spain (rank 15), Japan (rank 22), China (rank 36), U.S. (rank 41), Russia (rank 53), Chile (rank 72), Mexico (rank 76), Colombia (rank 87), and Indonesia (rank 104). National samples were recruited to be representative of the general population in terms of age and gender.

Data were collected as the second part of a superordinate project on gender differences in prosocial behavior across nations, for which a power analysis was conducted. For the superordinate project, a sample size of $N = 2,000$ was determined to be adequate. A sensitivity analysis conducted in G*Power (Faul et al., 2007) showed that for a within-between interaction in a repeated-measures ANOVA (the closest available approximation to the models tested in the current research), small effects ($f = 0.027$ with a power of .80 and $f = 0.033$ with a power of .95) could be detected with the current sample. The following inclusion criteria were pre-registered for the superordinate project: Participants were included in the analysis if they (a) completed both parts of the project, (b) entered a valid participant code (i.e., the code consisted of a personal combination of four letters and three numbers;

participants were excluded if they entered fewer than three characters), and (c) indicated a nation of origin that corresponded to the nation registered with the panel provider. In addition, participants who reported an age greater than 100 years were excluded ($n = 2$). The pre-registration for the superordinate project can be found at https://osf.io/re7n3/.

The final sample consisted of 1,918 participants (991 female, 924 male, 3 other; age ranged from 18 – 78 years, $M = 45.10$, $SD = 15.71$). Descriptive statistics of the national subsamples (sample size, gender, and age) are displayed in Table 1. Materials were translated from the English version to the respective languages by professional translators. Each translation was subsequently checked by a researcher in psychology who was fluent in both the respective language and English. If necessary, additional modifications were implemented by the translation company. Materials in all languages are available at https://osf.io/7ybns/. Data and analysis scripts are available at https://osf.io/wumdk/. The study was approved by the ethics committee of the University of Goettingen.

**Materials**

Based on Cejka and Eagly (1999) as well as Koenig and Eagly (2014), seven occupations that were male-dominated in the U.S. (i.e., attorney, CEO, judge, police officer, politician, rescue service worker, soldier) and five occupations that were female-dominated in the U.S. (i.e., geriatric aide, nurse, nursery teacher, secretary, therapist) were selected. All participants rated their perceptions of the distribution of men and women in occupation with the items "In your nation, what proportion (%) of individuals working as [occupation] are male?" (Cejka & Eagly, 1999). Next, participants rated the extent to which target men or women in each occupation tended to exhibit agentic (i.e., competitive, courageous, dominant, stand up well under pressure) and communal traits (i.e., sympathetic, supportive, kind, nurturing) with the items "men/ women who work as [occupation] tend to be [trait]" on a scale of *1 (do not agree)* to *7 (completely agree)* (Cejka & Eagly, 1999; Eagly & Steffen, 1984). Thus, the study had a 2 (Target Gender: male vs. female) X 2 (Occupation Type: male-

vs. female-dominated) X 2 (Domain: communal vs. agentic) design, with the first factor varying between participants and the other factors within participants.

Participants were randomly assigned to rate either target men or women working in the respective occupations. Demographic variables included age and gender. Nation-level gender inequality was assessed with the 2017 Gender Inequality Index scores (United Nations Development Programme, 2018a). As measures of objective gender segregation in the selected occupations in all nations, we compiled statistics about the gender distributions in the occupations from international organizations (e.g., OECD, World Economic Forum), national organizations (e.g., U.S. Bureau of Labor Statistics), or other sources (e.g., newspaper reports, annual reports of labor associations), if available. A file with the objective statistics can be found on the Open Science Framework (https://osf.io/wumdk/; sources for statistics in comments).

## Results

### Perceived Occupational Gender Segregation

To investigate whether our selection of occupations was indeed perceived as gender-segregated, we analyzed a) the perceived distributions of men in occupations within and across nations, b) the perceived proportion of men depending on occupation type and national-level gender inequality, and c) the accuracy of perceived gender segregation when compared to objective statistics. We expected participants in all nations to rate the proportion of men in male-dominated occupations (i.e., attorney, CEO, judge, police officer, politician, rescue service worker, soldier) as higher than the proportion of men in female-dominated occupations (i.e., geriatric aide, nurse, nursery teacher, secretary, therapist). Descriptive statistics showed that across nations, men were perceived to be overrepresented in male-dominated occupations (overall: $M = 67.40$, $SD = 22.69$; attorney: $M = 61.95$, $SD = 19.43$; CEO: $M = 68.97$, $SD = 23.38$; judge: $M = 64.49$, $SD = 22.77$; police officer: $M = 69.29$, $SD = 21.15$; politician: $M = 67.47$, $SD = 22.22$; rescue service worker: $M = 65.31$, $SD = 23.02$;

soldier: $M = 74.31$, $SD = 24.44$) and underrepresented in female-dominated occupations

(overall: $M = 38.24$, $SD = 25.34$; geriatric aide: $M = 38.17$, $SD = 24.67$; nurse: $M = 37.97$, $SD$

$= 24.68$; nursery teacher: $M = 31.98$, $SD = 27.58$; secretary: $M = 34.62$, $SD = 25.91$; therapist:

$M = 48.46$, $SD = 20.17$). Overall, the difference in perceived proportions of men in male-

dominated compared to female-dominated occupations was 29%.

