要約 本研究の目的は、自己報告のほかに潜在指標も用いて謙虚と人生満足度の関係を調査することであった。研究1では、

日本における謙虚と人生満足度

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Humility and life satisfaction in Japan

回答バイアスに影響されずに謙虚を測定できる謙虚一傲慢潜在連合テストの日本語版を開発し、その妥当性を確認した。 研究2では、自己報告式の質問紙によって測定した顕在的謙虚と潜在連合テストによって測定した潜在的謙虚がそれぞ れ人生満足度とどのように関連しているかを調査した。その結果、顕在的謙虚は人生満足度と有意な相関を示さなかっ たが、潜在的謙虚は人生満足度と有意な正の相関を示した。年齢と性別を統制しても同様の結果が得られた。これは、 謙虚は単なる社会的美徳ではなく、自分自身にとってもポジティブな行動特性であるという仮説を支持するものであっ た。

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Key words

humility, well-being, implicit association test, character strengths, cultural differences

1. Introduction

1.1 Humility as a character strengths

There has been a rapid increase in psychological research on humility. For example, a search for articles using PsycINFO with the keyword "humility" resulted in 1, 27, and 171 published articles in 2000, 2010, and 2020, respectively. Humility is positioned as one of the 24 character strengths organized by Peterson and Seligman (2004), especially in the area of positive psychology. These character strengths are regarded as properties that contribute to a person's well-being and, in fact, they are directly associated with high life satisfaction and subjective happiness (e.g., Hook, Davis, Owen, Worthington, & Utsey, 2013). However, humility is exceptional, and there are only few data to support that. Presumably, this is because of certain facts, such as the complex response biases associated with humility measurements and the cultural differences in humility. Examining whether humility is just a social virtue or a positive propriety for individuals in detail is useful not only academically, but also when considering education and interventions based on character strengths.

1.2 Relationship between humility and life satisfaction

Peterson and Seligman (2004) set up various criteria to identify character strengths. There were two criteria among them: one is whether it is widely recognized across cultures; the other is whether it contributes to satisfaction and happiness. In other words, character strengths should have a positive effect on an individual's life satisfaction and happiness in any culture.

To confirm this, Park, Peterson and Seligman (2004) investigated the association between the 24 character strengths and life satisfaction in Americans (three samples totaling 5,299 people), controlling for gender and age. Consequently, it was confirmed that character strengths were basically associated with life satisfaction, but there is a range of levels; humility showed the least association with life satisfaction among the 24 character strengths. Specifically, only one of the three samples showed a significant positive partial correlation, and the effect size was almost zero (pr = 0.05). Similar results were obtained from the survey by Buschor, Proyer, and Ruch (2013) on Germans and by Blasco-Belled, Alsinet, Torrelles-Nadal, and Ros-Morente (2018) on Spaniards. Otake, Shimai, Ikemi, Utsuki, and Peterson (2005) investigated the association between the 24 character strengths and subjective happiness in Japanese people. The results were similar to other studies, demonstrating that humility was not significantly correlated with subjective happiness. Contrarily, some data demonstrate that humble people are more satisfied with their lives. Rowatt, Powers, Targhetta, Comer, Kennedy, and Labouff (2006) measured humility in Americans using four different scales and investigated its association with life satisfaction. The results revealed that one of the four scales of humility showed a significant positive correlation with life satisfaction (r = 0.28). Krause (2016) also conducted a survey on Americans and in a multiple regression analysis, they found that if a person has a higher level of humility, they will have better life satisfaction ($\beta = 0.24$), although it was not predicted in advance.

1.3 Response bias in self-reported humility and using the Implicit Association Test (IAT) to avoid the bias

Character strengths are related to virtues (Peterson & Seligman, 2004); therefore, there is a concern that if their extent is self-reported, they may be biased in a socially desirable direction. When it comes to humility, it is more complicated. This is because when people self-assess their humility, it is predicted that their answers may be biased in the opposite direction if a humble person answers questions which ask about humility in a reserved way. Consequently, the score of a person who is not humble may become unreasonably high, and the score of a humble person may become unreasonably low. These conflicting biases need to be removed.

