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Gendered Occupational Prestige Scores in Japan: Focusing on the Effects of Respondents' Characteristics

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1．Background

Occupational prestige score is an important measurement of occupational status, which is measured as the public's evaluation of the social standing of various occupations (Hodge et al. 1964, Treiman 1977, Nakao and Treas 1994). In Japan, large surveys like the Social Stratification and Mobility (SSM) Survey Project, first implemented in 1955, have researched and calculated the prestige score for each occupation as the average rating given by survey respondents. According to previous studies based on the results of these surveys, occupational prestige scores are stable across different periods (Hodge et al. 1964, Nakao and Treas 1994, Genji and Tsuzuki 1998, Miwa and Saito 2018) and societies (Treiman 1977, Sonoda 2005, Genji 2008, 2011). Furthermore, occupational prestige scores calculated from ratings given by respondents with different characteristics like gender, age, education, etc., greatly correlate with each other (Genji and Tsuzuki 1998, Genji 2018). For example, men and women share similar rankings of occupations, although on average, women tend to give higher evaluations than men. Thus, occupational prestige scores are robust and reliable measurements for people in different periods and societies with different characteristics. This feature is consistent with the idea that a person with a certain occupation has a certain social prestige, which contributes to the validity of occupational prestige scores as a measurement of occupational status.

However, if we consider the gender of the incumbents rated in occupational prestige surveys as well as the gender of the survey respondents, occupational prestige scores are not gender-neutral measurements of occupational status. Some empirical studies have focused on the relationship between occupational prestige and the gender of incumbents, measuring gendered occupational prestige scores (Bose 1985, Jacobs and Powell 1985, Magnusson 2009, Wakita 2021). These studies generally reported that people had a tendency to give lower evaluations to the people working in occupations that were not typically associated with their gender (i.e., women working in fields associated with men or vice versa). Occupational prestige varies between genders of incumbents, and the prestige of gender-atypical incumbents is affected by the job's gender composition as well as its income and educational levels (Powell and Jacobs 1984).

Occupational prestige without gender information is accurately predicted by that of gender-typical incumbents (Jacobs and Powell 1985).

The effect of jobholders' gender on occupational prestige can be explained by respondents' gender stereotypes. A core feature of male and female characteristics based on gender stereotypes is "that women are presumed to excel in personal service, nurturance, and interpersonal interaction, while men are presumed to excel in interaction with things (rather than people) and in strenuous or physical labor" (Charles and Grusky 2004: 15). Two mechanisms may underlie how gender stereotypes affect prestige ratings. First, deviance from gender stereotypes may lower prestige. Behaviors that deviate from stereotypes are underestimated because a stereotype is both a normative and a descriptive concept. Therefore, workers in jobs not consistent with their gender stereotypes, i.e., gender-atypical workers, may be rated lower than other workers. Second, people may think that one can derive more social resources from their occupation when one's gender is consistent with the gender stereotype of their occupation. In other words, gender-typical workers may be thought to be more successful than gender-atypical workers in the same job. When people believe that masculinity is related to the success in male-dominated occupations, and likewise, femininity is related to the success in female-dominated occupations (Cejka and Eagly 1999), they tend to rate the gender-typical workers higher than the gender-atypical workers.

Furthermore, in contemporary Japanese society, we can observe occupational gender segregation, gender stereotypes regarding occupations and the effects of gender stereotypes on occupational prestige scores. Yamaguchi (2019) pointed out that there is strong horizontal occupational gender segregation as well as vertical occupational gender segregation in Japan if the analysis reconsiders the categories of professional/technical (semi-professional) occupations: human service professional occupations are occupied by female workers. Adachi (2013) showed that people recognize male-dominated occupations like carpenter and pilot as "masculine" occupations and female-dominated occupations like dietitian and sewing stewardess / steward as "feminine" ones in Japan (Adachi 2013). Analysis has shown that respondents' gender stereotypes about rated occupations do affect their rating of gendered occupational prestige: respondents who consider an occupation as "appropriate for men (women)" tend to rate the prestige of a women (men) with the occupation lower in Japan (Wakita 2021).

