Abstract

Social role theory postulates that gender stereotypes are restrained for men and women observed in the same social role. Cultural differences in the valuation of communal attributes might moderate this effect. To examine this possibility, 288 participants (144 German, 144 Japanese) estimated the communal and agentic attributes of an average man or woman described in a male-dominated role, a female-dominated role, or without role information. We hypothesized and found that in Germany and Japan, participants perceived men as more agentic than women without role information and as similarly agentic in the same role. However, for communion, German and Japanese participants reacted differently. German participants perceived women as more communal than men without role information and in male-dominated roles and perceived men as more communal than women in female-dominated roles. Japanese participants perceived all targets as similarly communal, regardless of role or gender, suggesting that communion is generally expected in Japan.

Keywords: culture, gender, social perception, social role theory, stereotyping

Social Role Effects on Gender Stereotyping in Germany and Japan

From childhood on, people observe the actions of boys and girls and women and men. According to one widely recognized explanation for the social origins of stereotypes (Eagly,1987; Eagly & Wood, 2012), these everyday observations fuel gender stereotypes because people infer that the sexes possess attributes that correspond to their behaviour (Gilbert, 1998). The sexes engage in different behaviours to the extent that they occupy different social roles—for example, there are more women than men in the domestic role and occupations such as teacher and nurse and more men than women in occupations such as soldier, fire fighter, and leader. In this article, we explore the implications that culture in the form of Western independent self-construal and Eastern interdependent self-construal (Markus & Kitayama, 1991) has on these role-based processes of gender stereotype formation.

Men and women are differently distributed into social roles because of humans' evolved physical sex differences by which men are stronger, larger, and faster than women and women gestate and nurse children. Because of these physical differences, certain activities are more efficiently accomplished by one sex or the other, depending on each society's circumstances and culture (Wood & Eagly, 2002, 2012). This task specialization of women and men produces an alliance between them as they engage in a division of labour.

Gender stereotypes arise because the psychological characteristics corresponding to behaviours are generalized to the sex typically performing them, and these characteristics are viewed as stable, intrinsic attributes of each sex. Specifically, to the extent that women are concentrated in domestic work and communally demanding employment, people believe that they are warm, caring, and socially skilled (Williams

& Best, 1990). To the extent that men are concentrated in strength-intensive roles and in high-status roles, people believe that they are assertive, forceful, and dominant (Ridgeway, 2011; Williams & Best, 1990). Psychologists usually refer to these feminine and masculine personality traits in terms of Bakan's (1966) concepts of *communion*—involving warmth and concern for others, and *agency*—involving assertiveness and competitiveness.

Because gender stereotypes are formed through the observation of women and men in different social roles, the occupancy of the same social roles by women and men might be able to prevent gender stereotyping. Indeed, this effect was demonstrated in classic social role experiments first carried out by Eagly and Steffen (1984, 1986). These experiments and several extensions and replications (Bosak, Sczesny, & Eagly, 2007, 2008, 2012; Harrison & Lynch, 2005) found that the observation of women and men in the same social role leads to the attribution of the same traits to women and men and thereby eliminates gender stereotyping. For example, in female-dominated occupational roles such as nurse, the men appeared as similar to the women in their warm and caring qualities. Still, gender stereotypes prevail when men and women are presented without further role information. For example, without role information, women appear more warm and caring than men.

Whereas gender stereotypes follow from the female-male division of labour, cultural differences stem in large part from the more diffuse influences inherent in societies' adaptation to their ecological and social environment (Kashima et al., 1995). For example, distinctive ecosystems favour different adaptive tasks, which then lead to the emergence of cultural differences. Such cultural differences may yield a somewhat different specification of gender stereotypes between cultures. Even though many

cultures share the communal and agentic content of gender stereotypes, some differences in stereotype content have also been documented (Williams & Best, 1990). Such cultural differences in gender stereotyping may reflect the varying placement of women and men in the social structure (Diekman, Eagly, Mladinic, & Ferreira, 2005; Wilde & Diekman, 2005). Alternatively, such differences may also reflect broader cultural dimensions that transcend the male-female division of labour.

