

# Socio-Economic Standing and Social Status in Contemporary Japan: Scale Constructions and Their Applications

Sho Fujihara\*

Institute of Social Science, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan

\*Corresponding author. Email: sho.fujihara@iss.u-tokyo.ac.jp

Submitted September 2018; revised January 2020; accepted March 2020

## Abstract

Current debates on the conceptualization and measurement of social stratification are finding increasing value in Weber's distinction between class and status for empirical analysis. However, aspects of Weber's theory have yet to be sufficiently investigated. Indeed, it remains unclear whether Weber's theory can be applied to temporally and culturally different circumstances, or whether social status is preferred to other occupational scales such as prestige or socio-economic standing. To address this gap, this study constructed a Japanese Socio-Economic Index (JSEI) and a Japanese Social Status Index (JSSI), using data from the Employment Status Survey conducted in 2007 and 2012. We applied these two indexes to analyses of social stratification in Japan, finding that the JSEI and JSSI worked better in the intergenerational inheritance of occupational status than the Japanese occupational prestige scale. We also found that the JSSI was useful for predicting the cultural activities of individuals—as Weber predicted. The JSEI and JSSI showed results similar to those found in European societies and so demonstrated their validity and usefulness for investigating social stratification in Japan, thereby extending European findings on social stratification into an Asian society.

## Introduction

Social stratification is one of the major topics of sociological research. Numerous studies have investigated the characteristics and consequences of social stratification and inequality. However, the conceptualization and measurement of social stratification and inequality have been controversial—generating considerable dispute among scholars (Featherman and Hauser, 1976; Prandy, 1990; Hauser and Warren, 1997; Wright, 2005). Recent sociological studies have suggested a return to traditional conceptualization and measurement of social stratification: namely, Weber's distinction between class and status (Weber, 1947, 1968; Goldthorpe, 2012).

Weber (1968) maintains that class, status, and party form a multidimensional stratification in society. His approach was different from that of Marx, who focused on class situation, purely based on economic considerations. While class and status are interdependent and interrelated in complex ways (Weber, 1947: p. 428), they are not identical; they differ in many respects: while social class is understood as one's relation to the labour market and production units, Weber understands social status as a symbolic aspect of social stratification. Weber (1947, 1968) says, status is based on mode of living, formal education, the prestige associated with one's birth or occupation, and the expected lifestyle of a group

that might restrict social interactions, such as dating and marrying others from different groups. The most important source of the development of distinct strata is the type of occupation pursued (Weber, 1947: p. 429), and social distance and exclusivity between various occupations reflect the differences in their social status.

Chan and Goldthorpe (2004, 2007a) and Chan (2010) insist on distinguishing between class and status because, as Weber (1968) argued, each concept should capture qualitatively different aspects of social stratification and the different resources that influence the distribution of life chances (Breen, 2005). In empirical analyses, they found that, while an individual's class position is more strongly related to his/her economic life chances, his/her social status is rather strongly linked to the lifestyle followed (Chan and Goldthorpe, 2006, 2007a,b; Chan, 2010). Based on these arguments, recent studies, particularly on European societies, have illustrated both the existence of a status order and the usefulness of Weber's distinction between class and status in their analyses (Bukodi, Dex and Goldthorpe, 2011; Bukodi and Goldthorpe, 2013; Bukodi, Erikson and Goldthorpe, 2014). However, this analytical framework proposed by Chan and Goldthorpe has been criticized from both theoretical and empirical standpoints (Bihagen and Lambert, 2018; Freeland and Hoey, 2018; Flemmen, Jarness and Rosenlund, 2019), stimulating the debate on the distinction between class and status.

In non-European societies, this distinction has rarely been used to understand social stratification. This prompts the question: can Weber's theory of class and status be applied to temporally and culturally different circumstances? Besides status, two other important scales are predominantly used by sociologists in the United States: the occupational prestige scale and the socio-economic index (SEI). While Chan (2010) has illustrated the characteristics of each of these three occupational scales by comparing correlations with income and educational attainment, he used only the status scale in the empirical application. Other studies on the distinction between class and status have similarly failed to compare the impact of social status with that of occupational prestige or SEI, independent of the effect of social class. Hence, can other continuous conceptualizations and measurements of social stratification (prestige or SEI) be used with social class instead of social status?

This study examined whether the combination of class and status has more predictive power than class and prestige or class and socio-economic standing (SEI) in a non-European society, namely Japan. However, there are no scales for SEI or social status in Japan. Thus, two scales for Japanese society were developed in

this study. Their characteristics are described and applied in the empirical analyses of intergenerational mobility and cultural activities in Japan.

## Measures of an Individual's Position in Social Stratification

Socio-economic status (SES) is a key concept in sociology. Although there are several indicators for SES, sociologists have predominantly used the 'BIG 3' (NCES, 2012: p. 15): occupation, education, and income. Of the 'BIG 3', the conceptualization and operationalization of occupations have traditionally been an important issue in sociological studies, because an individual's occupation is the primary indicator of his/her position in the social structure (Hauser and Warren, 1997; Lambert and Bihagen, 2012).

An important categorical conceptualization of occupations is social class (Erikson and Goldthorpe, 1992; Wright, 2005). While social class operates based on different theoretical traditions (Wright, 2005), many social stratification studies use the Erikson–Goldthorpe–Portocarero (EGP) class schema (Erikson and Goldthorpe, 1992; Breen, 2005). The EGP schema is based on distinct combinations of occupational categories and employment statuses. Here, social class refers to a group of people similarly positioned in terms of employment relations in the labour market and workplace and, therefore, in the economic and material sense as well. Thus, social classes 'are not consistently ordered according to some inherent hierarchical principle' (Erikson and Goldthorpe, 2002: p. 33).

However, instead of using social classes exclusively, sociologists in the United States have developed and used continuous scales for occupations—including the occupational prestige scale and SEIs, mainly to 'emphasize the social and economic grading of occupational structure rather than a priori constructions of distinct social classes' (Hauser and Warren, 1997: p. 183).

Based on people's evaluation of occupational titles, occupational prestige is the general level of social standing enjoyed by the incumbents of an occupation (Hauser and Warren, 1997). The first major survey of occupational prestige in the United States was carried out at the National Opinion Research Center (NORC) in 1947 by North and Hatt (Reiss, 1961), and the scales have since been updated (Nakao and Treas, 1994; Hauser and Warren, 1997).

Sociologists have also used SEI as a continuous scale of occupational standings (Duncan, 1961; Nakao and Treas, 1994; Hauser and Warren, 1997). The SEI has usually been operationalized as a composite of

education levels and occupational earnings. Duncan (1961) assumed that occupation is the intervening activity that links income to education. Ganzeboom *et al.* insisted that an SEI ‘measures the attributes of occupations that convert a person’s main resource (education) into a person’s main reward (income)’ (Ganzeboom, De Graaf and Treiman, 1992: p. 9).

Featherman and Hauser (1976) maintained that a ‘socio-economic’ distance is preferred to ‘prestige’ in a status attainment process because Duncan’s SEI yielded higher-explained variance (*R*-squared) than prestige scales did in the status attainment model. They concluded that ‘prestige scores are “error-prone” estimates of the socio-economic attributes of occupation’ (Featherman and Hauser, 1976: p. 405).