This research focuses on the effects of the respondents' characteristics such as gender, age and education on occupational prestige ratings when respondents know the gender of the rated incumbents. We believe that respondents' characteristics, especially gender-related characteristics, can impact gender stereotypes about occupations and thereby occupational ratings. In large random-sampling surveys, women had a tendency to rate female-dominated occupations higher than men (Genji and Tsuzuki 1998, Genji 2018, Valentino 2020). Additionally, gender stereotypes are associated with respondents' characteristics. Adachi (2013) clarified that female respondents tend to see male-dominated occupations as "masculine" jobs, and men tend to see female-dominated occupations as "feminine" jobs. Tanabiki (2018) demonstrated that people without degrees tend to think male and

female dominated occupational categories are more appropriate for the dominating gender. Therefore, we believe that respondents' personal characteristics may influence their gender-stereotypes and ratings of occupations when incumbents' gender information is given. For example, male respondents may evaluate male workers higher than female workers and that female respondents may do the opposite. We also believe that the effect of respondents on their rating of workers with occupational and gender information are related to their gender stereotypes.

In our analysis, then, we examine whether respondents' characteristics affect their rating for male/female workers, taking into account their gender stereotypes regarding the rated workers' occupations. As respondents' characteristics variables, we will examine gender-related variables like respondents' (raters') gender, gender-related consciousness, gender composition of their workplace, which are expected to be somewhat related to gender stereotypes regarding rated incumbents' occupations. We also need to examine the effects of respondents' own occupational variables, such as occupational prestige and occupational categories, in addition to demographic variables like age and educational levels.

2. Data and variables

The data analyzed in this study are drawn from the Online Survey about Occupation in Contemporary Japanese Society data. The survey respondents included people who voluntarily registered to Macromill, Inc., an online survey company, in 2020. The survey was conducted as an online survey of adults aged 20 to 69 in Japan, using quota sampling that included gender and age groups. In the analysis, the data from 3 questionnaires named type A, D, E are used; the complete survey consists of 6 different types of questionnaires. The analysis uses the data from 1516 respondents in total as three types of data include 1560 respondents (respectively 520 respondents), but we use list-wise case deletion in the analysis. The sample is somewhat biased because the respondents were not randomly sampled. The online medium, however, make it easy to conduct surveys with a complicated structure, e. g. a variety of questionnaires, random order of rated occupations. In addition, occupational prestige scores are stable among various surveys, including non-random-sampling surveys, according to previous studies.

To measure the dependent variable, prestige rating, the survey questionnaire provided information on incumbents' occupation and gender and asked participants to rate incumbents. For example, the survey asked participants to evaluate "Doctor (Woman)," "Nurse (Man)," and so on, while general occupational prestige surveys ask respondents to rate "Doctor" and "Nurse" on a 5-point rating scale, which included "Highest," "Somewhat High," "Middle," "Somewhat Low" and "Lowest". A total of 90 occupational titles were divided into three groups of 30 occupations respectively: group 1, 2, and 3. The three groups including 30 occupational titles had similar average occupational prestige scores as per the prestige survey in 2016 (Genji 2018), similar average percentages of female workers according to the 2015 Japanese Population Census (Statistics Bureau of Japan 2017), similar compositions of major occupational categories, and

female- and male-dominated occupations. Type A respondents were asked to rate 30 male incumbents of group 1 and 30 female of group 2, Type D respondents were asked to rate 30 male group 2 workers and 30 female group 3 workers, and Type E respondents were asked to rate of 30 male group 3 workers and 30 female group 1 workers on a 5-point scale. The occupational prestige scores ranged from 0 to 100 and were calculated for male and female incumbents with 90 occupations across the three questionnaire types.

Gender stereotypic images were measured regarding 60 occupations, whose gendered occupational prestige scores were measured in each type of questionnaire. Respondents rated the gender stereotyping of each occupation on a 5-point rating scale, ranging from "thought to be appropriate for men" (1) to "thought to be appropriate for women" (5), following a previous online survey (Tanabiki 2018). When respondents selected 1 or 2 ("somewhat appropriate for men") for an occupation, the value of "M-stereotype for incumbent" dummy variable for an occupation equaled 1, which meant that respondents had "appropriate for men" gender stereotypes for the occupation. Similarly, when they selected 4 ("somewhat appropriate for women") or 5 for the occupation, the dummy variable "F-stereotype for incumbent" equaled 1, indicating that they had "appropriate for women" gender stereotypes for an occupation. The order of the incumbents in the prestige ratings and the occupations in gender stereotypic images was randomized for each participant.

