A BRIGHTER FUTURE:

THE EFFECT OF SOCIAL CLASS ON RESPONSES TO FUTURE DEBT
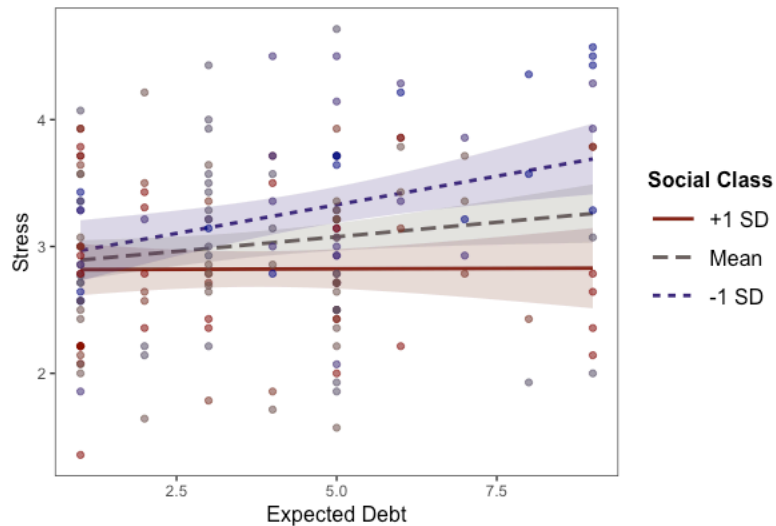
Content:

Supplemental Materials

Study 1

Gender differences

   We tested to see if the expected debt by subjective social class interaction on stress would differ based on gender. We regressed stress onto expected debt, social class, and their interaction for women and men separately. We found evidence of a significant interaction for women (β = -.33, SE = .02, $t(164)$ = -2.49, p < .05) and not for men (β = .21, SE = .02, $t(86)$ = 1.18, p = .241). A test of simple slopes for the interaction for women revealed that the debt expectations significantly increased stress at low (-1 SD) social class (β = .09, SE = .03, t(164) = 3.29, p < .001) and had no effect at high (+1 SD) social class (β = .00, SE = .03, $t(164)$ = .05, p = .96). These results, especially for men, should be interpreted with caution, as the sample sizes are much smaller when split by gender. See Figure S1 below.

Figure S1. *Stress as a function of expected debt, social class, and their predicted interaction for women only.*

All Debt Items Measured in Study 1

   Debt-related items that were included in the present study were 6 items that assessed current amount of debt in terms of credit card, student loan, home loan, auto loan, friends/family loan, and other loan debt, and 1 item that assessed debt expectations for 5 years in the future. Those six items were used to create the debt-to-income ratio measure used in Study 1. Other debt-related items measured, but not included, in the present study were 1 item assessing how many debt accounts participants had, 1 item assessing how much money participants spend on debt each month, 1 item assessing what percent of their monthly income went toward monthly debt payments, and 1 item assessing how much of a hypothetical monetary reward participants would put toward their debt payments.

Study 2

Gender Differences

  Expected Debt. We tested to see if the condition by social class interaction on expected debt would differ based on gender. We regressed expected debt onto condition, social class, and their interaction for women and men separately. We found no evidence an interaction for women (β = -.26, SE = .32, t(71) = -1.40, p = .166) or for men (β = -.21, SE = .24, t(115) = 1.51, p = .133). These results should be interpreted with caution, as the sample sizes are much smaller when split by gender.

  Stress. We tested to see if the condition by social class interaction on stress would differ based on gender. We regressed stress onto condition, social class, and their interaction for women and men separately. We found no evidence an interaction for women (β = -.23, SE = .19, t(70) = -1.21, p = .229) or for men (β = -.16, SE = .12, t(115) = -1.20, p = .233). These results should be interpreted with caution, as the sample sizes are much smaller when split by gender.

Controlling for Gender, Age, and Ethnicity.

