PSYCHOLOGICAL OWNERSHIP OF (BORROWED) MONEY WEB APPENDIX

CONTENTS

PILOT STUDY

This pilot study was meant to assess different associations that people readily have with credit cards and loans. As such, we directly elicit associations using the first words that come to mind. Additionally, we indirectly elicit how using credit cards and loans influences perceptions of efficacy and self-identity (needs known to influence psychological ownership) through a story-writing task.

Method

Four hundred online participants completed the study (M age = 38.92, SD = 13.05; 46.3% male). Participants were randomly assigned to either a personal loan or a credit card condition. First, we elicited the natural associations people have with the debt type. We did so by asking participants to list the first three words that come to mind when they hear the words [“credit card”/ “personal loan”] (phrase varied by condition). They were given three separate text entries to enter these words.

Next, participants were asked to write a story about using the debt type. The instructions were as follows:

> We would like you to take some time to write a fictional story about someone who is using a [credit card / personal loan] to make a purchase. Your story can be about any character in any location, making any type of purchase, but at some point in the study, the main character must use a [credit card / personal loan] to make a purchase.
>
> Please write this story in the space provided below. Feel free to write about what most readily comes to mind - we're most interested in the thoughts that immediately come to you.

Participants were then shown eight possible avatars and asked to select the avatar that most closely represented their vision of the main character they had written about. Importantly, the avatars differed systematically. Four avatars represented people who seemed less efficacious and appeared to have a more negative self-identity compared to the other four avatars, as confirmed in a separate study (efficacious: $t(50) = 11.34$, $p < .001$; self-identity: $t(50) = 14.64$, $p < .001$). See supplemental figure 1.

Supplemental figure 1. Avatars available in the pilot study

Less efficacious/ more negative self-identity

More efficacious / more positive self-identity

Results

Associated words. We coded the words that came to participants' minds based on whether any of the words mentioned an institutional lender (Amex, American Express, bank, broker, credit union, lender, Mastercard, Visa). In total, 55 participants listed at least one lender

(40 participants listed a bank, 2 participants listed a credit union, and 14 participants listed a card issuer such as Visa). In line with the premise that loans are more closely linked to the lender, those asked to consider a personal loan (19.1%) were significantly more likely to spontaneously mention an institutional lender compared to participants asked to consider a credit card (9.0%), B = .44, Wald $\chi^2 = 8.36$, $p = .004$. Differences across condition remained significant examining only mentions of the term "bank" specifically, B = 1.01, Wald $\chi^2 = 19.78$, $p < .001$.

Stories. The avatar selected by each respondent was coded as a 0 if it came from the less efficacious/ lower self-identity group and as a 1 if it came from the more efficacious/ higher self-identity group. Participants were more likely to select one of the avatars that seemed less efficacious and had a more negative self-identity when writing about someone using a personal loan (40.6%) rather than a credit card (30.0%), B = .23, Wald $\chi^2 = 4.90$, $p = .027$.

Discussion. This study demonstrates that loans naturally elicit more thoughts of the lender as compared to a credit card. Moreover, the results of the story-writing task suggest that using a credit card is likely to make people feel more efficacious and reflect more positively on one's self-identity than using a loan. We further considered whether this latter result emerged simply because people imagined using a credit card and paying it off immediately. In a replication of this study (N = 400), participants were asked to write a story about a person who either had an outstanding balance on a personal loan or a revolving balance on a credit card, making the borrowing component of using a credit card explicit. After writing the story, participants were again asked to select the avatar that represents the main character. In this study, where the use of credit cards as a form of borrowing was made explicit, we again found that participants asked to consider a personal loan selected one of the avatars representing people with lower self-efficacy and a more negative self-identity, B = .61, Wald $\chi^2 = 8.83$, $p = .003$.

STUDY 1: CONFIRMATORY FACTOR ANALYSES

Confirmatory factor analyses were conducted using SPSS AMOS. For each analysis, one model (modelA) assumed two distinct constructs that were allowed to covary, and another model (modelB) assumed one construct such that psychological ownership and the other construct had perfect covariance. For each CFA, we provide RMSEA and AIC information as well as the hypothesis test comparing the two models. As shown below, for all constructs, the hypothesis test is rejected, suggesting that the model with two latent constructs outperforms the model with one latent construct.

DEBT AVERSION

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
ModelA - random covariance	.041	.000	.073	.631
ModelB - perfect covariance	.068	.042	.096	.123

AIC

Model	AIC	BCC	BIC	CAIC
ModelA - random covariance	40.731	41.100	95.547	108.547
ModelB - perfect covariance	53.636	53.977	104.235	116.235

Model Comparison:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Model comparison	1	14.905	.000	.022	.022	.032	.032

FINANCIAL LITERACY

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
ModelA - random covariance	.002	.000	.053	.935
ModelB - perfect covariance	.188	.164	.214	.000

AIC

Model	AIC	BCC	BIC	CAIC
ModelA - random covariance	34.023	34.393	88.839	101.839
ModelB - perfect covariance	192.529	192.870	243.128	255.128

Model Comparison:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Model comparison	1	160.505	.000	.289	.293	.479	.492

LONG TERM PLANNING

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
ModelA - random covariance	.092	.077	.108	.000
ModelB - perfect covariance	.128	.114	.143	.000

AIC

Model	AIC	BCC	BIC	CAIC
ModelA - random covariance	174.534	175.309	254.649	273.649
ModelB - perfect covariance	285.107	285.842	361.006	379.006

Model Comparison:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Model comparison	1	112.573	.000	.038	.039	.049	.049

MATERIALISM:

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
ModelA - random covariance	.107	.092	.122	.000
ModelB - perfect covariance	.117	.103	.132	.000

AIC

Model	AIC	BCC	BIC	CAIC
ModelA - random covariance	229.919	231.062		
ModelB - perfect covariance	266.465	267.567		

Model Comparison:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Model Comparison	1	38.546	.000	.028	.029	.039	.041

SELF CONTROL

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
ModelA - random covariance	.082	.075	.090	.000
ModelB - perfect covariance	.099	.092	.107	.000

AIC

Model	AIC	BCC	BIC	CAIC
ModelA - random covariance	519.411	521.734	658.559	691.559
ModelB - perfect covariance	680.679	682.932	815.611	847.611

Model Comparison:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Model Comparison	1	163.268	.000	.063	.066	.071	.074

SPARE MONEY

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
ModelA - random covariance	.018	.000	.058	.893
ModelB - perfect covariance	.119	.095	.145	.000

AIC

Model	AIC	BCC	BIC	CAIC
ModelA - random covariance	35.346	35.715	90.162	103.162
ModelB - perfect covariance	97.073	97.414	147.673	159.673

Model Comparison:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Model comparison	1	63.728	.000	.071	.071	.116	.118

TIGHTWAD-SPENDTHRIFT

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
ModelA - random covariance	.052	.028	.076	.411
ModelB - perfect covariance	.093	.073	.114	.000

AIC

Model	AIC	BCC	BIC	CAIC
ModelA - random covariance	60.521	61.009	123.770	138.770
ModelB - perfect covariance	102.511	102.967	161.544	175.544

Model Comparison:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Model comparison	1	43.991	.000	.040	.040	.057	.058

STUDY 1: CORRELATIONS BETWEEN ALL MEASURED CONSTRUCTS AND THE FIVE DEPENDENT MEASURES

		Psychological Ownership	Materialism	Planning long run	Discount Rate	Self Control	Spare Money	Debt Aversion	Financial Literacy	Tight-wad-spend-thrift
Willingness to Borrow Credit	r	**.309****	**.153****	-0.057	**.143****	-0.074	-0.07	**-.193****	-0.063	**.290****
	p	**0**	**0.001**	0.214	**0.002**	0.101	0.125	**0**	0.166	**0**
Willingness to Borrow Loan	r	**.342****	**.113***	-0.076	**.170****	**-.107***	**-.132****	**-.217****	-0.017	**.115***
	p	**0**	**0.013**	0.095	**0**	**0.019**	**0.004**	**0**	0.715	**0.011**
Used Credit Card	r	**.099***	-0.034	**.108***	**-.205****	0.01	**.270****	-0.058	**.228****	0.012
	p	**0.029**	0.461	**0.018**	**0**	0.822	**0**	0.204	**0**	0.799
Used Loan	r	**.181****	0.079	0.021	0.071	-0.06	-0.076	-0.014	-0.045	0.008
	p	**0**	0.083	0.642	0.118	0.187	0.094	0.76	0.326	0.856
Ever had Debt	r	**.127****	0	-0.017	0.088	-0.004	**-.129****	**-.155****	-0.018	**.127****
	p	**0.005**	0.997	0.703	0.052	0.934	**0.004**	**0.001**	0.685	**0.005**

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

STUDY 1: HIERARCHICAL STEPWISE REGRESSIONS ON THE TWO MAIN DEPENDENT MEASURES, CONTROLLING FOR PAST BEHAVIOR

Because psychological ownership predicted past borrowing behavior, we considered the possibility that psychological ownership was merely a proxy for familiarity or experience with borrowing. Thus, as an additional robustness check, we performed the hierarchical stepwise regressions on future willingness to borrow including the three measures of past use as additional predictors.