The dependent variable is the prestige rating given to incumbents when participants had occupational and gender information. Aside from gender stereotypes (M-stereotype and F-stereotype for incumbent), independent variables regarding the incumbents are gender and occupational prestige score without gender information based on the survey conducted in 2016 (Genji 2018). Independent variables concerning the survey respondents included: gender, education (a dummy variable meaning 4-year university or higher), conservative gender-role attitude (synthesized from 5 questions) and occupational categories (upper white-collar worker / lower white-collar worker / blue-collar or agricultural worker / no job). To measure conservative gender-role attitude, respondents were asked five questions on a five-point scale seeking their opinions on: general gender roles; the effect of mothers' work on children; women's home responsibilities and men's earning responsibilities; the different upbringing of boys and girls; and gender differences in suitability for housework and childcare. Various variables including age, gender stereotyping for respondents' own occupations, gender composition of respondents' occupation/workplace and respondents' occupational prestige were also examined as independent variables but were not included in the models shown below because they did not have robust effects.

Table 1 lists the descriptive statistics of variables used in the hierarchical linear analysis. The analyzed data have a higher proportion of highly educated people and white-collar workers than general population.

The average occupational prestige score for male workers was 55.25 and 55.43 for female workers ($N=90$); there was no significant difference. The Pearson's correlation coefficient between male and female incumbents' occupational prestige scores is 0.979[1)] which confirms that

Table 1 Descriptive variables (N = 90,960)

Dependent variable		
	Mean	*s. d.*
Prestige rating	55.403	20.841
Level 1 variables		
	Mean	*s. d.*
Female incumbent	0.500	0.500
F-stereotype for incumbent	0.175	0.380
M-stereotype for incumbent	0.252	0.434
2016 occupational prestige	54.154	13.197
Level 2 variables		
	Mean	*s. d.*
Female respondent	0.504	0.500
4-year university or more respondent	0.519	0.500
Unemployed respondent	0.299	0.458
Upper white-collar respondent	0.203	0.402
Lower white-collar respondent	0.327	0.469
Blue collar / Agricultural respondent	0.172	0.377
Conservative gender-role attitude (Low)	0.320	0.466
Conservative gender-role attitude (Middle)	0.374	0.484
Conservative gender-role attitude (High)	0.306	0.461
Type A	0.332	0.471
Type D	0.336	0.472
Type E	0.331	0.471

male and female workers share the common stable structure of the prestige, similar to previous surveys (Goyder et al. 2003, Wakita 2021). Figure 1 shows the associations between difference of prestige scores and percentages that respondents have "appropriate for women" stereotypes (F-stereotype) about the occupation while Figure 2 shows them between difference of scores and percentages of "appropriate for men" stereotypes (M-stereotype). Differences of prestige scores were calculated by subtracting female incumbents' scores from males. Each plot means occupations rated in the survey (N=90). Figure 1 shows the negative correlation (r=−0.577), which means that female workers in occupations that many people consider "appropriate for women" were rated higher than male workers in the same occupations. Figure 2 shows positive correlation (r=0.359), which means that male workers in occupations considered "appropriate for men" were rated higher than female workers.

3. Analysis

Hierarchical linear modelling (HLM) is used to clarify the effect of survey respondents' characteristics on prestige rating in association with gender stereotyping. HLM modeling is used to analyze hierarchically structured data, and it treats multilevel variables such as individual level and group level. In the analysis, Level 1 consists of variables related to incumbents and Level 2 consists of variables only related to respondents. Also, models are adopted in which Level 2 vari-

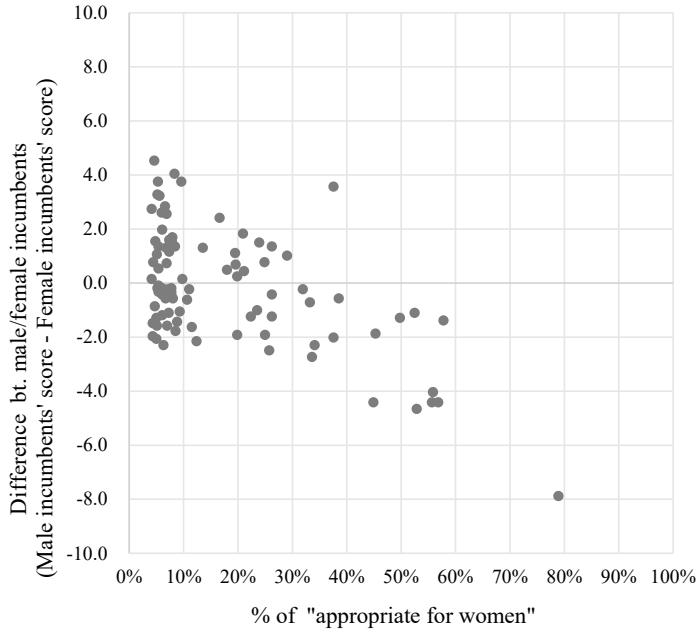

Figure 1 Difference of prestige score between male/female incumbents and percentage of "appropriate for women" stereotyping (*N* = 90)