Descriptive statistics on the nation level are displayed in Table 2. $\chi^2$ tests showed that

these distributions significantly deviated from equal distributions (i.e., 50% men in all

occupations, reflecting occupational gender equality) for the complete sample, but also for all

single nations (all $p$s $< .001$). Thus, the selected occupations were perceived as gender-

segregated not only by participants from the U.S. (in accordance with previous research;

Cejka & Eagly, 1999; Koenig & Eagly, 2014), but also by participants from the other nine

nations.

We further investigated whether participants across nations rated the proportion of

men in male-dominated occupations as significantly higher than the proportion of men in

female-dominated occupations when taking the clustered data structure into account

(observations clustered in participants clustered in nations). We transformed the data into long

format (1918 participants x 12 occupations) and computed a linear mixed model in R using

the lme4 (Bates et al., 2015) and lmerTest (Kuznetsova et al., 2017) packages and Maximum

Likelihood estimation. Effect sizes for fixed effects were computed as partial $R^2$ (Edwards et

al., 2008; Page-Gould et al., 2019).

Perceived proportions of men were predicted by the within-participants factor

Occupation Type (0 = female-dominated, 1 = male-dominated), the between-nations covariate

gender inequality (GII; centered on the grand mean across participants and nations), and their

interaction. The model also included random intercepts for the clustering variables, allowing

the level of perceived proportions of men in occupations to vary between participants and

nations. Additionally, the model included a random slope, allowing the effect of Occupation

Type to vary between participants (Heisig & Schaeffer, 2019).

Results are displayed in Table 3. Consistent with expectations, participants perceived

29% more men in male-dominated occupations than in female-dominated occupations ($M$ =

38.40, 95% CI [36.80; 40.10]; $SE$ = 0.84, male-dominated: $M$ = 67.60, 95% CI [66.00; 69.20],

$SE$ = 0.82). This means that across nations, men were perceived to be overrepresented in

male-dominated occupations and underrepresented in female-dominated occupations. The

random intercepts of participants and nations were significant, showing substantive variation

in the level of perceived proportion of men in occupations between participants and nations.

The random slope for Occupation Type was significant, indicating that the perceived

overrepresentation of men in male-dominated occupations compared to female-dominated

occupations significantly varied between participants. There was neither a main effect of

nation-level GII nor an interaction of Occupation Type with GII. This means that national-

level GII did not explain the difference between the perceived proportions of men in male-/

vs. female-dominated occupations. We concluded that the selected occupations were

perceived to be male-dominated or female-dominated in all nations and were thus suitable to

investigate social role theory's predictions about gender-stereotypical traits being ascribed to

targets in these occupations across nations.

To test whether participants' perceptions of occupational gender segregation were

accurate, we used an approach developed to measure stereotype accuracy by Jussim et al.

(2015) in which the correspondence between the individuals' perceptions and objective

criteria was computed. We correlated subjective perceptions of occupational gender

segregation (aggregated to the national level) with objective statistics for gender segregation

in the respective occupations and nations, if available. (There was a higher percentage of

missing data for the objective statistics for China, Russia, Colombia, and Indonesia).

Objective and subjective occupational gender segregation were highly correlated, $r$ (118) = .841, $p$ < .001, indicating a high correspondence ($r$ > .40; Jussim et al., 2015).

**Associations of Occupational Roles with Stereotypical Traits**

Second, we expected targets in male-dominated occupations to be rated as agentic and targets in female-dominated occupations to be rated as communal. We aggregated over agentic traits (.90 < Cronbach's α < .96) as well as communal traits (.89 < α < .96). Again, we transformed the data to the long format (1918 participants x 12 occupations x 2 domains) and took the clustered data structure into account in a linear mixed-effects model computed in R using the packages lme4 and lmerTest. Trait ratings were analyzed as a function of Occupation Type (0 = female-dominated, 1 = male-dominated), Domain (0 = communal, 1 = agentic), Target Gender (0 = female, 1 = male), and their respective interactions. Occupation Type and Domain varied within participants, whereas Target Gender varied between participants. The model also included random intercepts for the clustering variables (participants, nations) as well as random slopes for Occupation Type, Domain, and their interaction at the participant level (Heisig & Schaeffer, 2019).

Model results are displayed in Table 4. There was a significant main effect of Occupation Type, indicating that trait ratings were higher for female- than for male-dominated occupations. There was a significant main effect of Domain, showing that ratings were higher for communal than for agentic traits. There was also a significant main effect of Target Gender, indicating that trait ratings were higher for female than for male targets. The two-way interactions were significant except for the interaction of Domain and Target Gender. These interactions were qualified by a three-way interaction of Occupation Type, Domain and Target Gender. Post-hoc comparisons (Figure 1) revealed that targets in female-dominated occupations were rated as more communal than agentic. This effect was stronger for male compared to female targets (female targets: communal: $M$ = 5.33, 95% CI [5.13, 5.53], $SE$ = 0.11; agentic: $M$ = 4.75, 95% CI [4.54; 4.95], $SE$ = 0.10; $Z$ = 17.70, $p$ <.001; male

targets: communal: $M$ = 4.88, 95% CI [4.68; 5.09], $SE$ = 0.10; agentic: $M$ = 4.24, 95% CI [4.04; 4.44], $SE$ = 0.10, $Z$ = 19.19, $p$ <.001). In turn, targets in male-dominated occupations were rated as more agentic than communal. This effect was also stronger for male compared to female targets (female targets: communal: $M$ = 4.35, 95% CI [4.14; 4.55], $SE$ = 0.10, agentic: $M$ = 5.27, 95% CI [5.07; 5.47], $SE$ = 0.10, $Z$ = -27.42, $p$ < .001; male targets: communal: $M$ = 4.08, 95% CI [3.88; 4.28], $SE$ = 0.10, agentic: $M$ = 5.29, 95% CI [5.09; 5.49], $SE$ = 0.10, $Z$ = -35.24, $p$ <.001.