Among the most prominent cultural dimensions is the distinction between interdependent and independent self-construal (Markus & Kitayama, 1991), as a wide range of cultural differences maps onto these psychological dimensions. In specific, an independent self-construal is defined by a tendency to structure one's behaviour in accordance with "one's own internal repertoire of thoughts, feelings, and action, rather than by reference to the thoughts, feelings, and actions of others" (Markus & Kitayama, 1991, p. 226). An interdependent self-construal, on the other hand, is defined by a tendency to align behaviour with the expectations of meaningful others. Independent self-construal is more likely in Western, individualistic cultures (e.g., the United States or Germany), and interdependent self-construal is more likely in Eastern, collectivistic cultures (e.g., Japan). Even though there is large variation in self-construal within any one culture (Markus & Kitayama, 1991), differences between typically independent and typically interdependent cultures exist in various aspects of the perception of the self and of others (Markus & Kitayama, 1991), cognition (Nisbett, Peng, Choi, & Norenzayan, 2001), and emotion (Kitayama, Mesquita, & Karasawa, 2006).

In our research, we explore whether cultural specifics that correspond to the distinction between independence and interdependence moderate the effects explicated by social role theory. We present a study that examined social role effects on gender

stereotyping in Germany as a Western, independent culture and in Japan as an Eastern, interdependent culture (Hamamura, 2011; Kitayama, Park, Sevincer, Karasawa, & Uskul, 2009). Although research has extensively demonstrated that providing information about specific social roles occupied by target women and men prevents gender stereotyping, the impact of culture on these social role effects has not been addressed to date.

In Germany, classical social role effects should occur on gender stereotypic attributes, similar to those obtained in other studies conducted in Western, independent cultures (e.g., Bosak et al., 2012). Specifically, gender stereotyping should prevail in conditions that provide no role information, with the average man judged as more agentic and less communal than the average woman. These effects should be attenuated or even eliminated by the presentation of men and women in the same social role. In Japan, however, such classical social role effects should occur only on agentic attributes. Specifically, on agency gender stereotyping should prevail in conditions that provide no role information, with the average man judged as more agentic than the average women. This effect should be attenuated or eliminated by the presentation of men and women in the same social role.

The classical social-role effects on communion should not be obtained in Japan. Our rationale for this prediction is that interdependent cultures' emphasis on harmony and group cohesiveness is compatible with communal traits such as warmth and kindness (Sugihara & Katsurada, 2000, 2002). Even though interdependent cultures manifest sex-related differences in some traits and behaviour, communal characteristics might not be gender-stereotypic because such behaviour is generally expected in these cultures and thus typical of behaviour in a wide range of male- and female-dominated

social roles. It thus follows that communal traits may be attributed to all persons, irrespective of gender.

Considerable evidence supports the claim that communal traits and harmonious interdependence are highly valued in Japan (Markus & Kitayama, 1991). For example, Sugihara and Katsurada (2000) showed that in Japanese society, self-ratings were higher on communal than agentic attributes and the sexes did not differ on communion. The authors reasoned that in Japan, loyalty and cooperation are valued because of the Confucian ethic, which emphasizes loyalty to the company and subordination to authority. In line with this reasoning, Japanese workers regarded loyalty, cooperation, and modesty as ideal traits (Hamada, 1996). Even among Japanese managers, feminine attributes such as being sympathetic were valued more than masculine attributes such as being assertive, whereas the opposite was the case in the Unites States (Powell & Kido, 1994). In other words, communal behaviour is encouraged by both male- and female-dominated roles in Japan, with the result that communal behaviour is not gender specific. Therefore, gender stereotyping should not occur on communal attributes in Japan.

