



## Case Report

## Both selfishness and selflessness start with the self: How wealth shapes responses to charitable appeals

Ashley V. Whillans<sup>a,\*</sup>, Eugene M. Caruso<sup>b</sup>, Elizabeth W. Dunn<sup>a</sup><sup>a</sup> Department of Psychology, University of British Columbia, Canada<sup>b</sup> Chicago Booth School of Business, University of Chicago, United States

## HIGHLIGHTS

- Social class is associated with differences in people's self-concepts.
- These self-concepts should define effective appeals for encouraging generosity.
- Charitable appeals emphasizing agency encourage donations for more affluent.
- Charitable appeals emphasizing communion encourage donations for less affluent.
- Tailoring messages to fit wealth-based self-concepts enhances charitable giving.

## ARTICLE INFO

## Article history:

Received 23 July 2016

Revised 29 October 2016

Accepted 18 November 2016

Available online 5 December 2016

## Keywords:

Charity

Wealth

Altruism

Prosocial behavior

Self-concepts

## ABSTRACT

Wealth is associated with differences in people's self-concepts. We propose that these self-concepts should define the types of appeals that are most effective at motivating generosity. Across three field studies, we randomly assigned participants to view an appeal for a charitable organization that emphasized agency (the pursuit of personal goals) or communion (the pursuit of shared goals). When the appeal emphasized agency, wealthier individuals reported greater willingness to give and donated more money to charity. In contrast, when the appeal emphasized communion, less wealthy individuals reported greater willingness to give. These findings could not be explained by relevant demographic characteristics such as age, ethnicity, or gender. This work adds to a growing body of research suggesting that wealth does not inherently result in selfishness or generosity. By tailoring messages to fit with people's self-concepts, it is possible to catalyze giving across the socioeconomic spectrum.

© 2016 Elsevier Inc. All rights reserved.

## 1. Introduction

The average American family donates approximately 3.4% of its discretionary income to charity each year (Giving USA Foundation, 2016). What inspires individuals to give? Although people routinely express a desire to help those in need (De Waal, 2008), people also routinely fail to follow through on their best intentions (Gollwitzer, 1999). One factor that may affect the likelihood of giving is the potential donor's own wealth. Yet, the effect of wealth on charitable giving is unclear. Some research suggests that the more money individuals make, the more that they choose to give away (Smeets, Bauer, & Gneezy, 2015), whereas other research suggests precisely the opposite (Piff, Kraus, Côté, Cheng, & Keltner, 2010). We propose that neither selfishness nor generosity is an inherent outcome of one's own financial standing. Instead, we

suggest that wealth should define the types of appeals that are most likely to be effective at motivating prosocial behavior.

Differences in wealth are associated with differences in the self-concept (Kraus, Piff, & Keltner, 2011; Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012). In particular, lower-class individuals typically develop more communal self-concepts, whereby the self is primarily defined by one's social connection to others, whereas upper-class individuals typically develop more agentic self-concepts, whereby the self is primarily defined by one's individual capacity for personal control (Abele & Wojciszke, 2007; Markus & Kitayama, 2010). Consistent with this theorizing, people with higher incomes—and those who subjectively feel higher in social rank—report higher perceptions of personal control (Kraus et al., 2012), and higher-class individuals show a greater desire to make decisions for the self (Stephens, Fryberg, & Markus, 2011). Related research suggests that money produces a self-sufficient, agentic mindset because having money enables people to meet personal goals without relying on the help of others (Gasiorowska, Chaplin, Zaleskiewicz, Wygrab, & Vohs, 2016; Lea &

\* Corresponding author.

E-mail addresses: [ashleywhillans@psych.ubc.ca](mailto:ashleywhillans@psych.ubc.ca) (A.V. Whillans), [Eugene.Caruso@chicagobooth.edu](mailto:Eugene.Caruso@chicagobooth.edu) (E.M. Caruso), [edunn@psych.ubc.ca](mailto:edunn@psych.ubc.ca) (E.W. Dunn).

**Table 1**  
Participant demographic characteristics across studies.

Study	1	2	3
N	185	448	445
% donated	26% <sup>a</sup>	50%	87%
M. donation amount	–	\$7.22 <sup>b</sup>	\$74.77 <sup>c</sup>
% female	58%	52%	58%
% Caucasian	85%	73%	59%
Md. (range), age	44 (17–85)	35 (18–78)	28 (18–70)
Md., range, income	\$70K–\$80K (<\$10K to \$2.5M)	\$70K–80K (<\$10K to \$500K)	\$70K–\$80K (10K to 500K)
Md. (range), net worth	\$100K–\$250K (\$1 to \$40M+)	\$50K–\$100K (\$1 to 10M+)	\$50K–\$100K (\$1 to 10M+)

<sup>a</sup> This measure captures donation intentions (vs. monetary donations).

<sup>b</sup> This represents \$7.22 of a possible \$10 that participants could have donated in the study.

<sup>c</sup> This represents \$74.77 of a possible \$100 that participants could have donated in the study.

Webley, 2006; Vohs, Mead, & Goode, 2006, Vohs, Mead, & Goode, 2008). As such, the motivation to achieve personal success is often in conflict with the motivation to value one's community and to help other people (Grouzet et al., 2005; Schwartz, 1992).

Motivational conflicts can inhibit action and prevent people from successfully following through with their goals. For example, when individuals are led to focus on achievement (vs. benevolence) they are less likely to offer help to a person in need (e.g., Maio, Pakizah, Cheung, & Rees, 2009). One approach for minimizing motivational conflicts is to tailor messages to an individual's specific goal orientation. Indeed, research suggests that messages are more impactful when they fit with people's underlying motivations (Cesario, Grant, & Higgins, 2004; Lee & Aaker, 2004). This is because such messages encourage motivational fit and increase the perceived value of the intended action (Higgins, 2000). Following from this work, we suggest that providing a fit between a charitable appeal and the donor's self-concept should increase generosity. If recent theorizing is correct, wealthier individuals should be more inclined to donate in response to appeals that emphasize agentic goals, whereas less wealthy individuals should be more inclined to donate in response to appeals that emphasize communal goals.

