

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/346404170>

# Popping the Positive Illusion of Financial Responsibility Can Increase Personal Savings: Applications in Emerging and Western Markets

Article in *Journal of Marketing* · November 2020

DOI: 10.1177/0022242920979647

CITATIONS

2

READS

192

3 authors, including:



**Emily Garbinsky**  
Stanford University

6 PUBLICATIONS 475 CITATIONS

[SEE PROFILE](#)



**Nicole Mead**  
York University

28 PUBLICATIONS 3,258 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



The Psychological Consequences of Money [View project](#)

Popping the Positive Illusion of Financial Responsibility Can Increase Personal Savings:

Applications in Emerging and Western Markets

EMILY N. GARBINSKY

NICOLE L. MEAD

DANIEL GREGG\*

In press at *Journal of Marketing* (Special Issue: *Better Marketing for a Better World*).

Citation: Garbinsky, Emily, Nicole L. Mead, and Daniel Gregg (forthcoming), "Popping the Positive Illusion of Financial Responsibility Can Increase Personal Savings: Applications in Emerging and Western Markets," *Journal of Marketing* (Special Issue: *Better Marketing for a Better World*).

\*Emily N. Garbinsky is an Assistant Professor of Marketing at the University of Notre Dame, Mendoza College of Business, Notre Dame, IN 46556 (egarbins@nd.edu). Nicole L. Mead is an Associate Professor of Marketing at York University, Schulich School of Business, Toronto, Canada (nmead@schulich.yorku.ca). Daniel Gregg is a Senior Research Fellow at the University of New England, Armidale, Australia (dgregg@une.edu.au). The authors would like to thank Eileen Fischer, Szu-chi Huang, Anne-Kathrin Klesse, Monika Lisjak, and John Lynch for their feedback on the manuscript, as well as Megan Allen, Amanda Bockaj, Julius Njoke, and Anna Rehagen for their research assistance. In addition, the authors are grateful for the helpful comments from participants at the 2018 ACR conference in Dallas, as well as seminar participants at York University, Deakin University, and the University of Notre Dame. The Uganda studies in this paper were undertaken as part of the Value Chains for Innovation Platforms project funded by the Australian Centre for International Agricultural Research (project ID# FST/2014/093). This research was also funded by a Social Sciences and Humanities Research Council of Canada (SSHRC) grant awarded to NL Mead (Grant # 430-2020-00829).

**Popping the Positive Illusion of Financial Responsibility Can Increase Personal Savings:  
Applications in Emerging and Western Markets**

**Abstract**

People around the world are not saving enough money. We propose that one reason people under-save is because they hold the positive illusion of being financially responsible. If this conjecture is correct, then deflating this inflated self-view may increase saving, as people should become motivated to restore perceptions of financial responsibility. After establishing that people do hold the illusion of financial responsibility, we developed an intervention that combats this self-enhancing bias by triggering people to recognize their frequent engagement in superfluous spending. This superfluous-spender intervention increased saving by enhancing people's motivation to restore their diminished perceptions of financial responsibility. Consistent with theorizing, the intervention increased saving only when superfluous spending was under one's control and among those who were motivated to perceive themselves as financially responsible. In addition to increasing saving in Western countries, the superfluous-spender intervention increased saving of earned income and a financial windfall over time amongst chronically poor coffee growers in rural Uganda. Collectively, this work shows that people view their financial responsibility through rose-colored glasses which, in turn, can undermine their financial well-being. It also endows stakeholders with a simple, practical, and inexpensive intervention that offsets this bias to increase personal savings.

*Keywords:* behavioral intervention, emerging markets, financial well-being, saving, self-regulation, positive illusions

People around the world are not saving enough money. In North America, Europe, and Japan, personal savings rates have fallen (Graham 2017; Thompson 2016). In developing countries, where people are certainly challenged to save because of their meager income and lack of safe savings facilities, they too spend a portion of their scant income on non-necessities, money which could otherwise be saved (Banerjee and Duflo 2007; Karlan, Ratan, and Zinman 2014). For many households, a lack of savings means that they may not have enough money to cover an unexpected expense, which can result in a downward spiral of costly debt as they seek to cover necessary spending such as housing, car, and child-related expenses (Johnson 2013).

A lack of savings can undermine personal and societal welfare, so many researchers have considered *why* people do not save enough. For example, it has been shown that people's willingness to save money is influenced by relatively stable factors such as their financial status (Bertrand et al. 2006), childhood economic environment (Griskevicius et al. 2013), level of self-control (Vohs and Faber 2007), or even the language they speak (Chen 2013). Relatively less well studied is *how* practitioners can leverage psychological processes that govern saving to create implementable and scalable interventions to help people save more. Given that practitioners from a wide range of organizations across the world, such as fintech companies, commercial banks, NGOs, and the government, want to help people save more (Bernartzi 2020), knowing how to facilitate saving in a simple yet substantive way is an important but relatively understudied question.

In the current work, we aim to shed light on both of these issues. First, we leverage classic work on positive illusions to theorize that people hold the positive illusion of being financially responsible. In other words, even when they spend money superfluously, many people believe they manage and save their money in a responsible fashion because this enables

them to feel good about themselves. Second, drawing from classic work on self-regulation, we hypothesize and show that offsetting people's inflated perceptions of financial responsibility motivates them to restore those tempered self-views through increased saving. More specifically, we develop an intervention that increases people's motivation to save by drawing attention to the fact that they regularly engage in superfluous and thus irresponsible spending. Hence, in addition to illuminating an antecedent to saving (i.e., the illusion of financial responsibility), we illustrate what financial stakeholders can do to combat this self-enhancing bias in an effort to encourage consumers to (accurately) reflect on their financial situation, realize their (many) surpassed savings opportunities, and commit to saving more.