Notably, even though Germany is an individualistic culture, we do not expect a positive valuation of agency regardless of gender, parallel to the positive valuation of communion regardless of gender in Japan. Previous research has consistently shown that men are perceived as more agentic than women in Western cultures (Spence & Buckner, 2000; Williams & Best, 1990). Consistent with the male dominance of agentically demanding roles and the female dominance of communally demanding roles in Western cultures (Wood & Eagly, 2012), agentic women are usually evaluated more negatively than agentic men (Rudman, Moss-Racusin, Glick, & Phelan, 2012). To our

knowledge, there is no evidence that in individualistic cultures agentic traits are generally valued regardless of gender, as is the case for communal traits in Japan. We therefore do not expect that in Germany agentic traits are generally ascribed to all targets regardless of their role and gender, but we instead expect agentic gender stereotypes to prevail in Germany in the absence of role information.

In summary, Japanese and German findings should differ because communion is characteristic of both sexes and pervades a wide range of social roles in Japan. Therefore, the social role prediction that specific roles inhibit gender stereotyping should hold in Germany for both agency and communion but in Japan for agency only. This experiment examines these hypotheses on the cultural moderation of social role effects on gender stereotypes.

Method

The study has a Target Sex (male vs. female) × Target Role (no role vs. male-dominated role vs. female-dominated role) × Culture (Germany vs. Japan) between-subjects design with ascribed agency and communion as the dependent variables.

Participants

The total sample consists of 144 German (72 female) and 144 (72 female) Japanese students who indicated "Germany/German" or "Japan/Japanese" for their nationality, native language, and home country, respectively. Participants' age ranged from 18 to 33 years, with a mean of 22.79 (*SD* = 2.58) years in the German sample and 21.55 (*SD* = 3.04) years in the Japanese sample. The data were combined over participant sex, which produced no significant effects.

Materials and Procedure

The materials (i.e., the manipulation, the agency and communion items and

demographic items, modelled after Bosak et al., 2008, 2012) were translated from German into Japanese and then translated back by a different person to ensure equivalence. Recruitment of participants took place at cafeterias, canteens, and lecture rooms of a Japanese and a German university. The experimenter randomly assigned participants to one of the experimental conditions and at the same time ensured an equal distribution of male and female participants across conditions. Under the pretext of conducting a study about impression formation, participants were asked to fill out the questionnaire. When participants had finished, the experimenter collected the questionnaire, thanked participants for their participation, and orally debriefed them on the purpose of the study.

Target role, target sex, and culture. In the no-role condition, participants were instructed to think of either an average woman or an average man. In the role conditions, participants were instructed to think of either an average woman or man in either a specific male-dominated occupation (between subjects: fire fighter or mechanic) or a specific female-dominated occupation (between subjects: preschool teacher or nurse). In specific, the instructions were: "Please imagine an average [target person]. What impression do you have of that [target person]?"

These occupations were segregated by sex in Germany as well as in Japan at the time of data collection (Statistisches Bundesamt, 2007; Statistics Bureau, 2008). In Germany, more than 98% of fire fighters and 96% of mechanics were male, and 94% of preschool teachers and 86% of nurses were female (Statistisches Bundesamt, 2007). In Japan, 99% of fire fighters and 97% of mechanics were male, and 95% of preschool teachers and nurses were female (Statistics Bureau, 2008). In previous research, the male- and female-dominated occupations evoked masculine or feminine stereotypical

images, respectively (Beggs & Doolittle, 1993; Cejka & Eagly, 1999; Glick, Wilk, & Perreault, 1995).

We used specific roles such as fire fighter or nurse to exemplify male-dominated and female-dominated roles, respectively, because under contemporary conditions these evoke clearer gender typicality than the general roles of homemaker and employee that were used in the original studies on social role theory (Bosak et al., 2012; Eagly & Steffen, 1984, 1986). We combined the agency and communion ratings across the two male-dominated roles and across the two female-dominated social roles.