Willingness to Finance Using a Credit Card

Block		B	SE	Beta	t	p	95% CI Lower	95% CI Higher
1	(Constant)	1.018	.486		2.092	.037	.062	1.974
	Tightwad-Spendthrift	.129	.023	.237	5.519	.000	.083	.175
	Past Use – Credit Card	1.208	.227	.227	5.327	.000	.762	1.654
	Discount Rate	.149	.043	.149	3.469	.001	.065	.234
	Gender (Female)	.527	.191	.116	2.764	.006	.152	.901
	Debt Aversion	.305	.119	.110	2.574	.010	.072	.538
2	(Constant)	1.166	.478		2.438	.015	.226	2.106
	Tightwad-Spendthrift	.107	.023	.196	4.547	.000	.061	.153
	Past Use – Credit Card	1.115	.223	.210	4.992	.000	.676	1.554
	Discount Rate	.136	.042	.136	3.212	.001	.053	.219
	Gender (Female)	.546	.187	.120	2.922	.004	.179	.914
	Debt Aversion	.142	.122	.051	1.168	.243	-.097	.382
	Psychological Ownership	.236	.053	.200	4.454	.000	.132	.340

Willingness to Finance Using a Personal Loan:

Block		B	SE	Beta	*t*	*p*	95% CI Lower	95% CI Higher
1	(Constant)	2.008	.395		5.09	.000	1.232	2.784
	Past Use - Any Debt	.385	.095	.180	4.04	.000	.197	.572
	Debt Aversion	.461	.113	.177	4.07	.000	.239	.684
	Discount Rate	.119	.041	.126	2.93	.004	.039	.199
	Past Use – Personal Loan	.748	.274	.120	2.73	.007	.210	1.287
2	(Constant)	1.872	.383		4.89	.000	1.120	2.624
	Past Use – Any Debt	.362	.092	.169	3.92	.000	.180	.543
	Debt Aversion	.232	.117	.089	1.99	.047	.003	.461
	Discount Rate	.107	.039	.113	2.70	.007	.029	.184
	Past Use – Personal Loan	.480	.269	.077	1.78	.075	-.049	1.008
	Psychological Ownership	.292	.050	.263	5.83	.000	.194	.391

Across both dependent measures, psychological ownership was added as a significant predictor in the second block. These results suggest that the predictive power of psychological ownership of borrowed money is not simply a function of it being a proxy for familiarity or experience.

STUDY 1: HIERARCHICAL STEPWISE REGRESSIONS ON THE PAST BEHAVIOR MEASURES

Past credit card behavior: Psychological ownership of borrowed money is not added to the second block. Significant predictors from block 1 are shown below.

		B	S.E.	Wald	Sig.	Exp(B)
	Age	.032	.012	6.949	.008	1.033
	Spare Money	.323	.073	19.486	.000	1.381
	Debt Aversion	-.313	.145	4.631	.031	1.368
	Financial Literacy	.342	.133	6.602	.010	1.408
	Discount Rate	-.171	.050	11.538	.001	.843
	Constant	-2.924	.782	13.964	.000	.054

Past personal loan behavior: No predictors are identified in the first block. Psychological ownership is added as a significant predictor in block 2. It is the only significant predictor.

		B	S.E.	Wald	Sig.	Exp(B)
2	Psychological Ownership	.258	.066	15.292	.000	1.294
	Constant	-2.783	.295	88.702	.000	.062

Ever had any of the following: revolving balance on a credit card, personal loan, line of credit, payday loan or peer-to-peer loan. Psychological ownership of borrowed money is not added to the second block. Significant predictors from block 1 are shown below.

		B	S.E.	Wald	Sig.	Exp(B)
	Age	.075	.011	43.558	.000	1.078
	Spare Money	-.158	.055	8.239	.004	.854
	Debt Aversion	-.355	.123	8.279	.004	1.426
	Constant	-2.527	.638	15.686	.000	.080

STUDY 2: LIST OF ALL PRE-TESTED SEARCH TERMS

Higher Psychological Ownership Search Term Phrases		**Lower Psychological Ownership Search Term Phrases**	
1.	my money *	1.	paying off a …
2.	my cash *	2.	repaying a … *
3.	my funds *	3.	borrowing on a … *
4.	money to spend	4.	Repayment
5.	spending money	5.	… to repay
6.	my own money *	6.	borrowed money *
7.	… to spend	7.	borrowing *
8.	Spending	8.	debt *
9.	money for me	9.	Obligations
10.	spending my… *	10.	repay a …

Note: The * denotes a search term selected for use in the main study.

STUDY 2: FULL REGRESSION OUTPUT

Model:

Search Term Volume = Intercept + DebtType + PsychOwnershipTerminology + DebtType * PsychOwnershipTerminology + myXmoney[a] + myXcash[a] + myXfunds[a] + spendingmyX[a] + repayingaX[a] + borrowedXmoney[a] + borrowingonaX[a] + Xdebt[a] + Wk1 + Wk2 + Wk3 + Wk4 + Wk5 + Wk6 + Wk7 + Wk8 + Wk9 + Wk10 + Wk11+ Wk12 + Wk13 + Wk14 + Wk15 + Wk16 + Wk17 + Wk18 + Wk19 + Wk20 + Wk21 + Wk22 + Wk23 + Wk24 + Wk25 + Wk26 + Wk27 + Wk28 + Wk29 + Wk30 + Wk31 + Wk32 + Wk33 + Wk34 + Wk35 + Wk36 + Wk37 + Wk38 + Wk39 + Wk40 + Wk41 + Wk42 + Wk43 + Wk44 + Wk45 + Wk46 + Wk47 + Wk48 + Wk49 + Wk50 + Wk51

[a]Note that our model can be conceptualized as including fixed effects for high psychological ownership search terms and fixed effects for low psychological ownership search terms, each with their own reference level. Said differently, to compute a main effect of psychological ownership, there needs to be a base level for both a higher psychological ownership search term and a lower psychological ownership search term. We note that the main effect of psychological ownership therefore depends on which search terms are used as the omitted reference levels. The reference levels in the model specified were "my own [debt type] money" (higher psychological ownership search term) and "[debt type] borrowing." Critically, however, the interaction does not depend on which search terms are used as the reference levels.

Regression results:

	B	SE	Lower	Upper	Wald χ^2	df	Sig.
(Intercept)	37.296	3.6487	30.145	44.448	104.483	1	.000
DebtType	-2.829	.4876	-3.784	-1.873	33.661	1	.000
PsychOwnershipTerminology	-2.327	1.0903	-4.464	-.190	4.555	1	.033
DebtType * PsychOwnershipTerminology	12.787	.4876	11.831	13.742	687.720	1	.000
myXmoney	30.827	2.1805	26.553	35.101	199.865	1	.000
myXcash	20.260	2.1805	15.986	24.533	86.325	1	.000
myXfunds	15.154	2.1805	10.880	19.428	48.297	1	.000

