Classification of social stereotypes by Japanese Social Psychologists[1,2]

Ai Matsuo (*Faculty of Human Development, University of Toyama, 3190 Gofuku, Toyama 930-8555, Japan*)

Naoya Takahashi (*Faculty of Psychology, Rissho University, 4-2-16 Osaki, Shinagawa Ward, Tokyo 141-8602, Japan*)

Yutaka Matsui (*Faculty of Human Sciences, University of Tsukuba, Tsukuba 305-8572, Japan*)

The present study asks social psychologists (*N*=82) to evaluate six stereotypes in order to both examine the characteristics of stereotypes held by Japanese people and to classify them. The results are as follows. (1) Typicality and discrimination-amusement were identified as perspectives for evaluating stereotypes. (2) The six stereotypes examined in this study were classified into three different groups based on correspondence analysis. (a) Stereotypes about older people and business women include competence evaluations and correspond to a social cognition approach. This classification is similar to that of social groups within the stereotype contents model, as the classification is based on stereotypes related to ability. (b) Stereotypes about Chinese people and patients with mental illnesses include discrimination and correspond to a classical approach. This classification can be seen as involving strong negative evaluations and easily leads to discrimination. (c) Stereotypes about people from Osaka and blood groups include a sense of amusement. As this element of amusement within stereotypes has not been previously reported on, it is an original contribution of this study.

Key words: expert investigation, discrimination, prejudice, social stereotype

Since Lippmann (1922), a journalist, used the word "stereotype" as a conventional image of groups, many studies on stereotypes have been conducted in the field of psychology. The subject matter and the methods of these studies have changed dramatically since the social cognitive approach was introduced in the latter half of the 1970s (Leyens, Yzerbyt, and Schadron, 1994), and as a result, perspectives and definitions of stereotypes have also changed.

First, the main subject matter of classical studies conducted before the introduction of the social cognitive approach were devoted to describing the

stereotyped images about social groups, such as races, or ethnic groups (e.g. Katz & Braly, 1933) and examining the accuracy of these images (e.g. Judd & Park, 1993). These studies emphasized that stereotyped images of groups were rather negative. Allport (1954) in "The Nature of Prejudice" defined a stereotype as "an exaggerated belief associated with a category" and claimed that a stereotype acts as a justificatory device for categorical acceptance or rejection of a group. In other words, stereotypes justify either love-prejudice or hate-prejudice. He also mentioned that stereotypes may exist together with a favourable attitudes and emphasized that animosity often accompanies stereotypes. Thus, Allport regarded stereotypes as a part of prejudice, which consisted of a negative connotation. The negative perspective of a stereotype are highly affected by history and culture, disseminated in the society by repeated replays by the mass media, and

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1) At the time this study was conducted, the affiliation of first author was Graduate School of Comprehensive Human Sciences, University of Tsukuba.

2) A part of this study was presented at the 52nd Annual Conference of the Japanese Society of Social Psychology.

the content of the stereotyped image being shared by people that are uniform to a considerable extent (Allport, 1954). Recently, studies describing images of social groups have been decreasing (e.g. Leyens, et al., 1994). However, because the definition of stereotypes in classical studies was closely related to social problems, such as prejudice and discrimination, many researchers still conduct studies based on these perspectives.

On the other hand, social cognition emphasizes processes rather than descriptive outputs, and it has introduced the methods of cognitive psychology and new dependent variables such as reaction times, recall, and recognition, among others (Leyens, et al., 1994). For example, Taylor, Fiske, Etcoff, and Ruderman (1978) suggested seven hypotheses based on studies related to categorization in the field of perception and suggested that perceptual processes were common to physical and social objects. That is, in the social cognitive approach, stereotypes are regarded as a part of general cognitive activities and not a phenomenon that is specific to intergroup cognition. Therefore, stereotyped images of groups are not limited to negative attributes. A stereotype could be defined as "a cognitive structure containing the perceiver's knowledge, beliefs, and expectancies about a social group" (Hamilton & Trolier, 1986) . Since the introduction of the social cognitive approach, the subject matter of research on stereotypes has rapidly expanded. Especially, a number of studies on the process of applying stereotypes to interpersonal judgments have been conducted and it has been indicated that vague information about others' characteristics is interpreted according to stereotypes (Sagar & Schofield, 1980). Furthermore, studies focusing on people that are perceived stereotypically have been undertaken and have reported that gender stereotypical behaviours are displayed as a way of self-presentation (Leary, 1996). Along with this expanding range of research topics, in recent years, stereotypes about various social groups have also been investigated. For example, Fiske, Cuddy, Glick, and Xu (2002) constructed the stereotype content model (SCM), which comprehensively describes stereotypes of various social groups.