## **Conceptual Development**

### ***The Positive Illusion of Financial Responsibility***

People have a need to view themselves positively (Baumeister 1998; Tajfel and Turner 1979). Past research has demonstrated the pervasiveness of these positive illusions, revealing that most people hold positively distorted views of themselves, overly optimistic expectations about the future, and an exaggerated sense of personal control (Taylor and Armor 1996). Most relevant to the current investigation is the finding that people are especially likely to develop distorted positive self-views when they are faced with stressful events (Taylor and Armor 1996). For this reason, the cultivation of positive self-views may be particularly evident in the financial domain, as financial matters are a common source of stress in daily life (Papp, Cummings, and Goeke-Morey 2009).

This begs the question of how these positive self-views manifest in the financial domain. Here, we suggest that people hold the positive illusion that they are financially responsible, which we define as the unrealistically positive self-perception that one is good at managing one's money, saving one's money, and using one's money in a sensible, non-superfluous manner. To illustrate, we anticipate that most people view themselves as more financially responsible than their average peer, which is statistically impossible (i.e., the Better-than-Average Effect; Alicke and Govorun 2005). Our hypothesis that people hold the positive illusion of financial responsibility is rooted in several lines of work.

First, people tend to hold positive illusions for attributes that are valued by others and society (Taylor et al. 1989). A core aspect of financial responsibility, saving money, is a desirable attribute that people look for in a partner (Olson, Rick, and Finkel 2018). Second, people are particularly likely to hold inflated views for attributes that are vague and abstract because the fuzziness of those constructs enables people to construe the attribute in a self-serving way (Critcher, Helzer, and Dunning 2011; Horowitz and Turan 2008). This tendency thus leads people to reach overly flattering conclusions about themselves that fail to align with objective evidence (Critcher et al. 2011). Although financial actions are concrete, how those actions map onto more abstract judgments about financial responsibility is far from straightforward. In this way, people who want to perceive themselves as financially responsible can easily construe their financial behaviors in a flattering, self-serving way.

Third, past work has shown that people seek to preserve their perceptions of financial responsibility (Sussman and O'Brien 2016). More specifically, Sussman and O'Brien (2016) found that consumers preferred to borrow from a high interest credit rate option rather than dip into their savings when those savings were earmarked for a goal that they considered to be

responsible (e.g., children's education). While the purpose of our research is not to examine willingness to preserve savings, but rather how perceptions of financial responsibility affect the decision to save in the first place, this previous research clearly supports the notion that consumers perceive saving as financially responsible. Taken together, the above lines of reasoning lead us to our first hypothesis:

**H1:** People hold the positive illusion of financial responsibility (i.e., overly positive perceptions of how financially responsible they are).

### ***Perceptions of Financial Responsibility and Saving***

At first blush, one may expect that the positive illusion of financial responsibility would encourage consistent behavior and thus facilitate saving. However, drawing from classic work on positive illusions and self-regulation, we conjecture that inflated perceptions of financial responsibility may contribute to under-saving.

People who hold positive illusions believe they are more likely than others to experience positive events, and they see themselves as less vulnerable to threatening events (Taylor and Armor 1996; Taylor and Brown 1988). Because positive illusions cultivate the belief that bad things happen to others rather than to the self, individuals who hold the illusion of financial responsibility may feel less of a need to save money for unexpected (emergency) expenses. Similarly, people's rose-tinted glasses engender the belief that future conditions will be favorable and thus they can act in an ideal manner at a later point in time (e.g., saving money; Tanner and Carlson 2009). In this way, people who hold the positive illusion of financial responsibility may not feel the need to save in the present because they think they will save in the future. Finally, for those who need to save the most, taking a cold, hard look at their finances is likely a sobering

and unpleasant process. The desire to feel good about the self and avoid discomfort, basic components of the positive illusion (Taylor and Brown 1988), may lead people to postpone or even avoid taking such steps.

Research on self-regulation tells a similar story. People monitor their standing on important dimensions (e.g., how they're doing as a parent, teacher, or researcher; Carver and Scheier 1998). When people do not perceive a discrepancy between their behavior and their standard, they do not change their behavior; when they do perceive a discrepancy, they change their behavior to bring it in line with their desired standard (e.g., they devote more time and energy to their children, class, or research projects). Because positive illusions cause people to perceive themselves in a flattering, self-serving way (Taylor and Armor 1996; Taylor and Brown 1994; Taylor et al. 1989), they may not perceive that they are falling short of their desired standard – in the current context, that they are financially responsible. In this way, people will not perceive a need to change their behavior and thus will not take actions toward increasing their savings.