## 2. Overview of the studies

Across three field experiments, we assessed the impact of agentic and communal appeals for increasing charitable giving across the wealth spectrum. In Study 1, we conducted an experiment through the website of an established poverty relief charity (*The Life You Can Save*). In this study, participants were randomly assigned to view one of two charitable messages that emphasized agency (the pursuit of personal goals) or communion (the pursuit of shared goals; Abele & Wojciszke, 2007) and we measured whether participants chose to click a link to a webpage where they could make a donation. In Study

2, we conducted a more controlled field experiment to assess the efficacy of agentic vs. communal messages on actual monetary donations. In Studies 1 and 2, to maximize external validity, we selected actual charitable appeals already in use by the *Life You Can Save* organization that differed in the extent to which they emphasized agency or communion. In Study 3, to increase internal validity, we constructed new charitable appeals and conducted another controlled field experiment to assess the impact of these revised appeals on participants' donation intentions. In Studies 2 and 3, we focused our analyses on donation amount, which we were unable to measure in Study 1. To maximize transparency, we report the donation likelihood results in the Supplemental Online Material (SOM). Results are consistent across all measures (SOM).

Social class is a complex construct that includes people's objective wealth (i.e., their income and net-worth), their subjective wealth (i.e., their subjective socioeconomic standing), as well as their occupation and educational attainment (Weber, Gerth, & Wright, 1958). Yet, emerging research suggests that these constructs do not always predict similar outcomes. For example, recent research suggests that objective and subjective measures of wealth are better predictors of ethical decision making than other indicators of social class, such as occupation or education (e.g., Dubois, Rucker, & Galinsky, 2015). Furthermore, research on financial generosity has shown that objective and subjective indicators of wealth are critical predictors of financial generosity (e.g., Kessler, Zhang, & Milkman, 2016; Piff et al., 2010; Smeets et al., 2015). Thus, building on this work, we chose to focus on objective (i.e., income and net-worth) and subjective indicators of wealth (i.e., subjective socioeconomic standing).

From a practical perspective, we were also interested in identifying the appropriate levels at which more and less wealthy people were impacted by various charitable appeals. Indeed, to be of practical use, it is helpful to know the objective levels of wealth whereby people are more or less responsive to various charitable appeals. For example, it could be helpful for non-profit organizations to know which messages to send to each individual as a function of their income.

Across studies, we used an experimental moderation-of-process design (Spencer, Zanna, & Fong, 2005), rather than relying primarily on statistical mediation. Past research shows that people have difficulty accurately introspecting about motivational conflicts, even when those conflicts shape their behavior (Maio et al., 2009). Given this challenge, an ideal way of testing our hypothesis is to change the framing of the charitable appeal (thereby removing the motivational conflict between wealth and charitable giving) and to document between-condition differences on giving among wealthier and less wealthy individuals. Thus, across experiments, we measured participants' wealth, manipulated the framing of the appeal, and measured the donation behavior of more and less affluent people in response to each appeal.

Detailed demographic characteristics of the participants from each study are presented in Table 1. In this paper, we report all exclusions, every condition that was run, every measure that was given, and the stopping rule for each study (Simmons, Nelson, & Simonsohn, 2011).

**Table 2**  
Charitable appeals used in Studies 1 and 2.

Condition	Charitable appeal
Communal	This is an ad for a charitable organization called The Life You Can Save. Please take a moment to look over this advertisement. <i>The Life You Can Save spreads knowledge of what all of us can do together to reduce poverty.</i> The Life You Can Save encourages people to pledge a percentage of their income to poverty-related aid organizations.
Agentic	This is an ad for a charitable organization called The Life You Can Save. Please take a moment to look over this advertisement. <i>The Life You Can Save spreads knowledge of what each person can do individually to reduce poverty.</i> The Life You Can Save encourages people to pledge a percentage of their income to poverty-related aid organizations.

Note: These appeals were taken directly from advertisements in use by *The Life You Can Save*. Although images look slightly pixelated here, these images did not look pixelated in the Qualtrics survey that individuals viewed as part of the study.

**Table 3**  
Pilot test of the charitable appeals across Studies 1–3.

Variable	Study	N of pilot test	Agentic appeal	Communal appeal	Paired <i>t</i>	<i>p</i> value comparison
Agentic	1 & 2	39	4.97 (1.39)	3.10 (1.54)	<i>t</i> (38) = 6.22	<i>p</i> < 0.001
	3	44	4.27 (1.62)	3.36 (1.43)	<i>t</i> (43) = 2.72	<i>p</i> = 0.009
Communal	1 & 2	39	3.16 (1.33)	5.39 (1.22)	<i>t</i> (38) = 8.80	<i>p</i> < 0.001
	3	44	3.84 (1.14)	4.82 (1.51)	<i>t</i> (43) = 3.07	<i>p</i> = 0.004
Social status	3	44	3.70 (1.47)	3.82 (1.57)	<i>t</i> (43) = 0.68	<i>p</i> = 0.499
Powerful	3	44	3.89 (1.65)	3.84 (1.49)	<i>t</i> (43) = 0.24	<i>p</i> = 0.809
Important	3	44	3.89 (1.59)	4.09 (1.44)	<i>t</i> (43) = 1.09	<i>p</i> = 0.284

Note. <sup>a</sup>Participants read each appeal and were asked to rate the extent to which each appeal emphasized communion (1 = *Not at all Communal*, 7 = *Extremely Communal*) or agency (1 = *Not at all Agentic*, 7 = *Extremely Agentic*).