A series of studies on SCM conducted by Fiske's group examined the characteristics of social groups from the perspective of stereotype content. Concretely, on the assumption that out-groups could be described using two evaluation axes (i.e. competence and warmth), some social groups that might be regarded as out-groups for the participants were selected (e.g. Jews, business women, elderly, and welfare recipients, etc.) and how society perceives competence and warmth of outgroup members was inquired. Fiske et al. classified various social groups into groups with "paternalistic stereotypes" that were "warm but incompetent" and those with "envious stereotypes" that were "competent but not warm." This classification using SCM has been conducted not only in the US, but also in various countries. For example, the results of the survey that was conducted in 10 countries including Japan (Cuddy et al., 2009) indicated that while specific groups' stereotypes varied cross-culturally, classification of social groups using the two dimensions of warmth and competence was decided through perceived status and competition, regardless of culture.

Purpose of the present study

As indicated above, there are two types of stereotypes in contemporary social psychology that are based on different research contexts. Most previous studies have examined stereotypes regarding social group, such as women, black people, and white people, among others, from either the classical, or the social cognitive perspectives. However, there are only a few studies that have dealt with different stereotypes comprehensively, except the series of SCM studies by Fiske et al., discussed above. Furthermore, SCM studies have examined the content of stereotypes, whereas properties and functions of stereotypes themselves have not been investigated. The present study focused on certain stereotypes in Japan and classified them. Moreover, stereotypes in Japan were evaluated relatively, from the perspective of properties and functions of stereotypes that have been identified by the two types of research contexts. Social psychologists were selected as participants, because they are knowledgeable about properties and functions of stereotypes. Characterization of stereotypes by Japanese social psychologists were investigated through a survey, the results were classified through correspondence analysis, and the

interrelationships between the two types of approaches to stereotypes were examined.

Stereotypes examined in the present study

The present study focused on the following nine types of stereotypes. The classical stereotypes that we focused on were the following: (1) the stereotype about patients with mental illnesses (e.g. Quinn, Kahng, & Crocker, 2004; Sakamoto, 1999), (2) the stereotype about HIV-infected people (e.g. Walkey, Taylor, & Green, 1990; Sakata, 1994), (3) the stereotype about pyknic type people (e.g. Clayson & Klassen, 1989; Yokoyama & Adachi, 2012).

Stereotypes in the social cognitive approach that we focused were the following: (4) the stereotype about older people (e.g. Fiske, et al., 2002; Irie & Yamamoto, 2006), (5) the stereotype about business women (e.g. Fiske, et al., 2002; Takabayashi, Numazaki, Ono, & Ishii, 2008), and (6) the stereotype about Chinese people (e.g. Walkey, & Chung, 1996; Haratani, Matsuyama, & Minami, 1960). The other three stereotypes are specific to Japan: (7) the stereotype about blood groups, (8) the stereotype about people from Osaka, and (9) the stereotype about *Otaku*.

The blood-group stereotype is defined as "the belief that personality differs depending on blood-groups" (Takuma & Matsui, 1985). In Western astrology, personality characteristics are attributed to each of 12 constellations and the compatibility and fate of people that belong to each constellation are forecasted. The blood-group system is similar to this. According to the blood group, one's personality is judged and the compatibility and fate are forecasted. In Japan, the stereotype of blood groups began to spread around the 1980, mainly through the mass media. The assessment of people's personality using their blood groups is popular even today. In the background to this popularity, there are the functions of amusement and the facilitation of communication (Kamise & Matsui, 1996).