  Stress. We tested to see if the condition by social class interaction on stress would hold when controlling for gender, age, and ethnicity. We regressed stress onto condition, social class, and their interaction while controlling for gender, age, and ethnicity in model. The interaction term was not significant when these covariates were included in the model (β = -.18, SE = .10, t(186) = -1.65, p = .101). See Table S1 below for the full model.

Table S1. *Stress as a function of debt salience condition and social class, controlling for gender, age, and ethnicity.*

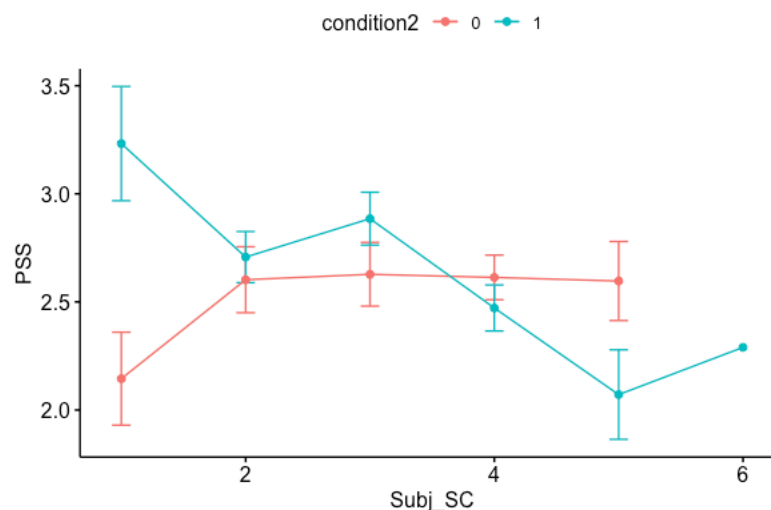|	b [β]	SE	*p* value
(Intercept)	2.63 [0]	.28	<.001
Condition	.05 [.04]	.09	.605
Social Class	-.06 [-.08]	.08	.439
Gender	.17 [.12]	.10	.084
Age	-.01 [-.11]	.005	.111
Ethnicity	.002 [.004]	.04	.958
Interaction	-.17 [-.18]	.10	**.101**

Separate Analyses for Social Class Items.

  Expected Debt. We tested the interaction between debt salience condition and social class on expected debt. First we used only the MacArthur Ladder item as the measure of social class and regressed expected debt onto debt salience condition, MacArthur Ladder, and their interaction and found no evidence for an interaction (β = -.43, SE = .11, t(190) = -1.81, p = .072). We then used the social class category item as the measure of social class and tested a two-way ANOVA with expected debt as the outcome and debt salience condition and the social class

categories as the grouping variables and found no evidence for an interaction ($F(1, 190) = 3.74$, $p = .055$).

Stress. We tested the interaction between debt salience condition and social class on stress. First we used only the MacArthur Ladder item as the measure of social class and regressed stress onto debt salience condition, MacArthur Ladder, and their interaction and found no evidence for an interaction ($\beta = -.41$, SE $= .06$, $t(189) = -1.80$, p $= .073$). We then used the social class category item as the measure of social class and tested a two-way ANOVA with stress as the outcome and debt salience condition and the social class categories as the grouping variables and found evidence for a significant interaction ($F(1, 189) = 4.84$, $p < .05$). See Figure S2 below.

Figure S2. *Stress as a function of debt salience condition and social class.*

Note. The x-axis represents the social class categories "low class, working class, lower middle class, middle class, upper middle class, and upper class. The y-axis represents the mean scores on the Perceived Stress Scale. The different colored lines represent the debt salience condition (blue) and the control condition (red).