If the positive illusion of financial responsibility undermines people's inclination to save, then offsetting the positive illusion of financial responsibility – namely, by drawing attention to their routine superfluous spending – should increase saving. As alluded to in the previous paragraph, when people perceive that their behavior has fallen short of their desired standard, they become motivated to enact behaviors that will close the gap (Carver and Scheier 2001; Festinger 1957; Higgins 1997; Locke and Latham 2002). Because self-regulation processes persist until one's standing on the threatened dimension has been achieved (Carver and Scheier 2001; Gollwitzer et al. 2013; Moskowitz et al. 2011), offsetting people's perceptions of financial responsibility should motivate them to restore those diminished perceptions through increased

saving. Note that because there is no ultimate attainment of identity goals (Gollwitzer and Kirchhof 1998), people who are striving to restore perceptions of financial responsibility may continue to save beyond the initial threat. We thus hypothesize the following:

**H2:** Diminishing the positive illusion of financial responsibility (by highlighting that one frequently engages in superfluous spending) will increase savings intentions and behavior.

**H3:** The desire to restore diminished perceptions of financial responsibility will mediate the effect of the superfluous-spender intervention on savings.

### ***Boundary Conditions***

In addition to mediation, we also sought to test our proposed process by examining two boundary conditions that follow directly from our theorizing (i.e., process through moderation; Spencer, Zanna, and Fong 2005). We selected these boundary conditions because they provide theoretical value, and they illustrate managerial relevance.

*Control Over Past Spending Behavior.* Situational circumstances alter whether people perceive a discrepancy between their enacted behavior and their desired self-views (Cooper and Fazio 1984). Most relevant to the current work, when people perceive that their behavior is not reflective of themselves, they do not feel that they have fallen short of their desired standards and hence they do not perceive the need to engage in restorative actions (Zanna and Cooper 1974).

Spending is sometimes freely chosen, but other times it is outside of people's control. Past research suggests that people do not use their past behavior as a clue to their inner states when they believe that their behavior is under external control (Aronson and Carlsmith 1963; Bem 1972; Mead and Patrick 2016). We thus hypothesized that when people can attribute their

past superfluous spending to external forces, their perceptions of financial responsibility should remain intact and thus they do not need to bolster those perceptions through increased saving.

More formally, we predict that:

**H4:** Highlighting frequent engagement in superfluous spending will increase saving when superfluous spending is under one's control, but not when superfluous spending is under external control.

Not only does this proposed moderator have theoretical value, but it is also practically relevant in the domain of financial decision-making, as sometimes people's financial decisions are determined by external factors.

*Importance of Financial Responsibility.* In addition to a situational variable, we sought to identify an individual difference variable that predicts variation in the desire and thus importance to view oneself as financially responsible. When a specific self-view is important, people seek to restore that self-view when it has been cast into doubt (Gollwitzer et al. 2013; Sherman and Gorkin 1980; Stone et al. 1997). By contrast, when the threatened self-view is not important, people can engage in general self-worth restoration. In this way, identifying a relevant individual difference variable can shed light on our proposed underlying process.

For some people, happiness and satisfaction come from spending money on material goods instead of from saving (i.e., materialistic happiness, a subfactor of materialism; Richins 2004; Richins and Dawson 1992). For these individuals, we anticipated (and confirmed) that they are relatively less motivated to view themselves as financially responsible. If diminishing perceptions of financial responsibility increases saving because it motivates people to restore those self-perceptions, then increased saving should be observed among those who are motivated

to perceive themselves as financially responsible – namely, those low (but not high) on materialistic happiness. More formally, we predict that:

**H5:** Highlighting frequent engagement in superfluous spending will increase saving, but only among those who are motivated to perceive themselves as financially responsible (i.e., those scoring low but not high on materialistic happiness).

In addition to its theoretical value, this moderator has managerial value. Generally speaking, knowing which consumers will respond positively to the intervention is helpful for using limited resources effectively. More specifically, this segmentation basis may be useful to marketing managers, as policy makers often include materialism-like constructs in national surveys and polls to interpret social trends and concerns (Richins 2004).

### *Alternative Perspective*

Our proposed conceptual model suggests that diminishing inflated perceptions of financial responsibility will increase saving specifically. However, the self-affirmation literature suggests that, in response to self-threats, people can restore *general* feelings of self-worth (Sherman and Cohen 2006; Steele 1988). The prediction from that literature, then, is that people can address threats to their perceptions of financial responsibility by engaging in *any* action that bolsters self-worth, such as donating to charity or buying something nice for someone special (Dunn, Aknin, and Norton 2008, 2014; Dunn and Norton 2014). Although some people may choose to bolster feelings of self-worth generally rather than perceptions of financial responsibility specifically, our conceptual model proposes that most people will choose the latter route when their perceptions of financial responsibility have been cast into doubt. This

expectation is grounded in classic work on self-regulation, and we test the specificity of our model in our empirical investigation.

Even though bolstering unrelated aspects of the self can improve general feelings of self-worth, it does not close the gap between one's behavior (in this case, superfluous spending) and desired self-view (in this case, financial responsibility). In this way, self-regulation processes which are geared toward achieving the important standard of financial responsibility should direct people toward restoring perceptions of financial responsibility until their standing on that dimension has been achieved (Carver and Scheier 2001; Gollwitzer et al. 2013; Moskowitz et al. 2011). Furthermore, according to the principle of multifinality (Kruglanski 1996; Shah and Kruglanski 2000), people will choose whichever means serves the most goals. When saving is considered to be a positive attribute, saving can restore both perceptions of financial responsibility and general self-worth, and thus it should be preferred over means that fulfill general self-worth but not financial responsibility. Indeed, when given the option to address a threat specifically or bolster feelings more generally, people chose to address the threat specifically (Stone et al. 1997).

