A Quantification of Social Status
— A Survey of Social Stratification and Social Mobility —

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1. Introduction

The psychological or sociological problems of human beeings—e. g. those of attitude, opinion, norm, goal, morale, etc.—are deeply connected with the social status, or originate in it. As to the definition of status the well-known is that given by Prof. R. Lintan. He defined it as follows, "The place in a particular system which a certain individual occupies at a particular time will be referred to as his status with respect to that system." His idea may be satisfactory in the abstract. But his notion of "paticular-system" contains some vague points. It is difficult to understand "the place in a particular system," and we can not actually evaluate it when the system is on a large scale or is heterogeneous. In such a case, we are obliged to quantify the social status of the individual by his abstract situation. So, it is desirable to construct the status score from the results of random sampling survey of the inhabitants in the place concerned. But we should consider that the random samples do not always grade every abstract situation. The status score must be constructed by expert's (sociologue's) grading.

The quantification by expert's grading is objectively valid, only when it is connected with the evaluation of the status in daily life. When we, therefore, adopt the quantification by expert's grading, we must show the connection between the quantification and the results of ranlom sampling survey, i. e. those concerning attitudes or opinions, other responses of samples, etc. In this paper we shall give a method to find such connections, which we actually employed lately.

Our method consists of three kinds of survey. The first which we call merely 'sample survey' is the sampling survey on occupation, education, economic position, sample's class self-identification, etc. which was actually done in the six large cities of Japan. The second is the sampling survey on ranking of occupations, namely objective judgement on the given occupations which we call 'ranking of sample survey.' This was actually carried out together with the first. The third is a status score construction which is given by sociologues' grading of a situation determined by occupation and income. We call it 'expert grading' or 'expert survey' determined by occupation and income. We call it 'expert grad-

ing' or 'expert survey' (cf. Note). The relations between the expert grading and the others will be shown.

I express here my thanks to Y. Taga of our Institute. Without his cooperation this paper would not appear. Further, I owe a deep debt of gratitude to Dr. K. Odaka of Tôkyô University.

2. Expert Survey on Situation

In the research or social stratification and social mobility, we make social score by grading of expert as follows.

Occupation, educational class, economic class, position in their clubs or associations, possession or non-possession of licences, age, personality, character, etc., these are all in a close connection with social status, and considered as components of an individual for his social status.

First, as for age, if we consider it from the point of view ef seniority, older man gets higher status, provided that the rests of the contributing factors or components are the same. On the other hand, the young man has a possibility of greater success in his life, whereas the older man has arrived at his peak. Hence, it is reasonable to exclude 'age' from the principal factors contributing to status and actually we did so.

Second, we think that the position in the association as a component of the individual does not play an important part in actual status, because in our sample survey, special positions are only eleven per-cent (sample size 899).

Third, though personality or character might be very important factor for deciding individual status in community, association, etc., it is very difficult to define types on them, in other words, they are not pervasive factors.

In addition, there are many kinds of licence and we cannot rank all of them in unidimension. Licence seems to be closely related to occupation, so we think that it should be eliminated from the components. Thus our components of social status are occupation, education and economic class.

Now, by the results of the sample survey, we divided each of these three components as follows. At first, occupation was divided into ten groups and the ten groups into 35 sub-groups. The ten groups are corresponding to the classification of the census. That is to say, they are Professional Workers, and Technical Workers, Managers, Clerical Workers, Merchants, Agrarian Workers, Mining Workers, Transportation Workers, Claftsman and Industrial Workers, General Labors, and Service Workers. Education was divided into three classes, Technical College and University, Secondary School and Elementary School. The economic class was divided into four grades, according to the total yearly income

per family. As the result of the classification, we
have 35 kinds in occupation, 3 classes in education,
4 subdivisions in economic classes. The total num-
ber of break-down of possible classifications is:

More than	¥ 400,000
¥ 250,000 ~	¥ 400,000
¥ 150,000 ~	¥ 250,000
Less than	¥ 150,000

$$420 = 35 \times 3 \times 4$$

These four hundred and twenty situations are graded
into nine classes by the experts. They are of type
upper-upper, middle-upper, lower-upper, upper-middle, middle-middle, lower-
middle, upper-lower, middle-lower and lower-lower, respectively. We, however,
admit the existence of an additional 'x' classes for extremely exceptional cases,—
e. g. the case of college graduates who earn more than ¥400,000 as general
laborers, etc.