spendingmyX	-10.490	2.1805	-14.764	-6.217	23.145	1	.000
repayingaX	-12.298	2.1805	-16.572	-8.024	31.809	1	.000
borrowedXmoney	-10.894	2.1805	-15.168	-6.620	24.961	1	.000
borrowingonaX	-6.317	2.1805	-10.591	-2.044	8.393	1	.004
Xdebt	16.298	2.1805	12.024	20.572	55.866	1	.000
Wk1	.200	4.9724	-9.546	9.946	.002	1	.968
Wk2	4.750	4.9724	-4.996	14.496	.913	1	.339
Wk3	-.600	4.9724	-10.346	9.146	.015	1	.904
Wk4	-4.800	4.9724	-14.546	4.946	.932	1	.334
Wk5	5.050	4.9724	-4.696	14.796	1.031	1	.310
Wk6	1.050	4.9724	-8.696	10.796	.045	1	.833
Wk7	-1.750	4.9724	-11.496	7.996	.124	1	.725
Wk8	1.300	4.9724	-8.446	11.046	.068	1	.794
Wk9	-.950	4.9724	-10.696	8.796	.037	1	.848
Wk10	7.400	4.9724	-2.346	17.146	2.215	1	.137
Wk11	1.850	4.9724	-7.896	11.596	.138	1	.710
Wk12	5.250	4.9724	-4.496	14.996	1.115	1	.291
Wk13	-10.450	4.9724	-20.196	-.704	4.417	1	.036
Wk14	-.400	4.9724	-10.146	9.346	.006	1	.936
Wk15	3.350	4.9724	-6.396	13.096	.454	1	.500
Wk16	6.550	4.9724	-3.196	16.296	1.735	1	.188
Wk17	-2.400	4.9724	-12.146	7.346	.233	1	.629
Wk18	-6.450	4.9724	-16.196	3.296	1.683	1	.195
Wk19	-5.650	4.9724	-15.396	4.096	1.291	1	.256
Wk20	3.800	4.9724	-5.946	13.546	.584	1	.445
Wk21	1.300	4.9724	-8.446	11.046	.068	1	.794
Wk22	-.650	4.9724	-10.396	9.096	.017	1	.896
Wk23	-2.550	4.9724	-12.296	7.196	.263	1	.608
Wk24	5.700	4.9724	-4.046	15.446	1.314	1	.252
Wk25	6.200	4.9724	-3.546	15.946	1.555	1	.212
Wk26	6.100	4.9724	-3.646	15.846	1.505	1	.220
Wk27	5.050	4.9724	-4.696	14.796	1.031	1	.310
Wk28	.150	4.9724	-9.596	9.896	.001	1	.976
Wk29	-2.750	4.9724	-12.496	6.996	.306	1	.580
Wk30	1.250	4.9724	-8.496	10.996	.063	1	.802
Wk31	7.950	4.9724	-1.796	17.696	2.556	1	.110
Wk32	2.000	4.9724	-7.746	11.746	.162	1	.688

Wk33	.950	4.9724	-8.796	10.696	.037	1	.848
Wk34	2.050	4.9724	-7.696	11.796	.170	1	.680
Wk35	1.700	4.9724	-8.046	11.446	.117	1	.732
Wk36	8.050	4.9724	-1.696	17.796	2.621	1	.105
Wk37	-1.150	4.9724	-10.896	8.596	.053	1	.817
Wk38	.350	4.9724	-9.396	10.096	.005	1	.944
Wk39	.600	4.9724	-9.146	10.346	.015	1	.904
Wk40	3.400	4.9724	-6.346	13.146	.468	1	.494
Wk41	-.350	4.9724	-10.096	9.396	.005	1	.944
Wk42	-6.100	4.9724	-15.846	3.646	1.505	1	.220
Wk43	-2.450	4.9724	-12.196	7.296	.243	1	.622
Wk44	9.700	4.9724	-.046	19.446	3.806	1	.051
Wk45	-3.300	4.9724	-13.046	6.446	.440	1	.507
Wk46	-1.218E-13	4.9724	-9.746	9.746	.000	1	1.000
Wk47	-3.850	4.9724	-13.596	5.896	.600	1	.439
Wk48	-2.000	4.9724	-11.746	7.746	.162	1	.688
Wk49	-4.500	4.9724	-14.246	5.246	.819	1	.365
Wk50	-6.100	4.9724	-15.846	3.646	1.505	1	.220
Wk51	-.250	4.9724	-9.996	9.496	.003	1	.960
(Scale)	247.245[a]	10.8424	226.882	269.436			

Dependent Variable: value
Model: (Intercept), DebtType, PsychOwnershipTerminology, DebtType * PsychOwnershipTerminology, myXmoney, myXcash, myXfunds, spendingmyX, repayingaX, borrowedXmoney, borrowingonaX, Xdebt, Wk1, Wk2, Wk3, Wk4, Wk5, Wk6, Wk7, Wk8, Wk9, Wk10, Wk11, Wk12, Wk13, Wk14, Wk15, Wk16, Wk17, Wk18, Wk19, Wk20, Wk21, Wk22, Wk23, Wk24, Wk25, Wk26, Wk27, Wk28, Wk29, Wk30, Wk31, Wk32, Wk33, Wk34, Wk35, Wk36, Wk37, Wk38, Wk39, Wk40, Wk41, Wk42, Wk43, Wk44, Wk45, Wk46, Wk47, Wk48, Wk49, Wk50, Wk51
a. Maximum likelihood estimate.

STUDY 2: ROBUSTNESS CHECKS AND ADDITIONAL ANALYSES

Independence of search volumes within search-term pairs across weeks. One might wonder about independence of the week-by-week search volumes for each search term pair. That is, it is possible that the weekly search volumes for each credit card vs. loan search term phrase (e.g., my credit card money vs. my loan money) are strongly correlated such that the week-by-week data points are not independent. In contrast to this possibility, we find that the correlations between each term pair on a weekly basis were modest, ranging from r = -.10 to r = .44, with an average correlation of r = .21.

Multicollinearity of independent variables. More broadly, we used the variation influence factor (VIF) to assess multicollinearity across all of the predictors in our model. VIF values ranged between 1.8 and 6.0. Since multicollinearity is generally a concern at values greater than 10 (Myers, 1990, p. 369), the VIF values suggesting a lack of multicollinearity.

Potential redundancy across similar search term phrases. When we collected the data in Google Trends, we did not enclose search terms in quotation marks (doing so does not generate a dataset). Thus, it is possible that search term phrases with redundancy in words could plausibly not be independent in terms of their search volumes. Specifically the terms “X borrowing” and “borrowing on a X” share the word “borrowing”; similarly, “my own X money” and “my money” share the words “my money”. Casting doubt on this possibility, the correlations across the potentially redundant phrases are low, indicating that they can be viewed independently. Specifically, the correlations ranged from r = .17 to r = .43, with an average of r = .31. However, as an additional robustness check, we re-ran the analysis described in the main paper, excluding observations from these four search term phrases, and the interaction remained significant, $\chi 2$ = 560.42, $p < .001$.

STUDY 2: POST-TEST FOR GOOGLE SEARCH TERMS

One hundred online participants completed this post-test in exchange for monetary compensation. Participants saw all 20 search term phrases used in study 2 and were asked to rate the phrases using the following three questions:

(1) Acceptable: How unacceptable or acceptable would it be for someone to use this phrase? (1 = completely unacceptable, 7 = completely acceptable)
(2) Normal: How normal would it sound for someone to use this phrase? (1 = not at all normal, 7 = completely normal)
(3) How strange or awkward would it be for someone to use this phrase? (1 = not at all strange/awkward, completely strange/awkward, reverse-scored)

Below are the mean values for the three dependent measures across all high psychological ownership phrases by credit and loan.

High Psychological Ownership Phrases

		Mean	SD	*t*(99)	*p*
Acceptable	Credit	4.69	1.29	-4.28	<.001
	Loan	5.13	1.11		
Normal	Credit	4.32	1.29	-4.61	<.001
	Loan	4.82	1.04		
Strange/Awkward	Credit	3.52	1.26	-4.78	<.001
	Loan	4.04	1.41		

Low Psychological Ownership Phrases

		Mean	SD	*t*(99)	p
Acceptable	Credit	5.45	1.03	0.36	.723
	Loan	5.42	1.02		
Normal	Credit	5.22	1.02	0.13	.901
	Loan	5.21	0.98		
Strange/Awkward	Credit	4.33	1.62	-1.37	.173
	Loan	4.46	1.61		

Next, we present the means individually by both question and search phrase:

