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It's All About the Money (For Some): Consequences of Financially Contingent Self-Worth

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Abstract

Financial success is an important goal, yet striving for it is often associated with negative outcomes. One reason for this paradox is that financial pressures may be tied to basing self-worth on financial success. Studies 1a to 1c developed a measure of Financial Contingency of Self-Worth (Financial CSW), and found that it predicted more financial social comparisons, financial hassles, stress, anxiety, and less autonomy. In response to a financial (vs. academic) threat, higher Financial CSW participants experienced less autonomy, perceived financial problems more negatively, and disengaged from their financial problems (Study 2). When given an opportunity to self-affirm, however, Financial CSW participants did not show diminished autonomy in response to a financial (vs. academic) threat (Study 3). Finally, participants with higher Financial CSW were less likely to make extravagant spending decisions following a financial (vs. health) threat (Study 4). Together, these studies demonstrate the many consequences of staking self-worth on financial success.

Keywords

contingencies of self-worth, money, well-being, materialism, autonomy, decision making

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Despite widespread belief that having money buys happiness, research has consistently shown only a small effect of money on happiness in developed countries, such as the United States (Diener & Biswas-Diener, 2002; Myers, 2000). In fact, placing central importance on materialistic values or financial aspirations has been linked to a host of negative outcomes, including lower self-esteem and life satisfaction; more anxiety, depressive symptoms, and physical health problems; and more maladaptive behaviors compared with placing relatively less importance on materialism or financial goals (Dittmar, 2005; Dittmar, Bond, Hurst, & Kasser, 2014; Kasser, 2002; Kasser, Cohn, Kanner, & Ryan, 2007; Kasser et al., 2014; Kasser & Ryan, 1993, 1996; Nickerson, Schwarz, Diener, & Kahneman, 2003; Niemiec, Ryan, & Deci, 2009; Richins & Dawson, 1992). Not everyone who pursues money, however, experiences lowered well-being. For whom, then, does the pursuit of financial success lead to negative outcomes?

In the present research, we propose that the desire for money diminishes well-being when one's *self-worth* is staked on achieving financial success. Although some lines of research suggest that self-esteem is a vital human need (Psyzczynski, Greenberg, & Solomon, 2000; Sheldon, Elliot, Kim, & Kasser, 2001), other perspectives suggest that when people pursue self-esteem, especially contingent self-worth, they are likely to feel anxious, stressed, and to be hindered from satisfying basic psychological needs (Crocker & Park, 2004, 2012; Ryan & Brown, 2003). To test these ideas in the financial domain—a domain that is highly relevant to everyday life—we developed a measure of Financial Contingency of Self-Worth (Financial CSW) and examined its unique predictive validity in shaping people's well-being, coping strategies, and spending decisions in response to financial stressors.

Motivations for Pursuing Financial Success

The pursuit of financial success is typically described in terms of materialism or financial aspirations. Materialism refers to the importance one places on ownership and acquisition of material goods in achieving desired life goals, such as happiness (Belk, 1985; Richins & Dawson, 1992). Financial aspirations refer to the degree to which people pursue financial success as a central life goal (Kasser & Ryan, 1993). People prioritize the pursuit of financial success for

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various reasons, such as seeking financial security, gaining power over others, expressing oneself, or because money is presumed to make people happier (Aknin, Norton, & Dunn, 2009; Belk, 1985; Richins & Dawson, 1992; Srivastava, Locke, & Bartol, 2001).

People may also value financial success because it reduces personal insecurities (Richins & Dawson, 1992). Along these lines, individuals with chronic or situationally activated self-doubt show increased endorsement of materialistic attitudes (Braun & Wicklund, 1989; Chang & Arkin, 2002; Kasser, 2002). In response to psychological threats, people often compensate by valuing extrinsic aspirations (e.g., financial goals) over intrinsic aspirations (e.g., personal growth; Sheldon & Kasser, 2008). Priming thoughts of death—perhaps the most extreme form of uncertainty—has been shown to heighten materialism as well (Kasser & Sheldon, 2000). Although death is a certainty in life, the anticipation and details surrounding one's death are uncertain; people do not know the exact date, time, or manner in which they will die.

Feelings of insecurity with significant others may also contribute to materialistic pursuits. For example, young adults with separated or divorced parents are more likely than those from intact families to hold materialistic attitudes and show compulsive purchasing tendencies (Rindfleisch, Burroughs, & Denton, 1997). Other studies indicate that teenagers who place importance on financial success are likely to have mothers who demonstrate more controlling and less nurturing behaviors (Kasser, Ryan, Zax, & Sameroff, 1995). In contrast, inducing feelings of security (e.g., via peer acceptance) lowers materialism among children and adolescents (Chaplin & John, 2007). Together, these findings suggest that self-esteem and self-threat may play an important role in regulating financial pursuits. Extending these ideas, we propose that the pursuit of financial success may be tied to contingencies of self-worth (CSWs) for some individuals (but not for others), with implications for well-being and responses to financial threats.

Financial CSW and Consequences of Pursuing Financial Success

Two broad categories of well-being have been examined in the literature. The study of *hedonic well-being* examines constructs such as happiness, positive and negative affect balance, and life satisfaction (Diener, 1984; Diener & Suh, 1997; Kahneman, Diener, & Schwarz, 1999; Lyubomirsky & Lepper, 1999); the study of *eudaimonic well-being* examines constructs related to optimal psychological functioning, such as experiencing meaning and purpose in life, and meeting basic psychological needs (Rogers, 1961; Ryff, 1989; Ryan & Deci, 2000; Steger, 2009).

In the current research, we focused on facets of both hedonic and eudaimonic well-being as they relate to Financial CSW. In terms of hedonic well-being, we predicted that basing self-worth on financial success would lead people to experience more stress and anxiety due to perceived pressures to succeed (and to avoid failure) in the financial domain. In terms of eudaimonic well-being, we predicted that basing self-worth on financial success would reduce satisfaction of the basic need for autonomy. Previous research suggests that when people strive for financial success, they are often motivated by controlled reasons, such as wanting to overcome self-doubt, rather than by autonomous or intrinsic reasons, such as personal interest (Kasser & Ryan, 1993; Sheldon & Kasser, 1995; Sheldon, Ryan, Deci, & Kasser, 2004; Srivastava et al., 2001).

According to self-determination theory (Ryan & Deci, 2000), pursuing extrinsic goals, such as financial success, is an example of introjected self-regulation in which people are motivated to attain rewards (e.g., pride, approval) and avoid punishments (e.g., feeling shame, guilt, anxiety; Carver & Baird, 1998; Ryan, 1995). People with introjected self-regulation are driven more by a sense of obligation than by free will; they feel as if they *have* to engage in a behavior rather than engaging in a behavior because they *want* to (Deci, Eghrari, Patrick, & Leone, 1994). CSW is a prime example of introjected self-regulation, in that people seek to boost (and avoid drops) in their state self-esteem in domains on which their self-worth is staked (Crocker & Wolfe, 2001). Accordingly, individuals with Financial CSW feel pressure to achieve financial success—to feel good (and avoid feeling bad) about themselves. We therefore expected people to experience lowered hedonic well-being, in the form of increased stress and anxiety, the more they based their self-worth on financial success.

A similar argument can be made for Financial CSW reducing people's sense of autonomy. Autonomy is considered to be a fundamental psychological need that enables people to thrive and experience optimal well-being (Ryan & Deci, 2000). Autonomy is the feeling that one's actions emanate from one's own volition; it reflects "self-governance, or rule by the self" (Ryan & Deci, 2006, p. 1562). A lack of autonomy, on the contrary, is characterized by regulation from forces and pressures outside of the self, including "external contingencies of reward and punishment" (p. 1562). We focused specifically on autonomy as an indicator of eudaimonic well-being in the present research, because a central tenet of CSW theory is that individuals adopt introjected self-regulation in domains on which they base their self-worth, which reduces the tendency for autonomous self-regulation (Crocker & Wolfe, 2001). Due to the perceived burden of meeting standards of self-worth in the financial domain, we expected people with Financial CSW to experience lowered eudaimonic well-being in the form of feeling less autonomy and control over their lives.

In addition, we expected that individuals who based their self-worth on financial success would make more financially based social comparisons, experience more financial hassles, and show more self-protective responses in the face of financial threats. Regarding financial social comparisons, people

tend to compare themselves with others to determine where they stand on valued traits and attributes (Festinger, 1954). Domains that are highly relevant to oneself elicit more social comparisons than domains that are less personally relevant (Tesser, 1988). For example, if a person considers academic competence to be an important part of his or her self-concept, then when a close other performs well academically, the individual might feel worse about himself or herself in comparison. In contrast, if academics is not a domain that is highly relevant to oneself, then a close other's superior academic performance should not lead to feelings of threat and lowered self-evaluations. We therefore predicted that individuals who strongly based their self-worth on financial success would be the ones most likely to compare their financial status with others, perhaps to monitor how well they are meeting standards of financial success relative to others.

In addition to financial comparisons, we expected individuals with Financial CSW to experience more financial hassles in everyday life. People tend to experience more emotional ups and downs in response to events that occur in domains of contingency. For example, college students who strongly based their self-worth on academics showed greater drops in their state self-esteem on days when they received worse-than-expected exam and paper grades (Crocker, Karpinski, Quinn, & Chase, 2003). Another study found that college seniors who based their self-worth on academics showed greater fluctuations in their state self-esteem as a function of acceptances and rejections from graduate programs (Crocker, Sommers, & Luhtanen, 2002).

Effects of CSWs have been demonstrated in other domains as well. Participants who based their self-worth on others' approval and received negative feedback about their likeability showed lower state self-esteem, less positive affect, and more negative affect than those who based their self-worth less in this domain (Park & Crocker, 2008). Other studies have shown that when negative relationship events occur, those with Relationship CSW experience more negative emotions, which in turn predicts greater fluctuations in their self-esteem (Knee, Canevello, Bush, & Cook, 2008). Furthermore, individuals who experienced a recent romantic breakup reported greater emotional distress and obsessive pursuit of their ex-partners the more they based their self-worth on being in a relationship (Park, Sanchez, & Brynildsen, 2011). Thus, the extant literature suggests that when self-worth is staked in a domain, people are more impacted by events that occur in the domain and react in ways to alleviate distress and to protect their self-esteem from further threat (Park & Crocker, 2013).

One way that individuals can protect self-esteem following self-threat is to disengage from the domain of threat (Major & Schmader, 1998; Major, Spencer, Schmader, Wolfe, & Crocker, 1998; Nussbaum & Steele, 2007; Schmader, Major, & Gramzow, 2001). Given that negative events tend to have a greater impact on the self than positive events (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), the motive for self-protection might be amplified for those who experience threat in a domain in which they base their self-worth. We therefore predicted that individuals who strongly base their self-worth on financial success would be the ones most likely to disengage from a financial threat to protect their self-esteem. In contrast, individuals whose self-worth is less invested in the financial domain should be less likely to disengage from a financial threat, presumably because they are less concerned about protecting their self-esteem in this domain.