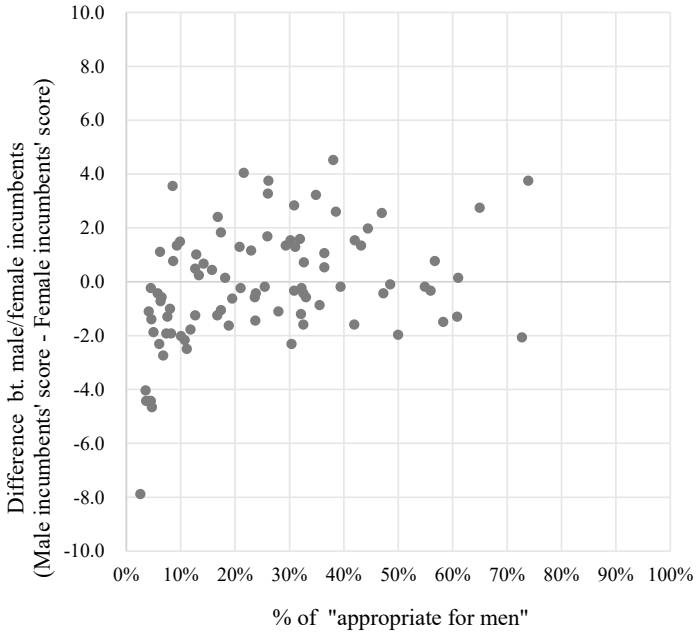

Figure 2 Difference of prestige score between male/female incumbents and percentage of "appropriate for men" stereotyping (*N* = 90)

ables explain the slopes as well as the intercept of Level 1 variables and examine the interaction effect between two levels, using the maximum likelihood estimation.

In the HLM analysis, female incumbent, F-stereotype for incumbent, M-stereotype for incumbent, 2016 prestige score, interaction of female incumbent and F-stereotype, and interaction of female incumbent and M-stereotype are eventually used as Level 1 variables. Gender is included as a dummy variable meaning female incumbents. F-stereotype is a dummy variable that means whether the respondent sees the rated incumbent's occupation as "appropriate for women" or not; M-stereotype means whether the respondent sees the rated occupation as "appropriate for men." The 2016 prestige score is based on Genji (2018) and is the centered occupational prestige score without the rated incumbent's gender information.

As Level 2 (respondents' characteristics) variables, respondents' gender, occupation, education and gender-role attitude are eventually used. The selected variables remained as they have robust and consistent effects on the dependent variable.

Model 1 includes only Level 1 variables, although the Level 1 intercept and slopes, the coefficients of Level 1 variables, are treated as random effects. The two coefficients of the Level 1 variable, female incumbent and 2016 prestige score, are treated as fixed effects as the Level 2 variances are very small. Model 2 is constructed by adding respondents' gender as a Level 2 variable that explains the intercept and slopes in Level 1. Model 3 includes an additional Level 2 variable, respondents' occupation, while Model 4 also includes educational level and gender-role attitude (3-value dummy variables). Each independent variable is examined to see if it has a significant effect and improves the model to decide whether it should be included to the models.

Table 2 and Table 3 show the results of the analyses. Table 3 does not show coefficients of the main effects (Level 1 and Level 2 variables), which do not show significant differences from Model 2. Model 1 confirms that male workers with occupations which respondents have F-stereotypes and female workers with M-stereotypes are rated lower when controlled by the 2016 prestige scores (without gender of incumbents). The coefficient of incumbents with occupations thought to be "appropriate for women" is −3.764 and the coefficient of female incumbents with occupations considered "appropriate for women" is +3.105. Thus, male incumbents with "appropriate for women" occupations are rated considerably lower (−3.764) than those having occupations without "appropriate for men/women" stereotypes. In contrast, female incumbents with "appropriate for women" occupations are rated slightly lower (−3.764+3.105=−0.659) than those having occupations without gender stereotypes.

