Supplementary Material for
Shame-Prone People Are More Likely to Punish Themselves:
A Test of Reputation-Maintenance Explanation of Self-Punishment

The Japanese version of the Test of Self-Conscious Affects (TOSCA) was developed for the present study (The Japanese version of TOSCA is available upon request from the original author of TOSCA, Professor June Price Tangney). TOSCA was first translated into Japanese by the corresponding author and administered to a sample of 101 Japanese undergraduates. On the basis of the observed correlation matrices, we identified the items that were not highly correlated with other items in the same category, and we corrected the Japanese expressions of those items and the relevant scenarios. After revising those items and scenarios, we administered the Japanese TOSCA, along with other relevant scales, to two sets of Japanese undergraduate samples. These two studies indicated the discriminant validity of shame-proneness and guilt-proneness measured by the Japanese TOSCA.

Study S1

Method. The revised Japanese TOSCA was administered to 186 Japanese undergraduates. Five respondents did not complete TOSCA, and the remaining 181 respondents (88 males, 92 females, 1 unreported; M_{AGE} = 19.07 years, SD = 1.74) were retained for the subsequent analyses. In addition to the Japanese TSOCA, the questionnaire also included KA-JiKoKan-12, a Japanese self-conscious affects scale (Kikuchi & Arimitsu, 2006), prosocial behavior scale (Kikuchi, 1988), and self-esteem scale (Rosenberg, 1965: the Japanese version was developed by Yamamoto, Matsui, & Yamanari, 1982).

Hypotheses. We expected the following patterns of correlation. KA-JiKoKan-12 was originally developed in Japanese to assess the respondents' proneness to experiencing various emotions (i.e., Indebtedness, Personal Distress, Guilt, Shame, Role Taking, and Empathic Concern). It was expected that (i) guilt-proneness measured by TOSCA and KA-JiKoKan would be significantly correlated with each other, while (ii) shame-proneness measured by the two scales would be significantly correlated. In addition, (iii) based on a previous finding (Leith & Baumeister, 1998), it was expected that personal distress would be more strongly correlated with shame-proneness than with guilt-proneness. The prosocial behavior scale by Kikuchi (1988) was developed by modifying the altruistic behavior scale (Rushton, Chrisjohn, & Fekken, 1981) for Japanese undergraduates. (iv) It was expected that prosociality would be positively correlated with guilt-proneness, but not with shame-proneness. (v) As for self-esteem, it was expected that shame-proneness, but not guilt-proneness, would be negatively correlated with self-esteem (Tangney & Dearing, 2002).

Results. The internal consistency of shame-proneness and guilt-proneness was decent: Cronbach's α coefficient = .76 for shame-proneness and .67 for guilt-proneness. Consistent with the previous research, both shame-proneness and guilt-proneness were higher among females than males: M_{FEMALE} = 3.56 (*SD* = .24) vs. M_{MALE} = 3.40 (*SD* = .35), $t(160) = 1.89$, $p = .030$ for shame-proneness; M_{FEMALE} = 4.12 (*SD* = .19) vs. M_{MALE} = 3.90 (*SD* = .25), $t(160) = 2.94$, $p = .002$ for guilt-proneness.

As shown in Table S1, most of the above criterion variables were significantly correlated with both shame-proneness and guilt-proneness. However, partial correlation analyses and the Hotelling *t*-test for correlated correlation showed the discriminant validity of the TOSCA shame and guilt scores. (i) TOSCA guilt was correlated with KA-JiKoKan guilt. After controlling for TOSCA guilt, TOSCA shame was not significantly correlated with KA-JiKoKan guilt. (ii) Although the partial correlation between TOSCA shame and KA-JiKoKan guilt was still significant, TOSCA shame was more highly correlated with KA-JiKoKan shame than with KA-JiKoKan guilt. The difference was significant by the Hotelling *t*-test. (iii) TOSCA shame was correlated with personal distress. After controlling for TOSCA shame, TOSCA guilt was not significantly correlated with personal distress. (iv) Prosociality was significantly correlated with TOSCA guilt, but not with TOSCA shame. (v) TOSCA shame was significantly negatively correlated with self-esteem. After controlling for TOSCA shame, TOSCA guilt was not significantly correlated with self-esteem. Therefore, all predictions were confirmed (at least either by the partial correlation analysis or by the Hotelling *t*-test) and these results suggest the validity of the Japanese version of TOSCA.