Self-protective responses are also relevant in situations that involve decision making. Indeed, people engage in motivated decision making by considering how to both maximize positive outcomes and avoid choices that might lead to failure or disappointment (Larrick, 1993). In general, people seek to maintain a positive self-image when they make decisions (Baumeister, Tice, & Hutton, 1989; Tesser, 1988). In particular, however, those who are most vulnerable to self-threats often act in ways to protect themselves from unfavorable consequences resulting from their decisions. For example, people with low self-esteem are hesitant to take risks, engage in new activities, and are more motivated than those with high self-esteem to make decisions that reduce the possibility of regret (Josephs, Larrick, Steele, & Nisbett, 1992).

Such findings suggest that when people are concerned about protecting self-esteem, which is likely the case following a threat to a domain of contingent self-worth, they may decrease pursuit of outcomes in that domain to avoid further loss. Given that people with high Financial CSW are expected to be the most affected by financial threats, we predict that those who base their self-worth on financial success may show more self-protective responses—in terms of being less likely to make extravagant spending decisions—following a financial threat.

Overview of Current Research

Whereas past research focused on the downsides of possessing materialistic values and financial aspirations (Dittmar et al., 2014; Kasser and Ryan, 1993, 1996; Niemiec et al., 2009), the present research is the first to empirically test the idea that *basing self-worth* on financial success is what leads some individuals, more than others, to experience diminished well-being and self-protective responses to financial threats. Six studies were conducted to test these ideas. In the first set of studies, we developed and validated a measure of Financial CSW, and examined its convergent, discriminant, and unique predictive ability in shaping outcomes associated with well-being. We tested these ideas in both a college sample (Studies 1a-1b) and a national sample that varied in age and socioeconomic status (Study 1c). Study 2 examined the effects of Financial CSW on people's momentary feelings of autonomy, perceptions of financial stressors, and coping responses to a situationally induced financial (vs.

academic) threat. Study 3 tested whether the satiation of self-esteem concerns, via self-affirmation, would reduce the predicted difference in feelings of autonomy between the financial and academic threat conditions for people who strongly staked their self-worth on financial success. Finally, Study 4 examined whether participants with higher Financial CSW become more cautious and self-protective in their extravagant spending decisions in response to a financial (vs. health) threat.

To examine the unique predictive validity of Financial CSW, we controlled for personality variables that were expected to be related to Financial CSW, such as trait self-esteem and other CSWs (Studies 1a and 1c), as well as financially relevant constructs, including financial status, materialism, financial goals (Studies 1a, 1c, 2, and 3), and economic hardship (Study 1c). To further test the idea that Financial CSW shapes responses to threat in specific domains of contingency, we compared a financial threat condition with an academic (Studies 2 and 3) and health (Study 4) threat condition.

Study 1a: Development and Validation of Financial CSW

The purpose of Study 1a was to develop and validate a measure of Financial CSW, and to examine its relation to personality constructs, financial variables and outcomes, and feelings of autonomy. Financial CSW is conceptualized as an external, conditional source of self-esteem in which feelings of personal worth and value depend on one's ability to achieve financial success. Based on this definition, we expected Financial CSW to be positively related to other CSWs that depend on external validation (e.g., others' approval, appearance), and negatively related or unrelated to CSWs that rely less on external validation (e.g., virtue). Negative associations have been documented between external CSWs and trait self-esteem (Crocker, Luhtanen, Cooper, & Bouvrette, 2003), so we expected Financial CSW to be related to lower trait self-esteem as well.

Given our focus on the financial domain, we also expected Financial CSW to be positively related to constructs reflecting preoccupation with money, such as materialism and financial aspirations. From the perspective of CSW theory, Financial CSW reflects a desire to attain financial success *as a basis of self-esteem*. Although Financial CSW should be positively related to materialism and financial aspirations (due to its shared focus on financial success), we expected Financial CSW to predict the outcomes of interest independent of these constructs. Furthermore, based on the ideas presented earlier, we expected that individuals who strongly based their self-worth on financial success would be more likely to make financially based social comparisons with others, experience more financial hassles, and feel less autonomy than those who based their self-worth less on financial success.

Method

Participants and procedure. A total of 349 undergraduates (128 men; M_{age} = 20.02, SD = 8.81) from the introductory psychology subject pool at the University at Buffalo participated in a "Study of College Experiences" in exchange for partial course credit. Given that a minimum of 300 cases are recommended when conducting factor analysis (Tabachnick & Fidell, 1996; VanVoorhis & Morgan, 2007), we sought to recruit at least 300 participants for the present study. Upon arrival at the lab, participants were seated at private cubicles and instructed to complete a series of computerized questionnaires that included the Financial CSW scale, personality measures, questionnaires related to financial outcomes and feelings of autonomy, and demographic information. Participants were then debriefed and dismissed.

Materials

Financial CSW. Participants responded to five items that were developed to assess how much individuals base their self-esteem on financial success on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Wording of the items was modeled after existing CSW scales. Table 1 presents the scale items and descriptive statistics.

Other CSWs. Using the same response scale, participants completed four 5-item subscales of the CSW scale (Crocker, Luhtanen et al., 2003): Appearance (e.g., "When I think I look attractive, I feel good about myself"; α = .80); Others' Approval (e.g., "I don't care what other people think of me," reversed; α = .80); Academic Competence (e.g., "My self-esteem is influenced by my academic performance"; α = .70); and Virtue (e.g., "My self-esteem would suffer if I did something unethical"; α = .80).

Self-esteem. Trait self-esteem was assessed with the 10-item Rosenberg (1965) Self-Esteem Scale (e.g., "On the whole, I am satisfied with myself") on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*), α = .89.

Materialism. Materialism was assessed with the Material Values Scale (MVS; Richins, 2004) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The MVS assesses the use of possessions to judge the success of self and others (e.g., "I admire people who own expensive homes, cars, and clothes"), the centrality of possessions in one's life (e.g., "I put less emphasis on material things than most people I know," reversed), and the belief that possessions lead to happiness (e.g., "I'd be happier if I could afford to buy more things"). Because we were interested in overall materialism, we computed an average materialism score across all items (15 items, α = .85).

Financial goals. Participants rated the importance of life goals as assessed by the Aspirations Index (Grouzet et al.,

Table 1. Psychometric Properties of the Financial CSW Scale (Study 1a; $N = 349$).

Item	Factor loading
1. My self-esteem is influenced by how much money I make.	.84
2. My self-esteem depends on having a lot of money.	.77
3. I feel bad about myself when I feel like I don't make enough money.	.71
4. My opinion of myself isn't tied to how much money I make (reversed).	.60
5. I feel better about myself when I am on top of my finances.	.48

Note. CSW = contingency of self-worth. $M = 4.04$; $SD = 1.02$; maximum = 1; minimum = 7; $\alpha = .75$.

2005) on a scale from 1 (*not at all important*) to 9 (*extremely important*). The domains were as follows: *Financial Goals* (e.g., "I will be financially successful," four items, $\alpha = .80$), *Image Goals* (e.g., "People will often comment on how attractive I look," five items, $\alpha = .79$), *Popularity Goals* (e.g., "I will be admired by many people, three items, $\alpha = .68$), *Affiliation Goals* (e.g., "I will express my love for special people," five items, $\alpha = .88$), *Community Goals* (e.g., "I will help the world become a better place," three items, $\alpha = .74$), and *Health Goals* (e.g., "I will be physically healthy," four items, $\alpha = .83$). As recommended by Grouzet et al. (2005), we computed mean-corrected subscale scores to assess the centrality of financial goals relative to other aspirations; specifically, we subtracted participants' grand mean (i.e., importance ratings averaged across all domains) from participants' particular aspiration scores (i.e., financial goals).

Financial social comparisons. To assess the frequency with which participants engaged in financial social comparisons, they reported how often in the past 3 months they compared their financial status with others from 1 (*virtually never*) to 6 (*several times a day*).

Financial hassles. Participants completed a short form of the Survey of Recent Life Experiences (Kohn & MacDonald, 1992), which assesses hassles in various life domains. Of particular interest were the financial hassle items (e.g., "financial burdens"; "financial conflicts with family members"; six items, $\alpha = .78$). Participants reported how much each experience had been a part of their life over the past month on a scale from 1 (*not at all part of my life*) to 4 (*very much part of my life*).

Autonomy. Participants completed the seven-item Autonomy subscale of the Basic Psychological Needs Scale ("Basic Psychological Needs Scale, " n.d.), which measures the extent to which people feel like they are the source of their actions (e.g., "I feel like I am free to decide for myself how to life my life"; "I feel pressured in my life"; reversed; $\alpha = .63$). Participants reported how true each item was to them on a scale from 1 (*not at all true*) to 7 (*very true*).

Demographics.[1] Participants reported their gender, age, and self-rated financial status: "In your overall estimation, how financially well-off are you now?" using the scale 1 (*much less well-off than most people*); 2 (*somewhat less well-off than most people*); 3 (*as well-off as most people*); 4 (*somewhat better-off than most people*); 5 (*much better-off than most people; $M = 3.11$, $SD = 1.03$*).

Results and Discussion

We first conducted an exploratory factor analysis to examine the factor structure of the five-item Financial CSW scale. Results revealed a single factor with an eigenvalue of 2.50 that accounted for 49.92% of the variance (see Table 1 for factor loadings). Financial CSW was not significantly related to gender or age, $ps > .10$. Next, we examined descriptive statistics and zero-order correlations among the variables (see Table 2). As predicted, Financial CSW was positively related to external CSWs (i.e., Others' Approval, Appearance, Academics), unrelated to internal CSW (i.e., Virtue), negatively related to trait self-esteem, and positively related to materialism and financial goals.

Next, to examine the distinctiveness of Financial CSW from other CSWs (i.e., Approval, Appearance, Academics, and Virtue), we conducted an exploratory factor analysis on all of the CSW items, with principal axis factoring and an oblique geomin rotation. The first 10 eigenvalues were 5.48, 3.95, 2.46, 2.10, 1.35, 1.04, 1.00, 0.83, 0.72, and 0.67. An inspection of the scree plot and interpretability of factor solutions suggested that a five-factor solution was the best fit to the data (standardized factor loadings available from authors upon request). The five-factor solution corresponded to the five included CSWs, and the Financial CSW items had strong and significant primary loadings on their factor (.45-.87). Cross-loadings for Financial CSW items were generally of negligible magnitude (range = |.01|-|.37|; $M = 0.07$; 19 of 20 cross-loadings <.20), and correlations of the Financial CSW factor with the other CSW factors were relatively small ($rs = -.01$-$.31$). Overall, these analyses suggest that Financial CSW is structurally distinct from the other CSWs considered here.

For our primary analyses, we conducted a series of hierarchical regression analyses to test whether Financial CSW uniquely predicted financial outcomes and basic psychological need satisfaction (i.e., autonomy). At Step 1, we entered centered Financial CSW scores; at Step 2, we entered centered scores of self-rated financial status, trait self-esteem, materialism, financial goals, and other CSWs to determine whether the relationship between Financial CSW and the dependent measures remained significant after controlling for all other variables.

Table 2. Zero-Order Correlations Among Variables (Study 1a, College Sample).