Model 2 identifies the effects of respondents' gender. The cross-level interaction section in the model indicates that the interactive effect of F-stereotypes for rated occupations and female respondents is negative (−1.766). However, the three-way interactive effect of F-stereotypes for rated occupations, female incumbents, and female respondents is positive (+2.433). These results mean that female respondents tend to rate male workers in occupations "appropriate for women" lower (−1.766) than male respondents. In addition, they tend to rate female workers in occupations "appropriate for women" higher (−1.766+2.433=0.667) than male respondents do.

Table 2 HLM (dependent variable: prestige rating)

	Model 0	Model 1	Model 2
Level 1 variables			
Female incumbent		−0.097	0.002
F-Stereotype for incumbent		−3.764 ***	−2.963 ***
M-Stereotype for incumbent		0.598 **	0.960 **
Female incumbent * F-Stereotype for incumbent		3.105 ***	2.038 ***
Female incumbent * M-Stereotype for incumbent		−0.586 †	−1.396 **
2016 occupational prestige		0.755 ***	0.755 ***
Level 2 variables			
Female respondent			1.168 *
Type of questionnaire (Reference: Type A)			
Type D			−0.335
Type E			−0.308
Interaction between levels			
Female incumbent * Female respondent			−0.186
F-Stereotype for incumbent * Female respondent			−1.766 ***
M-Stereotype for incumbent * Female respondent			−0.669
Female incumbent * F-Stereotype for incumbent * Female respondent			2.433 ***
Female incumbent * M-Stereotype for incumbent * Female respondent			1.588 *
Intercept	55.403	55.760	55.367
Level 2 variances			
β_2 variance (F-stereotype)		10.898	10.789
β_3 variance (M-stereotype)		10.968	10.934
β_4 variance (female incumbent * F-stereotype)		24.150	23.869
β_5 variance (female incumbent * M-stereotype)		35.309	35.119
β_0 variance (intercept)	69.220	69.712	69.471
Level 1 variance	365.134	253.472	253.438
Log Likelihood	−399317.6	−383975.9	−383962.1
N	90,960	90,960	90,960
Number of groups	1,516	1,516	1,516

1) † $p<.1$; * $p<.05$; ** $p<.01$; *** $p<.001$.

Therefore, the female respondents' F-stereotypes about occupations have a stronger effect on their prestige ratings than the male respondents' F-stereotypes have effect on theirs.

Models 3 and 4, shown in Table 3[2)], can improve the goodness of fit compared to Model 2. The following discussion, therefore, will mainly focus on the between-level interaction effects expressed in Model 4. The interaction of female incumbent and lower white-collar respondent (−0.588), and that of female incumbent and blue-collar or agricultural respondent (−0.742), have negative effects on occupational rating in Model 4. This suggests that respondents who have lower white-collar, blue-collar, or agricultural jobs tend to evaluate female workers lower. There is no robust tendency for people to rate incumbents with their own gender higher as the interaction coefficient of female incumbent and female respondent is not significant. Focusing on gender stereotypes, the interactive effects of F-stereotype for incumbent and female (−2.341),

upper white-collar (−2.152), blue-collar or agricultural (−2.905), and highly educated (−1.502) respondents are negative, while the three-way interactive effects of female incumbent, F-stereotype and female (+2.661), blue-collar or agricultural (+2.949) are positive in Model 4. These respondents rate male incumbents with "appropriate for women" occupations lower and female incumbents with these occupations higher. This suggests that among upper white-collar, blue-collar, and agricultural workers, as well as among women, the effects of F-stereotypes are strong. The interactive effects of M-stereotype for incumbent and upper white-collar (+1.699), and blue-collar or agricultural (+2.264) workers are positive while the three-way interactive effects of female incumbent, M-stereotype and upper white-collar (−1.798), and blue-collar or agricultural (−1.874) are negative. They rate male incumbents with "appropriate for men" occupations higher and female incumbents with these occupations lower.

Furthermore, the interactive effect of F-stereotype for incumbent and people with middle gender-role attitude compared to those who have low gender-role attitude is positive (+1.515), whereas the three-way interactive effects of female incumbent and F-stereotype, and middle or high gender-role attitude are negative (−2.756 and −2.233 respectively in Model 4). This suggests that the effects of gender stereotypes related to "appropriate for women" occupations are weaker among people with middle or higher gender-role attitudes. People who do not have conservative gender-role consciousness, therefore, are affected by gender stereotypes about occupation when they rate jobs.