The IAT is a typical method for solving this response bias problem. The IAT is an experimental test that can examine the strength of association between concepts or the strength between the association of a concept and its evaluation by measuring the reaction time required for the word classification task. In the IAT it is more difficult to give fake answers than in selfassessment-based questionnaire surveys (Steffens, 2004; Wolff, Schindler, & Brand, 2015); therefore, it is expected to be useful in research areas which relate to response bias in self-reported measures. Hereinafter, self-reported humility will be referred to as explicit humility and humility measured by IAT will be referred to as implicit humility. Studies presented in the previous section are conducted using explicit humility.

1.4 Implicit humility and life satisfaction

Rowatt et al. (2006) used the IAT to measure implicit humility in Americans and examined its association with life satisfaction; however, no significant correlation was found between them. As theoretically predicted, implicit humility had a significant negative correlation with narcissism (r = -0.19) and a significant positive correlation with humility, which was evaluated by other people (r = 0.48) (Rowatt et al., 2006). Furthermore, LaBouff, Rowatt, Johnson, Tsang, and Willerton (2012) demonstrated that implicit humility predicted helping behavior. These mean that humility measured by the IAT is valid, and the lack of significant association between implicit humility and life satisfaction may not be caused by low validity in the IAT.

1.5 Culture, social situations, and humility

The association between character strengths and well-being may vary from culture to culture. Bermant, Talwar, and Rozin (2011) praised the work of Peterson and Seligman (2004); however, they questioned the fact that the study is primarily based on Western literature. They suggested that the knowledge of cultural psychology should be incorporated to extend the area of positive psychology.

Regarding cultural differences in humility, in cultural psychology it was reported that self-enhancement, commonly seen in Westerners (Brown, 1986; Miller & Ross, 1975), was not seen in East Asians, and the tendency of self-criticism was seen there as well (Heine, Lehman, Markus, & Kitayama, 1999). There are several perspectives to explain this phenomenon. First, East Asians are more likely to discover their inferior aspects because

they are eager to improve them, resulting in self-criticism (Heine et al., 1999). Second, not showing self-enhancement is a type of self-presentation; by being humble, East Asians try to build smooth relationships. In fact, in East Asia, humble people often make a good impression on others (Bond, Leung, & Wan, 1982). Similar tendencies have been reported in Europe and the United States (Exline & Geyer, 2004; Vonk, 1999), however, in East Asia, the interdependent view of the self, which defines oneself in relation to others, is predominant, whereas in Europe and the United States, the independent view of the self, which defines oneself by ability and personality traits that are independent from others, is predominate (Markus & Kitayama, 1991). Thus, in East Asia, being humble that helps maintain good relationships with others is more likely to be selected than selfenhancement that emphasizes one's abilities. Yoshida, Kojo, and Kaku (1982) conducted a survey of elementary school students in Japan and reported the tendency that children were likely to have a better impression of humble people than of arrogant people, even among second graders in elementary school. The youngest of the survey participants were second graders, hence, it is possible that this tendency may have formed even earlier. This suggests that in Japan people recognize the importance of being humble from a very early age.

Suzuki and Yamagishi (2004) developed these arguments and proposed that in a collectivist society like Japan, humility is a "default strategy" for not being excluded from the community. Their argument is as follows: in a collectivist society, the cost of being excluded from the community is high. In such a society, it is a rational action principle to avoid offending others and behave humbly for that purpose. If a person is humble, they may fail to obtain what they want. However, the cost of being expelled from the community is generally greater than that; thus, the Japanese people try to be humble unless it is clearly shown that it is better not to be humble. To substantiate this theory, they conducted an experiment that demonstrated that Japanese people are likely to be humble even in anonymous situations where they do not need to manipulate impressions (humility is a default strategy, such that even if there is no profit in it, they try to act humble at first); however, they do not try to act humble if it is clearly shown that not acting humble is more beneficial. This result was also confirmed by Yamagishi et al. (2012).