		M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1.	Financial CSW	4.04	1.02	—											
2.	Self-rated financial status	3.11	1.03	.03	—										
3.	Self-esteem	4.71	0.90	−.10*	.15**	—									
4.	Materialism	3.94	0.89	.56***	.09	−.11*	—								
5.	Financial goals	6.17	0.92	.34***	.13*	.11*	.55***	—							
6.	Appearance CSW	4.75	1.07	.30***	.09	−.23***	.37***	.19**	—						
7.	Others' Approval CSW	3.82	1.18	.19***	.10	−.30***	.19***	.07	.51***	—					
8.	Academic CSW	5.43	0.80	.15**	.00	.06	.07	.07	.30***	.17**	—				
9.	Virtue CSW	4.91	1.03	.01	.04	.08	−.18**	−.14**	.05	.12*	.36***	—			
10.	Financial comparisons	2.73	1.31	.36***	.05	−.12*	.38***	.25***	.21***	.07	.06	.02	—		
11.	Financial hassles	1.58	0.54	.23***	−.30***	−.28***	.22***	.03	.07	.02	.03	.03	.26***	—	
12.	Autonomy	4.98	0.78	−.27***	.06	.48***	−.20***	.02	−.13*	−.26***	.02	−.01	−.20***	−.31***	—

Note. CSW = contingency of self-worth.
*$p < .05$. **$p < .01$. ***$p < .001$.

Financial social comparisons. Table 3 presents the results for financial social comparisons and all other dependent measures from Study 1a. Consistent with hypotheses, the more participants based their self-worth on financial success, the more frequently they compared their financial status with others. Having materialistic values also predicted making more financial social comparisons, but Financial CSW predicted this outcome even after controlling for materialism and all other variables.

Financial hassles. As predicted, the more participants based their self-worth on financial success, the more financial hassles they reported experiencing over the past month even after controlling for all other variables. Having materialistic values also predicted more financial hassles, as did basing self-worth on virtue. In contrast, participants with higher financial status and trait self-esteem experienced fewer financial hassles.

Autonomy. As expected, basing self-worth on financial success predicted less feelings of autonomy even after controlling for all other variables. Financial goals and basing self-worth on others' approval also predicted less autonomy; higher self-esteem predicted greater feelings of autonomy.

Study 1a confirmed that the Financial CSW scale is a reliable, distinct measure that assesses the degree to which individuals base their self-worth on financial success. Results of a factor analysis indicated that the Financial CSW items loaded onto a single factor. Supporting convergent and discriminant validity, Financial CSW was positively related to external CSWs (i.e., other's Approval, Appearance, Academics), unrelated to internal CSW (i.e., Virtue), and negatively related to trait self-esteem. Financial CSW was positively related to materialism and financial goals but was not redundant with these constructs. Indeed, even after controlling for all of these variables, participants who based their self-worth on financial success made more financial social comparisons, experienced more financial hassles, and felt less autonomy than those who based their self-worth less on financial success.

Participants with more materialistic values also reported making more financial social comparisons and experiencing financial hassles. Those with higher trait self-esteem reported greater autonomy, consistent with previous research (Ryan & Deci, 2000); those who placed importance on financial goals also reported less need satisfaction, consistent with prior research (Dittmar et al., 2014; Kasser et al., 2014). Higher financial status predicted fewer financial hassles; lower self-esteem predicted more financial hassles. Finally, basing self-worth on others' approval predicted less autonomy, consistent with the idea that introjected self-regulation that relies on external validation leads to feeling pressured (Deci & Ryan, 1995). Interestingly, basing self-worth on virtue predicted more financial hassles. Perhaps people who derive self-worth from being virtuous feel pressured in situations that involve following moral or ethical principles, which could involve financial situations (e.g., ensuring that others pay back money that is owed). In sum, even after controlling for a host of variables, higher Financial CSW predicted making more financial social comparisons, experiencing more financial hassles, and feeling less autonomy in life.

Study 1b: Test–Retest Reliability

To examine the test–retest reliability of the Financial CSW scale, we collected responses to this scale (five items, $\alpha = .80$; $M = 4.21$, $SD = 0.89$) from a separate group of 1,309 undergraduate students (679 men, $M_{age} = 18.97$, $SD = 1.89$) from the University at Buffalo introductory psychology subject pool. Participants completed the scale as part of a larger survey at the beginning of the semester. Approximately 5 to 6 weeks later, a random subset of participants ($N = 147$; 64 men; $M_{age} = 18.83$, $SD = 1.07$) who completed the initial survey came to the lab and completed the Financial CSW scale

Table 3. Results of Hierarchical Regression Analyses Predicting Dependent Measures (Study 1a, College Sample).

	Financial social comparisons	Financial hassles	Autonomy
	β at Step 1; Step 2 95% CI	β at Step 1; Step 2 95% CI	β at Step 1; Step 2 95% CI
Financial CSW	.36***; .21** [0.34, 0.60]; [0.12, 0.43]	.23***; .13* [0.07, 0.18]; [0.00, 0.13]	−.26***, −.17** [−0.28, −0.12]; [−0.21, −0.04]
Self-rated financial status	.03 [−0.09, 0.17]	−.28*** [−0.20, −0.10]	.01 [−0.06, 0.08]
Self-esteem	−.09 [−0.28, 0.02]	−.24*** [−0.21, −0.08]	.43*** [0.29, 0.46]
Materialism	.25** [0.16, 0.57]	.21** [0.05, 0.21]	.02 [–0.09, 0.13]
Financial goals	−.01 [−0.19, 0.17]	−.02 [−0.08, 0.06]	−.19** [−0.26, −0.07]
Appearance CSW	.08 [−0.06, 0.26]	−.03 [−0.08, 0.05]	.07 [−0.04, 0.13]
Others' Approval CSW	−.09 [−0.23, 0.03]	−.09 [−0.09, 0.01]	−.15** [−0.17, −0.03]
Academic CSW	−.02 [−0.22, 0.15]	−.01 [−0.08, 0.07]	.03 [−0.07, 0.13]
Virtue CSW	.08 [−0.03, 0.25]	.11* [0.00, 0.12]	−.09 [−0.14, 0.01]
	Step 1: R^2 = .131 $F(1, 340)$ = 51.23*** Step 2: ΔR^2 = .059, $\Delta F(8, 332)$ = 3.02**	Step 1 R^2 = .052, $F(1, 340)$ = 18.73*** Step 2: ΔR^2 = .172, $\Delta F(8, 332)$ = 9.20***	Step 1 R^2 = .069, $F(1, 340)$ = 25.18*** Step 2: ΔR^2 = .251, $\Delta F(8, 332)$ = 15.33***

Note. All βs in tables reflect standardized coefficients. CSW = contingency of self-worth; CI = confidence interval.
*p < .05. **p < .01. ***p < .001.

again as part of an unrelated study. The sample was 51% White, 35% Asian, 4% Black, 7% Hispanic, and 3% Other. Participants reported a mean score of 3.18 (SD = 0.95) in terms of how financially well-off they thought they were using the same response scale as in Study 1a. Similar to Study 1a, a factor analysis of the items revealed a single factor with an eigenvalue of 2.28 that explained 45.56% of the variance. The reliability of the scale was acceptable (α = .68) as was the test–retest reliability between the two time points (r = .67, p < .001).

Study 1c: Financial CSW in a Nationwide Sample

Whereas Studies 1a and 1b examined Financial CSW in a college sample, Study 1c examined the reliability and predictive validity of Financial CSW in a national sample that varied in age and socioeconomic status. In addition, whereas Study 1a used an exploratory factor analysis to test the distinctiveness of Financial CSWs from other CSWs, we sought to replicate and extend these findings by using confirmatory factor analysis (CFA) with a more comprehensive set of CSWs (see supplemental materials online for results of CFA).

Participants and Procedure

A total of 389 individuals from the United States were recruited for a "Study of Attitudes and Behaviors" via Amazon's Mechanical Turk (MTurk), a website that collects data from a national pool of participants (Buhrmester, Kwang, & Gosling, 2011). Participants received US$.50 compensation for completing the survey. Nineteen participants were excluded from analyses because they failed one or both of the attention checks,[2] leaving a final sample of 370 participants (152 men, 216 women; two other) ranging from 18 to 76 years old (M_{age} = 36.69, SD = 14.06), and was 79% White, 7% Asian, 8% Black, 4% Hispanic, and 2% Other.

As part of a larger survey, participants completed the same items as in Study 1a, as well as additional measures. The primary measures were as follows: the Financial CSW scale (five items, α = .87); the full CSW scale, which consists of five items per subscale (Appearance, α = .86; Other's Approval, α = .84; Academics, α = .86; Virtue, α = .87; Religious Faith, α = .97; Family Support, α = .85; Competition, α = .89); the Rosenberg Self-Esteem scale (10 items, α = .93); the MVS (18 items, α = .93); and subscales from the Aspirations Index that assessed Financial Goals (four items, α = .85), Image Goals (five items, α = .87), Popularity Goals (three items, α = .79),

Affiliation Goals (five items, α = .83), Community Goals (three items, α = .81), and Self-Acceptance Goals (seven items, α = .84). As in Study 1a, we computed mean-corrected subscale scores to assess the centrality of financial goals relative to other aspirations by subtracting participants' grand mean (i.e., importance ratings averaged across all domains) from participants' financial aspiration score.

Participants reported their gender, age, ethnicity, and responded to items from the MacArthur Network Sociodemographic Questionnaire that assessed educational attainment (i.e., "What is the highest educational degree you have earned?") and their annual salary (i.e., "How much did you earn, before taxes and other deductions, during the past 12 months?"). Approximately 55% of the sample had a bachelor's degree or higher. Salaries ranged from less than US$5,000 (15% of the sample) to US$150,000 or greater (0.5% of the sample); the median salary was US$25,000 to US$34,999.

Using the same scale as in Study 1a, participants reported how financially well-off they thought they were (M = 2.47, SD = 1.08). To assess economic hardship, participants completed the Economic Pressures Index (Conger, Rueter, & Elder, 1999), which assesses one's ability to meet basic material needs and financial obligations (e.g., "I have enough money to meet my expenses," reversed; "I have had money left over at the end of the month," reversed; three items, α = .80) on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher values indicate greater economic hardship or financial constraints.

For the dependent measures, we used similar items and response scales as in Study 1a to assess participants' (a) tendency to make financial social comparisons, (b) frequency of financial hassles experienced in the past month (six items, α = .79), and (c) satisfaction of the basic need for autonomy (seven items, α = .78). In addition, we measured anxiety using the Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988), which assesses common symptoms of anxiety over the past month on a scale from 0 (*not at all*) to 3 (*severely—it bothered me a lot*). Items included the following: "unable to relax," "heart pounding/racing," and "difficulty in breathing" (21 items, α = .96). We also assessed perceived financial stress by adapting Cohen, Kamarck, and Mermelstein's (1983) Perceived Stress Scale to assess feelings of stress in the financial domain. Participants reported how often they thought or felt a certain way over the last month on a scale from 0 (*never*) to 4 (*very often*). Items included the following: "In the last month, how often have you felt that you were unable to control a money-related issue in your life?" "How often have you felt nervous and stressed about your financial situation?" and "How often have you found that you could not cope with all the things that you had to do in the realm of finances?" (10 items, α = .93).