Other kinds of scales have used social relationships as the criteria for positions in a social stratification system. The theoretical and methodological framework of this approach has its roots in Laumann’s works, which used respondents’ occupations and social circles to construct the scales of occupational standing (Laumann and Guttman, 1966). Laumann and Guttman (1966) used a cross tabulation of the occupations of respondents and seven alters (father, father-in-law, and friends) and applied the statistical technique of smallest space analysis to measure social distances between occupations (social space). They found that three dimensions were enough to capture the association patterns of 55 occupational categories and that the first principal axis was highly related to the occupational prestige rating. Likewise, Stewart *et al.* (1980) used the occupational data of respondents and their friends to construct the so-called Cambridge scale. Prandy, Lambert, and colleagues updated the Cambridge scale to the Cambridge Social Interaction and Stratification (CAMSIS) scale from the cross tabulations of the occupations of friends and marriage partners (Prandy, 1990; Prandy and Jones, 2001; Prandy and Lambert, 2003; Lambert and Bihagen, 2012; Lambert and Griffiths, 2018). While SEIs are based on the attributional aspects of social stratification (education and earning levels), the CAMSIS scale is based on the relational aspects of social stratification (friendship and marriage). Prandy and colleagues maintain that patterns of social interaction are intrinsically related to patterns of social stratification overall. They interpret the CAMSIS scales as measuring the similarities in lifestyles and, therefore, also as measuring the generalized advantage or disadvantage of occupations (Stewart *et al.*, 1980; Prandy, 1990, 2002).

Similarly, Chan and Goldthorpe (2004, 2007a) used a multidimensional scaling approach to analyse data on the occupations of respondents and their friends,

developing a scale to measure social status. Chan and Goldthorpe (2004) believed that it is rational to interpret the resultant scales as representative of social status levels. Interpreting the scale as reflecting a hierarchy of social status and re-evaluating the Weberian tradition, they used both the EGP class category and the social status scale in their analyses of unemployment, earnings, cultural consumption, party choice, and political attitudes (Chan and Goldthorpe, 2006, 2007a; Chan *et al.*, 2011). Numerous studies followed investigating the effects of both class and status on several outcomes, including cultural consumption, educational attainment, and social attitudes (Chan and Goldthorpe, 2006, 2007b; Chan, 2010; Bukodi *et al.*, 2011, 2014, 2018; Chan *et al.*, 2011; Bukodi and Goldthorpe, 2013).

### Occupational Scales in Japan

Although Japanese sociology has a long history of conducting social mobility and social stratification surveys, Japanese sociologists have mainly used occupational prestige as the one-dimensional continuous conceptualization of occupational standing or social strata. The first systematic occupational prestige survey was conducted as a part of the 1955 Social Stratification and Social Mobility (SSM) survey. The 1975 and 1995 SSM Occupational Prestige Surveys updated Japanese occupational prestige scales (hereinafter, JOPS) (Tsuzuki, 1998). However, neither SEIs nor social status indexes (SSIs) have been created in Japan yet, and few have distinguished between class and status to investigate social stratification. Is there a status order in contemporary Japan? If so, can a distinction between class and status be applied to Japanese society? Can a scale for social status, constructed with relational data, account for lifestyle differences in Japan? In Wilkinson and Pickett’s (2009) graph, which depicts the relationships between income inequality and different health and social problems across rich countries, Japan is more equitable with regard to income and has better standings in health, social problem indexes, and life expectancy in years when compared with other countries (Goldthorpe, 2012). However, other measures of social stratification must be considered besides income or earnings (Goldthorpe, 2012). Previous studies described below have suggested that both socio-economic standing (SEI) and social status should be candidates for social stratification measures in Japan.

Although intergenerational class mobility as a relative term has increased in European societies (Breen, 2004), it has remained stable in post-war Japan (Ishida, 2018). The strength of mobility is in the middle position

in industrial societies (Ishida and Miwa, 2009), indicating that although income inequality tends to be lower compared with other developed countries, class inequality has remained substantive and persistent in Japan (Ishida and Slater, 2009). Because both social class and SEI are related to more or less advantaged positions in the labour markets and workplaces in society, the SEI, which is a continuous measure of socio-economic standing, is also useful in understanding Japan's social stratification system.

Although studies have focused on the effects of the Japanese employment system—organizational position, work structure, and firm size—on several outcomes related to social stratification (Lincoln and Kalleberg, 1985; Naoi and Schooler, 1985), the impacts of social status have rarely been investigated. However, Kerbo (2011) and Goldthorpe (2012) suggested that there is a very sharply defined ranking and status hierarchy in Japanese society. Their impressions may be built on Japan's seniority-based, employment status, or business title hierarchies, but there may also exist an occupation-based social status hierarchy. Thus, social status in Japan affects people's lives substantively and significantly at least as much as social status affects European societies. Therefore, both social class and social status may affect several outcomes, and the distinction between class and status is effective in explaining Japan's social structure. To test the validity of 'European' findings in Japan, one of the non-European industrialized societies with culturally and structurally different work situations contributed to the generalizations (or particularizations) of stratification theories and findings in European societies. However, with no SEI or SSI in Japan, a vacuum limits theoretical discussions on the conceptualization of occupations and, thus, empirical investigations on how occupational advantage or disadvantage is transmitted to succeeding generations and how social advantage or disadvantage in terms of occupation influences several outcomes in Japanese society. For example, Hout (1984) showed that SEI, as well as on-the-job autonomy and specialized training, was an important dimension of intergenerational occupational mobility and that the decline in the association between father's and son's occupations between 1962 and 1973 was caused by a decline in SEI's effect on mobility.

This study is the first to construct a Japanese Socio-Economic Index (JSEI) and Japanese Social Status Index (JSSI) to investigate social stratification and inequality in contemporary Japan. After examining the characteristics of the JSEI and JSSI, we applied these two indexes to analyses of the intergenerational correlation of occupational status and cultural activities.

## Hypotheses

Class position stems from the employment relations in the labour markets and workplaces, and it is related to economic life chance (Chan and Goldthorpe, 2004). The SEI is a continuous measure of the standing of occupations in terms of requirements or causes (education) and reward or effects (earnings) in the labour market and workplace (Duncan, 1961; Ganzeboom *et al.*, 1992). Therefore, both are related to advantaged/disadvantaged positions in the labour market and workplace. On the other hand, prestige and social status more strongly reflect symbolic or relational aspects of social stratification. This conceptualization suggests that social class and the SEI are closely related to each other. Thus, we derived the first hypothesis.

*H1: Social class is related more closely to socio-economic standing (SEI) than to occupational prestige and social status.*

Previous studies have suggested that the intergenerational correlations of SEI are stronger than that of the prestige scale because prestige scales are 'error-prone' estimates of the socio-economic attributes of occupation (Featherman and Hauser, 1976). Regarding social status, Prandy (1990) found a higher intergenerational correlation using the Cambridge scale than when using the Hope–Goldthorpe social desirability (prestige) scale. This pattern will be observed in Japan as well because previous studies suggested that both class and status hierarchy matter in Japanese society (Kerbo, 2011; Goldthorpe, 2012). Therefore, we derive the second hypothesis.