The random intercepts of participants and nations were significant, showing substantive variation in the level of trait ratings between participants and nations. The random slope for the Occupation Type X Domain interaction was also significant, indicating that the magnitude of the interaction significantly varied between participants. Inspection of effect sizes (partial $R^2$) for the fixed effects showed that the Occupation Type X Domain interaction explained the largest amount of variance in trait ratings.

In a further model, we included nation-level GII as a covariate (grand mean-centered) and computed its interaction with Occupation Type and Domain. Results are displayed in Table 5. The main effects of Occupation Type and Domain as well as their two-way interaction were similar to the previous model. The main effect of GII was marginally significant, showing that, by trend, trait ratings were higher in nations with higher gender inequality. GII significantly interacted with Occupation Type, showing that trait ratings were higher in nations with high gender inequality. This effect was more pronounced for female-dominated compared to male-dominated occupations (female-dominated occupations: low GII: $M$ = 4.96, 95% CI [4.76, 5.16], $SE$ = 0.10; high GII: $M$ = 5.25, 95% CI [5.06; 5.45], $SE$ = 0.10; slope = 1.71, $SE$ = 0.54; male-dominated occupations: low GII: $M$ = 4.12, 95% CI [3.91; 4.32], $SE$ = 0.10; high GII: $M$ = 4.31, 95% CI [4.11; 4.50], $SE$ = 0.10, slope = 1.11, $SE$ = 0.54, slope difference: $Z$ = 5.27, $p$ <.001). Furthermore, GII significantly interacted with Domain, showing that trait ratings were higher in nations with higher gender inequality. This effect was

more pronounced for agentic compared to communal traits (communal: low GII: $M = 4.96$, 95% CI [4.76, 5.16], $SE = 0.10$; high GII: $M = 5.25$, 95% CI [5.06; 5.45], $SE = 0.10$; slope = 0.94, $SE = 0.54$; agentic: low GII: $M = 4.20$, 95% CI [4.00; 4.40], $SE = 0.10$; high GII: $M = 4.79$, 95% CI [4.60; 4.99], $SE = 0.10$, slope = 1.89, $SE = 0.53$, slope difference: $Z = -7.90$, $p < .001$). Again, the random intercepts for participants and nations as well as the random slope for the Occupation Type X Domain interaction were significant. The Occupation Type X Domain interaction had the largest effect size compared to the other two-way interactions. The three-way interaction of Occupation Type, Domain, and GII was non-significant. This means that in support of social role theory, targets in male-dominated occupations were rated as more agentic than communal and targets in female-dominated occupations were rated as more communal than agentic and this effect did not depend on national-level gender inequality.

**Discussion**

The current research investigated perceived occupational gender segregation and stereotypical traits of targets working in male-/ female-dominated occupations on the dimensions of agency and communion in a cross-national data set with national samples recruited to be representative for age and gender. Ten nations were selected to represent a continuum from WEIRD and more gender-equal nations to non-WEIRD and less gender-equal nations (Henrich et al., 2010a; United Nations Development Programme, 2018a). Male-dominated and female-dominated occupations were selected based on previous research conducted in the U.S. (Cejka & Eagly, 1999; Koenig & Eagly, 2014), but were indeed shown to be perceived as gender-segregated by participants from all ten nations. The current research thus provides a selection of occupations that can be used in future cross-national research on occupational gender segregation and the testing of social role theory. Across nations varying in gender inequality, participants on average perceived men to be overrepresented in male-

dominated occupations (67%) and underrepresented in female-dominated occupations (38%).

These perceptions significantly differed from gender equality (50%).

Across nations with different levels of gender inequality, targets in male-dominated

occupations were associated more strongly with agentic than communal traits, whereas targets

in female-dominated occupations were associated more strongly with communal than agentic

traits. This effect was largest in size and substantiates social role theory's prediction that when

occupational role information is provided, persons working in gender-segregated occupations

are perceived as possessing traits that qualify them for these occupations (Bosak et al., 2012;

Cejka & Eagly, 1999; Eagly & Wood, 2012). The current research showed this prediction to

be supported with a cross-national sample including data from nations systematically varying

in gender inequality and with national samples of participants that were representative of the

populations according to age and gender.

However, when simultaneously taking into account occupational role information and

the gender of the target, results showed that across nations, in male dominated occupations the

difference between agentic and communal traits associated with male targets was greater than

the difference between agentic and communal traits associated with female targets. This effect

can be explained by the lower rating of male targets in communion. This result is in line with

the finding that stereotypes of male and female targets' agency have levelled as women have

increasingly entered higher education and the labor force in the last decades (e.g., Diekman et

al., 2005; Diekman & Eagly, 2000).

In female-dominated occupations, the difference between communal and agentic traits

was again greater for male than for female targets. This effect can be explained by a lower

rating of male targets in agency. This pattern might reflect a backlash effect (Rudman &

Glick, 2001) for men in counter-stereotypical occupations in that they are perceived as high in

communion at the expense of their agency (e.g., Bosak, Kulich et al., 2018). In accordance

with the shifting standards model (Biernat, 2003, 2012), participants in the current study

might have judged men in female-dominated occupations against the relatively low

communion and high agency associated with the traditional male gender role (i.e., when no

occupational role information is provided; e.g., Bosak et al., 2008).