Results and Discussion

As in the previous studies, we conducted a factor analysis to determine the factor structure of the Financial CSW scale. Consistent with past findings, a single factor solution emerged with an eigenvalue of 3.13 that explained 66% of the variance. Financial CSW was unrelated to gender (r = −.03, p = .32) and salary (r = .02, p = .72), but was negatively related to age (r = −.24, p = .001), positively related to economic hardship (r = .14, p = .007), and marginally related to educational attainment (r = .09, p = .08). As in Study 1a, basing self-worth on financial success was unrelated to self-rated financial status and positively related to external CSWs (i.e., appearance, others' approval, academics, competition), materialistic values, and financial goals. Financial CSW was also related to lower trait self-esteem and was unrelated to internal sources of self-worth (i.e., virtue, religious faith; see Table 4).

For our primary analyses, we conducted a series of hierarchical regression analyses in which centered Financial CSW scores were entered at Step 1, and centered scores of self-rated financial status, economic hardship, self-esteem, materialism, financial goals, and all other CSWs were entered at Step 2. Given that age was related to Financial CSW, we also controlled for this variable in the analyses. Table 5 presents the results for all dependent measures. Replicating Study 1a, participants who based their self-worth on financial success were more likely to make financial social comparisons with others, experience more financial hassles, and feel less autonomy than those with lower Financial CSW. Results remained even after controlling for participants' age, self-rated financial status, economic hardship, self-esteem, materialism, financial goals, and all other CSWs. Furthermore, participants experienced greater symptoms of anxiety and perceived financial stress the more they based their self-worth on financial success. Overall, the results of Studies 1a to 1c demonstrate that the Financial CSW scale is internally reliable, has good convergent and discriminant validity, acceptable test–retest reliability, and predictive validity in both a college and nationwide sample. The next set of studies examine whether Financial CSW uniquely shapes people's responses to financial threats.

Study 2

One of the key findings of Studies 1a and 1c is that people who base their self-worth on financial success experience less autonomy in their lives. In Study 2, we sought to demonstrate experimentally that financial insecurity affects people's momentary feelings of autonomy and coping responses. Specifically, we predicted that individuals with Financial CSW would show lower autonomy after experiencing a financial threat versus a threat in another domain. These individuals were also expected to adopt more disengagement strategies to cope with their financial problems as a way to protect their self-esteem from further loss. Although disengaging may help individuals avoid further feelings of threat, doing so could hinder them from addressing their financial problems in more active, problem-focused ways.

Table 4. Zero-Order Correlations Among Variables (Study 1c, National Sample).

		M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.	Financial CSW	4.31	1.27	—												.14**	.44***	.32***	−.37***	.31***	.39***
2.	Self-rated financial status	2.47	1.08	−.02	—											−.55***	−.10	−.38***	.13**	−.17**	−.51***
3.	Self-esteem	5.11	1.24	−.36***	.18***	—										−.30***	−.34***	−.35***	.60***	−.48***	−.48***
4.	Materialism	3.56	1.12	.60***	−.07	−.32***	—									.18***	.38***	.30**	−.35***	.22***	.29***
5.	Financial goals	5.16	1.90	.60***	−.03	−.22***	.60***	—								.11*	.33***	.28***	−.27***	.22***	.28***
6.	Appearance CSW	4.71	1.26	.48***	−.01	−.33***	.42***	.41***	—							.06	.34***	.10*	−.22***	.26***	.24***
7.	Others' Approval CSW	3.83	1.29	.40***	.06	−.27***	.37***	.25***	.45***	—						−.05	.22***	.00	−.22***	.08	.07
8.	Academic CSW	4.94	1.19	.36**	.08	−.21***	.18***	.23***	.41***	.36***	—					−.02	.23***	.06	−.14**	.15**	.18***
9.	Virtue CSW	5.38	1.08	.07	.02	.06	−.15**	−.10	.07	.18***	.35***	—				−.08	.04	−.04	.12	.01	.05
10.	Religious Faith CSW	3.77	2.14	−.02	.00	.20***	−.10*	−.03	−.13**	.03	−.05	.24***	—			.00	−.07	.05	.17**	−.06	−.01
11.	Family Support CSW	5.03	1.16	.18**	.09	−.01	.07	.10	.25***	.29***	.29***	.37***	.23***	—		−.07	.14**	−.12*	.07	.01	.02
12.	Competition CSW	4.66	1.29	.51***	.10	−.23***	.40***	.41***	.52***	.39***	.57***	.14**	−.12*	.17***	—	−.04	.32***	.09	−.21***	.19***	.18***
13.	Economic hardship	1.00	0.94													—	.21***	.59***	−.25***	.33***	.66***
14.	Financial comparisons	2.57	1.19														—	.42**	−.35***	.45***	.44***
15.	Financial hassles	1.96	0.64															—	−.37***	.51***	.71***
16.	Autonomy	4.90	1.02																—	−.44***	−.41***
17.	Anxiety symptoms	1.68	0.65																	—	.48***
18.	Financial stress	2.96	0.94																		—

Note. CSW = contingency of self-worth.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 5. Results of Hierarchical Regression Analyses Predicting Dependent Measures (Study 1c, National Sample).

	Financial social comparisons	Financial hassles	Autonomy	Anxiety symptoms	Perceived financial stress
	Step 1; Step 2 95% CI	Step 1; Step 2 95% CI	Step 1; Step 2 95% CI	Step 1; Step 2 95% CI	Step 1; Step 2 95% CI
Financial CSW	.45***; .24*** [0.33, 0.50]; [0.10, 0.34]	.33***; .22*** [0.12, 0.21]; [0.05, 0.16]	−.37***; −.12* [−0.37, −0.22]; [−0.19, −0.00]	.32***; .18** [0.11, 0.21]; [0.02, 0.16]	.39***; .20*** [0.22, 0.36]; [0.08, 0.22]
Age	−.14** [−0.02, −0.00]	−.08 [−0.01, 0.00]	.05 [−0.00, 0.01]	−.16** [−0.01, −0.00]	−.10** [−0.01, −0.00]
Self-rated financial status	−.03 [−0.15, 0.09]	−.10 [−0.11, −0.00]	.01 [−0.08, 0.11]	.00 [−0.06, 0.07]	−.24*** [−0.28, −0.14]
Self-esteem	−.12* [−0.22, −0.01]	−.14** [−0.12, −0.03]	.48*** [0.32, 0.48]	−.35* [−0.24, −0.13]	−.23*** [−0.23, −0.11]
Materialism	.10 [−0.04, 0.25]	.07 [−0.02, 0.11]	−.04 [−0.16, 0.07]	−.04 [−0.10, 0.05]	−.03 [−0.11, 0.06]
Financial goals	−.02 [−0.13, 0.10]	.02 [−0.04, 0.06]	−.09 [−0.15, 0.02]	−.06 [−0.09, 0.03]	.05 [−0.03, 0.10]
Appearance CSW	.05 [−0.07, 0.16]	−.06 [−0.08, 0.02]	.09 [−0.01, 0.16]	.08 [−0.02, 0.10]	.01 [−0.06, 0.07]
Others' Approval CSW	−.02 [−0.12, 0.08]	−.09 [−0.09, 0.00]	−.06 [−0.13, 0.03]	−.11* [−0.11, 0.00]	−.11** [−0.13, −0.02]
Academic CSW	−.03 [−0.15, 0.09]	.00 [−0.05, 0.06]	−.00 [−0.09, 0.09]	−.04 [−0.09, 0.04]	.04 [−0.04, 0.10]
Virtue CSW	.06 [−0.05, 0.18]	.05 [−0.02, 0.09]	.04 [−0.06, 0.13]	.07 [−0.02, 0.11]	.11** [0.02, 0.16]
Religious Faith CSW	−.02 [−0.06, 0.04]	.12** [0.01, 0.06]	.04 [−0.02, 0.06]	.05 [−0.01, 0.04]	.05 [−0.01, 0.05]
Family Support CSW	.07 [−0.04, 0.17]	−.13** [−0.12, −0.02]	.06 [−0.02, 0.06]	−.03 [−0.08, 0.04]	.00 [−0.06, 0.06]
Competition CSW	.09 [−0.03, 0.20]	.02 [−0.04, 0.06]	−.02 [−0.10, 0.07]	.06 [−0.03, 0.09]	.04 [−0.03, 0.10]
Economic hardship	.11 [−0.00, 0.28]	.43*** [0.23, 0.36]	−.06 [−0.18, 0.04]	.20*** [0.06, 0.22]	.42*** [0.34, 0.51]
	Step 1 R^2 = .199 $F(1, 367)$ = 91.29*** Step 2 ΔR^2 = .086 $\Delta F(13, 354)$ = 3.55***	Step 1 R^2 = .109 $F(1, 367)$ = 44.67*** Step 2 ΔR^2 = .360 $\Delta F(13, 354)$ = 18.41***	Step 1 R^2 = .135 $F(1, 367)$ = 57.39*** Step 2 ΔR^2 = .287 $\Delta F(13, 354)$ = 13.50***	Step 1 R^2 = .100 $F(1, 367)$ = 40.85*** Step 2 ΔR^2 = .229 $\Delta F(13, 354)$ = 9.30***	Step 1 R^2 = .151 $F(1, 367)$ = 65.15*** Step 2 ΔR^2 = .48 $\Delta F(13, 354)$ = 35.43***

Note. CSW = contingency of self-worth; CI = confidence interval.

We also examined whether participants with higher Financial CSW perceived financial stressors differently than those with lower Financial CSW. All participants in the financial threat condition were asked to write about an aspect of their financial situation they felt insecure about. However, we expected those with higher Financial CSW to express more negative affect in writing about financial stressors, because their self-worth depends on financial success, whereas this is not the case for those with lower Financial CSW.

Method

Participants and procedure. A total of 208 college students (106 men; M_{age} = 19.56, SD = 2.05) from the University at Buffalo introductory psychology subject pool participated in a "Study of Attitudes and Behavior" in exchange for partial course credit. The sample was 26% White, 62% Asian, 6% Black, 5% Hispanic, and 1% Other. Given that we expected to find a two-way interaction between Financial CSW and Threat Condition, we sought to recruit at least 40 participants per cell, which would be sufficient to detect a medium to large effect size with 80% power (Cohen, 1988; VanVoorhis & Morgan, 2007).

A few weeks before the lab session, participants completed an online questionnaire that included the Financial CSW scale. A few weeks later, participants came to the lab and were told that they would be participating in a study about "individual differences and cognitive processes." Next, they were randomly assigned to write about an aspect of their financial situation or academic performance that they felt dissatisfied with. Afterward, they completed a measure of state autonomy and reported what coping strategies they would use in response to the financial or academic problem they had written about earlier. Participants then completed questionnaires assessing their financial goals, materialism,

and demographic information, which were treated as covariates in the analyses.[3] Finally, they were debriefed and dismissed.

Materials

Financial CSW. Participants responded to the same Financial CSW scale (five items, α = .84) as in the previous studies.