*H2: Intergenerational associations between parents' and children's occupations are stronger for socio-economic standing and social status than for occupational prestige.*

Can Weber's theory of class and status be applied to temporally and culturally different circumstances? We tested the independent effect of social status on cultural activity participation in Japan.

*H3: Social status has an independent effect on individuals' participation in cultural activities, even after controlling for social class and other relevant covariates.*

There are international scales of occupational prestige, SEI, and social status: Standard International Occupational Prestige Scale (SIOPS), the International Socio-Economic Index (ISEI), and the International Cambridge Scale (ICAMS) (Treiman, 1977; Ganzeboom *et al.*, 1992; Meraviglia, Ganzeboom and De Luca,

2016). Although the occupational hierarchy may be much the same among industrialized societies, the national scales can capture more detailed patterns of a country's occupational hierarchy than international ones. Thus, we derived the following hypotheses.

*H4a: Intergenerational associations between parents' and children's occupations are stronger for national scales than international scales.*

*H4b: The independent effect of social status on individuals' participation in cultural activities is stronger for national scales than for international scales.*

## Methods

### Data

To construct the JSEI and JSSI, we used data from the Employment Status Survey in Japan (JESS), a premier source for statistical data. The JESS is a nationally representative repeated cross-sectional survey, conducted every 3 years between 1956 and 1982 and every 5 years since (Statistics Bureau, 2014). The JESS employed a stratified two-stage random sampling method to select dwellings and enumerate household members aged 15 years or older living in the selected houses (Statistics Bureau, 2014). We used data from the 2007 and 2012 surveys because detailed occupational titles were available for these periods. The JSEI sample size was 949,911, while 226,529 married couples made up the sample for the JSSI.

In applying the JSEI and JSSI to analyses of the intergenerational correlation of occupational status and participation in cultural activities, we used data from the SSM surveys conducted in 2005 and 2015 (SSM2005 and SSM2015). The SSM surveys are extensive cross-sectional surveys of a large nationally representative sample of males and females. We used data from SSM2005 and SSM2015 in the intergenerational correlation analysis and data from SSM2005 in the cultural activity analysis.

### Variables

We operationalized social status based on occupational titles, as previous studies did (Hauser and Warren, 1997; Chan and Goldthorpe, 2004). This enables us to capture an individual's position in the social stratification in a more detailed way because the number of occupational titles is much larger compared with other sources of social status. We estimate scores for 231 occupational titles based on the Japan Standard Occupational Classification (JSOC), originally created

in 1920 for the Population Census in Japan and revised several times to reflect the International Standard Classification of Occupations revisions. JSOC has been used for official statistics in Japan, and the occupational classification used in the SSM surveys is based on JSOC. We used the recent version of JSOC for the Population Census, revised in December 2009.

The JESS conducted in 2007 and 2012 had six levels of educational attainment: junior high school, senior high school, professional training college, junior college, college or university, and graduate school. We used pseudo-years of education to measure average educational levels of occupations (hereinafter, years of education): junior high school = 9 years; senior high school = 12 years; professional training college and junior college = 14 years; and college or university and graduate school = 16 years. We did not use 18 years for graduate school because not many people go to graduate school in Japan, and those who complete graduate school have a few occupational titles with higher standing (e.g. doctors and professors). Earning categories used in the JESS in 2007 and 2012 were as follows (values are in 10,000 yen): 0–49, 50–99, 100–149, 150–199, 200–249, 250–299, 300–399, 400–499, 500–599, 600–699, 700–799, 800–899, 900–999, 1,000–1,249, 1,250–1,499, 1,500, and more. We used the midpoints of each interval to measure the scores for these categories. For the highest-earning category of 1,500 and more, we used the method proposed by Ligon (1994) and assigned 2,053.637 for 2007 and 2,238.625 for 2012 to represent the midpoint.

### The Method of Constructing the JSEI

To create the SEI, Duncan (1961) used 'excellent' or 'good' ratings on the 1947 NORC survey's 5-point scale. Rather than using actual prestige scores, Nakao and Treas (1994) and Hauser and Warren (1997) relied on the proportion of respondents rating on the fifth or higher rung of the 10-point scale ladder of social standing used in the 1989 General Social Survey (GSS). We used actual occupational prestige scores calculated from the 1995 SSM Prestige Survey instead of percentage ratings to estimate the SEI.<sup>1</sup> We used data from the 2007 and 2012 JESS ( $n = 949,911$ ) and calculated the age-adjusted average years of schooling and logged earnings of working men and women aged 20–64 years old separately, using the aggregate weight. We selected 45 occupational titles from the JOPS that could be matched to 231 occupational titles used in the JESS. We then regressed JOPS for 45 occupational titles on the age-adjusted average years of education and logged earnings.

**Table 1.** Results of regression analyses of the JOPS of 45 occupational titles on age-adjusted average years of education and logged earnings

	Coef.	S.E.	<i>t</i>	<i>P</i>	Beta
Education	5.865	1.082	5.42	0.000	0.561
Log earnings	8.345	2.292	3.64	0.001	0.377
Constant	52.846	1.225	43.13	0.000	

Notes:  $n = 45$ .  $R$ -squared = 0.700.

Table 1 summarizes the results of the regression analyses. The effects of education and earnings on JOPS were statistically significant, and the effect of education ( $\beta = 0.561$ ) was stronger than that of earnings ( $\beta = 0.377$ ). This model explained about 70 per cent of the variance of 45 JOPS' scores.

Using estimated unstandardized coefficients, we predicted the SEI for 231 occupational titles in the JESS. We call the resultant SEI the JSEI.

### The Method of Constructing the JSSI

Clarifying the status boundaries that constrain the joint distribution of husbands and wives is important for understanding a society's underlying social status structure (Hout, 1982; Prandy and Jones, 2001). These boundaries affect not only marriage patterns but also friendship and intergenerational mobility. To construct the JSSI, we restricted data to married couples aged 20–64 years who lived together and were employed. Of the married couples (373,698 couples) in the JESS, 93.6 per cent of the married men and 65.5 per cent of the married women worked, and 62.4 per cent were couples in which both husbands and wives were employed (233,220 couples). We excluded the cases in which the occupation of either the husband or wife was unclassified (6,691 couples). We also restricted the analysis of the scale construction to those who were married and lived with their spouses. Those who were living apart for 3 or more months at the time of the interview were excluded because information about them was not available. In total, we used data from 226,529 married couples, representing the most reliable and available way to estimate the social status scale for Japan. It enabled measuring distances among a large number of different occupations and reflected the social hierarchy underlying the marriage patterns seen in several societies (Prandy and Jones, 2001; Prandy and Lambert, 2003), which possibly reflect the hierarchy of social status (Chan and Goldthorpe, 2004; Chan, 2010). Chan (2010) reported that the status scale based on marriage and partnership data from a 1 per cent sample of all UK

households was highly correlated with the scale based on friendship data ( $r = 0.96$ ), indicating that different kinds of relational data can be used to estimate a status scale.