The stereotype about people that come from Osaka, a prefecture in the Kansai region of Japan, is related to the unique culture of the region, and this stereotype is somewhat comparable to stereotypes about people from the Southern States of the US. People that come from Osaka have stereotypes such as "they think a culture of laughing as important," "commercially-minded," (Hirota, Nishida, & Saidou,

1990) "funny," and "strongly self-assertive," (Matsuo & Yoshida, 2012) among others. Recently, in Japan, personality assessment based on stereotypes about a person's birthplace ("people that came from ○ ○ prefecture are × ×") have become popular and stereotypes about people from Osaka, similar to the stereotype about blood groups, are considered to have a function of amusement.

"*Otaku*" are people that devote themselves to some genre, similar to "Nerds" or "Geeks." Kikuchi (2000) indicated that the social group called "Otaku" have a negative image and they tend to be treated with prejudice. This study analysed the nine stereotypes described above.

Pilot Study

In order to decrease the burden on the respondents, a pilot study was conducted to exclude stereotypes that have similar characteristics from the nine stereotypes indicated above. Simultaneously, evaluation items to be used in the main research were selected.

Method

Period of the study. Late July, 2010.

Participants. Participants were graduate students and post graduates specializing in psychology (N=27, 15 men and 12 women, mean age 26.63 ± 3.77 years).

Procedure. A questionnaire survey was conducted and the questionnaires were distributed and collected individually.

Content of the investigation. Table 1 shows the stereotypes that were assessed and the items for evaluating them. The items were constructed based on the perspectives of stereotypes in classical studies, as well as the perspective of the social cognitive approach. At the top of the questionnaire, stereotypes and their definitions (e.g. "Chinese stereotype: the belief that there are personality and behavioural patterns specific to Chinese") were indicated and the degree to which 17 characteristics are contained in each stereotype was inquired. Participants responded using a five-point scale ranging between 1 (*not at all*) to 5 (*very much*). We also inquired whether it was difficult or easy to judge each question using a yes or no, two-point scale format. The order presenting groups was

changed depending on the respondent. Finally, age, sex, job position, specialized field, interest in studies on stereotypes and the frequency of conducting such studies were inquired from all participants.

Results

Attributes of respondents. Nearly all respondents were graduate students, 55.6% in Ph.D. courses and 40.7% in master's courses, and about half the respondents specialized in social psychology (48.1%). Of these, 66.7% were interested in studies on stereotypes, whereas 22.2% had no such interest. Only a few participants (3.7%) had conducted researches on stereotypes, 63.0% had read the literature on stereotypes, or have cooperated in such studies (77.8%). Based on the above results, many of the respondents were considered to be knowledgeable about stereotypes and about evaluating them.

Evaluation of stereotypes. The mean value of

items for evaluating each stereotype was calculated to decide stereotypes and items for evaluating them in the main study. Next, correspondence analysis was conducted with data on the mean values that were arranged in a matrix of 9×17 (stereotypes × evaluation items), as shown in Table 1. According to the results, stereotypes and items for evaluating them were divided into three fields. Then, similar stereotypes and items for evaluating them were excluded. For example, since patients with mental diseases and HIV-infected people were proximally placed by the correspondence analysis, they were considered to have similar characteristics. Therefore, HIV-infected people that many respondents marked as "difficult to judge" were not dealt with in the main research. For the same reason, Otaku and pyknic type people were excluded.

Table 1

Mean value of evaluation for each stereotypes of the pilot study.