Dependent variables. Participants rated the targets on 7-point scales, ranging from 1 = *not at all* to 7 = *extremely* (e.g., "How dominant do you think the [target person] is?"), on four agentic attributes (*dominant, aggressive, competitive, adventurous*) and on four communal attributes (*gentle, affectionate, supportive, sympathetic*). These items had previously been used by Bosak et al. (2008, 2012). Results were then averaged separately across the agentic (Germany: alpha = .67, Japan: alpha = .70) and communal items (Germany: alpha = .88, Japan: alpha = .85). Bosak et al. (2012) found no differences in responses on subjective and common-rule scales for these materials (see Biernat, 2003, for the distinction between these two types of scales). Therefore, we used only subjective scales in the current research. Outliers (18 on agency ratings and 22 on communal ratings) were eliminated by removing values beyond Tukey's (1977) outer fences, as calculated within each cell of the design.

Results

On agency, we expected gender stereotyping effects in both Germany and Japan in the absence, but not in the presence, of role information. On communion, we expected the same pattern of gender stereotyping in Germany, whereas in Japan we

expected communion to be unaffected by target role or target sex. Throughout this article, *p* values less than .05 were significant, and all reported contrasts were two-tailed. The means and standard deviations corresponding to the three-factor ANOVA appear in Table 1.

On agency, as expected, the Target Role × Target Sex × Culture interaction was not significant, $F(2, 258) = 0.12$, $p = .885$ (see Figure 1)[1]. When computed separately within culture, as expected, the Target Role × Target Sex interaction was significant in the German sample, $F(2, 258) = 5.61$, $p = .004$, $\eta^2 = .04$, and in the Japanese sample, $F(2, 258) = 4.77$, $p = .009$, $\eta^2 = .04$.

In both Germany and Japan, participants perceived male targets as more agentic than female targets in the absence of role information (Germany: $p < .001$; Japan: $p = .001$). In Germany and Japan, participants perceived male and female targets as similarly agentic in male-dominated roles (Germany: $p = .819$; Japan: $p = .966$). Likewise, in both cultures, participants perceived male and female targets as similarly agentic in female-dominated roles (Germany: $p = .964$; Japan: $p = .590$).

On communion, as expected, the Target Role × Target Sex × Culture interaction was significant, $F(2, 254) = 4.45$, $p = .013$, $\eta^2 = .03$ (see Figure 2)[2]. When computed separately within culture, as expected, the Target Role × Target Sex interaction was significant in the German sample, $F(2, 254) = 16.40$, $p < .001$, $\eta^2 = .11$, but not in the Japanese sample, $F(2, 254) = 1.42$, $p = .244$. This pattern is in line with our prediction that gender and role information should influence perceived communion in the German but not the Japanese sample. For Germany, decomposition of the Target Role × Target Sex interaction found that participants perceived female targets as more communal than male targets without role information , $p < .001$, as well as when presented in a male-

dominated role, $p = .026$. Participants perceived male targets as more communal than female targets when presented in a female-dominated role, $p = .007$. Although participants perceived women as more communal than men without role information and in male-dominated roles, this sex difference was larger in the absence of role information, as revealed by the interaction contrast that compared the sex differences in the no-role condition and the male-dominated role condition, $F(1, 254) = 5.15$, $p = .024$, $\eta^2 = .02$.

In contrast to these German findings, Japanese participants perceived women and men as equally communal regardless of whether the targets were presented without role information, $p = .248$, in a male-dominated role, $p = .579$, or a female-dominated role, $p = .255$.

Discussion

This study examined differences in gender stereotyping between Germany and Japan. Specifically, role information should attenuate or inhibit gender stereotyping on agentic and communal attributes in Germany and only on agentic attributes in Japan. In contrast, role information should not influence gender stereotyping on communion in Japan. This prediction followed from our expectation that the communal gender stereotype would be absent in Japan due to communion's general desirability for both sexes in Japanese culture. The findings were generally consistent with these hypotheses.

In the German sample, as expected, gender stereotypes on agency and communion were intact but attenuated or inhibited by role information. Specifically, participants perceived men as significantly more agentic and less communal than women in the absence of role information. On agency, this perceived sex difference was no longer significant in either male-dominated or female-dominated roles. On

communion in male-dominated roles, these German participants perceived women as somewhat more communal than men, but this stereotyping effect was attenuated compared to the no-role condition. On communion in female-dominated roles, these German participants reacted counterstereotypically by perceiving men as more communal than women.