The persistence of traditional stereotypes about men's low communion might also be

explained by subtyping (Maurer et al., 1995; Richards & Hewstone, 2001; Schneider & Bos,

2014), which describes a process in which individuals who disconfirm a stereotype about their

group are treated as exceptions and are cognitively grouped together in a new subtype (e.g.,

men working in nurturing and caretaking occupations). Due to subtyping, stereotype change is

inhibited (i.e., men in female-dominated occupations are seen as an exception to the rule and

thus the stereotype about average men's low communion remains unchanged; Richards &

Hewstone, 2001). Both shifting standards and subtyping might explain why – in

correspondence with the finding that women's representation in male-dominated fields and

gender stereotypes about women's agency seem to be changing more and faster than men's

representation in female-dominated fields and stereotypes about men's communion – men in

counter-stereotypical occupations were perceived as being more exceptional from the

traditional gender stereotype than women in counter-stereotypical occupations.

Nation-level gender inequality did not qualify the effects for occupation type on the

perceptions of occupational gender segregation and the associated stereotypical traits.

Therefore, our results tentatively suggest that barriers to gender equality in the occupational

domain appear to be similar for nations with higher as well as lower gender inequality. Other

recent research on the gender equality paradox has shown that gender differences in different

outcomes were larger in more gender-equal countries (e.g., basic human values: Fors

Connolly et al., 2019; Schwartz & Rubel-Lifschitz, 2009; personality traits: Mac Giolla &

Kajonius, 2019; preferences: Falk & Hermle, 2018). In contrast to these recent findings,

gender inequality did not systematically predict stereotypes of male and female targets in

male-/ female-dominated occupations. This result indicates that social role theory's

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predictions are generalizable across both nations that are more industrialized and more gender equal as well as nations that are less industrialized and more gender unequal.

**Accuracy of Perceived Occupational Gender Segregation**

Social role theory is concerned with how individuals' gender stereotypes are formed through the observation of the division of labor. Therefore, in the current project we measured participants' individual *perceptions* of the proportion of men in male- and female-dominated occupations rather than using objective statistics of occupational gender segregation to predict occupational gender stereotypes. Previous research has shown that perceptions of occupational gender segregation are strongly related to actual occupational gender segregation in the U.S., the United Kingdom, and Japan (Adachi, 2013; Cejka & Eagly, 1999; Garnham et al., 2015; Koenig & Eagly, 2014). In the current study, subjective perceptions of occupational gender segregation were also highly correlated with objective measures of gender segregation in the respective occupations, although for some nations, objective statistics were limited.

In line with research on stereotype accuracy (e.g., Jussim et al., 2015), we found that participants in all nations accurately judged whether the selected 12 occupations were male-dominated or female-dominated. However, individuals in all nations underestimated the extent of occupational gender segregation (i.e., occupations were perceived as gender-segregated, but the over-/underrepresentation of men was judged to be smaller than was actually the case). This is in line with a recent study conducted in the U.S. showing that people underestimated the extent of occupational gender segregation (Beyer, 2018). Furthermore, a cross-national study by Kiatpongsan and Norton (2014) showed that people consistently underestimated pay inequality across 16 nations. Thus, the current study shows that people recognize the presence of gender segregation in occupations. However, the fact that on average, people seem to underestimate the extent of occupational gender segregation might present an additional hurdle on the way towards gender equality, as people might also

underestimate the extent of societal problems associated with occupational gender inequality (e.g., the gender pay gap).

**Overcoming Barriers to Occupational Gender Equality across Nations**

Social role theory explains the mutually reinforcing cycle of societal gender inequality and individuals' endorsement of gender stereotypes (e.g., Eagly & Wood, 2012). The current study's results support the predictions of social role theory on stereotypical traits of targets in gender-segregated occupations (Eagly & Wood, 2012) as well as previous research on occupational gender stereotypes (Koenig & Eagly, 2014) with a cross-national sample and thus underscore social role theory's applicability to non-Western, less industrialized and less gender-equal national contexts (Henrich et al., 2010a). As the majority of people in the world are not WEIRD (Henrich et al., 2010b), the current research highlights social role theory's relevance to male and female targets in previously understudied populations from world regions like Latin America and Asia. In line with this, Traylor et al. (in press) identified gender-based discrimination in the work environment resulting from gender stereotypes as one of ten blind spots of global research on women at work, which was until recently predominantly conducted in WEIRD nations.

**Discrimination of women in male-dominated occupations.** Although the present research suggests that female targets in male-dominated occupations are associated with agentic traits, women in general are stereotyped as less agentic than men and thus as less qualified than men for these occupations (e.g., Cejka & Eagly, 1999). The present findings suggest that women who consider entering male-dominated occupations face similar obstacles in WEIRD and non-WEIRD nations alike. The prevailing underrepresentation of women in male-dominated occupations that can be observed in nations around the world can thus partly be explained by a perceived role incongruity or lack of fit between female jobholders and the traits associated with success in male-dominated occupations (Cejka & Eagly, 1999). As an extension of social role theory, role congruity theory (Eagly & Karau, 2002) was developed to

investigate the underrepresentation of women in the male-dominated field of leadership positions. The theory describes that incongruence between occupational roles (e.g., leadership roles perceived as requiring agency) and gender roles (e.g., women perceived as communal but not agentic) can result in discrimination and negative evaluations.