	people from Osaka	Otaku	older people	Chinese people	pyknic type people	business women	HIV-infected people	patients with mental illnesses	blood groups	difficult to judge
This belief is known to people in general. [A]	4.61	4.57	4.04	3.79	3.85	4.07	2.54	3.93	4.86	5
People in general believe that this belief is the truth. [A]	4.04	4.07	3.81	3.64	3.37	3.74	2.81	3.89	3.93	10
This belief is highly affected by history and culture. [A]	4.21	4.04	3.59	4.39	3.31	4.04	3.44	3.85	3.79	5
This belief is difficult to change. [A·B]	4.18	3.57	3.63	3.64	3.48	3.26	3.37	3.78	4.00	3
This belief is enjoyed by people in general as an amusement. [B]	4.50	4.25	1.93	2.43	3.41	2.74	1.41	1.85	4.93	3
People in general consider that this belief should be eliminated. [A]	2.00	2.14	2.52	3.04	2.70	2.48	3.74	3.93	2.29	4
This belief is made by the mass media. [A]	3.89	4.25	3.04	3.64	3.63	4.00	2.93	3.52	4.46	1
This belief tends to be connected with negative feelings. [A]	2.89	3.89	3.22	4.07	4.07	3.15	4.00	4.59	2.96	1
This belief tends to be connected with positive feelings. [A]	3.50	2.36	2.78	2.18	2.78	3.04	1.70	1.41	3.32	0
This belief tends to lead to discrimination. [A]	2.61	3.54	3.37	4.07	3.85	2.92	4.33	4.56	3.07	0
This belief strongly includes the evaluation of competence. [B]	2.54	2.93	3.78	3.11	3.81	4.67	2.22	3.85	3.07	5
This belief strongly includes evaluations of warmth and coldness of personality. [B]	4.21	2.89	3.56	3.57	3.78	4.00	2.19	3.44	3.71	2
Different people accept the content of this belief very differently. [A]	3.54	3.79	3.59	3.43	3.63	3.44	3.44	3.44	4.04	11
This belief tends to be used to evaluate others. [B]	3.46	3.79	3.37	3.50	3.93	4.08	2.56	3.67	4.39	16
People that belong to a group that is dealing with this belief use this belief as a way of self-presentation. [B]	3.85	3.33	2.62	2.11	3.08	3.19	1.65	2.04	3.85	34
This belief tends to be used in the interpretation of others' behaviours. [B]	3.89	3.68	3.78	3.57	3.44	3.93	2.33	3.93	4.43	15
This belief tends to cause pity. [B]	1.50	2.75	3.63	2.04	2.93	2.11	3.89	3.59	2.07	3
number of "difficult to judge"	11	13	12	19	20	8	22	8	5	

Note: The letter at the end of each item shows the criterion on which the item was made. A indicates classical studies (e.g. Allport, 1954) and B indicates the social cognitive approach (e.g. Sagar & Schofield, 1980; Fiske et al. 2003, etc.)

Main Study

Method

Period of the study. The study was conducted between the 22 of December and the 31 of January 2011.

Participants. A closed Internet survey was conducted with researchers that specialized, or minored in social psychology, as well as with people that were currently studying for, or had completed their Ph.D. programs. The researcher sent an e-mail to people that were acquaintances, requesting their cooperation in the study and requesting them to access a website and reply. The mail was sent to 180 people and valid responses from 82, participants (54 men and 27 women, 1 gender unknown) were analysed.

Content of the Investigation. Table 2 shows the stereotypes that were evaluated and the items for evaluating the serotypes that were selected in the pilot study.

Similar to the pilot study, stereotypes and their definitions were shown in the upper part of a computer screen during the Internet survey, and the degree to which characteristics described by the 12 items were included in each stereotype was inquired using a five-point scale, 1 (*not at all*) to 5 (*very much*). The order of presentation of stereotypes was changed for different respondents. Finally, age, sex, job position, interest in studies of stereotypes and the frequency of conducting such studies were inquired.

Ethics statement. This study protocol was approved by the research ethics committees of Graduate School of Comprehensive Human Sciences, University of Tsukuba.

Results

Factor analysis was conducted to investigate the factor structure of evaluations regarding stereotypes. Correspondence analysis was also conducted in order to visually show the evaluation of the six stereotypes. Before describing the results of the analyses, attributions of the respondents and the mean value of evaluation for each stereotype are described.

Respondents' Attributions. Approximately half the respondents (53.7%) were professors, associate professors, and emeritus professors. The others were lecturers, assistant professors, assistants of universities (20.7%), graduate students (13.4%), researchers, postdoctoral fellows, and part-time workers, among others (12.2%). Of the respondents, 82.9% replied that they were interested in research on stereotypes, 69.3% had experience in doing such studies, though the frequency varied from "rarely" to "often." Moreover, 91.5% of the respondents had read the literature on stereotypes, though the degree of reading differed. Based on the above results, the respondents were considered to have the ability to evaluate stereotypes.