1.6 Purpose

The purpose of this study was to investigate the association between humility and life satisfaction among Japanese people. There are various theories about the mechanism by which Japanese people tend to be humble. They all share something in common in that humility is not only just a sign of lack of selfconfidence but it also has a positive function for improving oneself or facilitating smooth relationships. Therefore, we expected that humility (especially implicit humility) was associated with high life satisfaction. For this purpose, in Study 1, we measured implicit humility using the IAT and examined its correlation with humility when measured by other persons to confirm its validity. In Study 2, we investigated the association between explicit and implicit humility and life satisfaction.

2. Study 1

2.1 Materials and methods

2.1.1 Participants

A total of 37 Japanese undergraduate and graduate students (16 males and 21 females) participated in the study. Their mean age was 25.28 years (SD = 9.09; range: 20-61 years; 1 un-known). This research was approved by the ethics committee of the authors' affiliation. Participants gave their informed consent and were informed that they could withdraw from the study at any time.

2.1.2 Measures

2.1.2.1 Data obtained from the participants

2.1.2.1.1 Implicit humility

A Japanese version of the Humility-Arrogance IAT with reference to Rowatt et al. (2006) was developed and the score was used as an index of implicit humility. Rowatt et al. (2006) used English as stimulus words. However, there are many words that do not correspond well to Japanese and, hence, we reselected our own stimulus words through a preliminary survey. Tables 1 and 2 show a list of stimulus words and experimental blocks. The improved scoring algorithm for the IAT (Greenwald, Nosek, & Banaji, 2003) was adopted. In this study, when the score is higher, it shows that the respondent is more implicitly humble. The average correct rate of Humility-Arrogance IAT was 93 %. The participant with the lowest correct rate had 73 %. A onesided binomial test was performed to determine if it was significantly higher than the IAT chance level (50 %), and we found that it was significant (p = 0.01). From this result, it was judged that all the participants correctly understood and implemented the IAT procedure.

2.1.2.1.2 Explicit humility

A "humility thermometer" (self-assessment) was adopted as one of the indices of explicit humility, following Rowatt et al. (2006). Participants were asked to rate their own humility ranging from 0 (very arrogant) to 100 (very humble).

As the other index of explicit humility, participants completed the five-item self-assessment humility scale developed by Tsuda (2015). The specific five items were as follows: "When talking to my friends, I refrain from talking about my good points"; "When I talk to my friends, I don't say what I'm good at unless the other person asks me about it"; "When I succeed, I conservatively tell my friends about it, no matter how happy I am"; "When I'm with my friends, I don't make a display of my confidence, even if I'm actually really confident about something"; and "When my friends praise me, I don't express my pleasure candidly, and I try to deny it at first." The participants were asked to respond to each question using one of five answers ranging from "1. I do not do it at all" to "5. I always do so." Cronbach's alpha indicating internal consistency of the scale was 0.80.

2.1.2.2 Data obtained from other persons

Following Rowatt et al. (2006), we conducted a humility thermometer (evaluated by other people) to measure objective humility as seen by a third party. The participants' acquaintances who knew them well were given a definition of humility and asked to evaluate how humble they think the participants were ranging from 0 (very arrogant) to 100 (very humble). Data were collected from five or more contacts for each participant, and the average score was used for analysis.

2.1.3 Procedure

2.1.3.1 Determining the sample size

Although no previous study on Japanese people was found, Rowatt et al. (2006) reported that the correlation coefficient between implicit humility and the humility thermometer (evaluated by other people) was r = 0.48. Hence, in this study, we assumed the same effect size. A power analysis was performed to determine the sample size using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) ($\alpha = 0.05$, $1 - \beta = 0.80$, effect size $\rho = 0.48$, two-sided test) and then estimated that the required number of participants was 29. Considering the possibility that the IAT or questionnaires had some defects that were excluded from the data, we set the sampling size to be larger than this.