<sup>b</sup>We also pre-tested the agentic and communal appeals to ensure that these appeals did not differ on related constructs, such as the extent to which the charitable appeals led participants to believe that donating to the charity would increase their social status, make them feel more powerful, or make them feel like a more important person (1 = *Strongly Disagree*, 7 = *Strongly Agree*). We found no evidence that the charitable appeals differed on these constructs, suggesting that these appeals differed primarily on agency and communion.

Our data, syntax, and protocols are available through Open Science Framework (<https://osf.io/t9vz4/>).

### 3. Study 1

#### 3.1. Participants and procedure

Between November 21, 2013 and February 28, 2014, visitors to *The Life You Can Save* website were provided with the opportunity to participate in our survey and received a complimentary book for their time. During this time, we successfully recruited 185 participants (58% female) spanning a broad range of the economic spectrum (median household income: \$70,000–\$80,000, range: less than \$10,000 to \$2.5 million+, median personal net worth: \$100,000–\$250,000, range: \$1–\$25,000 to 40+ million dollars).

Participants completed an online survey where they reported their gender, age, ethnicity, household income, personal net-worth, and subjective wealth (in that order). Across studies, to measure subjective wealth, participants were presented with a 10-step ladder. Participants were told that this ladder represented where people stand in society and were asked where they would place themselves on this ladder (Adler, Epel, Castellazzo, & Ickovics, 2000). Next, participants were assigned to read information about *The Life You Can Save* that either emphasized agency or communion (Table 2). Finally, participants had the opportunity to click on a link labeled “Donate Today” that took them to a landing page where they could make a donation or click “Skip,” providing our measure of donation intentions.

##### 3.1.1. Message frames

In this study, we used two appeals already in use by *The Life You Can Save*. We selected these appeals because these two appeals best fit with well established definitions of agency and communion that are described in detail below. With a separate sample of participants, we pretested these appeals for the extent to which they were perceived as agentic or communal. Participants read each appeal and were asked to rate the extent to which each appeal emphasized communion

(1 = *Not at all Communal*, 7 = *Extremely Communal*) or agency (1 = *Not at all Agentic*, 7 = *Extremely Agentic*). To assist with making these ratings, we provided participants with definitions of communion and agency prior to rating each appeal (Abele & Wojciszke, 2007). Participants read that “communion refers to a person’s striving to lose his or her own individuality by merging with others. Researchers often define communion as emphasizing common goals with others.” Participants also read that “agency refers to a person’s striving to be separate from others, to master the environment, and to assert, protect and expand the self. Researchers often define agency as the pursuit of personal goals.” As expected, the communal appeal was rated as significantly more communal than the agentic appeal. The agentic appeal was rated as significantly more agentic than the communal appeal (Table 3).

##### 3.1.2. Objective wealth

Consistent with research examining wealth and generosity, across each of our studies, we created an objective index of wealth by standardizing and combining participants’ income and net-worth scores (Kushlev, Dunn, & Ashton-James, 2012; Piff et al., 2010). To maximize transparency, we report the results on each individual measure in the SOM.

#### 3.2. Results

In this study, 25.9% of participants clicked “Donate Today” to pursue a donation opportunity.

##### 3.2.1. Objective wealth

To assess whether the efficacy of the appeals varied by wealth, we entered frame (−1 = *Communal*, 1 = *Agentic*), the objective wealth composite, and a frame × wealth interaction into a binary logistic regression model to predict the likelihood of clicking “Donate Today” (0 = *Skip*, 1 = *Donate Today*). There was no main effect of condition, *p* = 0.681. As predicted, there was a significant frame × wealth composite interaction, *B* = −1.14, *SE* = 0.41, Wald’s *X*<sup>2</sup> = 7.57, *p* = 0.006. This result held controlling for participants’ age, gender, and ethnicity,

**Table 4**  
Correlation table of all of the variables examined in Study 1 (*N* = 185).

	1	2	3	4	5	6	7	8
1. Condition (1 = agentic)								
2. “Donate Now” (1 = yes)	0.03							
3. Objective wealth composite	0.02	0.03						
4. Income	0.01	0.08	0.89**					
5. Net-worth	0.01	−0.02	0.89**	0.57**				
6. Subjective wealth	−0.02	0.13 <sup>†</sup>	0.51**	0.59**	0.31**			
7. Gender (1 = female)	0.12	−0.11	−0.03	−0.006	−0.03	−0.14 <sup>†</sup>		
8. Ethnicity (1 = Caucasian)	−0.05	0.11	0.03	0.05	−0.01	0.11	0.04	
9. Age	−0.04	0.08	0.42**	0.22*	0.58**	0.06	0.05	0.18*

<sup>†</sup> *p* ≤ 0.10.

\* *p* ≤ 0.05.

\*\* *p* ≤ 0.01.

**Table 5**

Final model predicting “Donate Now” clicks by objective wealth and condition in Study 1.

Predictor	<i>B</i>	( <i>SE</i> )	Wald	Exp( <i>B</i> )	<i>p</i> value for predictor	Chi-square for model	<i>p</i> value	Pseudo <i>R</i> -square
Condition (1 = agentic)	−0.15	0.36	0.169	0.86	0.681			
Objective wealth	0.69	0.31	5.12	1.99	0.024			
Condition × wealth	−1.14	0.41	7.57	0.32	0.006	$\chi^2$ (3, 185)	8.49	0.037

**Table 6**

Final model predicting “Donate Now” clicks by objective wealth and condition with covariates in Study 1.