Similarly, the lack of fit model (e.g., Heilman, 1983; Heilman & Caleo, 2018) posits that a perceived mismatch between women's stereotypical attributes and the attributes seen as necessary for success in male-dominated occupations leads to the discrimination of women in these occupations. In Western nations, women's perceived lack of fit to male-dominated occupations has been shown to affect organizational decisions like recruitment, selection, performance appraisal, promotion, and compensation (for a review, see Heilman & Caleo, 2018).

However, the results of the current study also give cause for hope. When women have already successfully entered male-dominated occupations (e.g., a female judge or police officer), they are seen as agentic and it appears that they do not suffer a backlash effect, that is, they are not perceived as less communal (Rudman & Glick, 2001). Thus, traditional gender stereotypes might still pose barriers for women who aspire to careers in male-dominated occupations (see Jasko et al., in press for female STEM graduates in Poland and Ghasemi, in press for women in the broadcasting industry in Iran), but maybe to a lesser extent once they have successfully entered male-dominated occupations.

Studies conducted predominantly in the U.S. have investigated measures to reduce women's role incongruity or lack of fit to male-dominated occupations, for example, by reducing the salience of gender in selection and evaluation processes (e.g., Goldin & Rouse, 2000) or challenging traditional work and family roles (e.g., by providing parental leave, flextime, and remote work arrangements to both men and women; Slaughter, 2015). Furthermore, transparency and structuring in the evaluative decision process have been shown to reduce gender discrimination in the workplace (e.g., Bragger et al., 2002; Castilla, 2015;

for a review see Heilman & Caleo, 2018). It remains an open question whether these measures to reduce gender-based discrimination of women in male-dominated occupations are similarly effective in non-Western, less industrialized nations. Although occupational gender stereotypes might be comparable across nations, organizational structures (e.g., hierarchies, focus on individual work vs. teamwork) differ between nations and cultural contexts. Further cross-national research should thus test the effectiveness of measures and interventions to reduce gender-based discrimination of women in male-dominated occupations in different nations and cultural contexts.

**Discrimination of men in female-dominated occupations.** Similar to women in male-dominated occupations, results of the current study suggest that, across nations, men who consider entering female-dominated occupations might also face obstacles like role incongruity and lack of fit. Targets in female-dominated occupations are associated with communal traits and according to traditional gender stereotypes men are perceived as less qualified than women for these occupations due to their lower ascribed communion (e.g., Cejka & Eagly, 1999). In addition to the incongruity of occupational and gender roles (Clow et al., 2015; Clow & Ricciardelli, 2011) as well as lack of fit of men aspiring to enter female-dominated occupations (Bosak, Kulich et al., 2018), the current data also point to potential backlash effects for men who have successfully entered female-dominated occupations. Target men in female-dominated occupations were seen as high in communion at the expense of their agency, consistent with recent research on backlash effects for men in caregiving and educational occupations (e.g., Halper et al., 2019; Moss-Racusin & Johnson, 2016).

Research on gender-based discrimination of men in female-dominated occupations is relatively recent and has been conducted predominantly in Western nations (e.g., Croft et al., 2015; Manzi, 2019). Although men are underrepresented in nurturing and caretaking occupations, results on whether men in gender-incongruent occupational domains are discriminated against are mixed and thus currently inconclusive (for a review, see Manzi,

2019). Croft et al. (2015) suggest that barriers for men's interest in and engagement with communal occupational roles are not only explained by their lower perceived gender-stereotypical qualifications for success in these roles, but also by the lower status of female-dominated occupations (e.g., lower prestige and financial incentives than in male-dominated occupations).

In addition, Meeussen et al. (2020) state that gender norms and fears that participating in female-dominated occupations threaten men's status may act as psychological barriers to men's engagement in communal social roles. Therefore, future research should further investigate the complex interplay of gender stereotypes, discrimination, and men's interest in communal roles as factors shaping men's underrepresentation in nurturing and caregiving occupations (Croft et al., 2015; Meeussen et al., 2020). Furthermore, cross-national research on individual and structural barriers to men's involvement in communal roles is needed.

**Pathways to reduce occupational gender segregation**. Gender stereotypes contribute to the maintenance of the status quo in occupational gender segregation by serving system-justifying functions. Gender segregation is assumed to be natural because the gender overrepresented in an occupational domain is perceived to inherently possess the traits necessary to be successful in that domain, whereas the other gender lacks these traits (Cundiff & Vescio, 2016; Jost & Banaji, 1994; Sidanius & Pratto, 1999). Occupational gender segregation and gender stereotypes form a mutually reinforcing cycle (e.g., Cejka & Eagly, 1999; Koenig & Eagly, 2014); as gender equality in the workplace increases and the corresponding social roles of men and women become more similar, occupational gender stereotypes also become more similar (Eagly & Wood, 2012), as do stereotype-congruent career choices and hiring decisions (e.g., Heilman & Caleo, 2018) and perceived goal affordances of and interest in the occupational field (Folberg & Kaboli-Nejad, in press).