Comparing Models with Different Social Class Measures

Although the social class category variable is indeed an ordinal variable, we wanted to see if we could combine our measures of subjective social class and treat the new combined measure as a continuous variable to simplify interpretation of results. The social class category measure was relatively normally distributed and the effect of this measure on stress was roughly linear in the debt salience condition, so we sought to test whether treating it as a continuous variable would be a better fit to the data than treating it as an ordinal variable. A summary of all model comparisons can be found in Table S2.

Expected Debt. We tested a two-way ANOVA with expected debt as the outcome and debt salience condition and the social class categories as the grouping variables. We also tested a similar model that treated the social class category variable as a continuous variable by regressing expected debt onto condition, social class category, and their interaction. We then used a Bayesian Information Criterion (BIC) model comparison to test to assess which of these models fit the data better (Raftery, 1995). There was a difference in BIC between these two

models of 29.90, where the model treating social class categories as a continuous variable had the lower BIC. This is a very strong effect of for a BIC model comparison indicating that the model treating social class categories as continuous was the better fitting model.

Stress. We tested a two-way ANOVA with stress as the outcome and debt salience condition and the social class categories as the grouping variables. We also tested a similar model that treated the social class category variable as a continuous variable by regressing stress onto condition, social class category, and their interaction. We then used a Bayesian Information Criterion (BIC) model comparison to test to assess which of these models fit the data better. There was a difference in BIC between these two models of 29.17, where the model treating social class categories as a continuous variable had the lower BIC. This is very strong evidence for a BIC model comparison indicating that the model treating social class categories as continuous was the better fitting model.

Combining the MacArthur Ladder and Class Categories. We then tested the better models from above against models that used the social class measure that combined the social class categories with the MacArthur Ladder. Using expected debt as the outcome, the model that used the combined social class measure was the better model, as indicated by a difference in BIC of 2.12. This indicates positive evidence for the superiority of the model with the combined social class variable. Using stress as the outcome, the model that used the combined social class measure was the better model, as indicated by a difference in BIC of 5.51. This indicates positive evidence for the superiority of the model with the combined social class variable.

Taken together, these BIC model comparisons indicate that it is justified to use combined measure of social class as a continuous moderator of the effect of condition on expected debt and stress in Study 2. We showed that the social class category item was relatively normally distributed, showed roughly linear effects of condition on the outcomes of interest, and was a better fit for the data when treated as continuous than when treated as ordinal according to Bayesian Information Criterion model comparisons. We also showed that combining the two social class measures into one continuous social class measure was a better fit for the data than using the social class category item on its own.

Table S2. *All model comparisons for Study 2.*

Model Comparison	Outcome	BIC (better model in ***bold italics***)	ΔBIC	Effect
Continuous vs. Categorical Social Class Category	Expected Debt	***644.5821***, 674.4853	29.9032	Very Strong
Continuous vs. Categorical Social Class Category	Stress	***405.6528***, 434.8233	29.1705	Very Strong

Combined Ladder and Class Category vs. Continuous Social Class Category	Expected Debt	**642.4596**, 644.5821	2.1225	Positive
Combined Ladder and Class Category vs. Continuous Social Class Category	Stress	**400.1470**, 405.6528	5.5058	Positive

Note. All effect strength guidelines come from Raftery (1995), where ΔBIC <2 is weak, 2-6 is positive, 6-10 is strong, and >10 is very strong.

Moderated Mediation Model: Alternate Formatting

In the manuscript, we present the moderated mediation model in Study 2 so that social class is the moderating variable to match our conceptual model. We presented two mediation models, where one showed the mediational pathways at high (+1 SD) and the other at low (-1 SD) social class. In this section we will report the same moderated mediation model, but with condition as the moderating variable. This is mathematically equivalent, but may be easier to interpret for some as the condition variable in this study is naturally dichotomous, while social class is not. See Figure S3 below for a summary of the moderated mediation model in this format.