Financial threat condition. Participants assigned to this condition read the following:

> Many college students are often dissatisfied with or feel insecure about their financial situation (e.g., having debts, student loans, not being able to afford things, etc.). Please take a moment to think about an aspect of your financial situation that you feel dissatisfied with or feel insecure about. Now write about this situation and your thoughts and feelings regarding this situation in the space below.

Academic threat condition. Participants assigned to this condition read the following:

> Many college students are often dissatisfied with or feel insecure about their academic performance (e.g., their grades, performance on tests, papers, assignments, etc.). Please take a moment to think about an aspect of your academic performance that you feel dissatisfied with or feel insecure about. Now write about this situation and your thoughts and feelings regarding this situation in the space below.

State autonomy. Participants responded to the same autonomy scale as in Study 1a but worded in terms of how they felt "Right now" on a scale from 1 (*not at all true*) to 7 (*very true*; for example, "Right now, I feel pressured in my life," reversed; seven items, α = .77).

Coping strategies. To assess coping responses, we administered items from the COPE Inventory (Carver, Scheier, & Weintraub, 1989), which assesses how people deal with stressful events in their lives. We adapted the instructions, so that participants reported how much they would use each coping strategy to deal with what they had written about earlier in the study (i.e., financial or academic stressor). Specifically, we examined participants' desire to engage in (a) *behavioral disengagement* strategies (e.g., "Reduce the amount of effort I'm putting into solving the problem"; four items, α = .83) and (b) *active coping* strategies (e.g., "Concentrate my efforts on doing something about it"; four items, α = .83). The response scales were anchored from 1 (*I would not do this at all*) to 4 (*I would do this a lot*).

Financial goals. As in Study 1a, participants rated the importance of financial goals as assessed by the Aspirations Index (Grouzet et al., 2005; four items, α = .77). Because we were interested in the financial domain, we did not assess other goal domains in the present study.

Materialism. We administered the same MVS (Richins, 2004) as in Study 1a to assess materialistic values (α = .85).

Demographics. Participants reported their gender, age, ethnicity, and the same perceived financial status item as in Study 1a (M = 2.90, SD = 1.00). They also reported their parents' combined annual income (*Mdn* = US$50,000-US$74,999). Items were standardized and averaged to create an overall financial status score (r = .54, p < .001).

Results and Discussion

We conducted a series of hierarchical regression analyses to test the hypotheses. At Step 1, covariates of financial status, centered scores for materialism, and financial goals were entered. At Step 2, main effects of centered Financial CSW scores and Threat Condition (1 = financial threat, 0 = academic threat) were entered. At Step 3, the Financial CSW × Threat Condition interaction, controlling for all two-way interactions between each covariate and condition, was entered. To decompose significant interactions, we plotted predicted values at 1 *SD* above and below the mean of Financial CSW across conditions (Aiken & West, 1991).

State autonomy. Results revealed significant main effects of Threat Condition, β = −.20, p = .009, 95% confidence interval (CI) = [−0.64, −0.09], and Financial Status, β = .17, p = .037, 95% CI = [0.01, 0.32], and marginal effects of Materialism, β = −.18, p = .062, 95% CI = [−0.39, 0.01], and Financial Goals, β = .19, p = .051, 95% CI = [0.00, 0.26], in predicting state autonomy. These effects were qualified by the predicted Financial CSW × Threat Condition interaction, β = −.28, p = .031, 95% CI = [−0.54, −0.03] (Figure 1).

Simple effects tests revealed that, among participants in the financial threat condition, those who more strongly based their self-worth on financial success reported less state autonomy, β = −.23, p = .048, 95% CI = [−0.35, −0.00]; this was not the case for those in the academic threat condition, β = .14, p = .266, 95% CI = [−0.08, 0.30]. Participants who strongly based their self-worth on financial success (+1 *SD*) also reported less autonomy when they were made to feel financially insecure versus academically insecure, β = −.39, p = .001, 95% CI = [−1.13, −0.29]; this was not the case for those who did not strongly base their self-worth on financial success (−1 *SD*), β = −.02, p = .850, 95% CI = [−0.44, 0.36].

Behavioral disengagement. In predicting disengagement, there were no significant main effects, but there was a significant Financial CSW × Threat Condition interaction, β = .40, p = .003, 95% CI = [0.08, 0.42] (Figure 2). As predicted, among participants in the financial threat condition, those with higher Financial CSW adopted more disengagement strategies to cope with their financial problem, β = .25, p = .042, 95% CI = [0.00, 0.23]; the reverse occurred among participants who wrote about an academic problem, β = −.28, p =

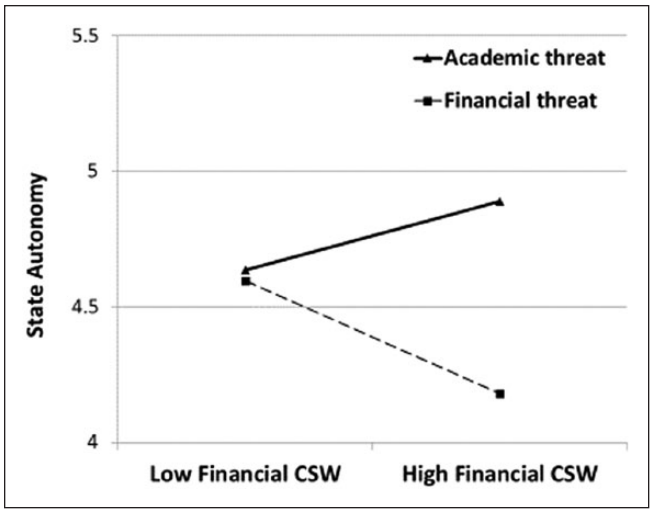

Figure 1. Study 2: Feelings of current autonomy as a function of threat condition and Financial CSW.
Note. Means are plotted at 1 *SD* above and below the mean of Financial CSW. CSW = contingency of self-worth.

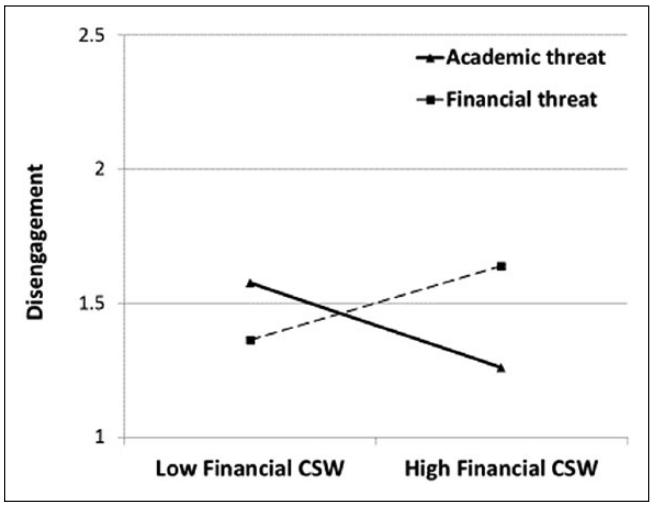

Figure 2. Study 2: Adoption of behavioral disengagement strategies as a function of threat condition and Financial CSW.
Note. Means are plotted at 1 *SD* above and below the mean of Financial CSW. CSW = contingency of self-worth.

.032, 95% CI = [−0.26, −0.01]. Participants with higher Financial CSW also adopted more disengagement strategies after writing about a financial versus academic insecurity, β = .34, p = .006, 95% CI = [0.11, 0.65]; this was not found among those with lower Financial CSW, β = −.19, p = .105, 95% CI = [−0.47, 0.05].

Active coping. Results revealed significant main effects of Financial Status, β = .16, p = .044, 95% CI = [0.00, 0.26], and Materialism, β = −.22, p = .022, 95% CI = [−0.36, −0.03], and a marginal effect of Financial CSW, β = .15, p = .082, 95% CI = [−0.01, 0.20], in predicting active, problem-focused coping. No other main effects or interactions were significant, including the Financial CSW × Threat Condition interaction, all ps > .41.

Text analysis of financial threat essays. To examine whether high Financial CSW participants perceived their financial stressor differently than low Financial CSW participants, we used the Linguistic Inquiry and Word Count program (LIWC; Pennebaker, Booth, & Francis, 2007) to assess the content of the essays in terms of (a) total number of words, (b) percentage of first-person pronouns; and (c) percentage of negative emotion words (Tausczik & Pennebaker, 2010). In addition, two independent coders rated each essay in the financial threat condition for how severe they thought the participants perceived their financial problem to be.

Although everyone in the financial threat condition was expected to write about a financially stressful situation they were experiencing, those with higher Financial CSW were expected to perceive these stressors as more emotionally upsetting and possibly more severe than those with lower Financial CSW. In addition, we explored whether participants with higher Financial CSW wrote longer essays overall (total word count) or used more personal pronouns, which might reflect greater personal involvement or relevance when writing about the financial stressor (Pennebaker, 2011).

Results of regression analyses revealed that participants with higher Financial CSW scores wrote essays with more negative emotion words than participants with lower Financial CSW, β = .22, p = .047, 95% CI = [0.01, 0.80]. There were no significant effects of Financial CSW on total number of words used or percentage of first-person pronouns used, all ps > .26. Interrater agreement for ratings of severity of the financial threat essays was good across the two coders, intraclass correlation (ICC) = .802, p < .001. Severity of the financial stressor, as assessed by these coders, did not differ as a function of participants' Financial CSW.

Financial concerns are a major source of stress and pressure for college students in America (White, 2015). Indeed, many college students today are working and paying for college expenses themselves. A recent report from the Georgetown University Center on Education and the Workforce (Carnevale, Smith, Melton, & Price, 2015) found that over the past 25 years, more than 70% of college students have worked while attending school. This coincides with the increase in college enrollment and tuition over the past few decades, which has led many students to take on loans and debts to pay for rising college expenses.

In the present study, college students who strongly based their self-worth on financial success showed diminished feelings of autonomy and adopted more disengagement strategies to cope with their financial problems. Importantly, only those with higher Financial CSW responded in this manner following a financial (vs. academic) threat. These findings emerged even after controlling for financial status, financial

goals, and materialism, thereby demonstrating that Financial CSW uniquely shapes responses to financial stressors.

Why would individuals with Financial CSW feel less autonomy in response to financial stressors but not academic stressors? Consistent with CSW theory, when people stake their self-worth in a domain, they feel pressured to achieve success and avoid failure in that domain. It therefore makes sense that, for those who strongly base their self-worth on financial success, thinking about financial insecurities would lead them to experience less autonomy than thinking about a problem in another domain (i.e., insecurities about academic performance).

People may also respond to self-threats in domains of contingency by protecting their self-esteem. Indeed, individuals with higher Financial CSW disengaged from their financial (but not academic) problems when they were reminded of a financial stressor. Such findings may appear to differ from past research, which found that individuals with contingent self-worth sometimes show greater investment in a domain following threat. For example, individuals who based their self-worth on being in a romantic relationship reported more obsessive pursuit of their ex-partner following a breakup (Park et al., 2011). One difference between the current findings and past findings, however, is that financial problems may be perceived as less under one's personal control than pursuing an ex-partner.