There have been extensive worldwide changes in women's social roles during the last decades due to industrialization, technological advances, and the availability of contraception,

but women's participation in the workforce and in leadership/ high-status positions is still unevenly distributed between nations. It remains a challenge especially for less industrialized nations to reduce occupational gender segregation, as gender inequality in the labor market tends to be higher in less economically developed nations (e.g., Eastin & Prakash, 2013). Current research identifying pathways to more gender equality in the workplace increasingly focuses on men's higher involvement in communal occupational and domestic roles, as this increases women's motivation to enter agentic roles. The rationale is that women can only fully transition into agentic occupational roles when men also transition more into communal occupational and domestic roles (e.g., Croft et al., 2015, 2018; Meeussen et al., 2020; Queneau, 2006). Thus, exploring how the proportion of men in communal roles can be increased is a promising route to reducing occupational gender segregation in non-Western nations.

**Limitations and Future Directions**

The current study has several limitations that might be addressed in future research. First, although the selection of nations was systematic, the number of nations included was rather small and therefore statistical power to detect cross-level interactions with national gender inequality was limited. Future studies should therefore include a larger selection of nations (preferably 30 – 50; Maas & Hox, 2005) to investigate the role of national differences in gender inequality in more detail. Second, the current research was cross-sectional and can therefore only provide a snapshot of the relation between occupational gender segregation and gender stereotypes across nations. As previous research has shown that occupational gender segregation and gender stereotypes are dynamic (e.g., Bosak, Eagly et al., 2018; Diekman et al., 2005; Diekman & Eagly, 2000; Eagly et al., 2019), cross-national longitudinal studies (e.g., Fors Connolly et al., 2019) observing how changes in occupational gender segregation – that might occur faster or slower in different nations – shape gender stereotypes over a longer period of time are a promising agenda for future research.

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**Conclusion**

The current research underscores that perceived occupational gender segregation is present in WEIRD and non-WEIRD nations alike and that occupational gender stereotypes can contribute to barriers for male and female targets in gender-segregated occupations across these nations. To achieve gender equality in the workplace further research needs to systematically test the effectiveness of interventions (e.g., women's quotas for leadership positions, raising salaries for caretaking positions) in different national contexts.

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GENDER AT WORK ACROSS NATIONS

Table 1

*Descriptive Statistics for the National Subsamples*

| | *N* (female, other) | Age | |
| --- | --- | --- | --- |
| | | Range in years | *M* (*SD*) |
| Chile | 158 (75) | 18 – 82 | 44.59 (15.63) |
| China | 185 (84) | 18 – 87 | 42.44 (12.96) |
| Colombia | 203 (105) | 18 – 71 | 39.07 (13.39) |
| Indonesia | 185 (105) | 18 – 69 | 37.62 (12.52) |
| Japan | 213 (102, 1 other) | 20 – 81 | 51.26 (15.63) |
| Mexico | 201 (101) | 18 – 75 | 40.11 (14.87) |
| Russia | 231 (133, 2 other) | 19 – 77 | 45.81 (14.77) |
| Spain | 217 (112) | 18 – 78 | 48.59 (15.28) |
| Sweden | 210 (111) | 18 – 86 | 48.91 (17.26) |
| U.S. | 115 (63) | 19 – 86 | 55.17 (16.25) |