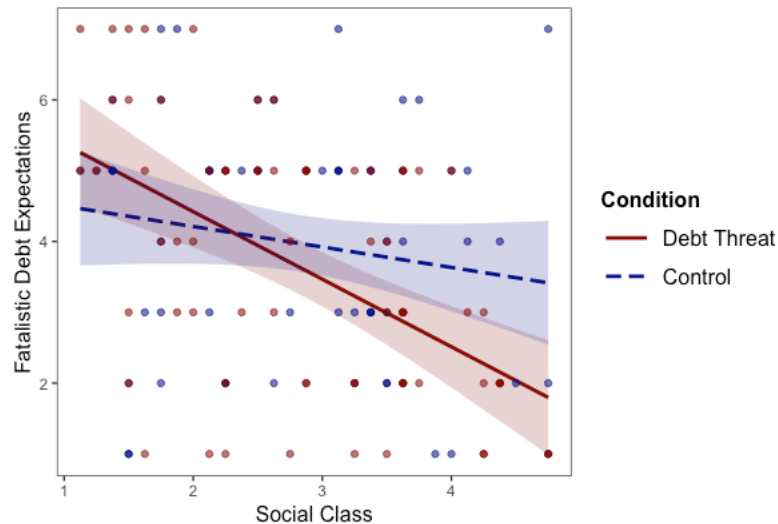**Figure S3.** *Moderated mediation of subjective class on stress by expected debt for each condition. (Study 2)*

Debt Salience Condition

Expected Debt

-.33**

.19**

Social Class

Stress

Total Effect: -0.26***
Direct Effect: -0.20**

Control Condition

Expected Debt

-.03

.19**

Social Class

Stress

Total Effect: -.06
Direct Effect: -.07

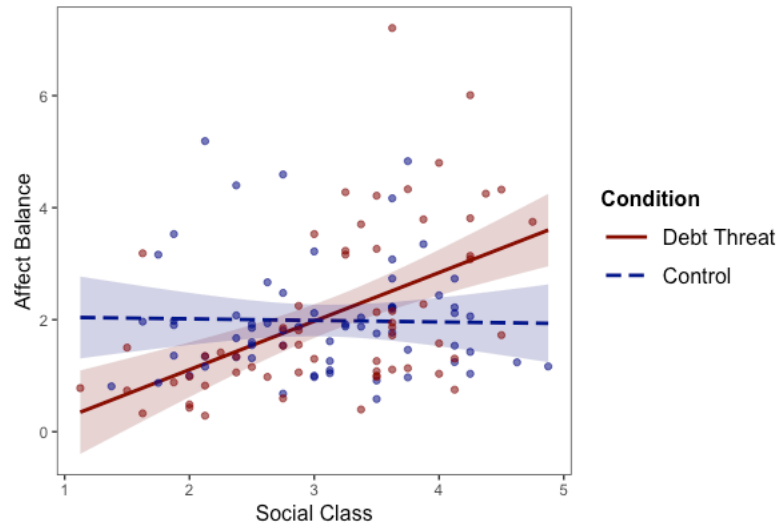**Study 3**

Gender Differences

   Fatalistic Debt Expectations. We tested to see if the condition by social class interaction on fatalistic debt expectations would differ based on gender. We regressed fatalistic debt expectations onto condition, social class, and their interaction for women and men separately. We found evidence for an interaction for women (β = -.61, SE = .28, $t(131)$ = -2.36, p < .05), but not for men (β = -.52, SE = .34, $t(123)$ = -1.54, p = .125). A test of simple slopes for the interaction for women revealed that the debt salience condition significantly decreased fatalistic debt expectations at high (+1 SD) social class (β = -1.02, SE = .40, t(131) = -2.58, p < .01) and had no effect at low (-1 SD) social class (β = .31, SE = .40, $t(131)$ = .77, p = .44). These results should be interpreted with caution, as the sample sizes are much smaller when split by gender. See Figure S4 below.