Question	**Credit Version**	**Mean**	**SD**	**Loan Version**	**Mean**	**SD**
acceptable	my credit card money	4.77	1.575	my loan money	5.69	1.360
normal	my credit card money	4.35	1.794	my loan money	5.55	1.336
strange (reversed)	my credit card money	3.68	1.820	my loan money	4.73	2.034
acceptable	my credit card cash	4.37	1.730	my loan cash	4.84	1.707
normal	my credit card cash	3.92	1.807	my loan cash	4.44	1.725
strange (reversed)	my credit card cash	3.08	1.574	my loan cash	3.66	1.858
acceptable	my credit card funds	5.30	1.528	my loan funds	5.38	1.496
normal	my credit card funds	4.99	1.600	my loan funds	5.14	1.436
strange (reversed)	my credit card funds	4.37	2.058	my loan funds	4.31	1.958
acceptable	spending my credit card	4.53	1.766	spending my loan	5.08	1.483
normal	spending my credit card	4.25	1.839	spending my loan	4.83	1.464
strange (reversed)	spending my credit card	3.38	1.805	spending my loan	4.14	1.798
acceptable	my own credit card money	4.51	1.717	my own loan money	4.66	1.584
normal	my own credit card money	4.08	1.662	my own loan money	4.14	1.645
strange (reversed)	my own credit card money	3.14	1.538	my own loan money	3.35	1.599
acceptable	repaying a credit card	5.85	1.395	repaying a loan	6.18	1.201
normal	repaying a credit card	5.76	1.492	repaying a loan	6.21	1.217
strange (reversed)	repaying a credit card	4.92	2.141	repaying a loan	5.40	2.132
acceptable	borrowing on a credit card	5.29	1.552	borrowing on a loan	5.07	1.719

normal	borrowing on a credit card	5.06	1.536	borrowing on a loan	4.79	1.731
strange (reversed)	borrowing on a credit card	4.19	2.009	borrowing on a loan	4.07	1.935
acceptable	borrowed credit card money	4.68	1.651	borrowed loan money	4.89	1.510
normal	borrowed credit card money	4.14	1.666	borrowed loan money	4.53	1.726
strange (reversed)	borrowed credit card money	3.19	1.727	borrowed loan money	3.77	1.786
acceptable	credit card borrowing	5.13	1.625	loan borrowing	5.02	1.589
normal	credit card borrowing	4.97	1.690	loan borrowing	4.65	1.674
strange (reversed)	credit card borrowing	4.14	1.990	loan borrowing	3.89	2.060
acceptable	credit card debt	6.29	1.209	loan debt	5.92	1.323
normal	credit card debt	6.18	1.329	loan debt	5.88	1.281
strange (reversed)	credit card debt	5.26	2.299	loan debt	5.14	2.025

STUDY 5: VALIDATION OF PSYCHOLOGICAL OWNERSHIP MANIPULATION

This study was run to validate that the low psychological ownership terminology used in Study 5 of the main paper manipulates perceptions of psychological ownership.

Method

This study was pre-registered on AsPredicted.org (https://aspredicted.org/blind.php?x=qu4qf3). Four hundred and two online participants completed the study (M age = 32.64, SD = 12.47; 45.8% male). Participants were randomly assigned to either a control condition or a lower psychological ownership terminology condition. Participants in the control condition read the following: "In this mini-study, we would like you to think about your own spending desires and imagine getting access to funds to get the things you want. Please read the offer carefully," followed by "Imagine that in addition to your current savings, checking, and credit card accounts, your bank gives you access to an additional $500. With this money, you can spend up to $500 per month. You can pay back as little or as much as you would like. Any remaining balance will incur a 10% interest rate." Participants in the lower psychological ownership terminology condition instead read: "In this mini-study, we would like you to think about your own spending desires and imagine getting access to funds you can borrow from a lender to get the things you want. Please read the lending offer carefully," followed by "Imagine that in addition to your current savings, checking, and credit card accounts, your bank lets you borrow an additional $500. With this money, you can borrow up to $500 of the **bank's money** per month. You can pay back as little or as much of their money as you would like. Any remaining balance will incur a 10% interest rate. **This lets you temporarily borrow money that belongs to the bank."** Note that this wording uses the same terminology as

provided in Study 5 of the main paper, simply removing the "credit" and "loan" language. All participants provided their perceptions of psychological ownership by indicating their agreement with the following three items: (1) This money feels like my money, (2) Spending this money feels like accessing my own money early, (3) Spending this money feels like spending money that's **NOT MINE** to spend (9-point scales: 1 = strongly disagree, 9 = strongly agree; third item was reverse-scored). Participants then completed a titration task. This task was used to identify participants with inconsistent switching points as a means of filtering out participants who were not paying attention (see pre-registration). Finally, participants provided demographic information.

Results

Thirteen participants displayed inconsistent switching on the titration task and, following the pre-registration, were removed from the analysis. Exclusions did not vary by condition.

Psychological ownership. The three questions assessing psychological ownership of borrowed money loaded onto a single factor and provided reliable internal consistency (Cronbach's $\alpha = .86$). Thus, the three measures were combined into a single psychological ownership of borrowed money index. As intended, the manipulation was effective. Participants in the lower psychological ownership terminology condition indicated lower psychological ownership ($M = 2.73$, $SD = 1.97$) relative to those the control condition ($M = 3.20$, $SD = 2.16$), $F(1, 387) = 4.85$, $p = .028$.

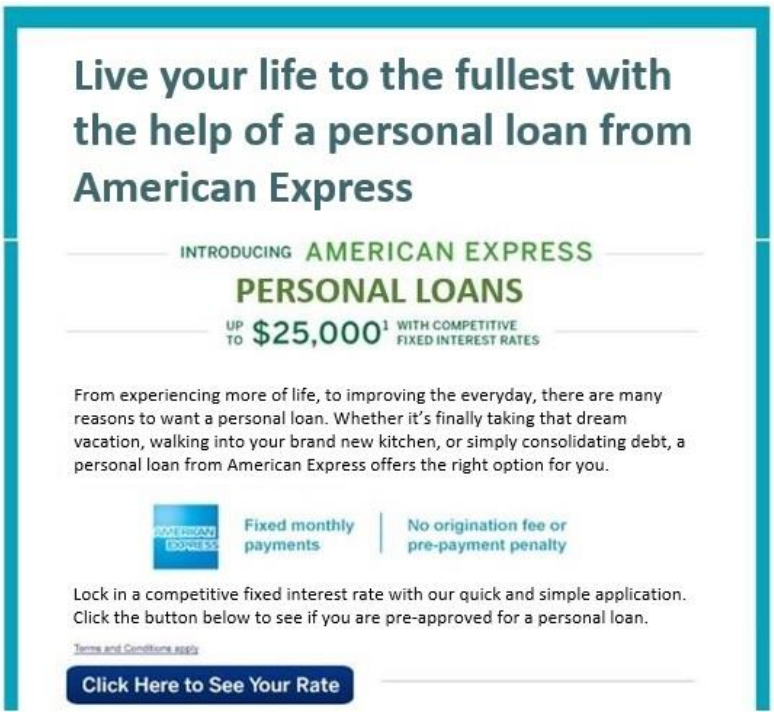
SUPPLEMENTAL STUDY 1: NATURAL VARIATION IN PSYCHOLOGICAL OWNERSHIP AND INTEREST IN A FINANCING OFFER

Supplemental Study 1 provides a conceptual replication of Study 1 in the main manuscript with the following differences. As our primary dependent measure, we measured participants' interest in applying for an American Express personal loan using a real American Express advertisement. We measure psychological ownership of borrowed money after participants indicate their interest in applying for the financing offer, and include measures assessing participants' understanding of whether borrowed money must be repaid.

Method

This study was pre-registered on As Predicted (https://aspredicted.org/blind.php?x=h39m2i). Participants were 203 individuals (M_{age} = 33.04, SD = 8.64, 45.8% females) on MTurk who completed this study in exchange for monetary compensation.

Supplemental Study 1 used a real American Express personal loan advertisement (see supplemental figure 1). First, participants viewed the advertisement. They were asked to review the offer carefully, and were informed that they would be asked questions about it. Next, participants indicated how interested they were in applying for the personal loan using a nine-point scale (1 = not at all interested, 9 = very interested). Then, participants responded to a question regarding their repayment concern using a nine-point scale: "If you spent using this personal loan, how concerned would you be about repaying it in a timely manner?" (1 = a little concerned, 9 = extremely concerned).



We then measured psychological ownership of borrowed money using the same 3-item scale used in Study 1 of the main manuscript. To ensure that differences in psychological ownership were not due to differences in participants' objective understanding of whether money from a personal loan must be repaid, we asked participants: (1) "Would money that you spend from this personal loan have to be repaid?" (Yes / No / Not sure) and (2) "Would money that you spent from the personal loan, and don't repay quickly, accrue interest charges?" (Yes / No / Not sure).

We next administered several individual-level questions. We measured propensity to plan for money in the long run, self-control, financial literacy, materialism, and intertemporal discount rates using the same measures as in Study 1. In place of the three-item scale for debt aversion, in this study we measured debt aversion using a single measure that has been shown to negatively predict debt incurrence: "Do you feel uncomfortable having debt?" (Yes, No, Do not

know, Do not want to answer; coded such that yes = 1, otherwise = 0; Almenberg et al. 2019). In addition, we included the propensity to plan for money in the short run scale (Lynch et. al, 2010).

For exploratory purposes, we asked participants whether they currently had a revolving balance on a credit card, whether they had a line of credit (other than a credit card), a personal loan, a payday loan, or any other type of debt. We also asked participants to estimate the amount of debt they had for each borrowing form they indicated having. Finally, we collected demographic information.