GENDER AT WORK ACROSS NATIONS

Table 2

*Means for Male-dominated and Female-dominated Occupations by Nation*

| | Chile | China | Colombia | Indonesia | Japan | Mexico | Russia | Spain | Sweden | U.S. | Overall |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Male-dominated occupations | | | | | | | |
| Attorney | 63.68 | 60.71 | 63.50 | 64.95 | 57.34 | 64.04 | 60.77 | 60.52 | 61.20 | 65.37 | 61.95 |
| | (19.79) | (21.12) | (15.74) | (22.57) | (25.58) | (18.53) | (18.63) | (14.96) | (16.33) | (17.34) | (19.43) |
| CEO | 70.22 | 67.37 | 67.51 | 66.35 | 63.97 | 68.77 | 69.75 | 74.59 | 70.47 | 71.33 | 68.97 |
| | (24.46) | (27.08) | (18.41) | (24.05) | (29.48) | (21.43) | (21.49) | (20.58) | (21.61) | (22.30) | (23.38) |
| Judge | 66.49 | 61.65 | 67.36 | 65.04 | 62.24 | 68.17 | 54.65 | 68.25 | 65.46 | 69.07 | 64.49 |
| | (24.94) | (24.30) | (19.53) | (23.44) | (29.83) | (21.73) | (18.80) | (18.25) | (21.25) | (19.35) | (22.77) |
| Police officer | 69.89 | 66.85 | 74.64 | 70.63 | 60.93 | 70.87 | 72.29 | 71.35 | 65.84 | 69.83 | 69.29 |
| | (19.89) | (23.98) | (18.29) | (20.79) | (27.02) | (19.75) | (22.27) | (17.32) | (16.93) | (19.41) | (21.15) |
| Politician | 69.37 | 69.83 | 71.31 | 67.35 | 61.93 | 68.61 | 70.74 | 66.57 | 61.82 | 68.22 | 67.47 |
| | (21.87) | (26.73) | (18.20) | (22.49) | (30.19) | (19.41) | (23.66) | (16.78) | (16.28) | (20.05) | (22.22) |
| Rescue service worker | 57.31 | 67.38 | 58.07 | 68.14 | 67.30 | 59.43 | 76.10 | 60.00 | 68.83 | 69.71 | 65.31 |
| | (19.44) | (25.83) | (17.46) | (23.57) | (31.39) | (20.14) | (25.82) | (16.15) | (17.92) | (17.34) | (23.02) |
| Soldier | 73.89 | 72.20 | 82.22 | 72.77 | 63.06 | 76.06 | 76.78 | 76.48 | 74.79 | 74.63 | 74.31 |
| | (23.78) | (26.39) | (19.59) | (23.73) | (34.50) | (21.74) | (23.56) | (19.53) | (22.92) | (17.74) | (24.44) |
| | | | | Female-dominated occupations | | | | | | | |
| Geriatric aide | 44.85 | 34.52 | 43.17 | 41.71 | 38.37 | 46.75 | 21.73 | 41.04 | 31.65 | 44.55 | 38.17 |
| | (24.91) | (21.75) | (20.06) | (26.53) | (20.77) | (21.24) | (29.83) | (22.58) | (22.02) | (23.85) | (24.67) |
| Nurse | 42.38 | 27.91 | 43.69 | 46.29 | 32.80 | 44.05 | 26.64 | 42.52 | 34.65 | 43.79 | 37.97 |
| | (20.62) | (28.85) | (19.56) | (24.97) | (23.64) | (22.02) | (30.11) | (20.06) | (19.88) | (24.28) | (24.68) |
| Nursery teacher | 30.38 | 26.58 | 32.64 | 38.12 | 44.76 | 30.81 | 21.86 | 33.30 | 29.56 | 32.50 | 31.98 |
| | (26.57) | (27.98) | (26.10) | (29.72) | (22.31) | (25.28) | (32.78) | (25.82) | (22.45) | (29.57) | (27.58) |
| Secretary | 33.78 | 37.43 | 35.33 | 39.16 | 37.02 | 36.03 | 24.23 | 40.72 | 28.42 | 36.47 | 34.62 |
| | (25.85) | (24.16) | (24.24) | (28.47) | (24.23) | (26.29) | (27.19) | (24.40) | (22.30) | (28.56) | (25.91) |
| Therapist | 53.36 | 50.48 | 48.75 | 51.46 | 39.01 | 52.78 | 39.69 | 54.39 | 45.69 | 54.50 | 48.46 |
| | (19.04) | (19.83) | (18.11) | (23.95) | (21.39) | (19.59) | (20.74) | (15.24) | (16.93) | (17.63) | (20.17) |

*Note.* Standard deviations are in parentheses.

Table 3

*Linear Mixed Model Results for Occupational Gender Segregation*

| **Fixed Effects** | *Coefficient* | *SE* | *t* | *p* | $R^2_{partial}$ |
|---|---|---|---|---|---|
| Intercept | 38.42 | 0.92 | 41.73 | <.001 | |
| Occupation Type | 29.16 | 0.61 | 47.44 | <.001 | .54 |
| GII | 11.29 | 6.91 | 1.63 | .133 | .19 |
| Occupation Type X GII | -4.77 | 4.56 | -1.05 | .296 | <.01 |
| **Random Effects** | *Coefficient* | *SD* | | | |
| Participant intercept variance | 322.05 | 17.95 | | | |
| Nation intercept variance | 6.51 | 2.55 | | | |
| Slope variance | 641.37 | 25.33 | | | |

*Note*. Occupation type was coded 0 for female-dominated occupations and 1 for male-dominated occupations. GII was grand-mean centered.

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Table 4

*Linear mixed model results for traits predicted by Occupation Type, Domain, and Target Gender*

| **Fixed Effects** | *Coefficient* | *SE* | *t* | *p* | $R^2_{partial}$ |
|---|---|---|---|---|---|
| Intercept | 5.33 | 0.10 | 51.79 | <.001 | |
| Occupation Type | -0.98 | 0.03 | -31.62 | <.001 | .01 |
| Domain | -0.58 | 0.03 | -17.70 | <.001 | .09 |
| Target Gender | -0.44 | 0.05 | -9.45 | < .001 | .04 |
| Type X Domain | 1.51 | 0.05 | 31.27 | <.001 | .55 |
| Type X Target Gender | 0.18 | 0.04 | 3.99 | <.001 | .07 |
| Domain X Target Gender | -0.06 | 0.05 | -1.26 | .208 | .01 |
| Type X Domain X Target Gender | 0.34 | 0.07 | 4.97 | <.001 | .01 |
| **Random Effects** | *Coefficient* | *SD* | | | |
| Participant intercept variance | 0.95 | 0.97 | | | |
| Nation intercept variance | 0.09 | 0.31 | | | |
| Type slope variance | 0.75 | 0.87 | | | |
| Domain slope variance | 0.84 | 0.92 | | | |
| Type X Domain slope variance | 1.89 | 1.38 | | | |

*Note*. Occupation type was coded 0 for female-dominated occupations and 1 for male-dominated occupations. Domain was coded 0 for communal traits and 1 for agentic traits. Target Gender was coded 0 for females and 1 for males.