Predictor	<i>B</i>	( <i>SE</i> )	Wald	Exp( <i>B</i> )	<i>p</i> value for predictor	Chi-square for model	<i>p</i> value	Pseudo <i>R</i> -square
Condition (1 = agentic)	−0.16	0.38	0.18	0.85	0.672			
Objective wealth	0.68	0.34	4.00	1.97	0.046			
Condition × wealth	−1.26	0.44	8.15	0.28	0.004			
Age	0.01	0.01	1.29	1.01	0.257			
Gender (1 = female)	0.57	0.37	2.37	1.77	0.124			
Ethnicity (1 = Caucasian)	0.43	0.62	0.50	1.54	0.481	$\chi^2$ (6, 162)	12.63	0.049

Notes. This table reflects the results for the final binary logistic regression with all covariates entered simultaneously into the model.

$B = -1.26$ ,  $SE = 0.44$ , Wald's  $\chi^2 = 8.15$ ,  $p = 0.004$ . There were no three-way interactions between condition and wealth with either gender, ethnicity, or age to predict the likelihood of clicking “Donate Today” ( $ps \geq 0.357$ ). See Table 4 for a correlation table of all of the variables examined in this study. See Tables 5 and 6 for the regression models with and without covariates.

**3.2.1.1. Spotlight analyses.** Upon conducting a Johnson-Neyman test to determine the specific regions of significance (Johnson & Fay, 1950), individuals with an annual household income at or below  $Z = -0.91$  (approximately \$40,000 to \$50,000) were more likely to click “Donate Today” after viewing the communal (vs. agentic) appeal ( $ps \leq 0.05$ ). In contrast, individuals with an income at or above  $Z = 0.62$  (approximately \$90,000–\$100,000) were more likely to click “Donate Today” after viewing the agentic (vs. communal) appeal ( $ps \leq 0.05$ ).

### 3.2.2. Subjective wealth

To assess whether the efficacy of the appeals varied by subjective wealth, we entered frame ( $-1 = Communal$ ,  $1 = Agentic$ ), a centered subjective wealth variable, and a frame × wealth interaction into a binary logistic regression model to predict the likelihood of clicking “Donate Today” ( $0 = Skip$ ,  $1 = Donate Today$ ). In this model, there was no main effect of condition to predict the likelihood of clicking “Donate Today,” ( $p = 0.821$ ) and the interaction was not statistically significant,  $B = -0.24$ ,  $SE = 0.18$ ,  $Exp(B) = 0.78$ , Wald's  $\chi^2 = 1.85$ ,  $p = 0.174$ .

### 3.3. Discussion

After viewing an agentic (vs. communal) appeal, wealthier individuals reported greater intentions to donate to one of the charities that *The Life You Can Save* supports. These results provide initial evidence that matching message frame to self-concept can increase donation intentions. We documented these findings among a sample who were spontaneously visiting a charitable organization's website and who were considering making a donation with their own money. However, this study was limited in that the technical restrictions of the website prevented us from confirming whether participants who clicked “Donate Today” actually followed through to make a donation. Because the charity only allowed us to collect data for twelve weeks, the sample that we obtained was relatively small. Thus, in Study 2, we conducted a more controlled field experiment that allowed us to track the amount of money that participants donated.

## 4. Study 2

### 4.1. Participants

We recruited 449 participants from public places including a sports stadium in Vancouver, Canada and a science museum in Chicago, US. These data were collected from two separate samples targeting 200 participants each (see the SOM for the stopping decision rules used in Studies 2 & 3). There was no interaction between condition and location to predict whether participants made a donation or the amount that participants' donated,  $ps \geq 0.243$ . We therefore collapsed across the Vancouver and Chicago samples.<sup>1</sup> We recruited slightly more participants than planned because the research assistants worked set data collection schedules. Because not all of our participants completed the demographic measures, and because one person did not return their donation collection envelope, our analyses are based on  $N = 414$ .

### 4.2. Procedure

Participants completed a study on charitable appeals in exchange for ten dollars. After providing informed consent, participants received their \$10 payment in an envelope labeled “For You,” were asked to sign a receipt for payment, and were told to put their payment away. Participants were then told that our research team was studying the effectiveness of charitable appeals and were handed an envelope labeled “For Charity.” Participants completed the survey on an iPad. They completed the identical demographic questions and were randomly assigned to view the identical communal or agentic appeals from Study 1. They were told that our lab was collecting money for the charity that they had just read about, and they were provided with the opportunity to donate. To minimize social pressure, regardless of whether they made a donation, all participants returned their sealed “For Charity” envelope to a research assistant whom they had not previously met. Participants were reminded that their honest responses to the appeals were essential for the validity of our results. We counterbalanced whether participants completed the demographic information before making their donation decision, or vice versa; results did not differ by order.

### 4.3. Results

In this study, 50.2% of participants made a donation.

<sup>1</sup> See the SOM for the results of an exploratory measure examined in the Chicago data collection.



**Table 9**  
Final model predicting donation amount by objective wealth and condition with covariates in Study 2.

Predictor	$\beta$	<i>B</i>	( <i>SE</i> )	<i>t</i> value for predictor	<i>p</i> value for predictor	<i>F</i> value for model	<i>p</i> value	<i>R</i> -square
Condition (1 = agentic)	−0.01	−0.04	0.19	0.24	0.813			
Objective wealth	0.05	0.23	0.24	0.96	0.337			
Condition × wealth	0.15	0.72	0.21	3.45	0.001			
Age	0.04	0.01	0.01	0.78	0.436			
Gender (1 = female)	0.06	0.52	0.38	1.38	0.169			
Location (1 = Vancouver)	3.51	0.42	0.38	9.23	<0.001			
Ethnicity (1 = Caucasian)	0.09	0.84	0.44	1.90	0.058	<i>F</i> (7, 395)	18.30	<0.001

Notes. This table reflects the results for the final binary logistic regression with all covariates entered simultaneously into the model.

were randomly assigned to read an appeal that emphasized agency or communion. Participants were then provided with information that they would be entered into a lottery for the chance to win \$100 and were provided with the opportunity to donate some of their potential lottery winnings to charity. Participants were told that their decision would be binding if they won. After making their decision, participants reported the extent that they felt that their donation decision fit with their values (Cesario et al., 2004) and the extent to which their donation decision had made a significant difference to the charity (Aknin, Dunn, Whillans, Grant, & Norton, 2013). Participants reported their agreement with these statements on a scale ranging from 1 = *Strongly Disagree* to 7 = *Strongly Agree*.