We used 231 occupational titles for husbands and wives and created a very large two-way table (231 by 231). Some scholars used multidimensional scaling techniques (Prandy, 1990; Chan and Goldthorpe, 2004; Chan, 2010), while others used correspondence analysis (Prandy and Jones, 2001) or Goodman's row-column association II (RC II) model (Lambert *et al.*, 2012) to measure the social distance among occupations. We employed the RC II model for this analysis because it enabled us to use flexible modelling on parameters (e.g. equality constraints and weighting).

We denote  $F_{ij}$  to be the expected frequency of cell ( $i, j$ ) under the model. The RC II model can then be represented as follows:

$$\log F_{ij} = \lambda + \lambda_i^H + \lambda_j^W + \delta_k + \phi \mu_i \nu_j \quad (\text{for all } i = j, \mu_i = \nu_j),$$

where  $\lambda$  is the grand mean,  $\lambda_i^H$  is the row (husbands) marginal parameters,  $\lambda_j^W$  is the column (wives) marginal parameters,  $\delta_k$  is the level parameters ( $k = 1, \dots, K$ ),  $\phi$  is the intrinsic parameter that indicates the strength of association,  $\mu_i$  represents row (husbands) score parameters, and  $\nu_j$  represents column (wives) score parameters. We constrained  $\mu_i$  and  $\nu_j$  to be the same within occupational titles so that the distances between occupational titles were the same for husbands and wives.<sup>2</sup> To know the distance between two different categories of occupations, not occupational immobility or homogamy, we do not need to have the cells in the same occupational categories for husbands and wives (Hout, 1982; Lambert, 2018). Therefore, as proposed by Lambert (2018) and Prandy and Jones (2001), we eliminated the effects of all the cases in each cell for the same occupational category by using level parameters to fit diagonal cells exactly (231 cells). By adding level parameters, we also controlled all cases such that the sub-group categories of occupations were the same for husbands and wives (1,288 cells). This procedure corresponds to deleting or controlling for pseudo-diagonal cells in a broader sense (Lambert, 2018). Moreover, we added parameters for the cases of male 'aircraft pilots' and female 'food and drink service and personal assistance workers'. In occupational classifications used in the JESS, 'a flight attendant' was included in the category of 'food and drink service and personal assistance workers'. The 1995 SSM Prestige Survey, however, distinguished 'a flight attendant' from 'food and drink service and personal assistance workers'. The JOPS measure for the former was

70, and that for the latter was 38.1. Male ‘aircraft pilots’ were relatively likely to marry female ‘flight attendants’, which was a high prestige occupation in Japan. Consequently, we used 1,520 (=231 + 1,288 + 1) level parameters.

In the analysis of a huge two-way table, zero or sparse cells may be problematic. Of 53,361 cells, 36,716 were zero cells (68.8 per cent). However, for the RC II models, zero or sparse cells do not generate any serious problems (Wong, 2010).<sup>3</sup> The LEM (Vermunt, 1997) was used to estimate the parameters of the homogeneous row and column effects in the RC II model. We interpreted the scale estimated from the model ( $\mu_i$  and  $\nu_j$ ) as representing status in Japan and called it the JSSI.

## Characteristics of Occupational Scales

### Relationships between the JOPS, JSEI, and JSSI

This section describes the characteristics of the three occupational scales. We transformed these scales to have the means of 50 and the standard deviations of 10. The JSEI and JSSI scores are shown in [Supplementary Appendix SA](#).<sup>4</sup> Of the 20 highest-ranking titles in the JSEI, 13 were among the JSSI’s top 20 titles (values in the parentheses indicate occupation numbers): doctors (20); judges, public prosecutors and attorneys (38); university professors (50); certified public accountants (41); dental surgeons (21); humanities, social science, and other researchers (7); veterinary surgeons (22); junior high school teachers (47); licenced tax accountants (42); officers of other corporations, organizations (3); natural science researchers (6); pharmacists (23); and patent attorneys and judicial scriveners (39). These occupations are either highly skilled professional or highly ranked managerial workers, and they are all of high rank in both educational and income levels.

Occupational titles with a high JSEI ranking (among the top 20) but not a very high JSSI ranking (not among the top 20) were as follows: aircraft pilots (194), senior high school teachers (48), elementary school teachers (46), special needs education school teachers (49), management government officials (1), chemical engineers (13), and medicine sales workers (94). These occupations are of high rank in both educational and income levels (46, 48, 49, and 13) or of high rank in income but not in education (1, 94, and 194).

The occupational titles with not very high JSEI (below top 20) but high JSSI (on top 20) were as follows: musicians (58), authors (53), specialist professionals not classified elsewhere (68), public health nurses (24), librarians and curators (60), and certified social

insurance and labour consultant (43). All of these occupations are categorized as parts of ‘professional and engineering workers’ (from 6 to 68) in the JSOC. In other countries, professionals were also highest ranked in terms of social status (Chan, 2010). In general, their income levels are not very high, but their educational levels are high.

Semi- and unskilled manual labourers and service workers were ranked at the bottom of the JSEI. However, while the JSEI rankings of other domestic support service workers (100), house cleaning workers (228), home-visiting care workers (102), and housekeepers and home helpers (99) were very low, the JSSI rankings of these occupations were relatively high.

Panel A of [Table 2](#) shows Pearson’s correlations of average years of education, average logged earnings, and JOPS, JSEI, and JSSI for 231 occupations. The JOPS was moderately correlated with average years of education ( $r=0.662$ ) and average logged earnings ( $r=0.546$ ). The JSEI was highly correlated with years of education ( $r=0.909$ ), and rather moderately correlated with earnings ( $r=0.741$ ), as expected from [Table 1](#). The JSSI was also highly correlated with years of education ( $r=0.922$ ), but rather weakly correlated with earnings ( $r=0.369$ ). This pattern was similar to that found in British society: correlations of the status scale with education and income were 0.784 and 0.554 (Chan, 2010: p. 43). We also showed the relationships using the individual level data in Panel B of [Table 2](#). The JSEI showed a slightly stronger correlation to both years of education and earnings than the JOPS, while the JSSI showed the strongest correlation to years of education, but the weakest correlation to earnings.