Mean value for evaluation of stereotypes. As shown in Table 2, the following evaluations were common to each stereotype: "this belief tends to be used in the interpretation of others' behaviours," "this belief is difficult to change," "people in general believe that this belief is the truth," "this belief

Table 2
Mean value of evaluation for each stereotypes of the main study.

	people from Osaka	older people	Chinese people	business women	patients with mental illnesses	blood groups	*M*	*SD*
This belief is known to people in general.	4.02	3.57	3.73	3.50	3.77	4.50	3.85	0.37
People in general believe that this belief is the truth.	3.82	3.49	3.60	3.28	3.78	3.84	3.64	0.22
This belief is difficult to change.	3.60	3.40	3.38	3.16	3.62	3.77	3.49	0.22
This belief is enjoyed by people in general as an amusement	3.79	1.81	2.11	2.11	1.75	4.41	2.67	1.14
People in general consider that this belief should be eliminated.	1.95	2.63	2.69	2.73	3.13	2.18	2.55	0.42
This belief is made by the mass media.	3.61	3.00	3.52	3.40	3.22	3.99	3.46	0.34
This belief tends to be connected with positive feelings.	3.09	2.29	1.86	2.32	1.49	2.74	2.30	0.58
This belief tends to lead to discrimination.	2.99	3.65	3.95	3.33	4.29	3.45	3.61	0.46
This belief strongly includes the evaluation of competence.	2.61	4.01	3.17	4.01	3.60	3.40	3.47	0.54
This belief strongly includes evaluations of warmth and coldness of personality.	3.73	3.21	3.58	3.66	3.18	3.87	3.54	0.28
This belief tends to be used in the interpretation of others' behaviours.	3.91	3.76	3.91	3.84	4.00	4.26	3.95	0.17
This belief tends to cause pity.	1.93	3.62	2.26	2.31	3.07	2.23	2.57	0.64

Note: The range of the value is from 1 to 5. The higher the score, the stronger the characteristics shown by each item.

strongly includes evaluations of warmth and coldness of personality," "this belief is made by the mass media," and "this belief is known to people in general." The dispersion of the mean values of these evaluations among stereotypes was not wide and these items had a high evaluation for every stereotype. On the other hand, the item that "people in general consider that this belief should be eliminated" was evaluated lower, except for the stereotype regarding patients with mental illnesses. That is Japanese social psychologists that responded considered that in general, people did not want stereotypes to be eliminated, except for the stereotype related to patients with mental diseases.

On the other hand, the following items were assessed differently, depending on the stereotype: "this belief is enjoyed by people in general as an amusement," "this belief tends to cause pity," "this belief tends to be connected with positive feelings," "this belief strongly includes the evaluation of competence," and "this belief tends to lead to discrimination." Positive items among the above, were highly evaluated with stereotypes about people from Osaka and blood-groups, whereas those with negative contents were highly evaluated with the stereotypes about patients with mental diseases, Chinese, and older people.

The structure of evaluation of stereotypes. The factor structure of evaluations about stereotypes

was investigated. The data obtained in the main study consisted of three variables (Respondents × Stereotypes × Evaluation items). Each respondent evaluated 6 stereotypes using 12 items. A super matrix was developed of responses to each stereotype (N=408, 68 (except missing data) ×6 stereotypes) included in rows and items evaluating the stereotypes in the column. Factor analysis using principal component analysis with promax rotation was conducted with the 12 items indicative of the characteristics of stereotypes (Table 3). Two interpretable factors were extracted (the cumulative contribution ratio of the two factors was 53.3%). The loading on the first factor was high with items indicating stereotypes were popular in the society (e.g. "this belief is known to people in general"), as well as with items that were related to the definition of stereotypes (e.g. "this belief is difficult to change," "people in general believe that this belief is the truth," and "this belief strongly includes evaluation of warmth and coldness of personality"). The above results suggested that this factor might indicate popularity and typicality of stereotypes, and it was named as the "typicality" factor. On the other hand, the loading on the second factor was high with items such as "this belief tends to cause pity" or "this belief tends to lead to discrimination," which suggested that this factor might indicate that contents of stereotypes tend to lead to prejudice and

Table 3
The structure of evaluation of stereotypes.