### 5.1.1. Message frames

The messages used in this study were adapted from the charitable appeals used in Studies 1 and 2 (see Table 12). We pre-tested these appeals with a separate sample of 44 adults recruited from Science World. Using the identical protocol as in the initial pre-test, we provided participants with established definitions of communion and agency prior to rating each appeal (Abele & Wojciszke, 2007). We also asked participants to rate the extent to which they believed donating would increase their social status or make them feel like a more powerful or important person. As predicted, the communal appeal was rated as significantly more communal than the agentic appeal. The agentic appeal was rated as significantly more agentic than the communal appeal. There were no differences between the agentic and communal appeals on the extent to which donating to the charity was perceived as an act that would increase social status, make the participant feel more powerful, or make the participant feel like a more important person (Table 4). These results provide evidence that the appeals used in Study 3 differed on agency vs. communion and did not differ on other related characteristics that might have otherwise accounted for our results.

## 5.2. Results

Consistent with research suggesting that people are more generous when making donations from prize windfalls (e.g., Kroll, Cherry, & Shogren, 2007), 87.3% of participants pledged some of their lottery earnings to charity (range: \$0–\$100, *M* = \$65.41, *SD* = \$37.31).

### 5.2.1. Objective wealth

Using the identical analytic strategy as Studies 1 and 2, there was no main effect of condition to predict pledge amount ( $p = 0.681$ ). In this model, there was a significant frame × wealth interaction to predict pledge amount,  $B = 11.26$ ,  $SE = 3.91$ ,  $t(467) = 2.88$ ,  $p = 0.004$ . The frame × wealth interaction held controlling for participants' age,

gender, and ethnicity,  $B = 12.25$ ,  $SE = 3.99$ ,  $t(456) = 3.07$ ,  $p = 0.002$ . There were no three-way interactions between condition and objective wealth with either gender, ethnicity or age to predict the amount that participants pledged to charity ( $ps \geq 0.496$ ). See Table 13 for a correlation table of all of the variables examined in this study. See Tables 14 and 15 for the linear regression models with and without covariates.

**5.2.1.1. Spotlight analyses.** Individuals with an annual household income at or below  $Z = -1.04$  (approximately \$30,000 to \$40,000) pledged more of their lottery prize to charity after viewing the communal (vs. agentic) appeal ( $ps \leq 0.05$ ). In contrast, individuals with an annual household income at or above  $Z = 0.61$  (approximately \$90,000 to \$100,000) pledged more to charity after viewing the agentic (vs. communal) appeal.

### 5.2.2. Subjective wealth

Using the identical analytic strategy as Studies 1 and 2, there was no main effect of condition ( $p = 0.538$ ). The frame × wealth interaction was not a significant predictor of pledge amount in this study,  $B = 1.38$ ,  $SE = 1.18$ ,  $t(467) = 1.17$ ,  $p = 0.244$ .

### 5.2.3. Mediation analyses

There were no wealth by condition interactions with perceived fit or impact to predict donation amount, suggesting that these variables were not plausible mediators.

## 5.3. Discussion

In Study 3, using a revised set of charitable appeals, we found additional evidence that appeals were more effective when they matched the self-concepts associated with an individual's objective wealth. We observed weaker results on the subjective measure of wealth in this study.

## 6. Meta-analysis of Studies 1–3

We meta-analyzed the results of Studies 1–3 ( $N = 1078$ ). Following established recommendations (Lipsey & Wilson, 2001), individual standardized effect sizes from each study were weighted by the inverse of their variance and aggregated to arrive at a meta-analytic effect size across studies.

### 6.1. Objective wealth

In these analyses, we first assessed the relationship between condition and the objective wealth composite on the amount of money that

**Table 10**  
Final model predicting donation amount by subjective wealth and condition in Study 2.

Predictor	$\beta$	<i>B</i>	( <i>SE</i> )	<i>t</i> value for predictor	<i>p</i> value for predictor	<i>F</i> value for model	<i>p</i> value	<i>R</i> -square
Condition (1 = agentic)	−0.03	−0.12	0.20	0.60	0.547			
Subjective wealth	0.06	0.03	0.11	0.56	0.579			
Condition × wealth	0.16	0.37	0.11	3.32	0.001	<i>F</i> (3, 439)	4.09	0.007

**Table 11**  
Final model predicting donation amount by subjective wealth and condition with covariates in Study 2.

Predictor	$\beta$	<i>B</i>	( <i>SE</i> )	<i>t</i> value for predictor	<i>p</i> value for predictor	<i>F</i> value for model	<i>p</i> value	<i>R</i> -square
Condition (1 = agentic)	−0.01	−0.06	0.18	0.31	0.759			
Subjective wealth	0.001	0.002	0.11	0.02	0.987			
Condition × wealth	0.14	0.33	0.10	3.26	0.001			
Age	0.07	0.02	0.01	1.61	0.107			
Gender (1 = female)	−0.07	−0.55	0.37	1.50	0.135			
Location (1 = Vancouver)	0.43	3.60	0.37	9.74	<0.001			
Ethnicity (1 = Caucasian)	0.08	0.73	0.42	1.73	0.084	<i>F</i> (7, 420)	20.18	<0.001
								0.255

Notes. This table reflects the results for the final binary logistic regression with all covariates entered simultaneously into the model.

participants donated (Study 2) or pledged to donate (Study 3). Across studies, there was a significant interaction between condition and wealth to predict the amount that participants donated,  $Z = 3.29$ ,  $p < 0.001$ , 95%CI [0.31, 1.21].