Study S2

Method. The revised Japanese TOSCA was administered to 60 Japanese undergraduates (24 males, 36 females; M_{AGE} = 19.03 years, *SD* = 0.96). In addition to the Japanese TOSCA, the questionnaire included the prosocial behavior scale (Kikuchi, 1988), self-esteem scale (Yamamoto, Matsui, & Yamanari, 1982), and self-rating depression scale (Zung, 1965; the Japanese version was developed by Fukuad & Kobayashi, 1973).

Hypotheses. For prosociality and self-esteem, it was expected that the results of Study S1 would be replicated. For depression, it was expected that shame-proneness, but not guilt-proneness, would be positively correlated with the depression score (see Tangney & Dearing, 2002).

Results. The internal consistency of shame-proneness was .71 and that of guilt-proneness was .76. The sex differences were again found, although it was marginally significant for shame-proneness (possibly due to the small sample size): M_{FEMALE} = 3.56 (*SD* = .32) vs. M_{MALE} = 3.38 (*SD* = .12), $t(58) = 1.35$, $p = .091$ for shame-proneness; M_{FEMALE} = 4.10 (*SD* = .20) vs. M_{MALE} = 3.69 (*SD* = .21), $t(58) = 3.48$, $p < .001$ for guilt-proneness.

As shown in Table S2, the results of Study S1 were basically replicated. Prosociality was correlated with guilt-proneness, but not with shame-proneness. After controlling for shame-proneness, guilt-proneness was not correlated with self-esteem, while shame-proneness was negatively correlated with self-esteem even after controlling for guilt-proneness. In addition, depression was significantly correlated with shame-proneness, but not with guilt-proneness. These results indicate the discriminant validity of TOSCA shame and TOSCA guilt.

Table S1

Correlation Coefficients(Study S1) between a Set of Criterion Variables (Indebtedness, Personal Distress, Guilt, Shame, Role Taking, Empathic Concern [These were from KA-JiKoKan-12], Prosociality, and Self-Esteem) and the Two TOSCA Scores (Shame-Proneness and Guilt-Proneness). Results of Difference between the Correlation with Shame-Proneness and Correlation with Guilt-Proneness. Partial Correlation Coefficients between the Set of Criterion Variables and the Two TOSCA Scores.

	KA-JiKoKan-12							
	Indebtedness	Personal Distress	Guilt	Shame	Role Taking	Empathic Concern	Prosociality	Self-Esteem
TSOCA Shame	.65***	.61***	.40***	.72***	.60***	.57***	–.03	–.48***
TOSCA Guilt	.63***	.38***	.64***	.60***	.50***	.57***	.22**	–.20**
Hotelling *t* test for correlated correlation	*t*(178) = 0.42 *ns*	*t*(178) = 4.29 *p* < .001	*t*(178) = 4.61 *p* < .001	*t*(178) = 2.64 *p* = .009	*t*(178) = 1.89 *p* = .061	*t*(178) = 0 *ns*	*t*(172) = 3.86 *p* < .001	*t*(169) = 4.64 *p* < .001
Partial Correlation TOSCA Shame (controlling for guilt)	.44***	.51***	.00	.60***	.43***	.33***	–.20**	–.46***
TOSCA Guilt (controlling for shame)	.40***	.04	.55***	.30***	.24**	.35***	.30***	.12

p < .05 *, *p* < .01 **, *p* < .001 ***

Table S2

Correlation Coefficients(Study S2) between a Set of Criterion Variables (Prosociality, Self-Esteem, and Depression) and the Two TOSCA Scores (Shame-Proneness and Guilt-Proneness). Results of Difference between the Correlation with Shame-Proneness and Correlation with Guilt-Proneness. Partial Correlation Coefficients between the Set of Criterion Variables and the Two TOSCA Scores.

	Prosociality	Self-Esteem	Depression
TSOCA Shame	.12	–.49***	.28*
TOSCA Guilt	.38**	–.38**	.05
Hotelling *t* test for correlated correlation	$t(57) = 2.09$ $p = .041$	$t(57) = 0.92$ *ns*	$t(57) = 1.83$ $p = .072$
Partial Correlation TOSCA Shame (controlling for guilt)	–.08	–.38**	.30*
TOSCA Guilt (controlling for shame)	.37***	–.20	–.10

$p < .05$ *, $p < .01$ **, $p < .001$ ***

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