items	typicality	discrimination-amusement
This belief is known to people in general.	.852	−.121
People in general believe that this belief is the truth.	.816	.051
This belief tends to be used in the interpretation of others' behaviours.	.780	.135
This belief is difficult to change.	.748	.055
This belief is made by the mass media.	.666	−.106
This belief strongly includes evaluations of warmth and coldness of personality.	.660	−.059
This belief tends to cause pity.	−.023	.657
This belief tends to lead to discrimination.	.434	.655
This belief is enjoyed by people in general as an amusement	.521	−.648
This belief tends to be connected with positive feelings.	.187	−.613
People in general consider that this belief should be eliminated.	−.016	.581
This belief strongly includes the evaluation of competence.	.359	.535
	correlation between factors	.046

Note: The absolute value of loading=0.53 and over

discrimination. Furthermore, the loading of this factor with the item of "this belief is enjoyed by people for amusement" was negative, which suggested a one-dimensional property with bipolarity of discrimination and amusement. Therefore, this factor was named the "discrimination-amusement" factor. Thus, two factors were derived to evaluate stereotypes: typicality and discrimination-amusement.

Next, the mean value of the two scores for each stereotype was calculated by adding items in the typicality and discrimination-amusement factors, dividing the results by the number of items, and naming the obtained values as the typicality score (α = .93) and discrimination-amusement score (α = .71) respectively (Table 4). As shown in Table 4, typicality scores were positively evaluated in the

stereotypes about blood groups and people in Osaka, whereas they were less positively evaluated in the stereotypes about older people and business women. On the other hand, discrimination-amusement scores were positively evaluated in the stereotypes of patients with mental diseases and older people, whereas they were less positively evaluated in the stereotypes about people in Osaka and blood groups. That is, the degree of discrimination of the stereotypes of patients with mental diseases and older people, as well as the degree of amusement of the stereotypes about people in Osaka and blood groups, were evaluated highly.

Classification of stereotypes. Characteristics and classification of stereotypes that were examined in the present study were investigated through

Table 4

The typicality scores and discrimination-amusement scores for each stereotypes

		people from Osaka	older people	Chinese eople	business women	patients with mental illnesses	blood groups
typicality score	*M*	3.76	3.40	3.62	3.47	3.60	4.03
	SD	0.71	0.63	0.68	0.68	0.67	0.69
discrimination-amusement score	*M*	2.45	3.63	3.35	3.30	3.81	2.69
	SD	0.41	0.41	0.43	0.38	0.51	0.47

Note: The range of the values is from 1 to 5. The higher the score, higher is the typicality and discrimination that is indicated.
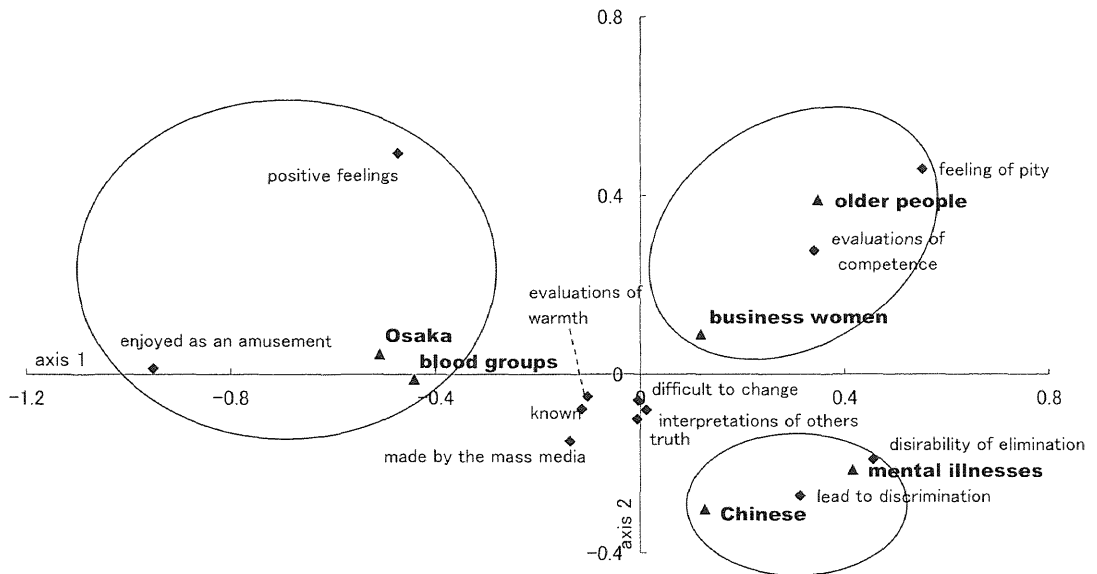