Decomposing this interaction, among participants who were randomly assigned to the communal condition, there was a negative, non-significant association between wealth and the amount that participants donated or pledged to donate,  $Z = -0.59$ ,  $p = 0.278$ , 95%CI [−0.84, 0.45]. In contrast, in the agentic condition, there was a significant, positive association between wealth and the amount that participants donated or pledged to donate,  $Z = 4.33$ ,  $p < 0.001$ , 95%CI [0.75, 2.00].

## 6.2. Subjective wealth

We then assessed the relationship between condition and the subjective wealth measure on the amount of money that participants donated (Study 2) or pledged to donate (Study 3). Across studies, there was a significant interaction between condition and subjective wealth to predict the amount that participants donated or pledged to donate,  $Z = 3.79$ ,  $p < 0.001$ , 95%CI [0.18, 0.57].

Decomposing this interaction, among participants who were assigned to the communal condition, there was a negative association between subjective wealth and the amount that participants donated or pledged to donate,  $Z = -2.05$ ,  $p = 0.040$ , 95%CI [−0.64, −0.01]. In contrast, in the agentic condition, there was a positive association



between subjective wealth and donation or pledge amount,  $Z = 3.10$ ,  $p = 0.002$ , 95%CI [0.17, 0.76]. This meta-analysis helps to reveal the consistency of the general pattern of findings across studies, participants, and measures.

## 7. General discussion

In three studies, conducted in two countries with over 1000 participants, we found evidence that tailoring messages based on wealth-relevant self-concepts encouraged charitable contributions. Upon conducting a meta-analysis, we found consistent evidence that agentic appeals increased the amount of money that participants donated among wealthier individuals. In this meta-analysis, we also found evidence that communal appeals increased the amount of money that participants donated among less wealthy individuals, although these results were less consistent across the objective wealth measures examined. We obtained these results in a diverse sample of participants recruited from Canada and the US who represented a broad range of income levels from less than \$10,000 to \$2.5 million+.

Upon conducting spotlight analyses, agentic (vs. communal) appeals increased donations for individuals making approximately \$90,000 to \$100,000 of household income per year across studies. In contrast, upon conducting spotlight analyses, communal (vs. agentic) appeals increased donations for individuals making approximately \$40,000 to \$50,000 of household income. Because the overall wealth of our studies was relatively high (\$70,000 to \$80,000 of annual household income per

**Table 12**  
Charitable appeals used in Study 3.

Condition	Charitable appeal
Communal	This is an ad for a charitable organization called The Life You Can Save. Please take a moment to look over this advertisement. <i>The Life You Can Save spreads knowledge of what all of us can do together to reduce poverty.</i> The Life You Can Save encourages people to pledge a percentage of their income to poverty-related aid organizations.
	
Agentic	This is an ad for a charitable organization called The Life You Can Save. Please take a moment to look over this advertisement. <i>The Life You Can Save spreads knowledge of what each person can do individually to reduce poverty.</i> The Life You Can Save encourages people to pledge a percentage of their income to poverty-related aid organizations.
	

Note: Charity descriptions were created using language from *The Life You Can Save* website. Although images look slightly pixelated here, these images did not look pixelated in the Qualtrics survey that individuals viewed as part of the study.

**Table 13**  
Correlation table of all variables examined in Study 3 (*N* = 474).

	1	2	3	4	5	6	7	8	9
1. Condition (1 = agentic)									
2. % donated	−0.02								
3. Amount donated	0.02	0.67**							
4. Objective wealth composite	0.03	−0.08†	0.07						
5. Income	0.03	−0.05	0.07	0.87**					
6. Net-worth	0.03	−0.10†	0.07	0.86**	0.45**				
7. Subjective wealth	−0.03	0.02	0.13**	0.38**	0.35**	0.28**			
8. Gender (1 = female)	0.03	0.11*	−0.01	−0.10†	−0.07	−0.12*	−0.02		
9. Ethnicity (1 = Caucasian)	0.07	−0.04	0.03	0.06	0.06	−0.005	0.12**	−0.04	
10. Age	0.0001	−0.05	0.08†	0.36**	0.15**	0.52**	0.08†	−0.11*	0.07

† *p* ≤ 0.10.  
\* *p* ≤ 0.05.  
\*\* *p* ≤ 0.01.

**Table 14**  
Final model predicting donation amount by objective wealth and condition in Study 3.

Predictor	$\beta$	<i>B</i>	( <i>SE</i> )	<i>t</i> value for predictor	<i>p</i> value for predictor	<i>F</i> value for model	<i>p</i> value	<i>R</i> -square
Condition (1 = agentic)	0.02	0.70	1.71	0.411	0.681			
Objective wealth	−0.06	−2.42	2.73	0.889	0.375			
Condition × wealth	0.18	11.26	3.91	2.881	0.004	<i>F</i> (3, 470)	3.64	0.013

year on average), future research should focus on clarifying the relationship between wealth and charitable giving among individuals at the lower end of the socioeconomic spectrum.