Figure S4. *Fatalistic debt expectations as a function of debt salience condition and social class for women.*
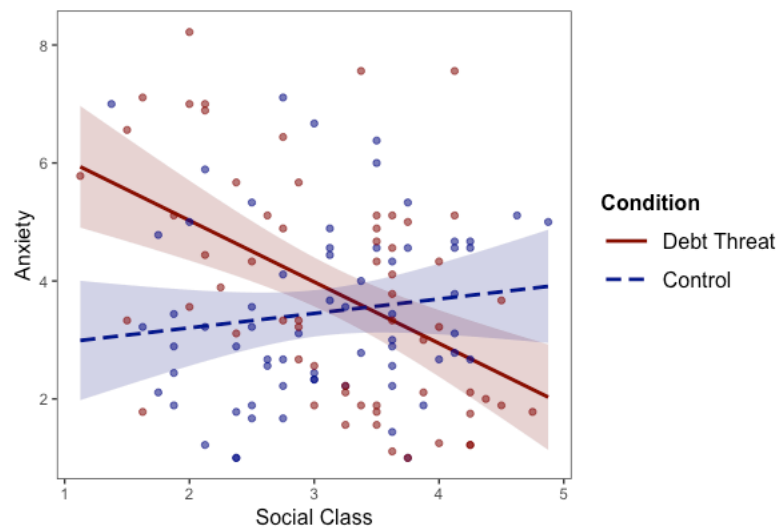

   Affect Balance. We tested to see if the condition by social class interaction on affect balance would differ based on gender. We regressed affect balance onto condition, social class, and their interaction for women and men separately. We found evidence for an interaction for men (β = 1.20, SE = .24, $t(123)$ = 3.66, p < .001) but not for women (β = .24, SE = .24, $t(131)$ = .91, p = .367). A test of simple slopes for the interaction for men revealed that the debt salience condition significantly increased affect balance at high (+1 SD) social class (β = .85, SE = .29, t(123) = 2.88, p < .01) and significantly decreased affect balance at low (-1 SD) social class (β = -.68, SE = ..29, $t(123)$ = -2.31, p < .05). These results should be interpreted with caution, as the sample sizes are much smaller when split by gender. See Figure S5 below.

Figure S5. *Affect balance as a function of debt salience condition and social class for men.*

Anxiety. We tested to see if the condition by social class interaction on anxiety would differ based on gender. We regressed anxiety onto condition, social class, and their interaction for women and men separately. We found evidence for an interaction for men (β = -1.26, SE = .34, $t(123)$ = -3.80, p < .001) but not for women (β = -.42, SE = .34, $t(131)$ = -1.56, p = .121). A test of simple slopes for the interaction for men revealed that the debt salience condition significantly increased anxiety at low (-1 SD) social class (β = 1.49, SE = .41, $t(123)$ = 3.66, p < .01) and had no effect at high (+1 SD) social class (β = -.70, SE = .41, $t(123)$ = -1.72, p = .090). These results should be interpreted with caution, as the sample sizes are much smaller when split by gender. See Figure S6 below.

Figure S6. *Anxiety as a function of debt salience condition and social class for men.*

Moderated Mediation Model: Alternate Formatting

        In the manuscript, we present the moderated mediation models in Study 3 so that social class is the moderating variable to match our conceptual model. For each moderated mediation model, we presented two mediation models, where one showed the mediational pathways at high (+1 SD) and the other at low (-1 SD) social class. In this section we will report the same moderated mediation models, but with condition as the moderating variable. This is mathematically equivalent, but may be easier to interpret for some as the condition variable in this study is naturally dichotomous, while social class is not. See Figure S7 and Figure S8 below for a summary of the moderated mediation models in this format.