Figure 1.　Correspondence analysis (Dimension 1 and 2)

correspondence analysis of the data of mean values, arranged in the matrix of 6×12 (stereotypes × evaluation items), as shown in Table 2. Figure 1 shows the coordinate plane consisting of the first and second axes (the cumulative contribution ratio=90.1%). The first axis was interpreted as functions of stereotypes that have both discrimination (the positive pole) and amusement (the negative pole), and the second axis was interpreted to express individual perception/feeling components (positive) and social functions (negative) of stereotypes. As shown in Figure 1, stereotypes and evaluation items were divided into three fields. In the first quadrant, we placed stereotypes about business women and older people and evaluation items, "tend to cause pity" and "strongly including the evaluation of ability." In the fourth quadrant, we placed stereotypes about Chinese people, patients with mental diseases and the following evaluation items: "considered by people that it should be eliminated" and "tend to lead to discrimination." In the second and third quadrants, we placed stereotypes of people in Osaka and blood groups and the evaluation items: "enjoyed by people as amusement" and "tend to be connected to positive feelings." Around the origin, we placed the evaluation items: "strongly including evaluation of warmth and coldness of personality" and "difficult to change."

Next, with each group of stereotypes divided into three fields, typicality scores and discrimination-amusement scores obtained from factor analysis were calculated. As shown in Table 5, the typicality scores were high in the following descending order: "People from Osaka/ blood-groups," "Chinese people / patients with mental illnesses," and "older people / business women. "Differences in mean values between the three groups of stereotypes were tested

and results indicated a significant difference in these values $(F(2,318)=47.69,\ p<.001)$. The result of multiple comparisons indicated a significant difference between each stereotype group $(p<.001)$. Regarding discrimination-amusement scores, "Chinese / patients with mental illnesses" and "older people / business women" had high scores indicating strong discrimination and "People from Osaka / blood groups" had low scores indicative of high amusement. The difference between the mean values of the three stereotypes was tested, which indicated a significant difference $(F(2,306)=238.17,\ p<.001)$. The result of multiple comparisons indicated that the scores for "People from Osaka / blood-groups" were lower than those for "older people / business women" and "Chinese people / patients with mental illnesses" $(p<.001)$. Moreover, scores of "older people / business women" were lower than those for "Chinese people / patients with mental illnesses" $(p<.01)$.

Discussion

The present study required social psychologists to evaluate six stereotypes in order to examine the characteristics of stereotypes held by Japanese people and to classify them. The results were as follows: (1) Typicality and discrimination-amusement were identified as a perspectives for evaluating stereotypes. (2) Six stereotypes that were examined in the present study were classified into three stereotype groups with different characteristics.

Typicality and discrimination-amusement of stereotypes. The typicality factor and the discrimination-amusement factor were identified as perspectives for evaluating stereotypes. The typicality factor consisted of the following items:

Table 5
The typicality score and discrimination-amusement score for three groups of stereotypes

		people from Osaka / blood groups	older people / business women	Chinese people / patients with mental illnesses
typicality	M	3.90	3.44	3.61
(N=160)	SD	0.71	0.65	0.66
discrimination-amusement	M	2.55	3.48	3.57
(N=154)	SD	0.46	0.43	0.53

Note: The range of the values is from 1 to 5. The higher the score, higher is the typicality and discrimination that is indicated.