4. Discussion

The analysis yields three main findings. First, the effects of gender stereotypes on prestige ratings are confirmed. Both men and women who are considered gender-atypical in their occupation are undervalued in prestige rating. Second, the analysis revealed that the effect of "appropriate for women" stereotypes on prestige ratings are stronger among women, those who are highly educated, and people who have an egalitarian consciousness about gender roles. Third, the overall effects of gender-related stereotypes on prestige ratings are stronger among upper white-collar, blue-collar, or agricultural workers than among lower white-collar workers or people without job.

It may be a surprising result that the effects of gender-stereotypes for "feminine" jobs are stronger among women, highly educated, or gender-egalitarian respondents. It should be noted, however, that this result does not suggest that these groups have stronger gender stereotypes. As shown in previous studies, female participants in this study had more gender stereotypes for "masculine" occupations but did not have strong gender stereotypes for "feminine" occupations. The results of hierarchical logistic regression models (Table 4) demonstrate that the coefficients of female respondent and 4-year university are not significant in the model for F-stereotype, while female respondent is positively significant and 4-year university is negatively significant in the model for M-stereotype. The coefficients of middle/high conservative gender-role attitudes present a strong positive significance in both models according to Table 4. Therefore, people who do not exhibit conservative gender-role consciousness have fewer gender stereotypes for each

Table 3 Interaction effects of HLM (dependent variable: prestige rating)

	Model 3	Model 4
Interaction between levels		
Female incumbent		
* Female respondent	−0.241	−0.208
* Upper white-collar respondent	0.129	0.070
* Lower white-collar respondent	−0.570	−0.588 †
* Blue-collar / Agricultural respondent	−0.805 †	−0.742 †
* 4-year university or more		0.314
* Middle gender-role attitude		0.390
* High gender-role attitude		0.165
F-Stereotype for incumbent		
* Female respondent	−2.404 ***	−2.341 ***
* Upper white-collar respondent	−2.433 **	−2.152 **
* Lower white-collar respondent	−0.281	−0.158
* Blue-collar / Agricultural respondent	−2.482 **	−2.905 ***
* 4-year university or more		−1.502 **
* Middle gender-role attitude		1.515 *
* High gender-role attitude		0.967
M-Stereotype for incumbent		
* Female respondent	−0.011	0.092
* Upper white-collar respondent	1.545 *	1.699 *
* Lower white-collar respondent	0.511	0.547
* Blue-collar / Agricultural respondent	2.352 ***	2.264 **
* 4-year university or more		−0.545
* Middle gender-role attitude		0.170
* High gender-role attitude		0.805
Female incumbent * F-Stereotype for incumbent		
* Female respondent	2.937 ***	2.661 ***
* Upper white-collar respondent	0.749	0.625
* Lower white-collar respondent	−0.280	−0.329
* Blue-collar / Agricultural respondent	2.917 **	2.949 **
* 4-year university or more		−0.018
* Middle gender-role attitude		−2.756 **
* High gender-role attitude		−2.233 *
Female incumbent * M-Stereotype for incumbent		
* Female respondent	0.969	0.861
* Upper white-collar respondent	−1.743 †	−1.798 †
* Lower white-collar respondent	−0.103	−0.110
* Blue-collar / Agricultural respondent	−1.865 †	−1.874 †
* 4-year university or more		0.009
* Middle gender-role attitude		−0.606
* High gender-role attitude		−0.843
Intercept	54.194	55.675
Level 2 variances		
β_2 variance (F-stereotype)	10.195	9.765
β_3 variance (M-stereotype)	10.272	10.197
β_4 variance (female incumbent * F-stereotype)	23.603	23.054
β_5 variance (female incumbent * M-stereotype)	34.922	34.808
β_0 variance (intercept)	68.719	68.170
Level 1 variance	253.376	253.360
Log Likelihood	−383923.4	−383903.6
N	90,960	90,960
Number of groups	1,516	1,516

1) † $p<.1$; * $p<.05$; ** $p<.01$; *** $p<.001$.

occupation; however, their stereotypes matter in prestige ratings. Women, highly educated, or gender-egalitarian people with strong gender stereotypes for "feminine" jobs may believe that these occupations should be occupied by female workers, as professionals with high percentages of women are limited to human service-related occupations in Japan (Yamaguchi 2019).