Our actual grading was carried out by ten experts, who are members of our
Institute and sociologeues of the Tôkyô University. In order to gather the
results classified, we assigned score 1 for upper-upper, score 2 for middle-upper,
......, and score 9 for lower-lower. Thus, the status scores of the situation are
shown by the mean value of scores on each situation graded by the ten experts.
Namely, we define status score of each situation as follows:

$$S(O, E, I) = \frac{1}{10} \sum_{i=1}^{10} G_i(O, E, I)$$

where i is an individual of expert $(i = 1, 2, ..., 10)$, $G_i(O, E, I)$ is the grade
of the situation—a function of three components—by expert i, and $S(O, E, I)$
is a status score of the situation. Then, we make score of each class of income, and
education, and each group of occupation as follows. We call them status of
income, education or occupation, respectively.

$$S(\cdot \cdot I) = \frac{1}{35 \times 3} \sum_{O=1}^{35} \sum_{E=1}^{3} S(O, E, I)$$

$$S(\cdot E \cdot) = \frac{1}{35 \times 4} \sum_{O=1}^{35} \sum_{I=1}^{4} S(O, E, I)$$

$$S(O \cdot \cdot) = \frac{1}{3 \times 4} \sum_{E=1}^{5} \sum_{I=1}^{4} S(O, E, I)$$

In table 1 each score (mean) and standard deviation on occupation are shown.
Table 1 shows the following relation between status and occupation:
Professional men and managers are the highest, clerical and service workers are
the next, and occupations like merchants, mining workers, agrarian workers show
almost the same status. General laborers not only show the lowest status but

Table 1

Occupation	Mean	S. D.
Profesional Work- ers	3.56	1.28
Managers ·	3.93	1.11
Clerical Workers	4.98	1.07
Merchants	6.25	1.32
Agrarian Workers	6.49	1.09
Mining Workers	6.38	1.26
Transportation Workers	6.21	1.07
Industrial Workers	6.17	1.17
General Laborers	7.92	0.23
Service Workers	5.67	0.28

Education	Mean	S. D.
Tecknical College and University	5.06	1.67
Secondary School	5.66	1.59
Elementary School	5.84	1.56

Income	Mean	S. D.
More than ¥ 400,000	4.41	1.30
¥ 250,000 ～ ¥ 400,000	5.14	1.37
¥ 150,000 ～ ¥ 250,000	5.91	1.45
Less than ¥ 150,000	6.61	1.59

also the smallest standard deviation. And service workers show the small standard deviation, too.

With regard to education, the more the schooling, the higher the status. The same thing can be said with regard to income, in other words, the more the income, the higher the status. The variances in these three component categories are as follows: the variances within occupation, education and income class in our survey are shown in Table 2.

Table 2

Component	Occupation	Education	Income
Variance	1.643	0.146	0.652

According to table 2, the variance of occupation is larger than that of income, and the variance of education is smaller than that of income. This shows that occupation is the most important to decide status score of situation. Moreover, we can say the same thing from the correlation coefficient of table 5.

3. Correlation Between Sample Survey and Expert Survey

As mentioned before, the expert survey was done in connection with a sam-

ple survey of Social Stratification and Social Mobility in the six large cities. Now let us observe the relationship in the two surveys.   On this sample survey, we considered not only static items, but also conciousness, self-identification, social attitude, etc.

3 · 1   The Structure of Social Status in the Six Large Cities

We have investigated for each sample on his occupation, education and income.   Then we can decide the status score of each sample.   The distribution of the status score is shown in table 3.

Table 3 (%)

Status	U–U	M–U	L–U	U–M	M–M	L–M	U–L	M–L	L–L	Total
Score	1	2	3	4	5	6	7	8	9	
As a whole	1.4	2.6	4.9	18.4	23.6	19.7	18.5	8.5	2.4	100.0
Tôkyô	2.0	2.3	5.1	17.7	25.1	19.2	19.4	6.4	2.8	100.0
Yokohama	0.0	1.4	6.8	17.6	16.2	24.2	20.3	9.4	4.1	100.0
Nagoya	0.0	2.5	3.7	11.1	29.5	16.1	23.5	13.6	0.0	100.0
Kyôto	0.0	3.9	5.2	16.9	22.0	18.2	18.2	10.4	5.2	100.0
Ôsaka	1.7	1.7	4.1	28.1	20.6	17.3	14.1	11.6	0.5	100.0
Kôbe	2.4	7.1	2.4	14.3	23.8	33.3	11.9	4.5	0.0	100.0

U is upper, M is middle and L is lower.

The people sampled in each of the six cities were proportionate to the population.   However, the sample was so small that the χ^2-test does not show any significant difference on the distribution shown in table 4.   Moreover, we did not discover any significant difference between the cities on the mean values of thier status (see Table 4).

The survey reveals that the mean value of the social status in all six cities was middle-middle, or lower-middle class.