Although this counterstereotypical effect on the Germans' ratings of men in female-dominated roles was not predicted, an analogous effect appeared in early social role research whereby participants accorded more agency to women than men in male-dominated roles (Eagly & Steffen, 1984, 1986). These researchers presented evidence that this effect was due to participants' belief that women more than men explicitly chose a male-dominated role. Because men and women are expected to choose stereotypical roles, an individual who chooses a counterstereotypical role could be regarded as having overcome normative pressures against such a choice. Social perceivers are thus likely to infer that such a choice implies a particularly strong dispositional inclination toward counterstereotypical activities (see Kelley's, 1973, augmentation principle). Therefore, this mechanism could underlie the greater communion ascribed to men than women who undertake female-dominated roles in our experiment. Specifically, participants may have reasoned that men, who are not expected to take on female-dominated roles, would choose to do so only if they were very communal. Despite this complexity, the German findings show that in general role information eliminated or at least attenuated conventional gender stereotyping as predicted by social role theory.

In the Japanese sample, the social role effects emerged as expected on agency. Japanese participants perceived men as more agentic than women in the absence of role

information. They perceived men and women as similarly agentic in the presence of a male-dominated role or a female-dominated role, which is consistent with social role theory. Yet, on communion, which is typical of both men and women in Japan (Sugihara & Katsurada, 2000), no sex differences emerged in any of the social role conditions. Japanese participants perceived men and women as equally communal in the presence and absence of role information. Hypothetically, the equal ascription of communion to women and men in the presence of role information could also indicate that gender stereotypes on communion are inhibited when women and men occupy the same social roles. However, we do not find this gender stereotype on communion even in the absence of role information, in contrast to the pronounced stereotyping effect in Germany. Concerning Japan, we expect and find that even the average woman and man without role information are perceived as equally communal. Furthermore, also the average woman and man in a male-dominated or female-dominated role are perceived as equally communal. Because the gender stereotyping effect is absent without role information, it should also be absent in the presence of role information and not merely inhibited by the role information. Taken together, the findings on communion are supportive of our hypotheses, according to which communal attributes are not gendered in Japan. Cultural specifics thus moderate typical social role effects.

One may wonder whether more egalitarian gender roles in Japan than in Germany might be responsible for our results. If roles of women and men concerning communion were more similar in Japan, this smaller gender gap could potentially explain why we do not find gender stereotyping on communion in Japan. However, the gender gap in domestic labour is even larger in Japan than in Germany. In fact, men in Japan spend 93% of their work time on paid labour, compared to men in Germany who

spend 55% of their work time on paid labour (United Nations Development Programme, 2007). Furthermore, Japan ranks much lower than Germany on women's economic participation and opportunity (World Economic Forum, 2011; Germany's rank: 32; Japan's rank: 100). Also on the Gender Equity Index (GEI) that reflects the gender gap in education and economic as well as political participation, Japan ranks lower than Germany (Social Watch, 2012; Germany's rank: 10; Japan's rank: 107). Regarding unpaid care work, in Japan women spend four times as many hours as men, whereas in Germany women spend two times as many hours as men (Organisation for Economic Co-operation and Development, 2010). Taken together, both in Germany and in Japan, women do more unpaid care work that is associated with communal attributes. Also, in both cultures, men do more market work that is associated with agentic attributes and have larger shares of economic and political participation. Nevertheless, this gender gap is more pronounced in Japan than in Germany. Therefore, our findings cannot be attributed to Japanese men's higher share of communal domestic labour or to more egalitarian gender roles in Japan.