These findings add to an emerging body of literature showing that selfishness and generosity are not an inherent outcome of one's financial standing (e.g., Dubois et al., 2015; Kessler et al., 2016; Kraus & Callaghan, 2016; Whillans & Dunn, 2015). For example, wealthy people are more inclined to give when donations are made publicly, whereas less wealthy people are more inclined to give when donations are made privately (Kraus & Callaghan, 2016). Together, these findings point to a re-interpretation of economic data showing that wealthy individuals are less inclined to donate to charity (e.g., Piff et al., 2010). Rather than reflecting an inherent failure of wealthier people to exhibit compassion toward other people, this pattern may reflect a motivational conflict that can be readily overcome by altering the typical nature of charitable giving. This research also provides a novel test of emerging theoretical claims regarding the effects of social class on people's self-concepts (Kraus et al., 2012). As Van Lange (2013) has recently argued, one of the primary criteria for evaluating a theory is its applicability in addressing real-world challenges. The present research thus provides a valuable road test for the theory that social class fundamentally shapes the self-concept.

One limitation of the present work is that we used only one target charity across our studies. Our decision to examine donations to a poverty-relief charity was driven by conceptual and applied considerations. Conceptually, we were interested in examining an organization that would not provide advantages to our participants (in contrast to educational or cultural institutions, which may provide direct benefits to donors). From an applied perspective, increasing donations to poverty-relief charities is particularly important in light of large-scale survey research

showing that individuals are particularly reluctant to donate to charities that benefit low-income individuals (Giving USA Foundation, 2016).

It might seem somewhat surprising that our results were not mediated by participants' self-reported feelings of fit; however, these findings should be interpreted cautiously in light of past research showing that people have difficulty introspecting about motivational conflicts (Maio et al., 2009). People might have been reluctant to say that the decision was not a good fit with their values given that they answered this question immediately after making their donation decision (with almost 90% choosing to give; Festinger & Carlsmith, 1959).

Another possibility for the lack of mediation is that other theories might better account for our results. Although we started by examining this question in light of the theory of perceived fit and using the terminology agency and communion, it is possible to consider this work in light of the cultural mismatch theory and using the terminology interdependence and independence (see SOM for additional data supporting this claim). The cultural mismatch theory proposes that a match between someone's cultural values and the activities that they are pursuing can enhance motivation and performance (e.g., Stephens, Fryberg, Markus, Johnson & Covarrubias, 2012; Stephens, Townsend, Markus and Phillips, 2012). Because wealth can shape whether people enact independent or interdependent cultural models of the self (e.g., Markus & Conner, 2013; Markus & Kitayama, 2010; Snibbe & Markus, 2005) this theory might better account for our empirical findings, although more research is needed to substantiate this claim. However, in bringing this perspective to bear, additional hypotheses emerge. Future work could examine whether our results are limited to cultures where wealth is associated with greater feelings of independence. Future research could also explore whether relevant appeals are more persuasive in

**Table 15**  
Final model predicting donation amount by objective wealth and Condition with covariates in Study 3.

Predictor	$\beta$	<i>B</i>	( <i>SE</i> )	<i>t</i> value for predictor	<i>p</i> value for predictor	<i>F</i> value for model	<i>p</i> value	<i>R</i> -square
Condition (1 = agentic)	0.008	0.30	1.73	0.175	0.861			
Objective wealth	−0.09	−3.63	2.91	1.249	0.212			
Condition × wealth	0.20	12.25	3.99	3.07	0.002			
Age	0.05	0.20	0.18	1.06	0.290			
Gender (1 = female)	0.001	0.03	3.51	0.008	0.994			
Ethnicity (1 = Caucasian)	0.04	2.78	3.55	0.783	0.434	<i>F</i> (6, 462)	2.21	0.041

Notes. This table reflects the results for the final logistic regression with all covariates entered simultaneously into the model.



part because they sound as if they are coming from an in-group member who is from a similar socioeconomic background.

Indeed, our findings point to a number of novel hypotheses. Although we only examined financial generosity, portraying generosity as an opportunity to satisfy agentic or communal goals may be differentially effective at promoting a variety of prosocial behaviors among less and more affluent individuals—from donating blood to volunteering at soup kitchens. In addition, eliminating the motivational conflict between wealth, social class, and generosity should not only promote higher levels of prosocial behavior, but should also increase the emotional rewards that individuals reap from helping others (Weinstein & Ryan, 2010). As a result, depending on how these initial acts of generosity are framed, initial prosocial acts may be more self-reinforcing and therefore produce more sustainable increases in helping.

Understanding the messages that encourage prosocial behavior for more and less wealthy individuals is important. In the US, it costs over \$50 billion each year to raise roughly \$300 billion (National Philanthropic Trust, 2012). By tailoring messages to people's self-concepts, it is possible to efficiently encourage charitable giving across the socioeconomic spectrum.

## Acknowledgments

We would like to thank Jon Behar, Charlie Bresner, and Nathan Wispinski for their feedback and assistance with this research. The first author would like to acknowledge support from the Society for Philanthropy Initiative at the University of Chicago. The second author would like to acknowledge support from the Willard Graham Faculty Research Fund at the University of Chicago, Booth School of Business. This project was funded through a New Paths to Purpose grant awarded to the University of Chicago, Booth School of Business from the John Templeton Foundation. The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the John Templeton Foundation.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.jesp.2016.11.009>.