2.1.3.2 Sampling and survey procedures

In multiple psychology classes, we distributed eight envelopes, which contained the humility thermometer Survey Questionnaire sheets (evaluated by other people) and one explanatory document to 250 students and asked them to cooperate with the survey. The explanatory document stated that "This is a study on the evaluation of a person's personality as evaluated by a third person. Give the envelopes to people who know you well and ask them to answer the questions on the sheet inside it. Give an envelope to as many people as possible and ask them for answers so that you can get answers from at least five people. The data obtained will be used for academic purposes, but we will not disclose any information that can identify an individual. Please carefully keep this explanatory document and do not lose it because it may be needed at a later date." The same thing was explained verbally. An identification number (ex: 0135) was printed on each explanatory document along with the humility thermometer (evaluated by other people), which would be used to link each data later.

Inside the envelope, we inserted a paper on which was printed an explanation addressed to the contact and the humility thermometer (evaluated by other people). The explanation was as follows: this survey is for academic purposes; the content of individual answers will not be disclosed; and if a contact agrees to cooperate with providing answers, place the answer sheet in the envelope after filling it out and then seal it and put it in the designated collection box or mail the envelope to us (the mailing address was printed on the envelope and a stamp was attached). The deadline for the reply was also printed. In the Rowatt et al. (2006) study, the number of informants was 1-3; however, in this study, to evaluate the participants in a more multifaceted manner, five or more contacts were required.

There were 48 participants who obtained data from five or more informants by the reply deadline. The identification numbers of these 48 participants were disclosed, and we asked them to contact the first author if they could cooperate in participating in additional research and experiments. Consequently, the final sample size was 37. Surveys and experiments were conducted on these participants in the following order: first, the Humility-Arrogance IAT; then, the humility thermometer (self-assessed); and finally, the humility scale. At the beginning of each survey, we requested that they input or write down their identification number such that the data could be linked. There was no data loss and, hence, all the data were used for the analysis.

2.1.3.3 Statistical analyses

Correlation and partial correlation analyses were conducted

to check for the relationship between explicit and implicit humility. The statistical significance level was set at p < 0.05.

2.2 Results

The correlation analysis revealed that the Humility-Arrogance IAT was significantly positively correlated with the humility thermometer (evaluated by other people) (r = 0.55, 95% CI [0.28, 0.75], p < 0.01). Similarly, the humility thermometer (self-assessed) and the humility scale also demonstrated a significant positive correlation with the humility thermometer (evaluated by other people), respectively (r = 0.34, 95 % CI [0.02, 0.60], *p* = 0.04; *r* = 0.48, 95 % CI [0.17, 0.69], *p* < 0.01). Next, we performed a partial correlation analysis to clarify which measurement method was most strongly associated with the humility thermometer (evaluated by other people). Upon the analysis, we set explicit and implicit humility for controlling each other. Specifically, when examining the partial correlation between the Humility-Arrogance IAT and the humility thermometer (evaluated by other people), the humility thermometer (self-assessed) and the humility scale were controlled. When examining the partial correlation between the humility thermometer (self-assessed) and the humility thermometer (evaluated by other people) or the partial correlation between the humility scale and the humility thermometer (evaluated by other people), the Humility-Arrogance IAT was controlled. The results re-

| Block | Number of trials | Task function | Items assigned to left-key response | Items assigned to right-key response | |
|-------|------------------|---------------|-------------------------------------|--------------------------------------|--|
| 1 | 20 | Practice | Humility | Arrogance | |
| 2 | 20 | Practice | Self | Other | |
| 3 | 20 | Test | Humility + self | Arrogance + other | |
| 4 | 40 | Test | Humility + self | Arrogance + other | |
| 5 | 20 | Practice | Arrogance | Humility | |
| 6 | 20 | Test | Arrogance + self | Humility + other | |
| 7 | 40 | Test | Arrogance + self | Humility + other | |

Table 1: Sequence of trial blocks in the Humility-Arrogance IAT

Note: For half of the participants, the positions of Blocks 1, 3, and 4 are switched with those of Blocks 5, 6, and 7, respectively.