Other research suggests that a primary function of disengagement is to avoid drops in self-esteem. For example, individuals who are stereotyped as possessing low intelligence often disengage from intellectual domains (Major & Schmader, 1998; Major et al., 1998; Nussbaum & Steele, 2007; Schmader et al., 2001), and even those who are not stigmatized tend to disengage their self-esteem from domains after receiving negative-domain-related feedback (Leitner, Hehman, Deegan, & Jones, 2014). Although disengagement may protect self-esteem in the short term, giving up attempts to resolve financial problems could be counterproductive in the long term. Furthermore, the results from the LIWC text analysis revealed that participants who based their self-worth on financial success perceived their financial problems more negatively than those who based their self-worth less in this domain.

An unexpected result is that participants with higher Financial CSW showed less disengagement in response to an academic threat. It may be the case that financially contingent participants' self-worth was less at stake in the context of an academic threat; thus, they were less motivated to protect their self-esteem by disengaging from the academic domain. Alternatively, it is plausible that for college students, academic achievement and financial success are closely linked. Thus, one reason why participants with higher Financial CSW may have showed less disengagement in response to an academic threat is because they viewed academic engagement as a way to indirectly pursue financial success.

Study 3

In Study 3, we sought to provide evidence that for individuals with Financial CSW, satiating self-esteem concerns may have implications for feelings of autonomy. In particular, we predicted that individuals with higher Financial CSW would experience lower autonomy in response to a financial threat versus a threat to another domain (i.e., academic competence). Furthermore, we expected the difference between ratings of autonomy in the academic and financial threat conditions to be smaller in the self-affirmation condition than in the control condition for high Financial CSW participants.

According to self-affirmation theory, people are motivated to maintain a view of themselves as good, capable, and adequate; when faced with information that threatens the self, they strive to protect and defend their self-esteem (Blaine & Crocker, 1993; Sherman & Cohen, 2006; Steele, 1988). The standard self-affirmation manipulation asks participants to reflect on personal values or strengths that are unrelated to the present threat. This process reduces defensiveness (Fein & Spencer, 1997) and, in turn, increases openness to threatening self-relevant information (Sherman & Cohen, 2002). Accordingly, we expected that being reminded of one's strengths would reduce the difference in ratings of autonomy between the academic and financial threat conditions for those who strongly stake their self-worth on financial success.

Method

Participants and procedure. A total of 328 undergraduates (147 men; M_{age} = 19.21, SD = 1.80) from the University at Buffalo introductory psychology subject pool participated in the study in exchange for partial course credit. The sample was 42% White, 39% Asian, 7% Black, 7% Hispanic, and 5% Other. Given that we expected to find a three-way interaction between Financial CSW, Threat Condition, and Affirmation Condition, we sought to recruit a minimum of 40 participants per cell, which would exceed the recommended number of participants per cell to be able to detect a medium to large effect size with 80% power (Cohen, 1988; VanVoorhis & Morgan, 2007).

A few weeks prior to the lab study, participants completed an online questionnaire that included the Financial CSW scale. Upon arrival at the lab, participants were seated at private computer cubicles and told that they would be participating in a study about "individual differences and cognitive processes." As in Study 2, participants were randomly assigned to a financial or academic threat condition in which they wrote about an aspect of their financial situation or academic performance that they were dissatisfied with. Next, participants were randomly assigned to a self-affirmation condition—in which they listed a personal strength—or to a control condition—in which they listed an object in the room

(based on Park, 2007, Study 3). They then completed a measure assessing their current feelings of autonomy, followed by questionnaires assessing their financial goals, materialism, and demographic information, which were treated as covariates in the analyses.[4] Participants were then debriefed and dismissed.

Materials

Financial CSW. Participants responded to the same Financial CSW scale (five items, α = .82) as in the previous studies.

Financial threat condition. Participants completed the same writing task as in Study 2 for this condition.

Academic threat condition. Participants completed the same writing task as in Study 2 for this condition.

Self-affirmation condition. After writing one of the essays above, participants assigned to the self-affirmation condition were asked to "list their greatest strength." Participants listed items such as "creativity" and "determination."

Neutral (control) condition. After writing one of the essays above, participants assigned to the control condition were asked to "list an object you see in this room." Participants listed items such as "desk" and "computer."

State autonomy. Participants responded to the same State Autonomy scale as in Study 2 to assess how autonomous they felt at the moment (α = .72).

Financial goals. As in the previous studies, participants rated the importance of financial goals as assessed by the Aspirations Index (Grouzet et al., 2005; α = .81).

Materialism. Participants completed the same MVS (Richins, 2004) as in the previous studies (α = .81).

Demographics. Participants reported their gender, age, ethnicity, and the same perceived financial status item as in Study 1a (M = 3.06, SD = 1.04). As in Study 2, they also reported their parents' combined annual income (*Mdn* = US$75,000-US$99,999). We standardized and averaged these two items to create an overall measure of financial status (r = .52, p < .001).

Results and Discussion

We expected to find a three-way interaction between Financial CSW, Threat Condition, and Affirmation Condition. Specifically, we predicted that participants who strongly based their self-worth on financial success would feel less autonomy after writing about a dissatisfying aspect of their financial situation versus their academic situation. However, this relationship was only expected to emerge among participants in the control condition (those who listed an object in the room). On the contrary, if satisfying self-esteem concerns buffers people with Financial CSW from the negative effects of financial threat, then giving participants a chance to self-affirm (by listing one's greatest strength) should reduce the difference in ratings of autonomy between the financial (vs. academic) threat conditions among high Financial CSW participants.

A series of hierarchical regression analyses were conducted to test the hypotheses. At Step 1, covariates of financial status, centered scores for financial goals, and materialism were entered. At Step 2, main effects of centered Financial CSW scores, Threat Condition (1 = financial threat, 0 = academic threat), and Affirmation Condition (1 = self-affirmation, 0 = control) were entered. At Step 3, all two-way interactions between Financial CSW, Threat Condition, and Affirmation Condition were entered, along with all two-way interactions between each covariate and the respective conditions. At Step 4, all three-way interactions between Financial CSW, Threat Condition, and Affirmation Condition were entered, along with all three-way interactions between each covariate and the respective conditions. To decompose significant interactions, we plotted predicted values at 1 *SD* above and below the mean of Financial CSW across conditions.

State autonomy. Results of regression analyses revealed significant main effects of Financial Status, β = .20, p < .001, 95% CI = [0.11, 0.35]; Financial Goals, β = .18, p = .005, 95% CI = [0.04, 0.21]; and Materialism, β = −.29, p < .001, 95% CI = [−0.46, −0.18], in predicting current feelings of autonomy. These effects were qualified by the predicted three-way interaction between Financial CSW, Threat Condition, and Affirmation Condition, β = .27, p = .029, 95% CI = [0.05, 0.86]. Decomposing this interaction revealed a significant Threat Condition × Affirmation Condition interaction among high Financial CSW (+1 *SD*), β = .31, p = .03, 95% CI = [0.09, 1.38], but not low Financial CSW participants (−1 *SD*), β = −.14, p = .32, 95% CI = [−0.96, 0.31] (see Figure 3).

Simple effects tests supported our hypotheses: Among high Financial CSW participants (+1 *SD*), those in the no affirmation condition (who listed an object in the room) reported less autonomy when they experienced a financial (vs. academic) threat, β = −.30, p = .008, 95% CI = [−1.04, −0.16]. Furthermore, when high Financial CSW participants self-affirmed, the difference in autonomy ratings between the academic and financial threat conditions became nonsignificant, β = .07, p = .573, 95% CI = [−0.33, 0.60]. Among low Financial CSW participants (−1 *SD*), the effect of threat was nonsignificant in both the no affirmation, β = .02, p = .879, 95% CI = [−0.41, 0.48], and self-affirmation condition, β = −.14, p = .215, 95% CI = [−0.75, 0.17].

Within the financial threat condition, the simple effect of affirmation condition among high Financial CSW participants

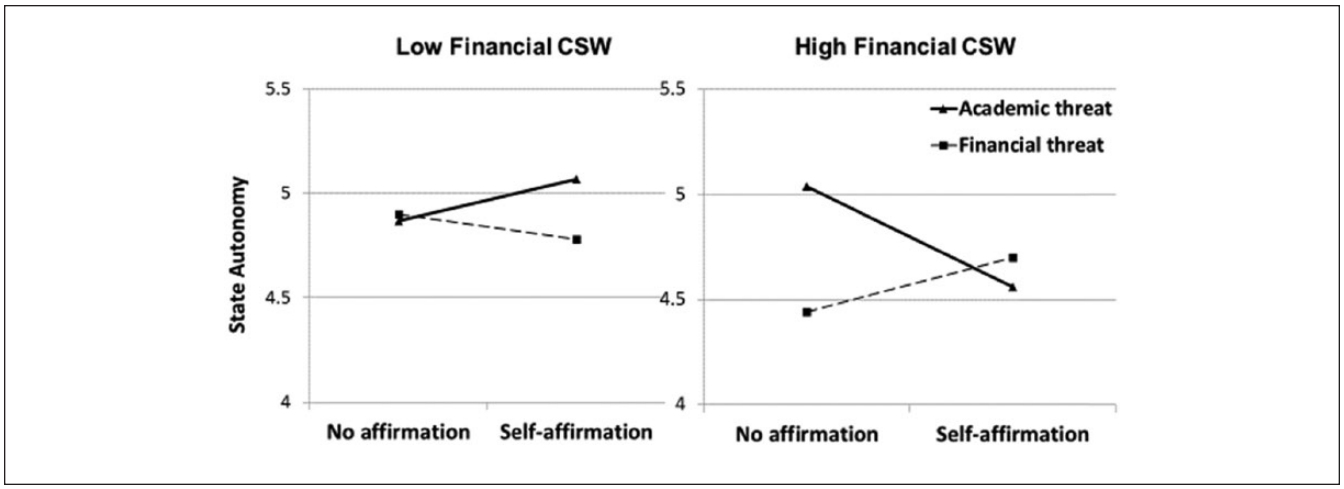

Figure 3. Study 3: Feelings of current autonomy as a function of threat condition and affirmation condition among participants with low (−1 *SD*) versus high (+1 *SD*) Financial CSW.
Note. CSW = contingency of self-worth.

was not significant, β = .13, p = .252, 95% CI = [−0.19, 0.71]; within the academic threat condition, the simple effect of affirmation condition among high Financial CSW participants was negative, β = −.23, p = .045, 95% CI = [−0.93, 0.01]. For low Financial CSW participants, the effect of affirmation condition was not significant within either threat condition, all ps > .51.

Consistent with Study 2, participants with higher Financial CSW reported lower feelings of autonomy after writing about a dissatisfying aspect of their financial situation versus their academic situation. Importantly, this pattern emerged only in the no affirmation condition—when participants wrote about a financial problem and then simply listed an object in the room. In contrast, when participants were given a chance to self-affirm—by writing about a financial problem and then listing their greatest strength—the difference in levels of autonomy between the financial threat and academic threat conditions was eliminated. These results emerged even after controlling for financial status, materialism, and financial goals, thereby highlighting the unique contribution of Financial CSW in shaping feelings of autonomy. As in Study 2, the current study also indicates that autonomy can be assessed not just as a trait but as a state that fluctuates in response to events that occur in domains of contingent self-worth.