Figure S7. *Moderated mediation of subjective class on affect balance by fatalistic debt expectations for each condition. (Study 3)*
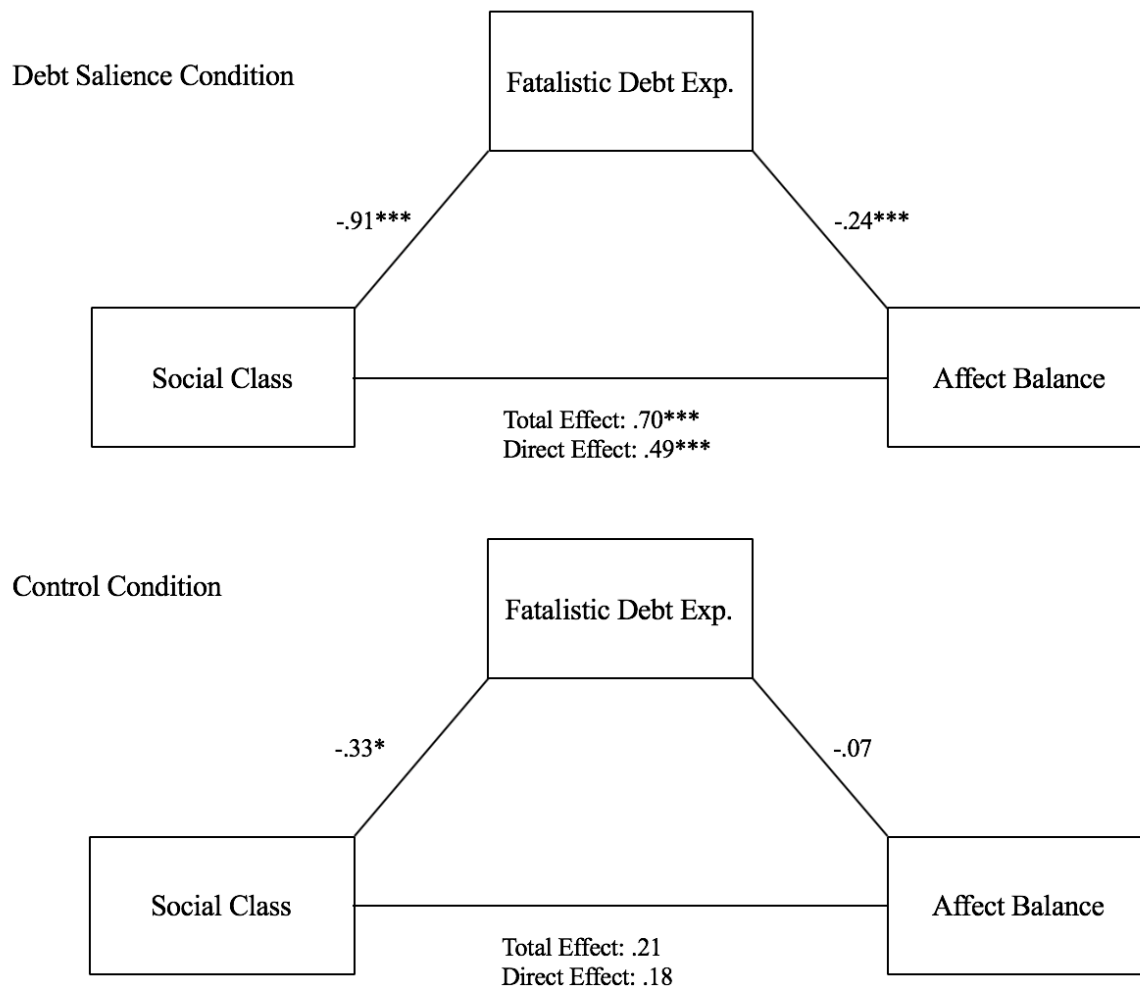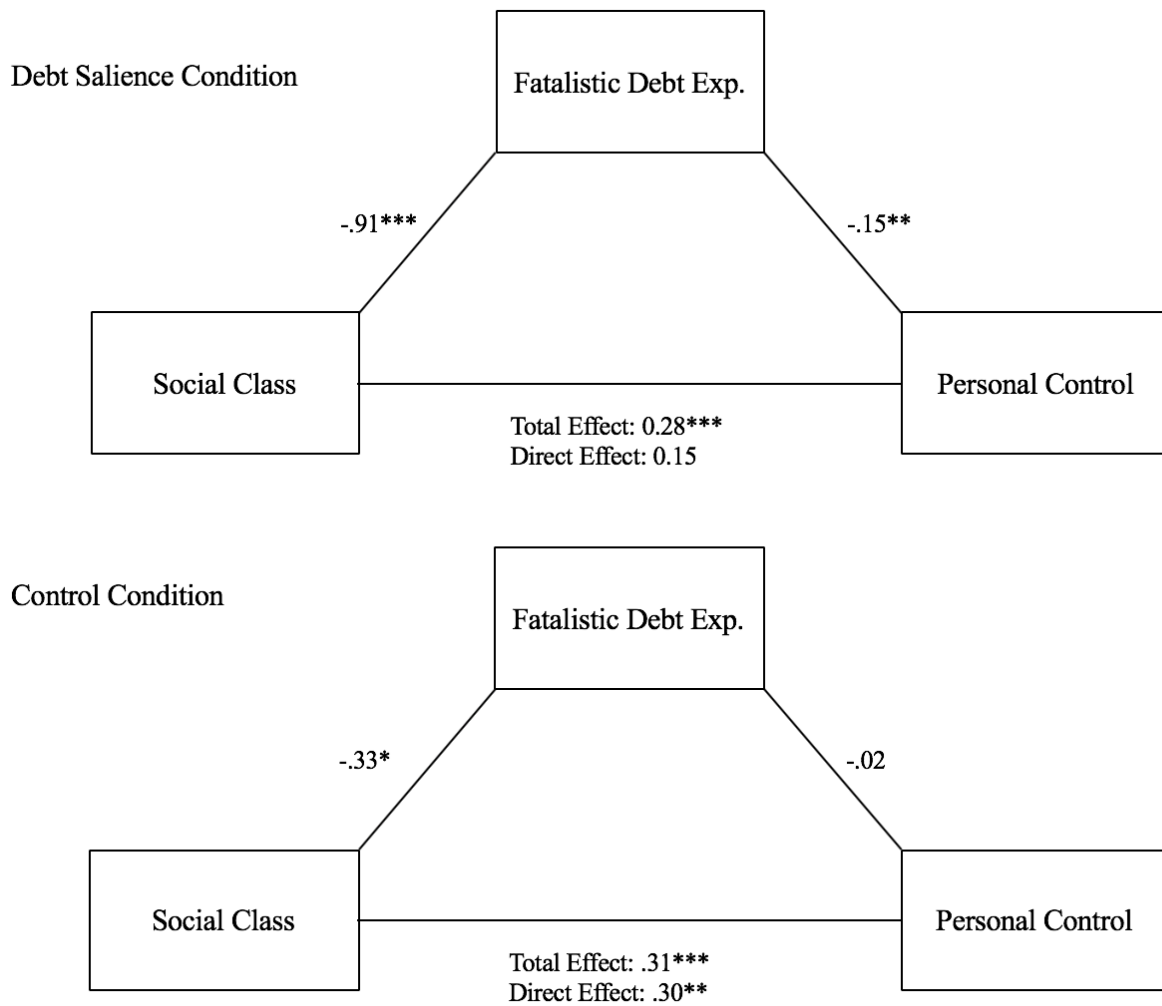
Figure S8. *Moderated mediation of subjective class on affect balance by fatalistic debt expectations for each condition. (Study 3)*

Debt Salience Condition

	Fatalistic Debt Exp.	

-.91***   -.15**

Social Class		Personal Control

Total Effect: 0.28***
Direct Effect: 0.15

Control Condition

	Fatalistic Debt Exp.	

-.33*   -.02

Social Class		Personal Control

Total Effect: .31***
Direct Effect: .30**

References

Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological Methodology*,

    25, 111–164.