The moderating influence of culture on social role effects is surprising, considering the pervasiveness of gender roles and gendered division of labour. Even though in Japan one's gender strongly affects one's role in the family and the society, this division does not translate into corresponding stereotypes on communal behaviour. In other words, despite women's typical domestic role as a care-taker, the traits associated with that role (e.g., nurturance) are not more likely attributed to women in Japan. The question remains whether gender stereotypes are formed differently in collectivistic cultures such as Japan. For instance, one may speculate whether our results could reflect different gender stereotype content. Although we do not find

gender differences on the communal stereotype, some specific communal attributes might have different meaning for men and women in Japan. For instance, social perceivers might believe that Japanese men manifest nurturance when spending extremely long hours in paid labour to provide for their families (Hamada, 1996) and that Japanese women manifest nurturance when being warm and caring towards their children. Because men's and women's nurturing behaviours would be carried out primarily in different role contexts, certain communal attributes that are specific to these contexts might be stereotypic of only one sex. For example, perhaps, expressiveness might be stereotypic of women and collaborative ability stereotypic of men, despite the ascription of communion to both sexes on the very general communal items that we presented (*gentle, affectionate, supportive, sympathetic*). Future research should explore whether our findings can be replicated for other collectivistic cultures, which would highlight even more the importance of cross-cultural research for a deeper understanding of social psychological processes.

This study is the first to compare a Western and an Eastern culture on effects predicted by social role theory. As expected, the effects of role information on gender stereotyping differed in Germany and Japan. These findings may be due to independence and interdependence in self-construal, which represent fundamental cultural distinctions (Markus & Kitayama, 1991), with culture serving as a proxy for these constructs. However, future research should test the social role hypotheses in a wider range of cultures and address the influence of interdependence versus independence more directly. We expect that this study's findings are not limited to the culture examined here (Japan) but would appear in interdependent cultures more generally (see cross-cultural meta-analysis on individualism-collectivism by Oyserman,

Coon, & Kemmelmaier, 2002). Overall, our results show that social role theory is relevant also when explaining stereotype formation in collectivist cultures, because we find typical social role effects in Japan on agency. Nevertheless, cultural specifics can moderate such social role effects.

One may speculate whether agency is culturally normative in Germany as an individualistic culture and whether in that case, agency would not be gendered in Germany and we would find no gender stereotyping. However, we expected to find parallel social role effects in Germany as had been found in other Western cultures (e.g., the United States) that are similarly or even more individualistic than Germany (Oyserman et al., 2002). Furthermore, to our knowledge there is no research explicitly showing that agency is culturally normative for both women and men in Germany or other Western cultures, whereas research has demonstrated that communion is culturally normative for both women and men in Japan (Sugihara & Katsurada, 2000, 2002). Taken together, in our study as well as in other social role studies in Western cultures (Bosak et al., 2007, 2008, 2012; Eagly & Steffen, 1984, 1986), agency is consistently attributed to and expected from men, but not women. In fact, for women, but not for men, agency is even discouraged if it is not mitigated by communion (Rudman, Moss-Racusin, Glick, & Phelan, 2012) in the United States as an individualistic culture. Therefore, agency is clearly gendered because agentic women, but not agentic men, are evaluated negatively. Considering this backlash effect and the lack of empirical support for the speculation that agency might be culturally normative in Germany or in other individualistic cultures, we expect that agency is gendered in Germany, but communion is not gendered in Japan.

Our results might be unexpected when considering that East Asians often show

less correspondent inference than Westerners, e.g., North Americans (Menon, Morris, Chiu, & Hong, 1999; Morris & Peng, 1994). However, other research has found that Japanese may be as likely as North Americans to manifest a bias towards dispositional attribution when observing trait-diagnostic behaviour (Miyamoto & Kitayama, 2002). Nevertheless, because correspondent inference (Gilbert & Malone, 1995) underlies stereotype formation, cultural variations in the readiness to infer traits from behaviour should therefore also affect gender stereotyping. Specifically, if people from interdependent cultures are less likely to infer gender stereotypic traits from the occupancy of different social roles of women and men, gender stereotypes should be less pronounced in these interdependent cultures. Thus, one alternative explanation for our results might be that Japanese do not show correspondent inference, i.e., are less likely to infer traits from behaviour, and accordingly do not form gender stereotypes. However, such a cultural difference in correspondent inference (Morris & Peng, 1994) cannot account for our results because gender stereotyping occurred on agency in Japan. Overall, our results suggest that Japanese people evidently show correspondent inference to some extent as they infer agentic traits from a more frequent expression of agentic behaviour by men, which is consistent with previous literature (Miyamoto & Kitayama, 2002). Therefore, our finding that communion is not gendered in Japan cannot be attributed to mere lack of inference from gender stereotypic behaviour to gender stereotypic traits. Instead, our results provide evidence that communion is culturally normative in Japan and thereby not gender specific.