Study 4

The final study examined Financial CSW and risk-taking in response to financial threats. On one hand, high Financial CSW participants may be more likely to make extravagant spending decisions following a financial threat because they seek to experience the emotional rewards of purchasing lavish items. However, given that negative events tend to have a stronger impact than positive events (Baumeister et al., 2001), high Financial CSW participants may show less desire to make extravagant purchases following a financial threat because they want to protect their self-esteem from further loss. To test these ideas, the current study examined desire for extravagant spending in response to negative feedback about one's future financial status. To determine whether this effect is unique to the financial domain, we included a comparison condition of receiving negative feedback about one's future health status. We also assessed decisions related to health to determine whether behavioral intentions following a financial threat are specific to the financial domain or extend to other domains more generally.

Method

Participants and procedure. A total of 209 undergraduates (100 men) from the University at Buffalo introductory psychology subject pool participated in the study in exchange for partial course credit. Four participants were excluded from analyses because they did not believe the feedback they received. The final sample consisted of 205 participants (96 men; M_{age} = 18.92, SD = 1.16) and was 48% White, 40% Asian, 3% Black, 6% Hispanic, and 3% Other. Given that we expected to find a two-way interaction between Financial CSW and Threat Condition, we sought to recruit at least 40 participants per cell, which would help detect a medium to large effect size with 80% power (Cohen, 1988; VanVoorhis & Morgan, 2007).

A few weeks prior to the lab study, participants completed an online questionnaire that included the Financial CSW scale and a measure of trait self-esteem. Self-esteem was treated as a covariate in the analyses given the negative link between self-esteem and Financial CSW, and past research suggesting that self-esteem differences exist in response to self-threat (Baumeister et al., 1989; Park, 2010). Upon arrival at the lab, participants were seated at private computer

cubicles, and told that they would be participating in a "Study of Performance and Preferences." They were then randomly assigned to a financial threat or health threat condition.

As part of the manipulation, participants first completed a questionnaire assessing their financial or health-related attitudes and habits. Next, they received bogus feedback indicating that the participant would experience either a financially insecure future or a future of insecure health. Participants then reported the likelihood they would make extravagant spending decisions, which were embedded among filler items. Finally, they completed measures assessing their financial goals, materialism, and demographics, which were treated as covariates. They were then debriefed and dismissed.

Materials

Financial CSW. Participants responded to the same Financial CSW scale (five items, α = .75) as in the previous studies.

Self-esteem. Participants completed the Rosenberg Self-Esteem scale, which assesses global evaluations of the self with items such as, "On the whole, I am satisfied with myself," from 1 (*strongly disagree*) to 7 (*strongly agree*; α = .89).

Financial threat condition. Participants completed a "Financial Attitudes" questionnaire where they answered items on the computer related to their financial status, habits, and beliefs. Afterward, the computer ostensibly "processed" their responses and provided the following feedback, modeled after a manipulation used in past research to convey negative feedback about one's future (Baumeister, DeWall, Ciarocco, & Twenge, 2005):

> Based on the information you provided, our computer program was able to analyze specific aspects of your personality, attitudes, and behavioral tendencies that research has shown to be predictive of future life outcomes. Based on your responses to specific questions in the survey, *you're the type of person who is likely to experience financial instability later in life.* Regardless of your financial situation right now, by your mid-20s you are likely to feel that money is scarce. There may be times when you regain financial stability, but these are likely to be short-lived and not continue into your 30s. You will likely end up struggling for money the older you get. (emphasis added)

Health threat condition. Participants assigned to this condition first completed a "Health Attitudes and Habits" questionnaire where they answered a series of questions on the computer pertaining to diet, exercise, and other health-related matters. Afterward, the computer "processed" their responses and provided the following feedback:

> Based on the information you provided, our computer program was able to analyze specific aspects of your personality, attitudes, and behavioral tendencies that research has shown to be predictive of future life outcomes. Based on your responses to specific questions in the survey, *you're the type of person who is likely to experience problems with your physical fitness later in life*. Regardless of your health condition right now, by your mid-20s you are likely to feel that your fitness level is not what you'd like it to be. There may be times when you improve your physical fitness, but these are likely to be short-lived and not continue into your 30s. You will likely end up struggling with being physically fit the older you get. (emphasis added)

Extravagant spending decisions. Participants reported the likelihood that they would engage in a series of behaviors in the financial domain. Items were developed based on the Financial Domain-Specific Risk-Taking scale (Weber, Blais, & Betz, 2002) but adapted to be relevant to the population being studied (i.e., college students) and tailored specifically toward extravagant spending decisions. For each statement, participants indicated the likelihood that they would engage in the activity or behavior on a scale from 1 (*extremely unlikely*) to 7 (*extremely likely*). Sample items were as follows: "buying an item that you really want even though you cannot afford it"; "spending most of your paycheck on a spontaneous shopping spree"; and "withdrawing most of the money in your savings account to buy a new car" (five items; α = 54).

Health risk-taking. Participants reported the likelihood that they would engage in various activities and behaviors related to health risks on a scale from 1 (*extremely unlikely*) to 7 (*extremely likely*). Sample items were as follows: "sun-tanning without sunscreen"; "engaging in unprotected sex"; "drinking heavily at a social function" (six items, α = .67; Weber et al., 2002).

Financial goals. As in the previous studies, participants rated the importance of financial goals as assessed by the Aspirations Index (Grouzet et al., 2005; α = .75).

Materialism. Participants completed the same MVS (Richins, 2004) as in the previous studies (α = .78).

Demographics. Participants reported their gender, age, ethnicity, and the same perceived financial status item as in Study 1a (M = 3.11, SD = 0.98). As in Study 2, they also reported their parents' combined annual income (Mdn = US$75,000-US$99,999). We then standardized and averaged the two items to create a financial status measure (r = .53, $p < .001$).

Results and Discussion

We conducted a series of hierarchical regression analyses to test the hypotheses. At Step 1, covariates of financial status, centered scores of materialism, financial goals, and trait self-esteem were entered. At Step 2, main effects of centered Financial CSW scores and Threat Condition (1 = financial

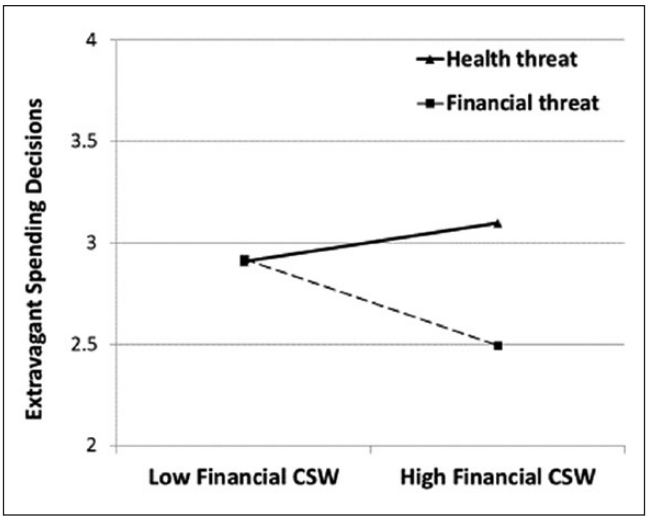

Figure 4. Study 4: Likelihood of making extravagant spending decisions as a function of threat condition and Financial CSW.
Note. Means are plotted at 1 *SD* above and below the mean of Financial CSW. CSW = contingency of self-worth.

threat, 0 = health threat) were entered. At Step 3, the Financial CSW × Threat Condition interaction, controlling for all two-way interactions between each covariate and condition, was entered. To decompose significant interactions, we plotted predicted values at 1 *SD* above and below the mean of Financial CSW across conditions.

Extravagant spending decisions. Results of regression analyses revealed significant main effects of Materialism, β = .30, $p <$ .001, 95% CI = [0.20, 0.63]; Self-esteem, β = −.15, p = .04, 95% CI = [−0.28, −0.01]; and Threat Condition, β = −.16, p = .02, 95% CI = [−0.58, −0.05], in predicting likelihood of extravagant spending. These effects were qualified by an interaction between Financial CSW × Threat Condition that approached significance, β = −.23, p = .053, 95% CI = [−0.58, 0.00] (see Figure 4).

Simple effects tests revealed that, among higher Financial CSW participants, those who received feedback indicating that they would have an insecure financial future reported less likelihood of making extravagant spending decisions than those who expected a future of insecure health, β = −.31, p = .003, 95% CI = [−1.03, −0.21]. Among lower Financial CSW participants (−1 *SD*), the effect of threat was nonsignificant, β = .00, p = .98, 95% CI = [−0.41, 0.42]. Within the financial threat condition, the simple effect of Financial CSW was significant, such that participants who expected a future of financial insecurity were less likely to make extravagant spending decisions the more they based their self-worth on financial success, β = −.21, p = .04, 95% CI = [−0.38, −0.01]. In the health threat condition, the simple effect of Financial CSW was not significant, β = .10, p = .42, 95% CI = [−0.13, 0.31].

Health risk-taking. Results of regression analyses showed significant main effects of Financial Status, β = .28, $p <$ .001, 95% CI = [0.17, −0.52]; Materialism, β = .18, p = .03, 95% CI = [0.03, 0.51]; Self-esteem, β = −.21, p = .003, 95% CI = [−0.38, −0.08]; and Financial CSW, β = .16, p = .046, 95% CI = [0.00, 0.32], in predicting likelihood of health risk-taking. There were no other significant effects or interactions, all ps > .11.

Overall, Study 4 demonstrated that individuals with higher Financial CSW were less likely to make extravagant spending decisions when they received feedback indicating that they would have a financially insecure future. Notably, these findings emerged only among those with high Financial CSW but not among those who did not strongly base their self-worth on financial success. Importantly, the effects emerged even after controlling for financial aspirations, materialism, and financial status, suggesting that Financial CSW is a unique predictor of extravagant spending decisions in the face of financial insecurity. In addition, the effects were observed only under conditions of financial threat and not when participants received negative feedback about their future health status. Finally, higher Financial CSW participants did not become averse toward behaviors in general following a financial threat; they did not, for example, report that they would take fewer health-related risks following threat, but became more cautious about making extravagant spending decisions in particular.

Together, these results suggest that feedback pertaining to domains of contingent self-worth can influence spending decisions. For individuals who strongly based their self-worth on financial success, anticipating a future of financial insecurity led them to adopt a more cautious, self-protective stance by reporting less desire to make extravagant purchases.

General Discussion

The pursuit of financial success is an important goal for many individuals living in capitalistic, consumer-based cultures, such as the United States (Jayson, 2007; Kasser et al., 2007). Ironically, however, preoccupation with financial success may come at a cost to psychological well-being (Dittmar et al., 2014; Kasser, 2002; Kasser & Ryan, 1993, 1996) and affect people's coping responses. In the present research, we proposed that feelings of stress and anxiety surrounding the pursuit of money may be tied to Financial CSW. From a CSW perspective, the desire for financial success has negative consequences, but only for those whose self-worth is strongly staked on achieving financial success.