### **Overview of the Current Research**

Across eight studies, we tested the hypothesis that offsetting the positive illusion of financial responsibility with the superfluous-spender intervention increases people's motivation to restore their tempered perceptions of financial responsibility through increased saving. To begin, we conducted two pilot studies to test and confirm that a) people hold the positive illusion

of financial responsibility and b) our superfluous-spender intervention diminishes inflated perceptions of financial responsibility. Then we turned to our primary hypothesis testing.

In study 1, we tested the hypothesis that the superfluous-spender intervention increases intentions to save relative to a control and a financially responsible condition. In study 2, we examined the effect of the superfluous-spender intervention on saving of earned income in a three-week diary study with chronically poor coffee growers in rural Uganda. We replicated the effectiveness of the intervention in a follow-up study (also conducted in rural Uganda) examining saving of a monetary windfall, as windfalls represent a prime opportunity to set aside money for unexpected emergency expenses.

Studies 3-5 tested our proposed process through mediation and moderation. More specifically, study 3 tested the hypothesis that the superfluous-spender intervention (vs. control procedure) increases saving through the desire to restore diminished perceptions of financial responsibility. Studies 4-5 tested theoretically and practically relevant boundary conditions for our basic effect. The superfluous-spender intervention was expected to increase saving intentions, but only when the superfluous spending behaviors were perceived to be under one's control and thus attributable to the self (study 4), and only among those who were relatively motivated to view themselves as financially responsible (i.e., those scoring low in materialism; study 5).

In all studies, data analysis occurred after we reached our desired sample size. Please refer to Web Appendix A for our sample size determination in each study. Consistent with previous research, we used attention check questions when relevant, and excluded those who did not pass the check (Oppenheimer, Meyvis, and Davidenko 2009); details on the attention check

and all exclusions applied are provided in each study. In all studies with participant exclusions, chi-square analyses indicated that exclusion did not differ by experimental condition.

### **Pilot Study 1: People Hold the Positive Illusion of Financial Responsibility**

In this study, we tested the hypothesis that people hold the positive illusion of being financially responsible (H1). One of the most common ways of assessing people's inclination to perceive themselves in an overly positive fashion is with the Better-Than-Average paradigm. In the direct version, respondents evaluate themselves as better (or worse) than their average peer on a number of characteristics, attributes, skills, or traits. Although only half of the population can be above average on a given trait, the motivation to see oneself positively causes the majority of people to report themselves as above average (Alicke and Govorun 2005; Sedikides and Alicke 2012). Because people's desire to feel good about themselves drives these higher than average ratings, the Better-Than-Average Effect emerges only for characteristics that are positive and valued by society.

We posit that most people view financial responsibility as a positive trait and thus are motivated to claim it for themselves. If this hypothesis is correct, reducing the attractiveness of financial responsibility should decrease people's proclivity to rate themselves as more financially responsible than others. We therefore manipulated whether saving, a core part of financial responsibility (Sussman and O'Brien 2016), was valued by society. If participants are motivated to view themselves as financially responsible, then self-evaluations of financial responsibility should be lower among those who learn that saving money has fallen out of favor (saving-is-less-desirable) as compared to those who learn that saving money is valued by society (saving-is-

good). We included a third, control condition, to confirm the direction of our effects. If participants view financial responsibility as a positive trait, then self-evaluations of financial responsibility should be similar across the control and saving-is-good conditions.

### ***Participants and Procedure***

We conducted this study within a larger research session. We made our study available to all participants who took part in the study session. Four hundred North American university students ( $M_{\text{age}} = 19$  years; 56% female) completed the study in exchange for partial course credit.

To minimize suspicion and experimental demand, we framed the study as a test of consumer memory. Participants started by reading one of three mock newspaper articles (Web Appendix B) for which their memory would ostensibly be tested later in the study. Participants randomly assigned to the *saving-is-good condition* read an article that depicted saving as positive and likable, whereas those in the *saving-is-less-desirable condition* read an article suggesting that saving is not viewed as positively as it used to be. Participants in the *control condition* read an article about jellyfish. A pre-test (Web Appendix B) with 87 participants drawn from a similar population confirmed that the manipulation had its intended effect.

After reading one of the three articles, we assessed self-evaluations of financial responsibility. Specifically, respondents indicated how they compared to the average university student on three financial responsibility items: “how good are you at saving your money,” “how financially responsible are you,” “how much are you a saver”. Participants rated themselves on each attribute using a 9-point scale (0 = much less than the average student; 4 = about the same as the average student; 8 = much more than the average student). These three items were related so they were combined into an index of financial responsibility ( $\alpha = .86$ ).

To reduce experimental demand, we mixed the three target (financial) traits with six filler (non-financial) traits. Three of the filler traits were positive (polite, considerate, respectful); three were negative (unpleasant, dishonest, disrespectful). We randomized the order of the nine traits. As a further precaution against demand, we framed the self-evaluation questions as unrelated to the savings article: participants were told that the attribute measures were designed to clear short-term memory before the memory test. These steps were effective for reducing suspicion.

Before analyzing the data, we excluded participants who met the exclusion criteria: fourteen failed the attention check (3.5%), thirty-seven failed the article comprehension check (i.e., they did not know the takeaway message of the article; 9.3%), thirteen believed that the article was fake (3.3%), and three guessed that we were trying to change their self-perceptions through the article (.1%). Three-hundred and thirty-five responses remained.