Results

Objective understanding of a personal loan. Nearly all participants (97%) understood that any money borrowed would have to be repaid. Furthermore, 79% of participants understood that money that was not repaid quickly would accrue interest charges. Moreover, responses to these questions were not correlated with participants' perceptions of psychological ownership of borrowed money (both $r \leq .005$, $p \geq .944$).

Psychological ownership. The three questions assessing psychological ownership of borrowed money loaded onto a single factor and provided reliable internal consistency (Cronbach's $\alpha = .85$). Thus, the three measures were combined into a single psychological ownership of borrowed money index. Participants' scores ranged from 1 to 9, with an average value of 3.70 (SD = 2.26).

Interest in financing. We regressed interest in applying for the personal loan on psychological ownership of borrowed money. As predicted, greater psychological ownership of borrowed money predicted increased interest in applying for the financing, B = .66, $t(201) = 9.04$, $p < .001$, 95% CI (.52, .81), $R^2 = .289$.

We next explored the relationship between psychological ownership of borrowed money and the other eight individual-level constructs measured (i.e., debt aversion, intertemporal discounting, financial literacy, materialism, planning for the long-term, planning for the short-term, and self-control). As in Study 1 of the main paper, psychological ownership was positively correlated with materialism ($r = .34$, $p < .001$), negatively correlated with debt aversion ($r = -.39$, $p < .001$), and negatively correlated with self-control ($r = -.20$, $p = .004$). In this study, psychological ownership was negatively correlated with financial literacy ($r = -.42$, $p < .001$), negatively correlated with intertemporal discount rates[1] ($r = -.18$, $p = .009$), and was unrelated to both short-term and long-term planning (both $p \geq .521$).

To examine whether psychological ownership of borrowed money provided predictive ability beyond the other constructs measured, we conducted a stepwise-hierarchical regression as in Study 1 of the main manuscript including the seven measured constructs and all demographic information (age, income, gender, and education) in the first block and psychological ownership in the second block. The first block identified participants' debt aversion and materialism as significant predictors, which were also significant predictors of personal loan willingness to borrow in Study 1. Additionally, financial literacy and discount rate were identified as relevant predictors, though the direction of discount rate was opposite of that of Study 1, $R^2 = .276$. Importantly, psychological ownership provided predictive ability beyond these measures as indicated by a significant R^2 change, $R^2 = .371$, $F(1, 197) = 29.51$, $p < .001$.

[1] Removing participants with inconsistent switching points on this task, as in Study 1, renders this relationship non-significant, and also removes intertemporal choice as a significant predictor in the hierarchical stepwise regression, but does not change the significance of psychological ownership.

HIERARCHICAL STEPWISE REGRESSION RESULTS FOR INTEREST IN APPLYING FOR THE FINANCING OFFER IN SUPPLEMENTAL STUDY 1

Block		B	Std. Error	Beta	*t*	*p*	95% CI Low	95% CI High
1	(Constant)	-4.942	3.238		-1.526	.129	-11.328	1.444
	Financial Literacy	-.526	.175	-.201	-3.009	.003	-.871	-.181
	Debt Aversion	-1.519	.419	-.230	-3.629	.000	-2.345	-.694
	Materialism	.783	.201	.251	3.890	.000	.386	1.180
	Discount Rate	-.144	.071	-.128	-2.024	.044	-.285	-.004
2	(Constant)	-4.217	3.030		-1.392	.166	-10.193	1.759
	Financial Literacy	-.262	.170	-.100	-1.538	.126	-.598	.074
	Debt Aversion	-.806	.413	-.122	-1.952	.052	-1.620	.008
	Materialism	.556	.193	.179	2.883	.004	.176	.936
	Discount Rate	-.132	.067	-.117	-1.972	.050	-.263	.000
	Psychological Ownership	.454	.083	.367	5.432	.000	.289	.618

Repayment concern. We next explored whether psychological ownership of borrowed money influences concerns over repayment. While directionally consistent, greater psychological ownership did not significantly predict decreased repayment concern, B = -.09, $t(201) = -1.30$, $p = .194$. We next explored the role of psychological ownership of borrowed money relative to the other measured constructs. The first block identified propensity to plan for the long-term, lower self-control, and age as predictors of repayment concern, $R^2 = .113$. However, in this analysis, the second block identified psychological ownership of borrowed money as adding significant predictive ability as indicated by a significant R^2 change, $R^2 = .134$, $F(1, 198) = 4.74$, $p = .031$. As concerns over debt repayment is not the focus of the current research, and given the

inconsistent findings across analyses, we suggest that future research examines the impact of psychological ownership of borrowed money on repayment more systematically.

Existing debt. We explored whether there was a relationship between psychological ownership of borrowed funds and existing debt. Through some of the open-ended responses, we learned that some participants mistook the "other" category for things like mortgages and car loans, which was not the intention. Moreover, this interpretation likely varied across participants. Thus, we analyzed responses only to the debt types we specified (i.e., revolving credit card balance, other credit line, payday loan, and personal loan). Nearly half of participants (49%) indicated having a revolving balance on their credit card, 15% indicated having a line of credit other than a credit card, 23% indicted having a personal loan, and 20% indicated having a payday loan. We recoded responses based on whether participants had any of these debt forms (1 = yes, 0 = no). A binary logistic regression revealed that higher psychological ownership of borrowed money marginally predicted having some existing debt, B = .12, Wald X^2 = 3.68, p = .055. Further analysis revealed that this relationship was coming from existing loans (personal or payday), B = .27, Wald X^2 = 12.19, $p < .001$. Psychological ownership did not predict having debt in the form of credit, Wald $X^2 < 1$. These results may suggest that psychological ownership of borrowed money when measured as "borrowed money" is a better predictor of loan (vs. credit) usage, and may be a function of psychological ownership of borrowed money being different for "credit" compared to "loans," as is explored in studies 2-5 in the main manuscript.

To summarize, Supplemental Study 1 showed that there is variation in psychological ownership of borrowed money across individuals, and that these perceptions are not explained by differences in understanding whether borrowed money needs to be repaid or whether it accrues interest. Moreover, it replicates the results of Study 1 in the main manuscript by demonstrating

that this variation predicts borrowing interest above and beyond other relevant individual-level factors.

SUPPLEMENTAL STUDY 2: NATURAL VARIATION IN PSYCHOLOGICAL OWNERSHIP AND CREDIT CARD APPLICATION BEHAVIOR

Supplemental Study 2 explored variation in individuals' perceptions of psychological ownership of credit card money specifically (rather than borrowed money more generally), and examined the relationship between this variation and consumers' credit card behavior over the previous six months. In addition to measuring whether participants had used their credit card, we also investigated whether psychological ownership predicted interest in obtaining new credit cards over the last six months. In addition, we sought to examine the predictive power of psychological ownership relative to other factors that may influence credit card usage, such as debt aversion, income, spare money, and tightwad-spendthrift tendencies.

Method

This study was pre-registered on As Predicted (https://aspredicted.org/blind.php?x=2gu97u). Participants were 506 individuals (M_{age} = 33.97, SD = 12.60, 54.0% females) from Prolific who completed this study in exchange for monetary compensation.

Psychological ownership of credit card money was measured using three items on nine-point scales: (1) "I feel like credit card money is my money" (1 = completely disagree, 9 = completely agree); (2) "Spending credit card money feels like accessing my own money early" (1 = completely disagree, 9 = completely agree); (3) Spending credit card money feels like spending money that's NOT MINE to spend (1 = completely disagree, 9 = completely agree;

reverse-scored)". Next, participants responded to the primary dependent measure: a binary measure indicating whether they had used a credit card over the last six month (1 = yes, 0 = no).

The primary dependent measure was followed by a number of exploratory measures. Participants indicated whether they had a revolving balance on a credit card at any point over the last six months (1 = yes, 0 = no, -99 = did not use or do not have a credit card), and among those with a revolving balance, whether the revolving balance had increased (1), stayed the same (0), or decreased (-1) over that time. Participants were also able to indicate whether they were unsure about this question. They further indicated whether they currently had any debt in the form of credit cards, personal loans, lines of credit, payday loans, or peer-to-peer loans (a single measure where 1 = yes, 0 = no). Participants then indicated whether over the past six months, (1) they had thought about getting a new credit card (1 = yes, 0 = no); (2) they had browsed credit card offers or searched for information about new credit cards (1 = yes, 0 = no); and (3) they had applied for a new credit card (1 = yes, 0 = no).