## References

- Abele, A. E., & Wojciszke, B. (2007). Agency and communion from the perspective of self versus others. *Journal of Personality and Social Psychology*, 93(5), 751.
- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychology*, 19(6), 586.
- Aknin, L. B., Dunn, E. W., Whillans, A. V., Grant, A. M., & Norton, M. I. (2013). Making a difference matters: Impact unlocks the emotional benefits of prosocial spending. *Journal of Economic Behavior & Organization*, 88, 90–95.
- Bryan, C. J., Master, A., & Walton, G. M. (2014). "Helping" versus "being a helper": Invoking the self to increase helping in young children. *Child Development*, 85(5), 1836–1842.
- Cesario, J., Grant, H., & Higgins, E. T. (2004). Regulatory fit and persuasion: Transfer from "feeling right". *Journal of Personality and Social Psychology*, 86(3), 388.
- De Waal, F. B. (2008). Putting the altruism back into altruism: The evolution of empathy. *Annual Review of Psychology*, 59, 279–300.
- Dubois, D., Rucker, D. D., & Galinsky, A. D. (2015). Social class, power, and selfishness: When and why upper and lower class individuals behave unethically. *Journal of Personality and Social Psychology*.
- Gasiorowska, A., Chaplin, L. N., Zaleskiewicz, T., Wygrab, S., & Vohs, K. D. (2016). Money cues increase agency and decrease prosociality among children early signs of market-mode behaviors. *Psychological Science* (0956797615620378).
- Giving USA Foundation (2016). *Glenview, IL: The Giving Institute* (Retrieved July 22, 2016, from <http://www.givinginstitute.org/?page=GUSAAnnualReport>).
- Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist*, 54(7), 493.
- Grouzet, F. E., Kasser, T., Ahuvia, A., Dols, J., Kim, Y., Lau, S., ... Sheldon, K. M. (2005). The structure of goal contents across 15 cultures. *Journal of Personality and Social Psychology*, 89(5), 800–816. <http://dx.doi.org/10.1037/0022-3514.89.5.800>.
- Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *The Journal of Abnormal and Social Psychology*, 58(2), 203.
- Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist*, 55(11), 1217.
- Johnson, P. O., & Fay, L. C. (1950). The Johnson-Neyman technique, its theory and application. *Psychometrika*, 15(4), 349–367.
- Kessler, J. B., Zhang, C. Y., & Milkman, K. L. (2016). Getting the 1% to give. *Working Paper, Wharton School of Business*. The University of Pennsylvania.
- Kraus, M. W., & Callaghan, B. (2016). Prosocial in public: Higher social class is associated with increased prosocial behavior in public giving contexts. *Social Psychological and Personality Science*.
- Kraus, M. W., Piff, P. K., & Keltner, D. (2011). Social class as culture the convergence of resources and rank in the social realm. *Current Directions in Psychological Science*, 20(4), 246–250.
- Kraus, M. W., Piff, P. K., Mendoza-Denton, R., Rheinschmidt, M. L., & Keltner, D. (2012). Social class, solipsism, and contextualism: How the rich are different from the poor. *Psychological Review*, 119(3), 546.
- Kroll, S., Cherry, T. L., & Shogren, J. F. (2007). The impact of endowment heterogeneity and origin on contributions in best-shot public good games. *Experimental Economics*, 10(4), 411–428.
- Kushlev, K., Dunn, E. W., & Ashton-James, C. E. (2012). Does affluence impoverish the experience of parenting? *Journal of Experimental Social Psychology*, 48(6), 1381–1384.
- Lea, S. E., & Webley, P. (2006). Money as tool, money as drug: The biological psychology of a strong incentive. *Behavioral and brain sciences*, 29(02), 161–209.
- Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: The influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology*, 86(2), 205.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Vol. 49. Thousand Oaks, CA: Sage publications.
- Markus, H. R., & Conner, A. (2013). Clash! 8 cultural conflicts that make us who we are. *Psychological Science*, 20, 444–446.
- Markus, H. R., & Kitayama, S. (2010). Cultures and selves: A cycle of mutual constitution. *Perspectives on Psychological Science*, 5(4), 420–430.
- Maio, G. R., Pakizeh, A., Cheung, W., & Rees, K. J. (2009). Changing, priming, and acting on values: Effects via motivational relations in a circular model. *Journal of Personality and Social Psychology*, 97(4), 699–715. <http://dx.doi.org/10.1037/a0016420>.
- National Philanthropic Trust (2012). *Charitable giving statistics*. (Retrieved from <http://www.nptrust.org/philanthropicresources/charitable-giving-statistics>).
- Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, 99(5), 771.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1–65.
- Snibbe, A. C., & Markus, H. R. (2005). You can not always get what you want. Educational attainment, agency, and choice. *Journal of Personality and Social Psychology*, 88(4), 703.
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, 22(11), 1359–1366.
- Smeets, P., Bauer, R., & Gneezy, U. (2015). Giving behavior of millionaires. *Proceedings of the National Academy of Sciences*, 112(34), 10641–10644.
- Spencer, S. J., Zanna, M. P., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of Personality and Social Psychology*, 89(6), 845.
- Stephens, N. M., Fryberg, S. A., & Markus, H. R. (2011). When choice does not equal freedom: A sociocultural analysis of agency in working-class American contexts. *Social Psychological and Personality Science*, 2(1), 33–41.
- Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012a). Unseen disadvantage: How American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of Personality and Social Psychology*, 102(6), 1178.
- Stephens, N. M., Townsend, S. S., Markus, H. R., & Phillips, L. T. (2012b). A cultural mismatch: Independent cultural norms produce greater increases in cortisol and more negative emotions among first-generation college students. *Journal of Experimental Social Psychology*, 48(6), 1389–1393.
- Van Lange, P. A. (2013). What we should expect from theories in social psychology truth, abstraction, progress, and applicability as standards (TAPAS). *Personality and Social Psychology Review*, 17(1), 40–55.
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science*, 314(5802), 1154–1156.
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2008). Merely activating the concept of money changes personal and interpersonal behavior. *Current Directions in Psychological Science*, 17(3), 208–212.
- Weber, M., Gerth, H. H., & Wright, M. C. (1958). *From Max Weber: Essays in sociology*. New York, NY: Oxford University Press.
- Weinstein, N., & Ryan, R. M. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of Personality and Social Psychology*, 98(2), 222.
- Whillans, A. V., & Dunn, E. W. (2015). Thinking about time as money decreases environmental behavior. *Organizational Behavior and Human Decision Processes*, 127, 44–52.