### ***Results and Discussion***

As an initial test of the hypothesis that people hold the positive illusion of financial responsibility, we compared the average self-evaluation of financial responsibility with the midpoint of the scale (4) for the entire sample. Supporting H1, the average respondent in this sample considered him/herself to be more financially responsible than the average university student ( $M = 5.04$ ,  $SD = 1.58$ ),  $t(334) = 11.975$ ,  $p < .001$ . Hence, this result supports the hypothesis that people hold the positive illusion of financial responsibility.

Second, we tested the assumption that people are motivated to view themselves as financially responsible because this enables them to feel good about themselves. If so, self-evaluations of financial responsibility should be reduced when saving is framed as relatively less socially desirable. Predicting self-evaluations of financial responsibility, an omnibus ANOVA revealed a main effect of experimental condition,  $F(2, 332) = 3.326$ ,  $p = .037$ ;  $\eta^2 = .020$ .

Supporting our theorizing, participants who read the saving-is-less-desirable article reported lower self-evaluations of financial responsibility ( $M = 4.72$ ,  $SD = 1.70$ ) as compared to participants who read the saving-is-good article ( $M = 5.22$ ,  $SD = 1.45$ ;  $t(332) = 2.373$ ,  $p = .018$ ;  $d = .30$ ) and participants who read the control (jellyfish) article ( $M = 5.16$ ,  $SD = 1.56$ ;  $t(332) = 2.078$ ,  $p = .038$ ;  $d = .27$ ). Consistent with the notion that people view financial responsibility as desirable, participants in the control and saving-is-good conditions rated themselves similarly ( $t(332) = .278$ ,  $p = .781$ ).

Notably, each condition's mean was higher than the midpoint ( $ps < .001$ ). In the saving-is-less-desirable condition, this could mean that the motivation to perceive oneself as financially responsible is very strong and robust, that our manipulation was not very powerful, or most likely a combination of the two. We present analyses for the filler traits, for which we did not have a priori predictions, in Web Appendix B.

The results of this study provide experimental support for the basic notion that people hold the positive illusion of financial responsibility. With this result in hand, we next offset this illusion by developing an intervention.

### **Pilot Study 2: Creating an Intervention to Diminish the Positive Illusion of Financial Responsibility**

In response to the need to develop simple, effective, and non-physical interventions that tackle psychological barriers to saving (Karlan et al. 2014), we sought to develop an intervention that both offsets the positive illusion of financial responsibility and can be implemented in practice. To do so, we aimed to highlight frequent superfluous spending, which we define as

*consumers'* perceptions that they are unnecessarily and commonly spending more than saving (e.g., going out to eat, instead of cooking at home). To instill these perceptions, we drew upon previous research which suggests that, when answering surveys, respondents extract information about themselves from their placement on rating scales (Schwarz 1999), as they assume that the middle of a rating scale refers to the “average” or “usual” frequency of a behavior. Thus, those who respond toward the extreme end of the scale (e.g., far right or far left) infer that they are more, or less, extreme on that particular dimension (Nelson and Morrison 2005; Schwarz 1999; Schwarz et al. 1985).

The current intervention required participants to indicate how often they engage in five spending behaviors that are common but superfluous. We selected the response-scale anchors to ensure that the majority of participants would endorse the upper ends of the response scale and thus consider themselves to be engaging in excessive superfluous spending. We present details of how we selected the items and anchors for the intervention as well as the percentage of participants falling at the upper ends of the scale in each study (Web Appendix C). Table 1 shows the intervention for each population sampled in this research (North American adults, Ugandans, and North American students). The aim of the present pilot studies was to check the assumption that this superfluous-spender intervention does in fact reduce inflated perceptions of financial responsibility in the populations studied in this research.

[Insert Table 1 about here]

### ***Participants and Procedure***

In one test, 100 students from a North American university ( $M_{\text{age}} = 20$  years; 62% female) were randomly assigned to either the *superfluous-spender condition* or the *baseline*

*condition* (used in studies 1 and 3). In the baseline condition, participants did not answer any questions about their financial behaviors before completing the financial responsibility items.

In another test, 59 coffee growers from Uganda were randomly assigned to either the *superfluous-spender condition* or the *control condition* (used in studies 2 and 5). In the control condition, participants reported how frequently they engaged in the same five superfluous spending behaviors. However, instead of using the response scale to indicate their answer, control participants reported their engagement in an open-ended format. In this way, it is less likely that they make inferences about themselves from their (superfluous) spending.

After the manipulation, all participants indicated their agreement with the following three statements: “I feel good about how I manage my money,” “I manage my money responsibly,” “I am a financially responsible person” (1 = not at all to 7 = very much so). These items were related (North America  $\alpha = .88$ ; Uganda  $\alpha = .82$ ) so they were combined into an index of financial responsibility.