Table 2: Stimulus words for the Humility-Arrogance IAT

| Self | | Oth | ner | Humility | | Arrogance | |
|------------|---------------------|---------------|---------------------|------------|------------------------|--------------|--------------------------|
| In English | In Japanese | In English | In Japanese | In English | In Japanese | In English | In Japanese |
| Ι | 私 (watashi) | friends | 友人 (yujin) | humble | 謙虚な (kenkyona) | arrogant | 傲慢な (gomanna) |
| self | 自己 (jiko) | acquaintances | 知人 (chijin) | reserved | 控えめな (hikaemena) | conceited | うぬぼれた (unuboreta) |
| myself | 自身 (jishin) | strangers | 他人 (tanin) | polite | 丁寧な (teineina) | cheeky | 生意気な (nakaikina) |
| Ι | わたくし (watakushi) | acquaintances | 知り合い (shiriai) | generous | 寛大な (kandaina) | presumptuous | あつかましい (atsukamashii) |
| Ι | 自分 (jibun) | friends | ともだち (tomodachi) | humble | 腰が低い (koshigahikui) | grandiose | えらそうな (erasona) |

65

| | 1 | 2 | 3 | 4 | M | SD |
|--|---|--------------------|--------------------|-------------------|-------|-------|
| 1. Humility-arrogance IAT | _ | 0.32 [-0.00, 0.59] | 0.31 [-0.02, 0.57] | 0.55 [0.28, 0.75] | 0.14 | 0.49 |
| 2. Humility thermometer (self-assessed) | | _ | 0.41 [0.10, 0.65] | 0.34 [0.02, 0.60] | 53.54 | 22.58 |
| 3. Humility scale | | | _ | 0.48 [0.17, 0.69] | 15.76 | 3.33 |
| 4. Humility thermometer (evaluated by other people) | | | | - | 62.24 | 12.41 |

Table 3: Descriptive statistics and intercorrelations of humility measurements

Note: Values in brackets represent 95 % confidence intervals.

Table 4: Partial correlations between humility evaluated by other people and self-assessed explicit (implicit) humility when controlling for self-assessed implicit (explicit) humility

| | Humility thermometer (evaluated by other people) |
|--------------------------------------|---|
| Humility-arrogance IAT | 0.47 [0.16, 0.69] |
| Humility thermometer (self-assessed) | 0.21 [-0.13, 0.50] |
| Humility scale | 0.38 [0.06, 0.63] |

Note: Values in brackets represent 95 % confidence intervals.

vealed a significant partial correlation between the Humility-Arrogance IAT and the humility thermometer (evaluated by other people) (pr = 0.47, 95 % CI [0.16, 0.69], p < 0.01) and a significant partial correlation between the humility scale and humility thermometer (evaluated by other people) (pr = 0.38, 95 % CI [0.06, 0.63], p = 0.02). However, the partial correlation between the humility thermometer (self-assessed) and the humility thermometer (evaluated by other people) was not significant (pr = 0.21, 95 % CI [-0.13, 0.50], p = 0.22). Table 3 and Table 4 display these results and the descriptive statistics for each variable.

2.3 Discussion

To summarize the results, the Humility-Arrogance IAT and the humility thermometer (evaluated by other people) demonstrated a strong positive correlation, which confirms that Humility-Arrogance IAT is a valid method of measuring humility. Also the five-item self-assessment humility scale evinced moderately significant positive correlations with the humility thermometer (self-assessed) and the humility thermometer (evaluated by other people), indicating the validity of the five-item self-assessment humility scale. Notably, in this study, implicit humility was more strongly associated with humility evaluated by others than explicit humility in either simple or partial correlation analysis.