The first set of studies (Studies 1a-1c) established the reliability and validity of a new measure to assess variability in the degree to which individuals base their self-esteem on financial success. As predicted, those with higher Financial CSW based their self-worth more on external sources of self-esteem (e.g., others' approval, appearance, academics,

competition), had lower trait self-esteem, and valued materialism and financial goals more strongly than those who based their self-esteem less in this domain. Even after controlling for these constructs, however, unique associations still emerged between Financial CSW and the outcomes of interest. Notably, individuals with higher Financial CSW made more frequent financial social comparisons with others, experienced more financial hassles, and felt less autonomy compared with those whose self-worth was less contingent on financial success. These findings were demonstrated robustly in both a college sample and a broader nationwide sample. In addition, participants with higher Financial CSW reported greater symptoms of anxiety and financial stress than those whose self-worth was less contingent on financial success, even after controlling for economic hardship and a host of other variables.

The next set of studies experimentally tested the idea that individuals with higher Financial CSW feel less autonomy when they are made to feel financially insecure versus insecure in another domain. Supporting this notion, Study 2 showed that individuals with higher Financial CSW experienced lower feelings of autonomy after thinking about a financial (vs. academic) stressor in their life. These individuals also perceived their financial problems more negatively and adopted more disengagement strategies to cope with their financial issues, suggesting that the desire to protect self-esteem may have motivated their responses to self-threat. Study 3 provided further evidence that individuals with higher Financial CSW feel less autonomy after reflecting on a dissatisfying aspect of their financial situation, compared with reflecting on a dissatisfying aspect of their academic performance. However, this difference in feelings of autonomy—between the financial and academic threat conditions—was attenuated when participants were given the chance to self-affirm, by thinking about a personal strength following the financial threat.

Finally, Study 4 showed that individuals with higher Financial CSW were less likely to make extravagant spending decisions after receiving feedback indicating that they would have a financially insecure future. Importantly, these effects emerged only among those with high (but not low) Financial CSW in response to a financial (vs. health-related) threat, and was specific to decision making in the financial domain (and not in other domains, such as health).

On a broader level, the current findings contribute to the literature on self-esteem, CSWs, and self-threat. First, the findings underscore the importance of matching domains of contingency with domains of self-threat in shaping outcomes of interest. In Studies 2 to 4, responses to financial threat did not generalize to threats in other domains, or to individuals whose self-worth was not strongly tied to financial success. Thus, people's reactions to self-threat appear to be shaped by the degree to which (a) their self-worth is on the line and (b) whether or not they experience a threat in a domain of contingency.

Another contribution of this work is in demonstrating how having *contingent* self-worth in the financial domain, rather than placing importance on financial goals or endorsing materialistic values in general, affects well-being. Across studies, results held even after controlling for financial status, economic hardship, financial goals, and materialistic values. Such findings underscore the unique contribution of Financial CSW in predicting responses to financial threat.

The current studies also support the idea that Financial CSW is an introjected form of self-regulation in which self-standards are internalized as guides that motivate a desire to feel good—and avoid feeling badly—about oneself (Ryan & Deci, 2000). When people internalize pressures to achieve success and avoid failure in domains of contingency, they are motivated by the pursuit of self-esteem; this pursuit, while emotionally rewarding, can be costly and undermine basic psychological need satisfaction (Crocker & Park, 2004; cf. Sheldon, Elliot, Kim, & Kasser, 2001). Consistent with this idea, participants in the current studies reported less autonomy (Studies 1a, 1c, 2, and 3) the more they based their self-worth on financial success. Although pursuing financial success may sometimes help individuals enhance their well-being (e.g., being able to afford food, shelter), striving for financial success is typically associated with lower well-being, and even with narcissism and antisocial behavior (Kasser, 2002; Kasser & Ryan, 1993, 1996). The present research suggests a key reason why this emphasis on financial success may have negative consequences; when self-worth is tethered to financial success, individuals are vulnerable to the costs of pursuing self-esteem—experiencing less autonomy and ability to cope effectively with problems in domains of contingent self-worth.

Indeed, participants with higher Financial CSW adopted more disengagement strategies to cope with their financial problems (Study 2). Disengagement involves avoidance of stressful situations through denial or distraction with irrelevant tasks (Carver et al., 1989). Although a primary function of disengagement is to prevent further drops in feelings of self-esteem (Major et al., 1998), alternative methods, such as active coping or making plans to overcome the problem, may be more effective in addressing the source of a person's stress. Thus, while disengagement may temporarily quell feelings of threat, repeatedly giving up on attempts to resolve a problem could incur costs over time.

On the contrary, some studies suggest that disengagement can be beneficial when goals are perceived to be unattainable (Wrosch, Scheier, Carver, & Schulz, 2003). The decision to withdraw effort and commitment from an unattainable goal may be adaptive at times, because doing so could help individuals avoid failure and free up time or energy to use elsewhere. Future research could examine in greater depth the coping strategies of those with contingent self-worth; for example, disengagement might be a suitable strategy in response to pursuing financial goals that are unrealistic or in dealing with financial problems that are beyond one's

control. However, disengagement could also decrease one's chances of achieving financial goals that *are* attainable, or in tackling financial problems that could be resolved. The use of longitudinal and daily diary methods could shed further light on the links between Financial CSW, financial stressors, and responses to financial threats over time.

In the present research, all of the experimental studies used personal financial threats (e.g., writing about a financial stressor; receiving negative feedback about one's future financial status). Future research could examine whether people with Financial CSW are equally affected by financial threats that extend beyond personal financial problems. For example, exposure to information about meager job prospects, the unpredictable stock market, or difficulties that people generally face in paying off debts and loans might seem more personally relevant to high Financial CSW individuals and affect their subsequent responses to financial threats. Along these lines, recent research has shown that financial insecurity can be induced by telling participants that their state has a high unemployment rate, or by having participants think about past and future economic insecurity in general (Chou, Parmar, & Galinsky, 2016).

A potential limitation of the current research is that some of the studies were correlational in nature, which raises questions about direction of causality. For example, although Financial CSW was theorized to predict more financial hassles and financial stress, it could also be the case that experiencing more financial stressors leads individuals to base their self-esteem more on financial success. Although Studies 1a and 1c were correlational and therefore cannot address this question, Study 1b found that the Financial CSW scale had good test–retest reliability over a 5- to 6-week period, suggesting that Financial CSW does not fluctuate much over time. Furthermore, Financial CSW was always assessed a few weeks prior to the lab session in Studies 2, 3, and 4, and consistently interacted with the financial threat condition to predict the outcomes of interest. Although we also assessed Financial CSW at the end of the lab session (in Study 2), postmanipulation Financial CSW did *not* interact with threat condition to predict behavioral disengagement. Thus, preexisting Financial CSW, rather than Financial CSW resulting from financial stressors induced in the lab, led to disengagement in the face of financial threats (Study 2). Such findings suggest that Financial CSW is a reliable individual difference variable that uniquely and prospectively predicts responses to financial threats.

One future research direction is to examine why and how people's self-esteem becomes linked to financial success in the first place. Whereas some people may develop Financial CSW from internalizing messages conveyed by parents or family members, other people might be influenced more by the media, peers, or the neighborhood in which they live. Capitalistic societies may especially promote Financial CSW compared with cultures that place relatively less emphasis on the accumulation of financial wealth. Even within the United States, there might be variation in how much people base their self-worth on financial success depending on the history of a region or the perceived values of a community.

Another direction is to explore how Financial CSW affects behavior in interpersonal settings. Research suggests that the frequency of financial disputes among married couples is a strong predictor of divorce (Dew, Britt, & Huston, 2012). Rather than focusing solely on the domain of conflict, researchers could gain a deeper understanding of relational dynamics by examining the underlying reasons *why* people experience financial conflicts in the first place. Based on the ideas proposed in the current research, it seems plausible that financial stressors—and responses to such threats—could spill over into one's relationships and might depend on the degree to which one's self-worth is staked on financial success.

Financial CSW may also be important to consider in group contexts. If a company and its leaders strongly value financial success, this perception could affect whether employees stake their own self-esteem on financial success. Such processes, in turn, could have implications for how stressed and pressured employees feel in organizations, affecting outcomes such as workplace satisfaction, productivity, and even burnout.

Conclusion

> Money never made a man happy yet, nor will it. The more a man has, the more he wants. Instead of filling a vacuum, it makes one. (Benjamin Franklin)
>
> Wealth is like sea-water; the more we drink, the thirstier we become. (Arthur Schopenhauer)

As suggested by these quotes, the pursuit of money may paradoxically increase the desire to attain even greater levels of financial success. Building upon previous work on the dark side of the American Dream (Dittmar et al., 2014; Kasser, 2002; Kasser & Ryan, 1993, 1996), the current studies suggest that the quest for money and wealth may sometimes be harmful for those who stake their self-worth on being financially successful. Indeed, the more people based their self-worth on financial success, the more they compared their financial status with others, experienced financial hassles, stress, and anxiety, and felt less autonomy—both chronically and in response to financial threats. These individuals also showed self-protective responses—in the form of disengagement from their financial problems—in the face of financial threats. People with Financial CSW also showed self-protective responses that could be interpreted in a favorable light, however, such as decreasing their likelihood of making extravagant spending decisions following a financial threat. Future research should examine further the antecedents and consequences of Financial CSW, and investigate the impact of this construct on psychological and behavioral outcomes related to physical and mental health, interpersonal relationships, and group-level processes.

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Supplemental Material

The supplemental material is available at online.

Notes

1. We did not collect information about the ethnicity of participants in Study 1a.
2. The attention check items in Study 1c (MTurk study) were as follows: (a) If you live in the United States, select *strongly agree*. Otherwise, select *strongly disagree* (scale from 1 = *strongly disagree* to 5 = *strongly agree*); and (b) Please enter the year in which we are currently living. Participants who responded with anything other than a "1" for the first item were excluded, as were participants who wrote anything other than "2015" for the second item.
3. In Study 2, there were no significant effects of the financial threat manipulation on the covariates of financial status, financial aspirations, or materialism, all *p*s > .55. In Study 3, there was only a marginal main effect of the self-affirmation condition in predicting materialistic values, $\beta = -.08$, $p = .076$, 95% confidence interval (CI) = [−0.30, 0.02]. No other effects of the manipulations approached significance, all *p*s > .36. These findings suggest that the manipulations did not consistently affect the covariates across studies. This could be due to the fact that the covariates were assessed at the end of the study, after participants had completed the outcome measures (e.g., state autonomy, disengagement coping). Perhaps completing these other measures diluted the impact of the manipulations on subsequent covariate measures.
4. We also administered the same COPE scales as used in Study 2 but did not find significant three-way interactions between Financial Contingency of Self-Worth (CSW), Threat Condition, and Affirmation Condition in predicting coping responses. For the sake of brevity, these variables are not reported in the text for Study 3; further information about them may be obtained from the authors.

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