### ***Results and Discussion***

First, consistent with pilot study 1, the majority of North American and Ugandan participants held unrealistically positive perceptions of their financial responsibility as evidenced by their scores falling higher than the midpoint in each sample (North America:  $M = 4.97$ ,  $SD = 1.18$ ,  $t(99) = 8.18$ ,  $p < .001$ ; Uganda:  $M = 6.42$ ,  $SD = .68$ ,  $t(58) = 27.33$ ,  $p < .001$ ). Second, the superfluous-spender intervention diminished inflated perceptions of financial responsibility. North American participants in the superfluous-spender condition reported lower perceptions of financial responsibility ( $M = 4.73$ ,  $SD = 1.23$ ) as compared to their counterparts in the baseline condition ( $M = 5.21$ ,  $SD = 1.09$ ),  $t(98) = 2.07$ ,  $p = .042$ ,  $d = .41$ . Similarly, Ugandans reported lower self-perceptions of financial responsibility in the superfluous-spender condition ( $M = 6.18$ ;

$SD = .55$ ) than the control condition ( $M = 6.67$ ;  $SD = .72$ ),  $t(57) = 2.932$ ,  $p = .005$ ;  $d = .76$ .

Hence, relative to baseline or a procedure that controlled for reminders of superfluous spending, the superfluous-spender intervention tempered the positive illusion of financial responsibility.

### **Study 1: Perceptions of Financial Responsibility and Saving**

Study 1 tested the hypothesis that diminishing inflated perceptions of financial responsibility with the superfluous-spender intervention increases saving (H2). We randomly assigned participants to one of three conditions (superfluous-spender, responsible-spender, or baseline) and observed the effect of the manipulation on their savings intentions. The dependent variable was the percentage of monthly income that participants were willing to put into their savings account (Garbinsky, Klesse, and Aaker 2014).

We predicted that those in the superfluous-spender condition would intend to save a greater percentage of their monthly income than those in the responsible-spender and baseline conditions. Based on our assumption that most consumers perceive themselves to be financially responsible and thus under-save, we additionally hypothesized that those in the baseline condition would intend to save a similar amount to those in the responsible-spender condition.

#### ***Participants and Procedure***

Amazon Mechanical Turk (MTurk) workers from the U.S. ( $n = 296$ ;  $M_{\text{age}} = 35$  years; 46% female) completed this study for \$0.50. We randomly assigned all participants to one of three conditions (superfluous-spender vs. responsible-spender vs. baseline). To create the *responsible-spender condition*, we reversed the superfluous-spender items (e.g., Cook at home

instead of going out to eat; see Web Appendix H for all five items). Participants in the *baseline condition* did not answer any questions before completing the dependent variable.

To assess savings intent, participants indicated their monthly income, and of this amount, how much they would be willing to put in their savings account at that moment. Consistent with prior work (Garbinsky et al. 2014), savings intent was the amount of money participants indicated they would save divided by their monthly income ( $M = 26.0\%$ ,  $SD = 21.8\%$ )<sup>1</sup>. Lastly, participants completed an attention check measure (“Please tick ‘Disagree’ to show that you are paying attention”) and demographic questions.

Before conducting the analyses, we excluded twelve participants (4% of the sample) because they (1) failed the attention check, (2) indicated they would save more money than they make, or (3) indicated an unrealistic monthly income (e.g., \$2). Two-hundred and eighty-four participants remained in the final sample.

### ***Results and Discussion***

An ANOVA revealed the predicted main effect of the experimental manipulation on saving,  $F(2,281) = 3.88$ ,  $p = .022$ ,  $\eta^2 = .027$ . Planned contrasts showed that participants in the superfluous-spender condition saved a significantly greater percentage of their monthly income ( $M = 30.6\%$ ,  $SD = 26.5\%$ ) than did their counterparts in the responsible-spender condition ( $M = 21.9\%$ ,  $SD = 16.4\%$ ),  $t(281) = 2.74$ ,  $p = .007$ ,  $d = .39$ . Furthermore, participants in the superfluous-spender condition saved a marginally greater percentage of their monthly income ( $M = 30.6\%$ ,  $SD = 26.5\%$ ) than those in the baseline condition ( $M = 24.8\%$ ,  $SD = 20.9\%$ ),  $t(281) = 1.83$ ,  $p = .068$ ,  $d = .24$ . Consistent with the notion that people are inclined to see themselves as

---

<sup>1</sup> Because this was the first study we conducted in July 2017, we also assessed two potential alternative mechanisms and one possible moderator, none of which were statistically significant. For a complete list of measures, please refer to Web Appendix D.

financially responsible and thus under-save, those in the baseline condition saved a similar amount to those in the responsible-spender condition ( $t(281) = .93, p = .35$ ).

The results of study 1 support the idea that inflated perceptions of financial responsibility contribute to under-saving. Offsetting the positive illusion of financial responsibility with the superfluous-spender intervention increased people's inclination to save money. In addition, baseline participants saved a similar amount to those induced to feel financially responsible. Participants in both the baseline and financially responsible conditions saved less than the superfluous-spender condition, casting doubt on the possibility that perceptions of financial responsibility generally encourage consistent behavior and thus saving. In study 2, we tested whether our intervention can sufficiently shift actual savings behavior over time.

### **Study 2: Saving Household Income in Uganda Over Time**

Chronically poor people who live in rural areas face many barriers to saving. Nevertheless, they do want to increase their savings (Banerjee and Duflo 2007; Karlan et al. 2014). We thus tested the effectiveness of the superfluous-spender intervention among coffee growers in the Mount Elgon region of eastern Uganda. The income of respondents in this sample mainly comes from agriculture, so their income and expenditures fluctuate throughout the year, making it particularly important for them to save (rather than spend) surplus money.