According to the models for determinants of gender stereotypes for occupations (Table 4), blue-collar or agricultural workers have stronger M-stereotypes and F-stereotypes for "masculine" and "feminine" jobs respectively, while upper white-collar workers such as professional / technical workers and managerial workers have strong M-stereotypes for occupations typically considered appropriate for men. Their prestige ratings are strongly affected by these stereotypes when compared to lower white-collar workers and unemployed people. The category "professionals / technicians" includes various "masculine" and "feminine" occupational titles, like kindergarten teacher (for which 57.8% of respondents have F-stereotype), nurse (52.9%), pilot (for which 65.0% of respondents have M-stereotype) and automobile designer (44.4%). Blue-collar and agricultural workers include very "masculine" jobs like road crew (which 58.3% of respondents have M-stereotype) and fisher (73.9%). Thus, there is possibility that people with upper white-collar, blue-collar and agricultural jobs tend to be conscious of masculinity and femininity as related to occupations. However, our results did not show explicit evidence that subjective / objective gender composition of respondents' own occupations or gender stereotypes for the respondents' own occupations affected their prestige ratings in the survey.

The analysis shows that there are the effects of respondents' characteristics on rating of gendered occupational prestige in contemporary Japanese society. The effects of F-stereotypes, that is "appropriate for women" stereotypes for occupations, are salient, especially among female, highly educated, or gender-egalitarian people. Currently, there is a steady increase in female-dominated occupations such as welfare, medical, and educational related services or technical (semi-professional) jobs. These jobs have been related to care, unpaid work at home, low wage and femininity. The increase in the demand for these types of occupations will enhance the gender-related factors for occupational prestige rating.

When we consider gendered occupational prestige, offering incumbents' gender information in addition to incumbents' occupation for respondents in prestige surveys, we can find complex effects of respondents' characteristics on gender-related stereotypes about each occupation and prestige ratings for the occupation. The respondents do not necessarily share a consensus about prestige ratings if considering combination of incumbents' occupation and gender. This suggests that there is merit in reconsidering the occupational prestige score as a measurement of occupational status in sociology and social sciences. For example, researchers may consider using gendered prestige scores to measure male and female occupational status. At the very least, this study supports the idea that occupational status, as measured by occupational prestige scores, is gendered, that is, influenced by gender-related variables of incumbents and raters. Further research could consider social status as something that can be influenced and changed by gender and other attributes. For further studies, we need to understand the mechanism that gender ste-

Table 4 Hierarchical Logit Model (dependent variables: M-stereotype / F-stereotype)

	F-stereotype	M-stereotype
	Odds Ratio	Odds Ratio
Level 1 variables		
Female incumbent in prestige rating	1.088 *	0.815 ***
Level 2 variables		
Female respondent	0.898	1.829 ***
Respondent's Occupation (Reference: No job)		
Upper white-collar respondent	1.235	1.413 *
Lower white-collar respondent	1.249 *	1.484 ***
Blue-collar / Agricultural respondent	1.516 **	1.863 ***
4-year university or more respondent	0.907	0.781 *
Gender-role attitude (Reference: Low)		
Middle	2.843 ***	2.820 ***
High	6.346 ***	9.345 ***
Age (centered)	1.004	1.002
Marriage	1.282 **	1.290 *
Type of questionnaire (Reference: Type A)		
Type D	1.283 *	0.785 *
Type E	0.697 ***	0.681 ***
Intercept	0.224	0.169
Level 2 variances		
β_0 variance (intercept)	2.231	3.028
Log Likelihood	−10250.3	−17222.0
N	18,184	33,354
Number of groups	1,516	1,516

1) † $p<.1$; * $p<.05$; ** $p<.01$; *** $p<.001$.
2) M-stereotype model is analyzed for occupations 30% or more respondents have M-stereotypes, while F-stereotype model is for occupations 30% or more respondents have F-stereotypes.

reotypes of respondents have affect prestige ratings in detail. For the purpose, we have to focus on differences between the effects of masculinity and femininity, the varieties of masculinities and femininities related to occupations, the features of increasing "feminine" occupations.

Notes

1) The correlation coefficient between the occupational prestige scores for male workers calculated in the survey and prestige scores without gender information according to the 2016 Social Status Survey (Genji 2018) is 0.972, while the correlation between the prestige scores for female workers and the 2016 occupational prestige scores is 0.968 (N=90).
2) Among respondents' (Level 2) variables, the coefficients of a female respondent, lower white-collar respondent, blue-collar or agricultural respondent are positive, while for respondents with 4-year university degree, it is negative; Table 3 shows interactive effects only.

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References

Adachi, Tomoko, 2013, "Occupational Gender Stereotypes: Is the Ratio of Women to Men a Powerful Determinant?" *Psychological Reports*, 112(2): 640-50.

Bose, Christine E. and Peter H. Rossi, 1983, "Gender and Jobs: Prestige Standings of Occupations as Affected by Gender," *American Sociological Review* 48(3): 316-30.