3. Study 2

In Study 2, the Humility-Arrogance IAT created in Study 1 was used to measure implicit humility and investigate its association with life satisfaction as well as explicit humility. In previous studies related to this topic, scores obtained from the Subjective Happiness Scale (SHS) developed by Lyubomirsky and Lepper (1999) and scores obtained from the Satisfaction With Life Scale (SWLS) developed by Diener, Emmons, Larsen, & Griffin (1985) were used as an index of well-being. Otake et al. (2005) used the Japanese version of the SHS (Shimai, Otake, Utsuki, Ikemi, & Lyubomirsky, 2004) to study the Japanese people. However, to make a comparison with the study conducted by Rowatt et al. (2006), which measured implicit humility, we adopted the SWLS.

3.1 Materials and methods

3.1.1 Participants

A total of 87 Japanese undergraduate students (41 males and 46 females) with a mean age of 19.78 years (SD = 0.91; range: 19-24 years) participated in this study. This research was approved by the ethics committee of the authors' affiliation. Participants gave their informed consent and were informed that they could withdraw from the study at any time.

3.1.2 Measures

3.1.2.1 Implicit humility

As in Study 1, participants performed the Humility-Arrogance IAT and used the scores as an index of implicit humility. The average correct rate of the Humility-Arrogance IAT was 92 %. The participant with the lowest correct rate had 73 % correct rate. A one-sided binomial test was performed to determine if it was significantly higher than the IAT chance level (50 %), and we found that it was significant (p = 0.01). From this result, it was judged that all the participants correctly understood and implemented the IAT procedure.

3.1.2.2 Explicit humility

As in Study 1, participants completed a humility thermometer (self-assessed). Participants also completed the humility scale as in Study 1. The Cronbach's alpha of the scale was 0.73.

3.1.2.3 Life satisfaction

The Japanese version of the SWLS (Oishi, 2009) was conducted, and the score was used as an index of life satisfaction. The specific items on the SWLS included five items such as "In most respects, my life is close to my ideal," and we asked participants to choose one of seven answers ranging from "1. Strongly disagree" to "7. Strongly agree." The Cronbach's alpha of the scale was 0.80.

3.1.3 Procedure

3.1.3.1 Determining the sample size and sampling

The expected size of the effect is unclear, but the correlation between the score of the Humility-Arrogance IAT and the humility thermometer (evaluated by other people) showed r =0.55 in Study 1; thus, it is unlikely that the correlation between implicit humility and life satisfaction will be higher than this. Therefore, assuming a medium-sized effect, we performed sampling to detect the effect. Specifically, a power analysis ($\alpha =$ 0.05, $1 - \beta = 0.80$, size of effect $\rho = 0.3$, two-sided test) was performed using G*Power, and we estimated the required number of participants as 82. Considering the possibility of inadequate answers on the IAT and questionnaires, we surveyed 87 people for this experiment, five more than the estimated number, after obtaining their consent to participate in the study. No participants were excluded from the data, and the final sample size was 87.

3.1.3.2 Survey procedures

All experiments and surveys were conducted on a personal computer placed in a private room, and the participants were asked to call a member of the experiment team who was waiting outside if something went wrong.

3.1.3.3 Statistical analyses

Correlation and partial correlation analyses were performed to check for the relationship between humility and life satisfaction. The statistical significance level was set at p < 0.05.

3.2 Results

Table 5 demonstrates the descriptive statistics and correlation coefficient between each variable. Only the Humility-Arrogance IAT showed a significant correlation with the SWLS (r = 0.29, 95 % CI [0.12, 0.44], p < 0.01). The scores of the humility thermometer (self-assessed) and the humility scale did not significantly correlate with the SWLS scores (r = 0.03, 95 % CI [-0.15, 0.20], p = 0.75; r = -0.02, 95 % CI [-0.19, 0.16], p = 0.86 respectively). After controlling for gender and age, the association between the Humility-Arrogance IAT and the SWLS did not change (pr = 0.28, 95 % CI [0.11, 0.43], p < 0.01).

3.3 Discussion

Overall, the hypothesis was supported. In Japan, humility is adaptive unless otherwise specified (Suzuki & Yamagishi, 2004). Hence, individuals who acquire such strategy may have high life satisfaction.