After recording their daily savings and income in a financial diary for one week, participants completed either the superfluous-spender intervention or the control procedure. Participants completed the financial diary for another two weeks after the intervention, allowing

us to test whether the superfluous-spender intervention (vs. the control procedure) causes people to save more of their household income than they would otherwise.

### ***Participants and Procedure***

We recruited 250 coffee growers from the Mount Elgon region of eastern Uganda. In exchange for their participation, they received a small monetary payment at the end of the study. Four participants could not be located at the start of the study, which meant that 246 participants undertook the study (57 women). The median weekly household income was approximately 56,000 Ugandan Shillings (approximately \$15 USD).

*Study design.* This study was a 2 (experimental condition: superfluous-spender vs. control) by 2 (time of measurement: pre- vs. post-intervention) mixed-measures design. Before the enumerators began to visit households (i.e., before the study began), we assigned households an ID and randomly assigned each household to either the superfluous-spender or the control condition. We aimed to measure pre-intervention savings for one week and post-intervention savings for two weeks. For logistical reasons, enumerators could not reach each household on the same day. The most common length of the pre-intervention period was 8 days; the most common length of the post-intervention period was 13 days.

*Cover story.* The enumerator introduced the study to participants as a money management study; we did not tell participants that we were interested in savings specifically. As a further precaution against experimental demand, we embedded the target savings measure within a larger financial diary.

*Daily percent saved.* To measure savings, all participants recorded their daily savings and income in a monetary diary both before and after the intervention. Consistent with study 1, we measured savings as the percent of income set aside for saving (Garbinsky et al. 2014). Because

we recorded daily data in this study, we analyzed savings at the daily level (i.e., *daily* savings divided by *daily* income).

*Intervention.* In both conditions, the enumerator read aloud each of the five superfluous spending behaviors, and asked respondents to take a moment to think of how many times they engaged in that behavior every year (see Table 1). In the *superfluous-spender condition*, the enumerator held up a response scale (Web Appendix E); respondents indicated their answer by pointing to their response on the scale. In the *control condition*, participants verbally reported how many times they engaged in the behavior. In both conditions, the enumerator recorded participants' responses, thereby holding constant social desirability concerns. Although the enumerators were not blind to participants' experimental condition, they were blind to the hypotheses of this study.

*Attrition.* Fifteen participants did not complete the diary for various reasons (i.e., dropped out of the study for a variety of reasons such as moving away for work), leaving a sample of 231 respondents. Sixteen-percent attrition is a relatively low rate of attrition for a mobile population such as this one with limited means of communication.

## ***Results and Discussion***

*Data inspection and analysis strategy.* Initial inspection of the data revealed a severe outlier for both income and savings (i.e., 40+ standard deviations from the means). We excluded this household from all analyses, leaving 230 respondents. In total, we collected 4,640 unique daily savings observations and 4,640 unique daily income observations.

Given the nested nature of the data (i.e., daily savings across multiple days for each household), we used multilevel modeling to test our hypotheses. Before computing our measure of savings, we checked to make sure that household income did not differ by experimental

condition, time of measurement, nor the interaction between the two. Confirming the effectiveness of random assignment, it did not ( $ps > .248$ ). Therefore, we created our dependent measure of *daily percent saved* by dividing daily amount saved by daily amount earned (i.e., percent saved; Garbinsky et al. 2014). Effect sizes are reported using standardized coefficients which were obtained by standardizing the dependent measure (Ferron et al. 2008).

*Daily percent saved.* To test the hypothesis that the superfluous-spender intervention increases daily saving (H2), we entered experimental condition (superfluous spender vs. control), time of measurement (pre-intervention vs. post-intervention), and the interaction between the two as fixed predictors in a multilevel model predicting daily percent saved. This model revealed the anticipated interaction between experimental condition and time of measurement ( $\beta = .148$ ),  $B = .065$ ,  $SE = .025$ ,  $p = .010$  (see Figure 1). In the main model, there was a main effect of time of measurement ( $\beta = .155$ ,  $B = .068$ ,  $SE = .017$ ,  $p < .001$ ); experimental condition was not a significant predictor of daily percent saved ( $\beta = -.019$ ,  $B = -.008$ ,  $SE = .024$ ,  $p = .723$ ).

Conceptually replicating study 1 with actual savings and a different population, participants who received the superfluous-spender intervention (vs. control procedure) saved more of their daily income in days following the intervention,  $\beta = .123$ ;  $B = .057$ ,  $SE = .022$ ,  $p = .013$ . The opposite pattern was apparent prior to the intervention, although only descriptively so ( $\beta = -.167$ ;  $B = -.074$ ,  $SE = .043$ ,  $p = .089$ ).

[Insert Figure 1 about here]

Looked at a different way, participants in the superfluous-spender condition saved more of their daily income after the intervention as compared to before the intervention,  $\beta = .303$ ,  $B = .134$ ,  $SE = .018$ ,  $p < .001$ . In this way, the intervention caused coffee growers to save more of their income than they otherwise would. In contrast, and consistent with expectations,

participants in the control condition saved similar amounts of their daily income in the pre- and post-intervention time periods ( $\beta = .007$ ;  $B = .003$ ,  $SE = .040$ ,  $p = .935$ ).