The correlation between JOPS and JSEI was 0.731, that between JOPS and JSSI was 0.723, and that between JSEI and JSSI was 0.841. Even though we did not use education or earning levels in creating the JSSI, the correlation between the JSEI and JSSI was very high, but the two scales were not identical.<sup>5</sup> These results indicate that the JSSI captures the social hierarchy of Japan’s occupational positions from a different perspective than do the JOPS and JSEI. In [Table 2](#), we also estimated correlations of each Japanese scale with the international version of prestige (SIOPS), the ISEI, and the ICAMS. Correlations of the JOPS with the SIOPS, ISEI, and ICAMS were 0.821, 0.789, and 0.766, respectively; those of the JSEI were 0.781 (SIOPS), 0.831 (ISEI), and 0.804 (ICAMS). The correlations of the JSSI were 0.755 (SIOPS), 0.810 (ISEI), and 0.836 (ICAMS), indicating that each Japanese scale was slightly more strongly correlated with each corresponding international scale. However, the international scales showed a higher

**Table 2.** Correlation matrix of average years of education, average logged earnings, JOPS, JSEI, JSSI, SIOPS, ISEI, and ICAMS from the aggregate level data (Panel A) and individual level data (Panel B)

	Education	Log earnings	JOPS	JSEI	JSSI	SIOPS	ISEI	ICAMS
Panel A: correlation matrix from the aggregate level data ( $n = 231$ )								
Education	1.000							
Log earnings	0.393	1.000						
JOPS	0.662	0.546	1.000					
JSEI	0.909	0.741	0.731	1.000				
JSSI	0.922	0.369	0.723	0.841	1.000			
SIOPS	0.748	0.517	0.821	0.781	0.755	1.000		
ISEI	0.822	0.507	0.789	0.831	0.810	0.897	1.000	
ICAMS	0.858	0.390	0.766	0.804	0.836	0.872	0.915	1.000
Panel B: correlation matrix from the individual level data ( $n = 7,194$ )								
Education	1.000							
Log earnings	0.246	1.000						
JOPS	0.406	0.417	1.000					
JSEI	0.487	0.441	0.790	1.000				
JSSI	0.501	0.264	0.706	0.801	1.000			
SIOPS	0.387	0.394	0.865	0.797	0.656	1.000		
ISEI	0.463	0.365	0.786	0.862	0.764	0.879	1.000	
ICAMS	0.498	0.309	0.790	0.842	0.835	0.826	0.889	1.000

Source: The JESS 2007 and 2012 for the aggregate level data and the SSM2005 and SSM2015 for the individual level data.

correlation with each other in both the aggregated and individual levels. In the aggregated level data, correlations between the SIOPS and ISEI, between the SIOPS and ICAMS, and between the ISEI and ICAMS were 0.897, 0.872, and 0.915, respectively, and this pattern, which was also found in individual level data, was almost identical to the correlations found in European countries (Meraviglia, Ganzeboom and De Luca, 2016). Panel B of Table 2 shows that in the individual level, JOPS and JSEI were more strongly correlated with education and income than the international scales (SIOPS and ISEI). JSSI and ICAMS were equally correlated with education. Moreover, JSSI, which reflects a symbolic aspect of social stratification, was less correlated with income than ICAMS. These results suggest that the international scales have less distinct features and may only loosely capture characteristics of the occupational hierarchy in Japan. In general, teachers and other professionals tended to rank higher in JSEI and JSSI than in ISEI and ICAMS.

### Social Class and Occupational Scales

To test whether social class was related to the JSEI more strongly than to the other scales (H1), we compared the relationships between social class and three occupational scales. We used the seven-category version of the EGP that consists of I: higher-grade professionals and managerials; II: lower-grade professionals and managerials;

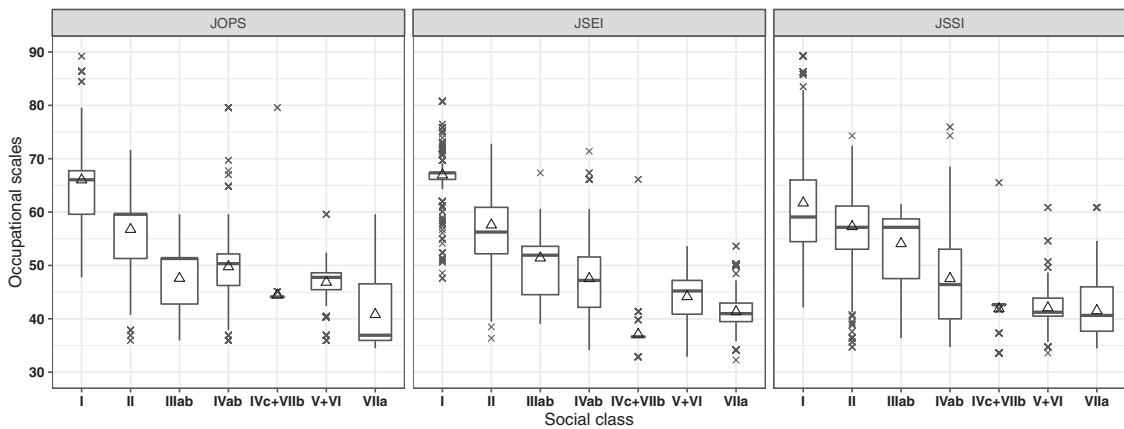
IIIab: routine non-manual, IVab: Petty bourgeoisie; IVc + VIIIb: farmers and farm workers; V + VI: skilled workers; and VIIa: semi- and unskilled workers. Figure 1 shows the boxplot of differences within and between classes in each scale. This graph shows that occupational scores are spread out within classes for all scales. However, there are between-class differences in the scales. While we can find class differences in JOPS within the non-manual classes (I, II, and IIIab), there is not much difference between IIIab and V + VI. The JSSI highlights the differences between the non-manual classes (I, II, and IIIab) and manual classes (V, VI, and VIIa), as Chan and Goldthorpe (2004) indicated for British society. However, few differences exist within the non-manual and manual classes in the JSSI. We observe class differences in the JSEI between both non-manual and manual classes. The between-class differences were greatest for the JSEI: social class was more strongly related to the JSEI ( $\eta^2 = 0.708$ ) than to the JOPS and JSSI ( $\eta^2 = 0.628$  and  $0.561$ , respectively). This analysis supports H1.

### Results of the Application of Occupational Scales

#### Intergenerational Correlation

Table 3 shows Pearson's correlation coefficients between the parents' and children's occupational scales by





**Figure 1.** Boxplot of distributions of occupational scales within and between social classes

Notes:  $n = 8,094$ . The boxes were drawn with widths proportional to the square roots of the number of cases in the classes. Triangles indicate mean scores. I: higher-grade professionals and managerial; II: lower-grade professionals and managerial; IIIab: routine non-manual, IVab: Petty bourgeoisie; IVc + VIIb: farmers and farm workers; V + VI: skilled workers; and VIIa: semi- and unskilled workers. We matched 231 occupational titles used in the JESS with the SSM occupational categories.

Source: 2005SSM and 2015SSM.

**Table 3.** Intergenerational correlations between the occupational scales of parents and their children

	JOPS	JSEI	JSSI	SIOPS	ISEI	ICAMS	<i>n</i>
Men							
Father	0.290	0.329	0.365	0.244	0.324	0.340	3,716
Mother	0.150	0.207	0.248	0.110	0.236	0.221	2,825
Parents (average)	0.280	0.318	0.361	0.236	0.328	0.337	3,977
Women							
Father	0.208	0.299	0.306	0.182	0.268	0.251	3,409
Mother	0.178	0.273	0.290	0.153	0.292	0.270	2,842
Parents (average)	0.219	0.306	0.335	0.194	0.300	0.289	3,700

Notes: Respondents were 20–64 years old. All coefficients were statistically significant at the 1 percent level (two-tailed tests).