"tend to be used in the interpretation of others' behaviours" and "difficult to change," among others. This factor was considered to reflect the classical and social cognitive perspectives on stereotypes. The results of the present study indicated that though typicality of stereotypes about people from Osaka and blood groups was the highest, typicality was generally evaluated highly in all the six stereotypes with a narrow dispersion. Therefore, the perspective of typicality was considered to be applicable to various stereotypes, regardless of the type of social groups. The discrimination-amusement factor consisted of the following evaluation items: "easily lead to discrimination" and "elimination is desirable," among others. This factor was considered to reflect perspectives of stereotypes that are highly related to prejudice, which was focused on in classical studies. The results of the present study indicated that discrimination in stereotypes about people from Osaka and blood groups was weak, indicating that perspectives of classical studies are not applicable to certain stereotypes.

Three stereotype groups. Firstly, stereotypes about older people, business women and items for evaluating ability and the feeling of pity were placed in the first quadrant of correspondence analysis. All the stereotypes included in the first quadrant were evaluated high in evaluative ability. On the other hand, the degree of causing pity was high with regard to older people and low with regard to business women. The BIAS map (Cuddy, Fiske, & Glick, 2007) indicated that social groups with low competence (such as older people) tended to draw feelings of pity, whereas social groups with high competence (such as business women) tended not to attract feelings of pity. Based on the above results, it is considered that a characteristic of these stereotype groups is that the evaluation of ability is highly connected with strong feelings of pity. This classification is similar to that of social groups in SCM (Fiske et al., 2002), since the classification is based on the content of stereotypes that are related to ability.

Secondly, stereotypes about Chinese people, patients with mental illnesses and items for evaluating "desirability of elimination," and "easily leading to discrimination" were placed in the fourth quadrant. The extent to which people in general

considered it desirable to eliminate these stereotype groups, and the ease with which these groups were related to discrimination were evaluated as being high. Furthermore, evaluation of these stereotype groups was generally negative and it was considered difficult have positive attitudes related to them, such as agreeable feelings, or the feeling of pity. Though the BIAS map (Cuddy et al., 2007) indicated that positive attitudes, such as respect for Asian people and pity for patients with mental illnesses are shown, the results of the present study indicated that in Japan, there are only negative attitudes related to stereotypes about Chinese people and patients with mental diseases. Based on the above results, these stereotype groups were considered to include strong negative evaluations and easily lead to discrimination, which is similar to the perspectives of stereotypes in classical studies, represented by Allport (1954).

Thirdly, stereotypes about people from Osaka, blood groups and evaluation items of amusement, positive feelings were placed in the second and third quadrants. These stereotype groups are enjoyed by people as amusements and are related to positive feelings. Furthermore, the tendency to lead to discrimination and desirability of elimination were evaluated lower in these stereotype groups. Moreover, the stereotyped images were relatively positive. Such perspective of stereotypes that include not only negative but also positive images corresponds to the current social cognitive approach to stereotypes. However, amusement has not been identified in previous studies on stereotypes. Therefore, this group of stereotypes can be considered a new kind of stereotypes that have remained un-investigated to date. Furthermore, it is considered difficult to eliminate these stereotypes, because they are accompanied by amusement and positive feelings.

Finally, evaluation items that were not included in the three stereotype groups discussed above (the six evaluation items placed around the origin in Figure 1) constructed the typicality factor and were positively evaluated with all the stereotypes. These evaluation items are considered to be characteristics of general stereotypes, which are not highly influenced by specific type of stereotype.

The present study classified social stereotypes

commonly held in Japan into the following three categories: (1) Stereotypes that includes ability evaluations and mainly correspond to the social cognitive approach, (2) Stereotypes that include discrimination and correspond to the classical approach, and (3) Stereotypes that include amusement. The aspect of amusement in stereotypes has not been previously reported and is an original contribution of this study.

Limitation of the present study. Three types of stereotypes were extracted in the present study. However, there are some limitations of the study as discussed below. The evaluators of stereotypes in this study were Japanese social psychologists. They evaluated characteristics of Japanese stereotypes. However, it is not certain whether this classification would apply to other cultures. Moreover, stereotypes with the function of amusement that was suggested in present study were stereotypes about people from Osaka and stereotypes about blood groups, which are only encountered to Japan. It is not certain whether such stereotypes are unique to the Japanese culture, or are common to other cultures. It is suggested that in the future, more types of stereotypes should be evaluated and stereotypes in other cultures should be examined. Moreover, the applicability of the classification system developed in this study to other cultures should be investigated.

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