The present study is not without limitations. Typical concerns in cross-cultural research pertain to the comparability of samples and measures. Concerning sample selection, recruitment of participants at only one university per country limits

generalizability, and more representative samples are thus desirable for future research. Another potential confound in cross-cultural research concerns cultural differences in response styles (Hamamura, Heine, & Paulhus, 2008), although recent research has found very similar response styles in Germany and Japan (Mõttus et al., 2012). However, to minimize the potential impact of response biases, we conducted contrasts testing the social role effects only within each of the two cultures. In terms of methodological complications arising from the differences in language of the two sample populations, we ensured maximum equivalence between the German and the Japanese versions of the questionnaire through back translation.

The results of this study have important implications for the understanding of social roles and gender stereotyping more generally. As our study has convincingly demonstrated, cultural specifics in the form of a general expectation of communion in both men and women moderated gender stereotyping and thus the effects of social role information on stereotyping. Therefore, the main implication of our research is that culture-specific values should be taken into account in understanding relations between gender stereotypes and social roles.

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[1] On agency, the following effects that are not relevant to the hypotheses were also obtained: (a) a main effect of target sex, $p = .006$, whereby participants ascribed more agency to male targets than female targets; (b) a main effect of target role, $p < .001$, whereby participants ascribed the most agency to targets in male-dominated roles and the least agency to targets in female-dominated roles, with targets without role information judged to be between these two conditions; (c) a main effect of culture, $p = .007$, whereby German participants ascribed more agency to targets than Japanese participants did.

[2] On communion, the following effects that are not relevant to the hypotheses were also obtained: (a) a main effect of target sex, $p = .026$, whereby participants ascribed more communion to female targets than male targets; (b) a main effect of target role, $p < .001$, whereby participants ascribed the most communion to targets in female-dominated roles and the least communion to targets in male-dominated roles, with targets without role information judged to be between these two conditions; (c) a main effect of culture, $p = .002$, whereby Japanese participants ascribed more communion to targets than German participants did.

Figure 1: Mean agency ratings and standard errors (error bars) by target gender, target role, and culture. Ratings were on a 7-point scale on which higher scores indicate greater likelihood of possessing each characteristic. Cell *n*s ranged from 18 to 24 participants.

Figure 2: Mean communion ratings and standard errors (error bars) by target gender, target role, and culture. Ratings were on a 7-point scale on which higher scores indicate greater likelihood of possessing each characteristic. Cell *n*s ranged from 18 to 24 participants.

Table 1

Means (Standard Deviations) on Agency and Communion by Culture, Role, and Target Sex

Culture	Target sex	Role		
		None	Male-dominated	Female-dominated
		Agency		
Germany	Male	4.46 (0.65)	4.76 (0.79)	3.25 (0.92)
	Female	3.63 (0.73)	4.83 (0.74)	3.24 (0.57)
Japan	Male	4.51 (0.82)	4.16 (0.81)	3.04 (0.76)
	Female	3.65 (1.02)	4.15 (1.22)	3.17 (0.81)
		Communion		
Germany	Male	3.71 (0.67)	3.86 (1.07)	5.78 (0.57)
	Female	5.22 (0.53)	4.48 (0.98)	5.01 (0.92)
Japan	Male	4.52 (1.02)	5.05 (1.00)	5.43 (0.90)
	Female	4.84 (0.74)	5.20 (1.11)	5.13 (1.07)

Note. Ratings were on a 7-point scale on which higher scores indicate greater likelihood of possessing each characteristic. Cell *n*s ranged from 18 to 24 participants.