Source: The SSM 2005 and SSM 2015 surveys.

children’s gender. For parents’ occupation, we used the father’s score, the mother’s score, and the parents’ score (average score of father and mother). If the score of either parent was not available because they were unemployed or did not respond, we used the available score as the parents’ score. For both men and women, the estimated intergenerational correlations were lower for the JOPS than for the JSEI and JSSI for father–child, mother–child, and parents–child, which support H2. Moreover, the intergenerational correlations for JSSI tended to be higher than those for JSEI, and this confirmed that status hierarchy matters in Japanese society.

The intergenerational correlations estimated using the international scales Table 3 for ISEI were similar to those for JSEI, while the SIOPS and ICAMS

showed lower intergenerational correlations than each corresponding Japanese scale (JOPS and JSSI), which partially supports H4a.

### Influence of Social Status on Cultural Activities

Chan and Goldthorpe (2007a) investigated the effects of status and social class on several outcomes. However, social status may merely reflect the effects of socioeconomic standing (SEI) that have not been fully captured by social class. To test this, we investigated four models using data from SSM2005. Model 1 included age, age squared, educational levels, household income, and social class as independent variables. Models 2–4 each added one of the three occupational scales as an independent variable to Model 1. Comparing these four

**Table 4.** Occupational scales and visiting museums (standardized coefficients)

	Model 1	Model 2	Model 3	Model 4
Women	0.111***	0.111***	0.114***	0.100***
Age	-0.089	-0.087	-0.076	-0.034
Age squared	0.231	0.229	0.219	0.173
Education				
Junior high school (ref.)	0.000	0.000	0.000	0.000
Senior high school	0.131***	0.131***	0.128***	0.120***
Junior college and university	0.288***	0.287***	0.281***	0.256***
Household income				
0–350 (ref.)	0.000	0.000	0.000	0.000
350–550	0.020	0.020	0.021	0.023
550–850	0.040	0.040	0.039	0.038
850+	0.043	0.042	0.041	0.032
Missing	0.041	0.041	0.041	0.038
Social class (EGP)				
I: higher-grade prof. and mngr. (ref.)	0.000	0.000	0.000	0.000
II: lower-grade prof. and mngr.	0.025	0.030	0.041	0.048
IIIab: routine non-manual	-0.062	-0.052	-0.033	-0.018
IVab: self-employed	-0.059	-0.052	-0.029	0.006
IVc + VIIb: farmer and farm worker	-0.118***	-0.111***	-0.087*	-0.058
V + VI: skilled manual	-0.121***	-0.112**	-0.084	-0.026
VIIa: semi- and unskilled manual	-0.119***	-0.107*	-0.075	-0.013
JOPS		0.012		
JSEI			0.048	
JSSI				0.145***
N	2,036	2,036	2,036	2,036
Adj. R-squared	0.096	0.096	0.096	0.104

Notes: Responses were coded as follows: 1 = did not do this for several years, 2 = once in several years, 3 = once or a few times per year, 4 = once per month, and 5 = more than once per week.

Source: The SSM2005 survey.

\*\*\* $P < 0.001$ , \*\* $P < 0.01$ , \* $P < 0.05$  (two-tailed tests).

models clarifies whether class and occupational scale have different effects on outcomes. If the JOPS or JSEI has no direct effect, but the JSSI has a direct effect on a cultural activity after controlling for social class, the importance of social status in understanding cultural activities is established.

Table 4 shows the effects of each occupational scale on the number of visits made to museums. Model 1 indicates that higher-educated individuals visited museums more often. Social class also had an effect: compared with higher-level professionals and managers, farmers and farm workers and skilled, semi-skilled, and unskilled manual workers were less likely to visit museums. Models 2 and 3 indicate that the effect of JOPS and JSEI was not statistically significant. The effect of class decreased after controlling the JSEI, but class still matters in predicting visits to museums. Model 4 demonstrates a positive and statistically significant effect of

JSSI ( $\beta = 0.145$ ) and little effect of social class, suggesting that the effect of social class was spurious. Based on the results from Models 1–3, education and social class seemed to have an effect on museum visits and that the additional variable of occupational scales has no effect. However, other indicators of occupational standing led to different conclusions: besides education, social status, not social class, was a significant determinant of participation in a cultural activity in Japan (Model 4).

In addition to ‘visit museums’, we investigated the following cultural activities: ‘attend classical music concerts’, ‘sing karaoke’, ‘play sports’, ‘visit libraries’, ‘read sports journals or women’s weeklies’, and ‘read novels or historical fiction’. Table 5 shows only the effects of three occupational scales that were included separately in the models (see Supplementary Appendix SB for details). The left side of Table 5 shows zero-order correlations between occupational scales and cultural

**Table 5.** Relationship between occupational scales, cultural activities, subjective social status (correlation coefficients and standardized regression coefficients)

	Correlation coefficients			Standardized coefficients			<i>n</i>
	JOPS	JSEI	JSSI	JOPS	JSEI	JSSI	
Cultural activities							
Visit museums	0.159***	0.180***	0.259***	0.012	0.048	0.145***	2,036
Attend classical music concerts	0.128***	0.118***	0.208***	0.077*	0.042	0.156***	2,032
Sing karaoke	0.088***	0.108***	0.077***	-0.003	-0.002	-0.055	2,029
Play sports	0.147***	0.159***	0.206***	0.050	0.048	0.142***	2,045
Visit libraries	0.161***	0.186***	0.271***	0.076*	0.061	0.142***	2,024
Read sports journals or women's weeklies	0.025	0.058**	0.021	-0.033	0.038	-0.046	2,039
Read novels or historical fiction	0.250***	0.274***	0.336***	0.053	0.084*	0.125***	2,036
Subjective social status (10-point scale)	0.193***	0.183***	0.245***	0.010	0.050	0.117***	3,991

Notes: Gender, age, age squared, educational levels (three categories), household income (four categories + missing category), and social class (seven-category version of EGP) were controlled in the regression models. For cultural activities, responses were coded as follows: 1 = did not do this for several years, 2 = once in several years, 3 = once or a few times per year, 4 = once per month, and 5 = more than once per week.

Source: The 2005 SSM survey.

\*\*\* $P < 0.001$ , \*\* $P < 0.01$ , \* $P < 0.05$  (two-tailed tests).

activities, and the right side summarizes the standardized regression coefficients of each occupational scale, after controlling for the relevant variables.

JSSI was more strongly correlated to cultural activities than JOPS or JSEI. After controlling for several covariates, the JOPS was found to have an effect on participation in two types of cultural activities (attending classic music concerts and visiting libraries). The JSEI affects only 'reading novels or historical fiction'. The JSSI has a positive effect on visiting museums, attending classical music concerts, visiting libraries, participating in sports, and reading novels or historical fiction, independent of social class. This result strongly confirmed Chan and Goldthorpe's finding. Thus, it showed that JSSI derived from marital relationships was valid because it was strongly related to participation in cultural activities, as Weber maintained. [Supplementary Appendices SB and SC](#) show that both social class and social status affect some types of cultural activities (going to libraries and reading novels or historical fiction) and subjective social status (10-point scale), indicating that the distinction between class and status is effective in explaining the social structure in Japan.