To ensure that differences in psychological ownership were not due to differences in participants' objective understanding of whether money from a credit card must be repaid, we asked participants: (1) "When you spend money using a credit card, does this money have to be repaid?" (Yes / No / Not sure) and (2) "If you do not repay the full balance on your credit card each month, does the remaining balance accrue interest charges?" (Yes / No / Not sure).

We also administered several questions to assess other individual-level factors that may plausibly relate to psychological ownership of credit card money. Tightwad-spendthrift tendencies were measured using the established 4-item scale (Rick, Cryder, and Loewenstein 2008). Debt aversion was measured with a single measure that has been shown to negatively predict debt incurrence: "Do you feel uncomfortable having debt?" (Yes / No / Do not know / Do

not want to answer; coded such that yes = 1, otherwise = 0; Almenberg et al. 2019). Financial literacy was measured with three measures assessing financial knowledge (Lusardi and Mitchell 2011). Participants also indicated their perceptions of their spare money with a single item measure: "How much spare money do you currently have?" (11-point scale; 1 = very little spare money, 11 = a lot of spare money). Demographic information including age, gender, and income were also collected.

Results

Objective understanding of a credit card. The majority of participants (98%) understood that money spent with a credit card needs to be repaid, and 94% understood that money that was not repaid each month would accrue interest charges.

Psychological ownership of credit card money. The measures of psychological ownership of credit card money provided reliable internal consistency (Cronbach's $\alpha = .81$). Thus, the three measures were combined into a single psychological ownership of credit card money index, with higher scores indicating greater psychological ownership of credit card money. Participants' scores on this index ranged from 1 to 9, with an average value of 4.32 (SD = 2.34).

Credit card usage. We regressed credit card usage on psychological ownership of credit card money. As predicted and pre-registered, the binary logistic regression revealed that greater psychological ownership predicted credit card usage, B = .31, Wald $\chi^2 = 31.28$, $p < .001$.

We next explored the relationship between psychological ownership of credit card money and the other potentially related individual-level factors (i.e., tightwad-spendthrift, debt aversion, financial literacy, spare money) as well as the demographic information collected. Psychological ownership was positively correlated with tightwad-spendthrift tendencies ($r = .16$, $p < .001$), spare money ($r = .11$, $p = .016$), and income ($r = .14$, $p = .002$), and negatively correlated with

debt aversion (r = -.18, $p < .001$). It was unrelated to financial literacy (r = -.03, $p = .498$), age (r = .02, $p = .672$), and gender (-.06, $p = .179$).

As in Study 1 in the main paper, we conducted a stepwise-hierarchical logistic regression on credit card usage in which we entered the seven individual-level factors together in a first block and entered psychological ownership of credit card money in a second block (Cohen et. al, 2003; pg. 161). Doing so allowed the model to identify the factors offering predictive value among all the factors entered. Inclusion in the model was determined using a forward conditional procedure. The first block identified participants' spare money, age, and income as predictors of credit card usage, $R^2 = .115$. Importantly, the second block revealed that psychological ownership of credit card money significantly increased the predictive ability of the model as indicated by a significant R^2 change, $R^2 = .197$, $p < .001$. See table below for full regression results.

Model		B	S.E.	Wald	df	Sig.	Exp(B)
1	Income	.118	.037	9.970	1	.002	1.125
	Age	.028	.010	7.516	1	.006	1.029
	Spare Money	.164	.051	10.169	1	.001	1.178
	Constant	-.898	.430	4.354	1	.037	.408
2	Income	.108	.039	7.778	1	.005	1.114
	Age	.030	.011	7.740	1	.005	1.030
	Spare Money	.149	.052	8.268	1	.004	1.160
	Psychological Ownership	.290	.057	25.606	1	.000	1.336
	Constant	-1.941	.493	15.521	1	.000	.144

Revolvers. We considered the possibility that the relationship between psychological ownership credit card money and credit card usage reflects differences in people who are using their credit card as a convenient payment form rather than a form of borrowing. If so,

psychological ownership could simply reflect differences in the extent to which credit card money *is* their money. We recoded the question about whether participants had a revolving balance at any point as a binary measure (1 = yes, 0 = no). Indeed, participants with lower psychological ownership were more likely to have a revolving balance. However, and importantly, restricting our analysis only to participants who had a revolving balance (N = 222) did not change the interpretation of the results. A binary logistic regression among these participants revealed that participants with higher psychological ownership were more likely to have used their credit card over the last six months, B = 0.27, Wald χ^2 = 3.96, p = .047. Moreover, none of the other potential predictors were found to be significant in a stepwise hierarchical logistic regression. As such, psychological ownership was the only significant predictor of credit card use among these participants in the hierarchical stepwise regression, B = 0.27, Wald χ^2 = 3.96, p = .047.

Exploratory analyses. We explored whether, among these participants, psychological ownership predicted how revolving balances had changed over the last six months. We removed one participant who was unsure of how their revolving balance had changed. Regressing revolving balance changes on psychological ownership revealed a marginally significant effect such that higher psychological ownership predicted having a revolving balance that increased over the last six months, B = 0.04, t(219) = 1.78, p = .077. However, in a hierarchical stepwise regression, psychological ownership was not determined to be a significant predictor of the direction of revolving balance changes after accounting for all of the other possible predictors. We also explored whether psychological ownership of credit card money could predict higher incurrence of having debt of any type. A binary logistic regression on this exploratory measure

revealed no significant predictive power of psychological ownership of credit card money, B = 0.04, Wald $\chi^2 = 1.04$, $p = .308$.

We next examined whether psychological ownership predicted consumers' behaviors towards getting a new credit card over the previous six months. A binary logistic regression on consideration of a new credit card revealed that participants with higher psychological ownership were significantly more likely to consider getting a new credit card, B = 0.10, Wald $\chi^2 = 6.52$, $p = .011$. They were significantly more likely to have browsed credit card offers or searched for information about new credit cards, B = 0.14, Wald $\chi^2 = 12.28$, $p < .001$. Further, they were significantly more likely to have applied for a new credit card over the last six months, B = 0.15, Wald $\chi^2 = 8.34$, $p = .004$. Moreover, hierarchical stepwise logistic regressions found that psychological ownership was a significant predictor of all three of these outcomes, after adjusting for the other seven potential predictors (all $p \leq .011$). These effects were robust to including whether participants had revolving balances over the last six months as an additional predictor in the first block (all $p \leq .011$).

In this study, psychological ownership of credit card money predicted usage of credit cards and interest in getting new credit cards over the last six months. These effects could not be explained by people using their credit cards as cash (i.e., for convenience with full repayment) as the results were robust to restricting the analysis only to those with revolving balances. However, in contrast to Study 1 of the paper, psychological ownership did not predict having debt or changes in participants' revolving balances. We speculate that this may be a function of having measured psychological ownership of "credit card money" specifically, rather than measuring psychological ownership of "borrowed money" more generally. Moreover, the current work does

not make predictions with regard to the relationship between psychological ownership and the repayment of borrowed funds, which remains outstanding for future research.

SUPPLEMENTAL STUDY 3: CONCEPTUAL REPLICATION OF STUDY 3B

Supplementary Study 3 was designed to conceptually replicate the results of Study 3b in the main manuscript, examining access to credit card funding rather than a line of credit. Participants imagined having access to additional financing in the form of either a credit card or a loan and indicated how that access would make them feel about their finances using a visual selection task.

Method

Participants were 523 individuals (M_{age} = 37.47, SD = 11.94, 45% female) on MTurk who completed this study in exchange for monetary payment. No participants were excluded in the analysis of this study. The study followed a two condition between-subjects design that varied debt form: credit card versus loan.

Participants received the following information, with differences by condition bolded here for emphasis: “Imagine that in addition to your current savings, checking, and credit card accounts, your bank gives you an additional [**credit card account with a limit of $500 / personal loan of $500**]. With this [**credit card / personal loan**], you can spend up to $500 per month in advance of your monthly paycheck. You can pay back as little or as much as you would like. Any remaining balance will incur a 15% interest rate.” Next, participants were instructed: “Please think for a minute about how access to this [**credit card / personal loan**] would make you feel about your finances.” Then, they viewed the two visual depictions from Study 3b and

were asked, “Which of these pictures best depicts how this [**credit card / personal loan**] would make you feel about your finances?” Participants were asked to select one of the two figures described in Study 3 in the main manuscript. Next, participants completed an instruction check question: “To ensure you were paying attention, please indicate which of the following you were asked to imagine getting:” (1 = a $500 personal loan, 2 = a credit card with a $500 limit, 3 = a $500 holiday bonus, 4 = a $500 fine). Last, participants provided demographic information.

Results and Discussion

Instruction check. The majority of participants (98%) correctly identified the condition to which they were assigned.