Bose, Christine E., 1985, *Jobs and Gender: A Study of Occupational Prestige*, Praeger Publishers.

Cejka, Marry Ann and Alice H. Eagly, 1999, "Gender-Stereotypic Images of Occupations Correspond to the Sex Segregation of Employment," *Personality and Social Psychology Bulletin*, 25(4): 413-23.

Charles, Maria and David B. Grusky, 2004, *Occupational Ghettos*, Stanford University Press.

Genji, Keiko and Kazuharu Tsuzuki, 1998, "Shokugyo Hyotei no Hikaku Bunseki" ("The Comparative Analysis of Prestige Rating"), in Tsuzuki, Kazuharu ed., *Shokugyo Hikaku no Kouzou to Shokugyo Ishin Score*, 1995 SSM Survey Committee, 45-68.

Genji, Keiko, 2011, "Shokugyo Hyotei no Kokusai Hikaku" ("The International Comparison of Prestige Rating"), in Hiroshi Ishida, Hiroyuki Kondo and Keiko Nakao ed., *Kaisou to Idou no Kouzou*, 301-16.

Genji, Keiko, 2018, "Shokugyo Hyotei oyobi Tagenteki Chii Shihyo (Shokugyo Ishin Score) no Kihonteki Tokusei" ("The Basic Characteristics of Occupational Rating and Occupational Prestige Score"), in Keiko Genji ed., *Koyo Tayouka Shakai ni okeru Shakaiteki Chii no Sokutei* (JSPS 15H03414), 14-29.

Goyder, John, Neil Guppy and Mary Thompson, 2003, "The Allocation of Male and Female Occupational Prestige in an Ontario Urban Area: A Quarter-Century Replication," *Canadian Review of Sociology*, 40(4), 417-39.

Hodge, Robert W., Paul M. Siegel, and Peter. H. Rossi, 1964, "Occupational Prestige in the United States, 1925-63," *American Journal of Sociology*, 70(3): 286-302.

Jacobs, Jerry A. and Brian Powell, 1985, "Occupational Prestige: A Sex-Neutral Concept?" *Sex Roles*, 12: 1061-71.

Magnusson, Charlotta, 2009, "Gender, Occupational Prestige, and Wages: A Test of Devaluation Theory," *European Sociological Review* 25(1): 87-101.

Miwa, Satoshi and Tomohiro Saito, 2018, "Shokugyo Hyotei ni Kansuru Jiten-kan Anteisei no Saikento" ("The Intertemporal Stability of Occupational Rating Reconsidered"), in Keiko Genji ed., *Koyo Tayouka Shakai ni okeru Shakaiteki Chii no Sokutei* (JSPS 15H03414), 30-40.

Nakao, Keiko and Judith Treas, 1994, "Updating Occupational Prestige and Socioeconomic Scores: How the New Measures Measure Up," *Sociological Methodology*, 24: 1-72.

Powell, Brian and Jerry Jacobs, 1984, "Gender Differences in the Evaluation of Prestige," *The Sociological Quarterly*, 25 (Spring), 173-90.

Sonoda, Shigeto, 2005, "Shokugyo Hyotei no Shakai Rikigaku" ("Social mechanism of Prestige Rating"), in Sonoda, Shigeto ed., *Higashi Asia no Kaisou Hikaku*, Chuo Daigaku Shuppanbu, 3-23.

Statistics Bureau of Japan, 2017, "Summary of the results and statistical tables" (https://www.stat.go.jp/english/data/kokusei/2015/summary.html).

Tanabiki, Yusuke, 2018, "Shokuiki ni Taisuru Sei-Typing no Shakaitekina Kitei Youin" ("Job Sex Typing and Their Sociological Determinants"), *Journal of Applied Sociology*, 60: 69-78.

Treiman, Donald J., 1977, *Occupational Prestige in Comparative Perspective*, Academic Press.
Valentino, Lauren, 2020, "The Segregation Premium: How Gender Shapes the Symbolic Valuation Process of Occupational Prestige Judgments," *Social Forces*, 99(1): 31-58.
Wakita, Aya, 2021, "Gender to Shougyo Ishin" ("Occupational Prestige and Gender: Focusing on Gender Stereotypes"), *Sociological Theory and Method*, 36(1): 51-64.
Yamaguchi, Kazuo, 2019, *Gender Inequalities in the Japanese Workplace and Employment: Theories and Empirical Evidence*, Springer.