We also conducted the same analyses using international scales ([Supplementary Appendix SD](#)). The effect of ICAMS was statistically significant for visiting museums, going to libraries, and reading novels or historical fiction but not significant for attending classical music concerts, participating in sports, and subjective social status. JSSI predicted more diverse cultural

activities and more strongly determined subjective social status than the ICAMS, thus revealing the effectiveness of the JSSI and supporting H4b.

## Conclusions

Two new occupational scales were developed for Japanese society in this study: the JSEI and the JSSI. Social class was found to be more closely related to the JSEI than to the JOPS or the JSSI (supporting H1). The JSSI was strongly associated with average levels of education and slightly related to average income levels. The fact that JSSI was found to be highly related to educational levels concurs with Weber's argument about social status (Weber, 1947, 1968).

We used the JSEI and JSSI, along with the JOPS, to analyze intergenerational occupational mobility. The JSSI and JSEI showed stronger intergenerational correlations than the JOPS, supporting H2. The JSSI showed a slightly higher intergenerational correlation than did the JSEI, reflecting the fact that the husband-wife association and the father-child association are both from the same underlying structure of social stratification (Hout, 1982). We thus conclude that social status, which is largely dependent on average educational levels, plays a pivotal role both in marriage and in intergenerational mobility. Our results were consonant with Hauser and Warren's (1997) finding that the intergenerational correlation of occupational education was virtually the same as that of the SEI. Hauser and Warren (1997) suggested that 'the source of persistent occupational

standings appears to be the educational level of occupation rather than their economic competition' (Hauser and Warren, 1997: p. 245) and that occupations should be indexed by the level of education alone. Our results support their findings, albeit from a different perspective.

We found that many cultural activities were related to the JSSI rather than the JOPS or JSEI, strongly supporting Chan and Goldthorpe's (2007a) argument and H3. We also found that both social status and social class are associated with some cultural activities (Supplementary Appendix SB); this pattern also holds true in the analysis of subjective social status (Supplementary Appendix SC). These results support our argument that both social class and social status predict several outcomes independently.

Comparing the three national scales with international ones, intergenerational associations between parents' and children's occupations were stronger for national scales of occupational prestige and social status than for international ones, partially supporting H4a. JSSI tends to have a stronger effect on individuals' participation in cultural activities than the ICAMS does, which supports H4b.

Hence, occupational scales function similarly in Japan and European countries, although there are cultural differences and structural diversities in the occupational settings of these societies. Our results extended European findings on social stratification into an Asian society, evidencing that there is a status order in Japan and that social status of an individual is related to his/her cultural activities. The Japanese scales rather than the international scales strongly support the hypotheses derived in European societies. Therefore, it is effective in being a society-specific occupational scale as well as an international scale.

Although the results for Japanese society concur with those for Western societies, this study's main limitation is that gender differences in occupational structure or gender-specific indexes are ignored. Future research should focus on gender-specific occupational indexes for Japanese society, where gender differences in occupational status are pronounced.<sup>6</sup>

## Notes

- 1 The scores from actual prestige and percentage ratings are quite comparable (Nakao and Treas, 1994).
- 2 The model fit was better in terms of the Bayesian Information Criterion (BIC) statistic for the equal-scale model (BIC = -577,242) than for the different-scale model (BIC = -576,422).
- 3 We performed the same analysis with a more aggregate occupational scheme: 56 sub-major groups in

the JESS. In this case, 815 of 3,136 cells were zero cells (26.0 per cent). The results are similar to those obtained from 231 occupational titles.

- 4 The JSEI and JSSI are available at <https://github.com/ShoFujihara/OccupationalScales>. The 1995 JOPS is available in Tsuzuki (1998).
- 5 The high correlation between JSEI and JSSI may be because the same JESS dataset for constructing the scales was used.
- 6 The gender-specific SEI for Japan was constructed by Fujihara and Wong (2017).

## Supplementary Data

Supplementary data are available at *ESR* online.

## Acknowledgements

The author would like to thank the 2015 SSM Survey Management Committee for allowing him to use the 2005 and 2015 SSM data. This study is a part of the 2015 Collaborative Research Projects of Secondary Analysis titled 'A Multidirectional Approach to the Relationship between Work and Activities in Japan' (PI: Shinsuke Ito, Chuo University), conducted at the Center for Social Research and Data Archives at the Institute of Social Science, The University of Tokyo. An earlier version of this article was presented in a workshop at the Institute of Social Science, The University of Tokyo, on 14 June 2016, and at the 62nd meeting of the Japanese Association for Mathematical Sociology at Kanazawa University, on 27 August 2016. He is grateful to the participants of this research project, the workshop, and the meeting for their comments and suggestions. He is also grateful to the anonymous reviewers for their valuable feedback on the earlier versions of the manuscript. The microdata from the Employment Status Survey used in this article were provided under Article 33 of the Statistics Act in Japan. The tables were created by the author for this article using the microdata.

## Funding

This research is supported by the Japan Society for the Promotion of Science (JSPS) Grant Numbers JP25000001, JP15H05397, JP18K18594, and JP19H01637.

## References

- Bihagen, E. and Lambert, P. (2018). Can class and status really be disentangled? *Research in Social Stratification and Mobility*, 58, 1–10.
- Breen, R. (Ed.) (2004). *Social Mobility in Europe*. Oxford: Oxford University Press.
- Breen, R. (2005). Foundations of a Neo-Weberian class analysis. In Wright, E. O. (Ed.), *Approaches to Class Analysis*. Cambridge: Cambridge University Press, pp. 31–50.