Table 4

	As a whole	Tôkyô	Yokohama	Nagoya	Kyôto	Ôsaka	Kôbe
Mean	5.51	5.45	5.74	5.78	5.68	5.36	5.21
S. D.	1.63	1.61	1.61	1.47	1.70	1.61	1.58
Sample Size	786	391	74	81	77	121	42

Further, we calculated correlation coefficents between status and every component, which are shown in table 5.

Table 5

	Status	Occupation	Education	Income
Status	1.0000	0.7742	0.6892	0.6617
Occupation	0.7742	1.0000	0.5269	0.3346
Education	0.6892	0.5269	1.0000	0.0319
Income	0.6617	0.3346	0.0319	1.0000

We see that the correlation coefficient between status and occupation is very high, and also the same between status and education, and between status and income. From these results, we calculated a multicorrelation coefficient:

$$r_{S.OEI} = 0.9585$$

The regression equation is as follows:

$$\tilde{S} = 0.134\,x - 0.116\,y + 0.346\,z + 3.559$$

where, x is status score of occupation

           y is status score of education

           z is status score of income

           $\tilde{S}$ is estimation of the status by three components.

$r_{S.OEI} = 0.9585$ means that judgement of experts is of linear form, namely they do not think the interrruction of components.

3 · 2   Class Self-Identification

Class self-identification, subjective judgement on social class, can easily be seen by asking the following question:

"If you divide present-day Japanese society into the three classes,—the capitalist class, the worker class, and the others—which do you consider your self to belong to?"

We calculated the mean of status score for each class—capitalist class, worker class, and middle class (others)—which may be seen in Table 6, e. g. 78 samples considered themselves to be the capitalists and the mean of status score of these 78 samples is 4.78 etc.

Table 6

Class Self-identification	Capitalist Class	Middle Class	Worker Class
Mean of Status Score	4.78	5.18	5.71
S. D.	1.59	2.47	2.60
Sample Size	78	169	530

As shown in Table 6, the differences of status between the working class and the capitalist class and between the working class and the middle class are significant, but the difference between the capitalist class and the middle class is not large enough to be significant.

3 · 3 Status Self-Identification

Subjective judgement on social status is obtained by asking the following question:

"If you divide the present-day Japanese society into the three classes,—upper, middle, and lower—which do you consider yourself to belong to?

(If the answer is 'middle,' ask, further, whether it is upper-middle, middle-middle or lower-middle?)"

We call this question "status self-identification." Table 7 shows the mean status score of answers in each of these categories.

Table 7

Status Self-indentif.	Upper and Upper-Middle	Middle-Middle	Lower-Middle	Lower
Mean Status Score	5.03	4.90	5.24	6.14
S. D.	1.83	1.68	1.59	1.37
Sample Size	81	194	238	321

Since, there was only one person who admits to be in the upper class, we combined upper and upper-middle into one category, then we had 21 samples in this category. Consequently, the total number of the upper and the upper-middle became smaller than the total number of the middle-middle, though the difference between the upper and the upper-middle is not significantly large. The status of the lower class is significantly lower than those of the other two classes.

3 · 4   Political Party Support

We attempted to obtain the answer concerning the question of political party support, that is, " What political party do you support?" The mean status scores of the answer are shown in Table 8.

Table 8

Party Supported	Liberal (Ziyûtô)	Progressive (Kaishintô)	Socialist (Syakaitô)	Communist (Kyosantô)
Mean Status Score	5.41	·5.85	5.41	5.15
S. D.	1.63	1.38	1.61	1.41
Sample Size	240	52	315	13

There is no significant difference between the parties. However, the mean score of supporters of Reformist parties (Socialist and Communist) was higher than that of Conservative parties (Liberal and Progressive).

3 · 5   Changes in Occupational Status for Generation

In our sample survey, we limited our investigation to the occupations on the grandfather, the father, and the wife's father. The occupational status revealed by the survey, are shown in Table 9, 10, 11 and 12.