Table 5

*Linear mixed model results for traits predicted by Occupation Type, Domain, and GII*

| Fixed Effects | Coefficient | SE | t | p | $R^2_{partial}$ |
|---|---|---|---|---|---|
| Intercept | 4.84 | 0.15 | 33.22 | <.001 | |
| Occupation Type | -0.80 | 0.04 | -18.31 | <.001 | <.01 |
| Domain | -0.87 | 0.05 | -19.08 | <.001 | .<01 |
| GII | 1.14 | 0.55 | 2.10 | .060 | .41 |
| Type X Domain | 1.76 | 0.07 | 25.89 | <.001 | .26 |
| Type X GII | -0.41 | 0.16 | -2.51 | .012 | .01 |
| Domain X GII | 1.14 | 0.17 | 6.60 | <.001 | <.01 |
| Type X Domain X GII | -0.38 | 0.26 | -1.47 | .141 | <.01 |
| **Random Effects** | Coefficient | SD | | | |
| Participant intercept variance | 0.99 | 1.00 | | | |
| Nation intercept variance | 0.05 | 0.22 | | | |
| Type slope variance | 0.76 | 0.87 | | | |
| Domain slope variance | 0.82 | 0.90 | | | |
| Type X Domain slope variance | 1.92 | 1.39 | | | |

*Note*. Occupation type was coded 0 for female-dominated occupations and 1 for male-dominated occupations. Domain was coded 0 for communal traits and 1 for agentic traits. GII was grand-mean centered.

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*Figure 1*. Mean trait ratings by Target Gender, Occupation Type, and Domain.
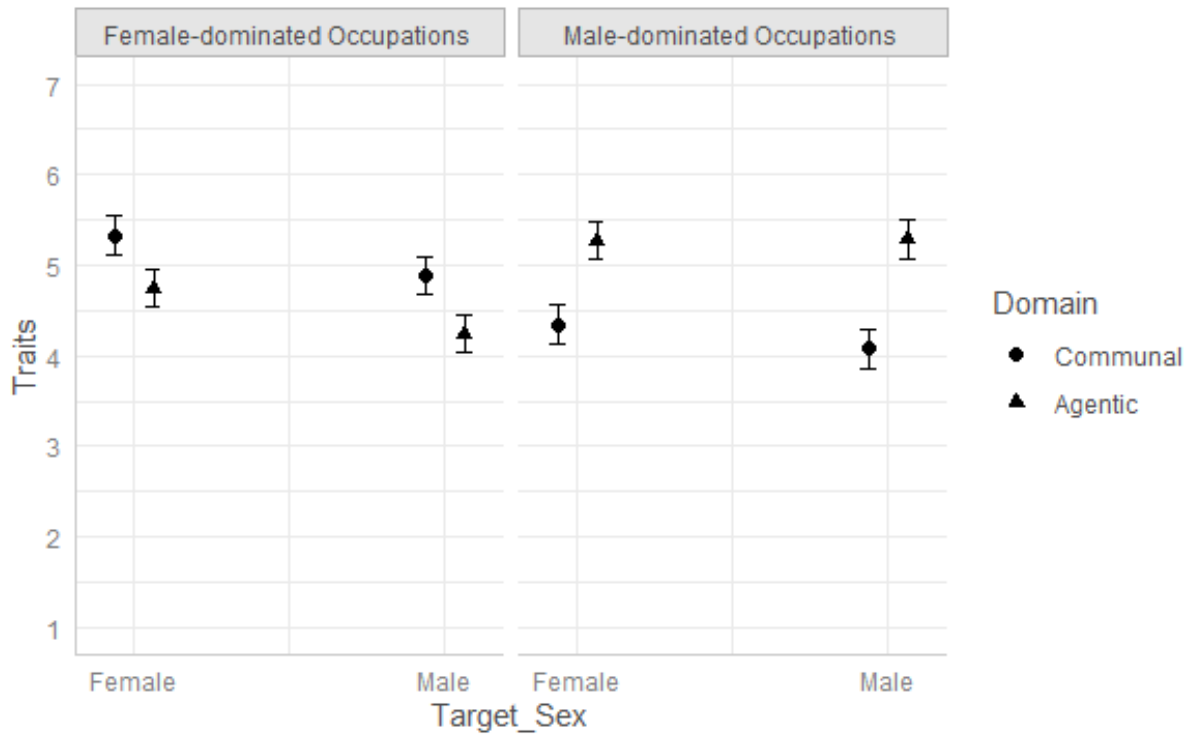
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**Maria I. T. Olsson** is a doctoral researcher in social psychology at the Arctic University of Norway in Tromsø. The focus of her PhD thesis is men in communal roles. She is currently co-leading a large cross-national project on men's engagement with communal roles in collaboration with researchers at the University of Leuven and University of British Columbia. She is also conducting field research on gender development in young children. She has published both experimental and theoretical papers on intergroup processes. Her main research interests are gender roles, role models, intergroup relations, and social inequality.

**Dr. Angela R. Dorrough** is a postdoctoral researcher in social psychology at the University of Cologne. She started her academic career as a research fellow at the Max Planck Institute for Research on Collective Goods and finished her PhD at the University of Goettingen in 2017. Her research can be divided into two main areas: One the one hand she investigates the determinants of cross-cultural cooperation behavior; on the other hand, her research is dedicated to discrimination (e.g., in selection processes) and potential interventions (e.g., quota rules) to reduce discrimination. She combines methods of economics and psychology to test social psychological theories. Furthermore, she is committed to transparency and replicability in research and communicates these principles as part of her teaching activities.

**Dr. Sarah E. Martiny** is a full professor in social and community psychology at UiT The Arctic University of Norway. She started her academic career as a PhD student at the International Graduate College "Conflict and Cooperation between Social Groups" at the Friedrich-Schiller-University in Jena. In Jena, she received a scholarship funded by the German Research Foundation and investigated motivational processes underlying social identity theory in her dissertation. She graduated from the University of Jena in 2008. Afterwards, she worked as a

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