- Bukodi, E. *et al.* (2018). Linking the macro to the micro: a multi-dimensional approach to educational inequalities in four European countries. *European Societies*, 20, 26–64.
- Bukodi, E., Dex, S. and Goldthorpe, J. H. (2011). The conceptualisation and measurement of occupational hierarchies: a review, a proposal and some illustrative analyses. *Quality & Quantity*, 45, 623–639.
- Bukodi, E., Erikson, R. and Goldthorpe, J. H. (2014). The effects of social origins and cognitive ability on educational attainment: evidence from Britain and Sweden. *Acta Sociologica*, 57, 293–310.
- Bukodi, E. and Goldthorpe, J. H. (2013). Decomposing ‘Social Origins’: the effects of parents’ class, status, and education on the educational attainment of their children. *European Sociological Review*, 29, 1024–1039.
- Chan, T. W. (Ed.) (2010). *Social Status and Cultural Consumption*. Cambridge: Cambridge University Press.
- Chan, T. W. *et al.* (2011). Social status in Norway. *European Sociological Review*, 27, 451–468.
- Chan, T. W. and Goldthorpe, J. H. (2004). Is there a status order in contemporary British society? Evidence from the occupational structure of friendship. *European Sociological Review*, 20, 383–401.
- Chan, T. W. and Goldthorpe, J. H. (2006). Social stratification and cultural consumption: music in England. *European Sociological Review*, 23, 1–19.
- Chan, T. W. and Goldthorpe, J. H. (2007a). Class and status: the conceptual distinction and its empirical relevance. *American Sociological Review*, 72, 512–532.
- Chan, T. W. and Goldthorpe, J. H. (2007b). Social status and newspaper readership. *American Journal of Sociology*, 112, 1095–1134.
- Duncan, O. D. (1961). A socio-economic index for all occupations and properties and characteristics of the socioeconomic index. In Reiss, A. J. (Ed.), *Occupations and Social Status*. New York, NY: Free Press of Glencoe, pp. 109–161.
- Erikson, R. and Goldthorpe, J. H. (1992). *The Constant Flux: A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon.
- Erikson, R. and Goldthorpe, J. H. (2002). Intergenerational inequality: a sociological perspective. *Journal of Economic Perspectives*, 16, 31–44.
- Featherman, D. L. and Hauser, R. M. (1976). Prestige or socioeconomic scales in the study of occupational achievement? *Sociological Methods & Research*, 4, 403–422.
- Flemmen, M. P., Jarness, V. and Rosenlund, L. (2019). Class and status: on the misconstrual of the conceptual distinction and a neo-Bourdieuian alternative. *The British Journal of Sociology*, 70, 816–866.
- Freeland, R. E. and Hoey, J. (2018). The structure of deference: modeling occupational status using affect control theory. *American Sociological Review*, 83, 243–277.
- Fujihara, S. and Wong, R. S.-K. (2017). Constructing a Socioeconomic Index Using Association Models. Paper presented at the Summer Meeting of ISA-RC28 (Social Stratification and Mobility), New York, 8 August.
- Ganzeboom, H. B. G., De Graaf, P. M. and Treiman, D. J. (1992). A standard International Socio-Economic Index of occupational status. *Social Science Research*, 21, 1–56.
- Goldthorpe, J. H. (2012). Back to class and status: or why a sociological view of social inequality should be reasserted. *Revista Española de Investigaciones Sociológicas*, 137, 201–216.
- Hauser, R. M. and Warren, J. R. (1997). Socioeconomic indexes for occupations: a review, update, and critique. *Sociological Methodology*, 27, 177–298.
- Hout, M. (1982). The association between husbands’ and wives’ occupations in two-earner families. *American Journal of Sociology*, 88, 397–409.
- Hout, M. (1984). Status, autonomy, and training in occupational mobility. *American Journal of Sociology*, 89, 1379–1409.
- Ishida, H. (2018). Long-term trends in intergenerational class mobility in Japan. In Yoshida, T. (Ed.), *2015 SSM Research Report 3: Social Mobility and Health*. Tokyo: The 2015 SSM Research Committee, pp. 41–64.
- Ishida, H. and Miwa, S. (2009). Intergenerational class mobility and Japanese society: long-term trends and cross-national comparisons. *Japanese Sociological Review*, 59, 648–664.
- Ishida, H. and Slater, D. H. (Eds.) (2009). *Social Class in Contemporary Japan: Structures, Sorting and Strategies*. New York, NY: Routledge.
- Kerbo, H. (2011). *Social Stratification and Inequality, 8th edn*. New York, NY: McGraw-Hill Education.
- Lambert, P. (2018). CAMSIS: *Social Interaction and Stratification Scale*. <<http://www.camsis.stir.ac.uk/index.html>> [accessed 4 April 2020].
- Lambert, P. and Bihagen, E. (2012). Stratification research and occupation-based social classification. In Lambert, P., *et al.* (Eds.), *Social Stratification: Trends and Processes*. Farnham: Ashgate, pp. 13–28.
- Lambert, P. *et al.* (Eds.) (2012). *Social Stratification: Trends and Processes*. Farnham: Ashgate.
- Lambert, P. and Griffiths, D. (2018). *Social Inequalities and Occupational Stratification: Methods and Concepts in the Analysis of Social Distance*. Basingstoke: Palgrave Macmillan.
- Laumann, E. O. and Guttman, L. (1966). The relative associational contiguity of occupations in an urban setting. *American Sociological Review*, 31, 169–178.
- Ligon, E. (1994). *The Development and Use of a Consistent Income Measure for the General Social Survey (No. 64)*. Chicago: NORC.
- Lincoln, J. R. and Kalleberg, A. L. (1985). Work organization and workforce commitment: a study of plants and employees in the U.S. and Japan. *American Sociological Review*, 50, 738–760.
- Meraviglia, C., Ganzeboom, H. B. G. and De Luca, D. (2016). A new international measure of social stratification. *Contemporary Social Science*, 11, 125–153.
- Nakao, K. and Treas, J. (1994). Updating occupational prestige and socioeconomic scores: how the new measures measure up. *Sociological Methodology*, 24, 1–72.
- Naoi, A. and Schooler, C. (1985). Occupational conditions and psychological functioning in Japan. *American Journal of Sociology*, 90, 729–752.

- NCES. (2012). *Improving the Measurement of Socioeconomic Status for the National Assessment of Educational Progress: A Theoretical Foundation*. Washington, DC: National Center for Education Statistics.
- Prandy, K. (1990). The revised Cambridge scale of occupations. *Sociology*, **24**, 629–655.
- Prandy, K. (2002). Ideal types, stereotypes and classes. *British Journal of Sociology*, **53**, 583–601.
- Prandy, K. and Jones, F. L. (2001). An international comparative analysis of marriage patterns and social stratification. *International Journal of Sociology and Social Policy*, **21**, 165–183.
- Prandy, K. and Lambert, P. (2003). Marriage, social distance and the social space: an alternative derivation and validation of the Cambridge scale. *Sociology*, **37**, 397–411.
- Reiss, A. J. (Ed.) (1961). *Occupations and Social Status*. New York, NY: Free Press of Glencoe.
- Statistics Bureau. (2014). *2012 Employment Status Survey: Results for Japan*. Japan Statistical Association.
- Stewart, A., Prandy, K. and Blackburn, R. M. (1980). *Social Stratification and Occupations*. London: Macmillan.
- Treiman, D. J. (1977). *Occupational Prestige in Comparative Perspective*. New York, NY: Academic Press.
- Tsuzuki, K. (Ed.) (1998). *SSM Chosa Sirizu 5: Shokugyou Hyoka no Kouzou to Shokugyou Ishin Suko*. Tokyo: The 1995 SSM Research Committee.
- Vermunt, J. K. (1997). *LEM 1.0: A General Program for the Analysis of Categorical Data*. Netherlands: Tilburg University.
- Weber, M. (1947). *The Theory of Social and Economic Organization* (Henderson, A. M. and Parsons, T. Trans.). Glencoe, IL: Free Press.
- Weber, M. (1968). *Economy and Society*. Berkeley and Los Angeles, CA: University of California Press.
- Wilkinson, R. and Pickett, K. (2009). *The Spirit Level: Why More Equal Societies Almost Always Do Better*. London: Allen Lane.
- Wong, R. S.-K. (2010) *Association Models*. Thousand Oaks, CA: Sage.
- Wright, E. O. (Ed.) (2005). *Approaches to Class Analysis*. Cambridge: Cambridge University Press.
- Sho Fujihara** is an Associate Professor of Sociology at the Institute of Social Science, The University of Tokyo. His research interests include social stratification and social mobility, educational inequality, and educational assortative mating. His work has been published in journals such as *Research in Social Stratification and Mobility*.