Psychological ownership. There was a significant effect of debt form on the dependent variable. Participants considering having additional access to funding through a credit card (55%) were more likely to perceive those funds as their own money in the bank (an increase of $500) as compared to participants considering a loan (37%), $\chi^2(1) = 17.81$, $p < .001$. These results conceptually replicate those shown in Study 3b in the main manuscript.

SUPPLEMENTAL STUDY 4: CONCEPTUAL REPLICATION OF STUDY 3A AND 3B USING 3-ITEM SCALE

Supplementary Study 4 was meant to be a conceptual replication of Study 3a and 3b in the main paper. Specifically, this study replicates the finding that borrowed money in the form of credit is higher in psychological ownership than is borrowed money in the form of a loan, as measured with the 3-item scale used in Study 1 of the main paper. Further, it uses two forms of credit (credit lines, and credit cards) and two types of loans (loans, payday loans).

Method

This study was pre-registered on As Predicted (https://aspredicted.org/blind.php?x=4vx9xi). Participants were 604 individuals (M_{age} = 35.23, SD = 11.46, 58.9% females) on MTurk who completed this study in exchange for monetary compensation. Twenty-nine participants failed the pre-registered instructional manipulation check (IMC, Oppenheimer, Meyvis, and Davidenko 2009), leaving a final sample of 575 participants. Failure rates did not vary by condition, $\chi^2(3) = 1.01$, $p = .800$.

This study followed a four condition between-subjects design that varied debt type across conditions (credit card, line of credit, loan, and payday loan). Participants were asked to imagine that, in addition to their current savings, checking, and credit card accounts, their bank gave them additional financing in one of the four debt types. Participants were told that, with those funds, they could spend up to $500, repay as little or as much as they would like within each month, and that any remaining balance would incur a 15% interest rate.

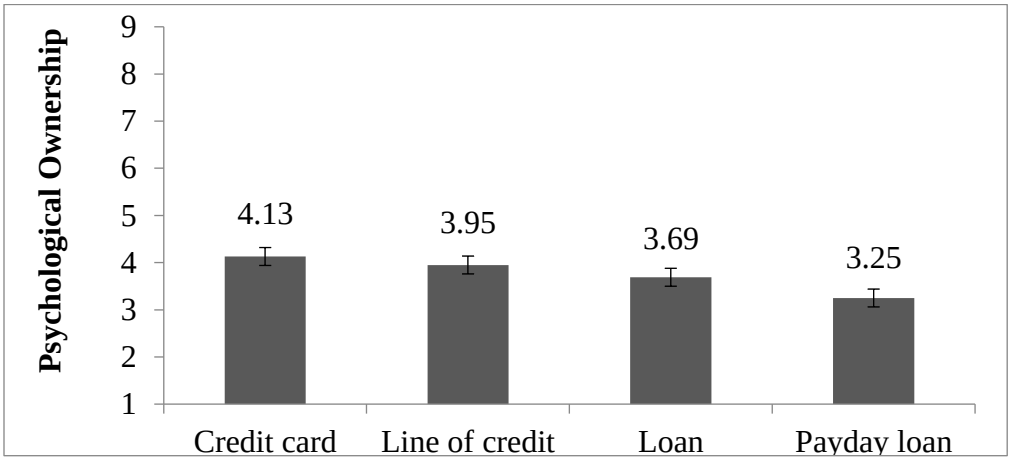
Next, participants were asked to think about how access to those funds would make them feel about their finances, and were asked to complete a version of the three measures of

psychological ownership of borrowed funds described in Study 1 of the main paper. Specifically, participants responded to the following three measures: (1) "I would feel like the [debt type] money is my money"; (2) "Spending this [debt type] money would feel like accessing my own money early" (3) "Spending this [debt type] money would feel like spending money that's NOT mine to spend" (nine-point scales, 1 = completely disagree, 9 = completely agree; item 3 was reverse-scored). Finally, participants completed demographic information and received the opportunity to provide any comments they had about the study.

Results

The three questions assessing psychological ownership of borrowed money loaded onto a single factor, provided reliable internal consistency (Cronbach's $\alpha = .84$), and were combined into a single measure.

We first conducted an ANOVA to examine the effect of debt type on perceptions of psychological ownership. As predicted, psychological ownership significantly varied across debt type, $F(3, 571) = 3.90$, $p = .009$. More importantly, we conducted a follow-up contrast comparing psychological ownership across the two credit conditions (coded as -1) and the two loan conditions (coded as 1), which revealed higher psychological ownership for financing in the form of credit as compared to loans, $F(1, 571) = 8.82$, $p = .003$.



SUPPLEMENTAL STUDY 5: DISCRETIONARY VS. NON-DISCRETIONARY PURCHASES

Supplementary Study 5 was conducted to explore whether consumers' greater willingness to borrow using funds in the form of credit versus loans is moderated by the type of purchase consumers intend to make. Specifically, we aimed to examine whether consumers are more willing to use credit versus loans for discretionary (fun, unnecessary) purchases, and whether this preference is attenuated for non-discretionary (useful, necessary) purchases.

Method

This study was pre-registered on AsPredicted (https://aspredicted.org/blind.php?x=uv2f5p). Participants were 1618 individuals (M_{age} = 35.52, SD = 11.70, 57% female) on MTurk who completed this study in exchange for monetary payment. One hundred and seventeen participants failed the IMC, leaving a final sample of 1501 participants. Failure rates did not vary by condition, $F < 1$.

The study followed a 2x2 between-subjects design that manipulated debt form (flex credit vs. flex loan) and purchase type (discretionary vs. non-discretionary). First, participants received the purchase type manipulation. They were randomly assigned to describe either a fun but unnecessary purchase they wanted to buy for themselves, or a useful and necessary purchase they needed to buy for themselves. All participants were instructed to think of something that cost between $50-1000.

Next, participants reviewed a financing offer, either for flex credit or a flex loan using the stimuli described in Study 4 in the main manuscript. Then, participants were reminded of the purchase they wrote about earlier in the study and were asked: (1) "If you did not have the money to pay for the purchase you wrote about, how willing would you be to consider using this

[flex credit / flex loan] offer?" (1 = not at all interested, 9 = fairly interested), and (2) "If you did not have the money to pay for the purchase you wrote about, how likely would you be to consider this [flex credit / flex loan] offer?" (1 = not at all likely, 9 = fairly likely).

Participants were then asked to complete the same comprehension check questions described in Study 5 in the main manuscript. Next, participants completed an instructional manipulation check (IMC; Oppenheimer, Meyvis, and Davidenko 2009), demographic variables, and were given the opportunity to provide any remaining comments they had about the study.

Results

Comprehension check questions. Nearly all participants (97%) understood that the financing offer they received was for revolving debt, that they only needed to make payments once they the spent money (98%), and that the available financing would be on a card accepted where Visa is accepted (96%). Finally, 99% of participants correctly identified the debt form they had viewed. Responses to these four measures did not vary by condition, all *p*s > .29, indicating that the manipulation was successful and understood similarly across conditions.

Interest in financing. The two measures designed to capture interest in using the financing offer were significantly correlated and combined for analysis, $r = .94$, $p < .001$. There was a significant main effect of debt form, $F(1, 1497) = 12.03$, $p = .001$, and a significant main effect of purchase type, $F(1, 1497) = 98.29$, $p < .001$. The interaction between debt form and purchase type was not significant, $F(1, 1497) = 1.79$, $p = .182$.

As pre-registered, we conducted follow-up planned contrasts within the purchase type conditions. For discretionary purchases, there was significantly greater interest in the flex credit financing offer as compared to the flex loan financing offer ($M_{credit} = 4.51$, SD = 2.79 vs. $M_{loan} = 3.82$, SD = 2.87), $F(1, 1497) = 11.55$, $p = .001$. However, there was no difference for non-

discretionary purchases, although the pattern of means followed that observed for discretionary purchases (M_{credit} = 5.74, SD = 2.72 vs. M_{loan} = 5.43, SD = 2.70), $F(1, 1497) = 2.27$, $p = .132$.

In supplementary Study 4, the debt form by purchase type interaction was not significant. However, the results of the planned follow-up contrasts suggest that willingness to borrow using credit (vs. loans) is significant for discretionary purchases and not for non-discretionary purchases. It is possible that a significant interaction would emerge with an even larger sample size. Future research may explore whether consumers' willingness to use certain debt forms over others depends at least in part on the types of purchases for which the funds are used.