Table 9 (status score)

Generation	Sample's	Father's	Grandfather's	Wife's Father's
Mean	5.35	5.37	5.68	5.37
S. D.	1.15	1.23	1.14	1.23
Sample Size	811	786	666	546

Table 10 (Correlation Coefficents)

	Father's	Grandfather's
Sample's	0.276	0.169
Wife's Father's	0.291	

Table 11 (%)

		Father's status	Grandfather's status
	higher than	45.0	61.0
Sample's status is	equal to	26.3	14.8
	lower than	29.7	24.2
Total		100.0	100.0

Table 12 (%)

		Wife's Father's status
	higher than	31.9
Father's status is	equal to	37.9
	lower to	30.2
Total		100.0

The mean of the grandfather's status is significantly lower than that of the sample's status. In other words, the sample's status is sixty-one per-cent higher than the grandfather's status (cf. Table 11). There is no significant difference between sample's and fathers, but we may say that the cases where sample's status is higher than father's status (45 %) are significantly more than the cases where father's status is higher than sample's status (29.7 %). As there are very few cases where the sample's status and father's or grandfather's are the same, the correlation coefficent is small in the absolute value. There is no significant relationship between status of father and father-in-law. That is to say, those cases where the father's status is higher than, lower than or the same to the wife's

father's status, are almost equal in number.

3 · 6   Best-off for Generation

In our survey, best-off means the answer of the following question. "In which period has your family been best-off, your grandfather's, your father's or yourown?" We make the cross tabulation (see Table 13, 14) based on the sample's own occupational status, father's occupational status and grandfather's occupational status, which we have reported in 3·5, in order to estimate whether the family is best-off during the sample's own or his father's period.

Table 13 (%)

Expert's judgement / Sample's estimation		Sample's own is more best-off than father's gen.	Sample's own is equal best-off to father's generation	Father's generation is more best-off than sample's own	Total
Sample's own occupational status is	higher than father's	74 (22.0)	83 (24.7)	179 (53.3)	336(100.0)
	equal to father's	47 (23.3)	50 (24.8)	105 (51.9)	202(100.0)
	lower than father's	31 (14.0)	33 (14.9)	157 (71.1)	221(100.0)
Total		152 (20.1)	166 (21.9)	441 (58.0)	759(100.0)

Table 14 (%)

Expert's judgment / Sample's estimation		Sample's own is more best-off than grandfather	Sample's own is equal best-off to grand-father	Grandfather is more best-off than sample's own	Total
Sample's own occupational status is	higher than grandfather	79 (21.4)	67 (18.1)	224 (60.5)	370(100.0)
	equal to grandfather	21 (23.1)	18 (19.8)	52 (57.1)	91(100.0)
	lower than grandfather	20 (13.1)	16 (10.4)	117 (76.5)	153(100.0)
Total		120 (19.5)	101 (16.4)	393 (64.1)	614(100.0)

From these tables, it can be seen that there is a relationship between the estimation of sample (subjective judgement) and grading by the experts (objective judgement).

3 · 7 Ranking of Sample Survey and Grading of Expert Survey on Occupation

We give the following statement to the persons sampled.

" Thirty occupations are written on those cards. Think of the general reputations of all occupations, from those of which people think highly to those of which they do not think so well."

According to these classifications, we obtain the occupational ranking from the sample survey, shown in Table 15.

Table 15

		Professional W.	Manager	Clerical W.	Merchants	Agrarian W.	Mining W.	Transportation W.	Industrial W.	General	Service W.
Score	Sample Survey	10.8	12.1	15.9	20.8	17.9	23.7	20.9	20.3	24.8	20.2
	Expert Survey	3.2	3.9	5.0	6.3	5.5	6.3	6.3	6.3	8.0	5.9
Rank	Sample Survey	1	2	3	7	4	9	8	6	10	5
	Expert Survey	1	2	3	7	4	7	7	9	10	5

We consider that thes ample ranked each occupation with tie from 1 to 30. And this score of each occupational group is the mean of ranks by samples. The correlation coefficient between the sample survey and the expert survey is $r = 0.956$ —and it can be said to be extremely high.

4 Conclusion

Thus far, we have treated the main factors which contribute to social status. It becomes clear that the status has a close correlation with citizen's consciousness, judgement, self-identification, self-estimation, etc. In addition the judgement of experts seems to be of linear form, namely they do not think the interaction of components, and further seems to be well in accordance with the citizen's occupational ranking and their judgement. It must be however remembered that reputation, personality, character, etc., have not been considered in this paper. A certain case of the quantification of social status where personality, character, etc. are considered will be treated by C. Hayashi in the future issue of this Annals.

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NOTE

International Sociological Association (I. S. A.) determined upon a Programme of Crossnational Research on Social Stratification and Mobility, at the first conference, Paris, 1951. The Japan Sociological Society has undertaken the research in autumn of 1952. The results of the study will be reported by Dr. K. Odaka at the Congress of I. S. A. ar Liège in this summer (1953).

Moreover, detail of this research was reported in English as "Report of a sample survey of social stratification and mobility in the six large cities of Japan." We have sent the paper to I. S. A. And Japanese report by Dr. K. Odaka and me was printed in the "Japanese Sociological Review" (*Shakaigaku Hyoron*).