4. General Discussion

Do humble people have greater life satisfaction? The results of the present study revealed that as in the study on Japanese people conducted by Otake et al. (2005), explicit humility failed to show a significant correlation with life satisfaction. Conversely, implicit humility, which was not examined by Otake et al. (2005), showed a significant positive correlation with life satisfaction. It was confirmed that humility is not just a virtue, it is also a positive behavioral characteristic for oneself.

The correlation coefficient between implicit humility and life satisfaction showed r = 0.29, which was not very large effect size. However, given the difference in the forms of measurement wherein implicit humility is based on reaction time, whereas life satisfaction is based on Likert scale scores, this value has substantial scientific significance. When the correlation coefficients between the 24 character strengths and life satisfaction or subjective happiness are arranged in descending order, zest and hope are consistently ranked high in questionnaire method (Buschor et al., 2013; Blasco-Belled et al., 2018; Otake et al., 2005; Park et al., 2004; Peterson, Ruch, Beermann, Park, & Seligman, 2007). Further research will be needed to measure these character strengths with the IAT, examine the correlation with life satisfaction, and compare them with the results of this study.

Unlike this study, Rowatt et al. (2006) found no significant correlation between implicit humility and life satisfaction in Americans. This difference in results can be explained by the ideas of Suzuki and Yamagishi (2004) and Yamagishi, Hashimoto, Cook, Kiyonari, Shinada, Mifune, Inukai, Takagishi, Horita, and Li (2012). In collectivist societies, including Japan, being excluded from the community is more problematic than in individualist societies. It is more adaptive to be humble as the default self-presentation because it is less likely to offend others. Therefore, among Japanese people, being humble leads to a higher life satisfaction. Even in individualist societies, including the United States, the impressions made by a humble person are good (Exline & Geyer, 2004; Vonk; 1999) and, hence, as

Table 5: Descriptive statistics and intercorrelations of humility and life satisfaction

| | 1 | 2 | 3 | 4 | M | SD |
|---|---|--------------------|-------------------|----------------------|-------|-------|
| 1. Humility-arrogance IAT | _ | 0.10 [-0.07, 0.27] | 0.20 [0.03, 0.36] | 0.29 [0.12, 0.44] | 0.19 | 0.50 |
| 2. Humility thermometer (self-assessed) | | _ | 0.42 [0.26, 0.55] | 0.03 [-0.15, 0.20] | 53.17 | 20.06 |
| 3. Humility scale | | | _ | -0.02 [-0.19, -0.16] | 15.40 | 3.86 |
| 4. Satisfaction with life scale (SWLS) | | | | _ | 18.20 | 6.42 |

Note: Values in brackets indicate 95 % confidence intervals.

Tangney (2009) states, humility will make it easier to succeed, especially in fields where relationships matter. However, if humility is the default self-presentation in an individualist society, there could be negative effects, such as a person's competence not being recognized or requests not being understood. Thus, the positive and negative aspects of humility can be seen to the same extent, such that it may be difficult to detect a positive correlation between humility and life satisfaction in Americans. Further studies are required to validate this interpretation.

This study has some limitations. First, the results of this study do not reveal a causal relationship between humility and life satisfaction. It is generally assumed that humility brings well-being (e.g., Peterson & Seligman, 2004). However, the causality of being humble can be assumed to behave oppositely; people can be humble because their demands are already satisfied. It is a future task to empirically clarify which of these is correct (or if both are correct) through longitudinal research. Second, in Study 2, we did not perform humility evaluations made by other people because of cost constraints. There is also an idea that humility is a characteristic which should be determined by other people (Davis, Placeres, Choe, DeBlaere, Zeyala, & Hook, 2016) rather than by oneself. Hence, in the future, it is necessary to clarify the association between humility when it is evaluated by other people and life satisfaction. Third, the participants in this study were university students, and it was not a sample that represents the entire Japanese population. Fourth, it is necessary to investigate in more details whether the results of this study are unique to Japan, or they are also found in East Asian countries in general and in wider countries and regions. Although it is certain that character strengths have universality to a certain degree, cultural differences may also have important implications.

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