SUPPLEMENTAL STUDY 6: CONCEPTUAL REPLICATION OF STUDY 5

We have shown that consumers perceive greater psychological ownership of borrowed money in the form of credit as compared to loans. If differences in willingness to borrow are indeed driven by differences in psychological ownership, then reducing differences in psychological ownership should attenuate differences in willingness to borrow. To examine this possibility, in Supplemental Study 6, in addition to varying whether participants considered a financing offer in the form of credit or a loan, we varied the extent to which the offer used lower psychological ownership terminology. To do so, we varied the extent to which the terminology highlighted the repayment component of borrowed money. Importantly, highlighting repayment (the fact that the money is not theirs to keep) should have a stronger impact for debt types that consumers more readily perceive as their own (credit), as compared to debt types that they more readily perceive as not their own (loans). As such, we predicted that including the lower psychological ownership terminology would reduce willingness to use financing in the form of credit to a greater extent than it would for financing in the form of a loan.

Method

Participants were 805 individuals (M_{age} = 35.15, SD = 10.61, 49% females) on MTurk who completed the study for nominal payment around the winter holidays.

The study followed a 2x2 between-subjects design that manipulated debt type (credit card vs. personal loan) and offer terminology (control vs. decreased psychological ownership). All participants read about an offer for either a credit card or a personal loan. As in Study 5, interest rates favored (i.e., were lower for) personal loans. We held constant the ease of application, the amount of funds available, the neutral impact to applicants' credit scores, and the convenience of

being able to use the funds from a card accepted for payment anywhere where Visa is accepted. In the lower psychological ownership terminology conditions, we included language to highlight that the money from this offer was borrowed and would require repayment. The exact language was as follows:

Control condition

There are many purchases to make and there are various ways to pay for your purchases. We would like you to think about your spending and review the potential offer below carefully.
One way for people to make their purchases is with the use of a [credit card / personal loan]. Many of these [credit cards / personal loans] offer the following terms:

- Amount available: up to $25,000 with no setup fees or penalties for pre-payment
- Fixed interest rates as low as [12.98% (credit card condition) / 8.98% (personal loan condition)]
- No credit score impact to apply
- Simple application and decision in a few minutes
- Funds available on a card for convenience and accepted everywhere Visa is accepted

Low psychological ownership condition

There are many purchases to make and there are various financing options for your purchases. With financing, you get access to money now, but you must repay this amount

> with interest at a later time. We would like you to think about your spending and review the potential financing offer below carefully.
>
> One way for people to finance their purchases is with the use of a [credit card / personal loan]. Such debt types give you money now, but require you to repay the money with interest later. Many of these [credit cards / personal loans] offer the following terms:
>
> - Amount available: up to $25,000 with no setup fees or penalties for pre-payment
> - Funds available on a card for convenience and accepted everywhere Visa is accepted
> - Fixed interest rates as low as [12.98% (credit card condition) / 8.98% (personal loan condition)]
> - No credit score impact to apply
> - Simple application and decision in a few minutes
>
> Such debt types give you money now, but require you to the repay the money with interest later.

Importantly, as repayment with interest is a hallmark of all forms of financing, and most online workers recognize that borrowed funds must be repaid (see Supplemental Study 1), this language should not provide new information to participants.

After reviewing the offer, participants indicated how interested they were in applying for the offer (1 = not at all interested, 9 = very interested) and how likely they would be to apply for the offer (1 = very unlikely, 9 = very likely). Next, because this study was run just before Christmas, we asked participants how concerned they would be about repaying the financing if they used it to buy holiday purchases (1 = not at all concerned, 9 = extremely concerned). Last, participants completed an instruction check to assess whether they recalled the debt instrument they read about (options: “credit card,” “personal loan,” “I don’t remember”), and provided demographic information.

Results

Instruction check. The majority of participants (95.9%) correctly identified the debt type to which they were assigned.

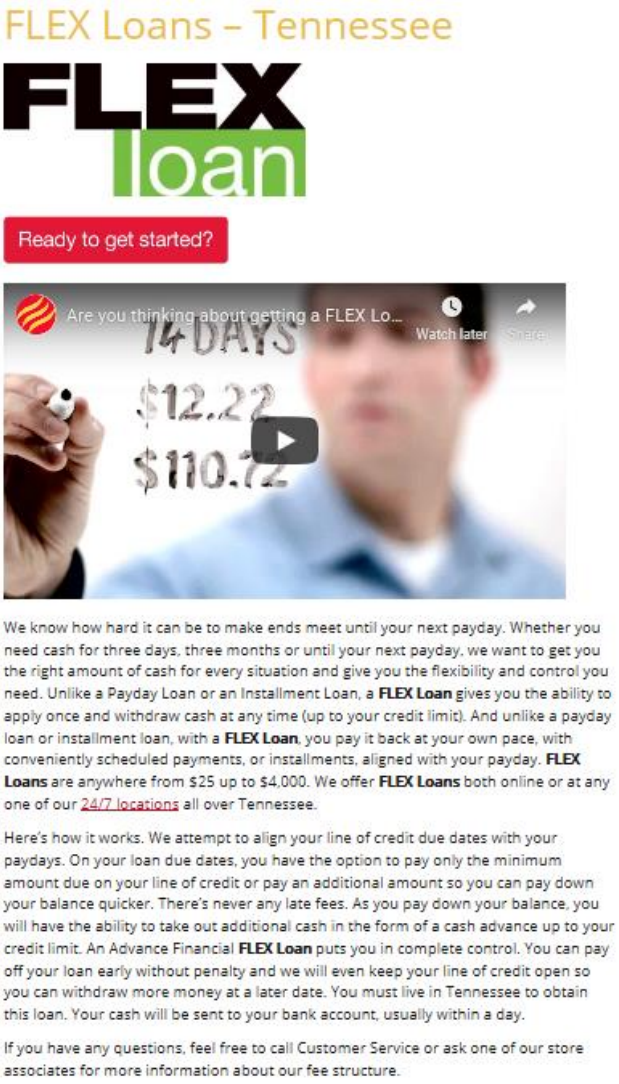
Interest in financing. The two measures assessing participants' interest in and likelihood of applying for the offer were correlated and combined to form a single measure of interest in the financing offer, $r = .91$, $p < .001$. There was a significant main effect of debt type, $F(1, 801) = 22.40$, $p < .001$. There was no main effect of offer terminology, $F(1, 801) = 2.57$, $p < .11$. However, we there was a significant debt type by offer terminology interaction, $F(1, 801) = 4.88$, $p < .027$. In the control condition, interest in the credit card offer was significantly greater than interest in the loan offer, $F(1, 801) = 24.25$, $p < .001$. However, these differences were reduced to marginal significance in the lower psychological ownership terminology condition, $F(1, 801) = 3.17$, $p = .076$. Moreover, as in Study 6, these differences were driven by changes in participants' interest in the credit offer, ($M_{control} = 5.67$, SD = 2.53 vs. $M_{lower\ ownership} = 4.98$, SD = 2.47), $F(1, 801) = 7.35$, $p = .007$; interest in the loan offer did not significantly differ across conditions, ($M_{control} = 4.41$, SD = 2.63 vs. $M_{lower\ ownership} = 4.52$, SD = 2.66), $F < 1$.

Repayment concern. There was a significant main effect of debt type on repayment concern, $F(1, 801) = 25.49$, $p < .001$. There was no main effect of offer terminology on repayment concern, $F < 1$. We observed a marginally significant interaction, $F(1, 801) = 2.72$, $p = .099$. In the control condition, participants were significantly more concerned about repaying any money spent using the loan compared to the credit ($M_{credit} = 5.67$, SD = 2.78 vs. $M_{loan} = 6.86$, SD = 2.29), $F(1, 801) = 22.58$, $p < .001$. Participants continued to be more concerned about repaying the loan in the lower psychological ownership terminology condition ($M_{credit} = 6.14$, SD = 2.57 vs. $M_{loan} = 6.748$, SD = 2.40), $F(1, 801) = 5.74$, $p = .017$. Consistent with the changes in participants' interest in the offer, the credit conditions were impacted more so than were the loan conditions. Lower psychological ownership terminology marginally increased repayment

concern for credit, $F(1, 801) = 3.56$, $p = .059$, but it did not significantly influence repayment concern for loans, $F < 1$.

This study provides a conceptual replication of Study 5 in the main manuscript. Incorporating lower psychological ownership terminology led to less interest in a debt type that is typically higher in psychological ownership (credit), but had no impact on interest in a debt type that is typically lower in psychological ownership (loans). These results provide greater evidence that psychological ownership plays a causal role in explaining differences in willingness to borrow across debt types.

EXAMPLE OF CREDIT AND LOAN BEING INTERCHANGEABLE IN PRACTICE



Source: https://www.af247.com/services/flex-loans