*Conceptual check.* As a conceptual check, we ensured that our intervention was most effective among those who endorsed the upper ends of the superfluous-spender scale. This was the case, suggesting that the effect of the intervention is due to inferences made from scoring high on the scale specifically rather than reminders of superfluous spending more generally. For full details, please see Web Appendix E.

*Discussion.* Conceptually replicating and extending study 1, study 2 found that diminishing the positive illusion of financial responsibility with the superfluous-spender intervention (vs. control procedure) increased saving of earned income among chronically poor coffee growers in Uganda. In this field study, treatment participants showed a continued increase in savings of their earned income after the intervention, upwards to 13 days' time. A follow-up field study extended this basic result to savings of a monetary windfall among a different group of Ugandan coffee growers (see Web Appendix F for complete details). Given the simplicity of this intervention, especially compared to far more complex ones, these studies suggest that the superfluous-spender intervention has a potentially meaningful effect on people's actual saving.

It is worth noting that over the course of the two-week period after the intervention, participants in study 2 had other means to bolster their positive self-views. Nevertheless, participants in the superfluous-spender condition saved more than those in the control condition, ostensibly because saving enabled them to feel financially responsible. This result suggests that the superfluous-spender intervention leads people to restore threatened self-views of financial responsibility specifically (i.e., through saving). We test this aspect of our model more directly in study 3.

### **Study 3: Saving to Restore Diminished Perceptions of Financial Responsibility**

Study 3 was designed to achieve two goals. The first was to test our proposed psychological process. More specifically, we hypothesized that the superfluous-spender intervention (vs. baseline) motivates people to restore their diminished perceptions of financial responsibility, which in turn causes them to save more money (H3). We therefore assessed this motivation and evaluated its viability as a statistical mediator.

The second was to evaluate an alternative model which suggests that, in response to threats, people can restore *general* feelings of self-worth (Sherman and Cohen 2006; Steele 1988). To evaluate our proposed model against the alternative model, we gave participants the opportunity to allocate a \$200 lottery between saving and spending opportunities that would enable them to restore general feelings of self-worth – namely, money on something nice for someone special or donating money to charity. This lottery was executed after the completion of the study, enabling us to assess a consequential savings decision. We hypothesized that participants in the superfluous-spender condition (vs. baseline) would save more money in order to restore diminished self-perceptions of financial responsibility. This study presents a conservative test of our hypothesis given that people tend to treat windfalls as disposable income (Carlsson, He, and Martinsson 2013).

#### ***Participants and Procedure***

Two hundred and five North American undergraduate students ( $M_{\text{age}} = 19$  years, 57% female) completed this paper-and-pencil study for the chance to win \$200. We randomly assigned participants to the *superfluous-spender condition* or the *baseline condition*. Those in the

superfluous-spender condition answered five questions before completing the lottery allocation task (see Table 1) whereas those in the baseline condition did not complete any questions prior to this task. No participants were excluded from analyses.

To make this study incentive compatible, we told all participants that if they won the lottery, they could allocate their winnings between the following four options: 1) an Amazon gift card for themselves, 2) money for their savings account, 3) an Amazon gift card for someone special, or 4) a donation to the charity of their choice. Pre-test results from a separate set of participants (presented in Web Appendix G) indicated that putting money into a savings account was considered the most financially responsible option, whereas spending money on others or donating money to charity were considered the best ways to bolster general feelings of self-worth. Participants could allocate the entire \$200 to a single option, or they could split the \$200 however they wished among the four options, but we stressed that their decision was final and unchangeable if they won. We executed the lottery one week later.

After the lottery allocation, we measured the putative mediator, the desire to restore perceptions of financial responsibility. All participants were directed to focus specifically on the amount of money they indicated they would save when answering three questions: “To what extent was your savings decision based on...1) your desire to feel more financially responsible; 2) your desire to take control of your personal finances; 3) the feeling that you have been financially irresponsible?” (1 = not at all to 7 = very much). These three items were related so they were averaged to create an index of desire to restore perceptions of financial responsibility ( $\alpha = .78$ ).

### ***Results and Discussion***

We first tested the hypothesis that the intervention will have an effect on how participants decided to allocate their winnings among the four categories. A MANOVA confirmed that it did. Consistent with theorizing and the results of studies 1-2, participants in the superfluous-spender condition committed to saving more money ( $M = \$110.25$ ,  $SD = \$81.29$ ) than did participants in the baseline condition ( $M = \$82.61$ ,  $SD = \$73.12$ ),  $F(1,203) = 6.56$ ,  $p = .011$ ,  $\eta^2 = .031$ . Conversely, those in the baseline condition committed to spending more money both on themselves ( $M = \$42.71$ ,  $SD = \$61.05$ ) and on someone special ( $M = \$21.06$ ,  $SD = \$37.39$ ), compared to those in the superfluous-spender condition ( $M_{\text{spend\_self}} = \$24.25$ ,  $SD = \$56.91$ ;  $M_{\text{spend\_other}} = \$7.85$ ,  $SD = \$21.43$ ),  $F_{\text{spend\_self}}(1,203) = 5.01$ ,  $p = .026$ ,  $\eta^2 = .024$ , and  $F_{\text{spend\_other}}(1,203) = 9.50$ ,  $p = .002$ ,  $\eta^2 = .045$ . There was no significant difference in the amount of money participants wanted to donate to charity based on condition ( $F(1,203) = .21$ ,  $p = .65$ ).

Next, we tested our prediction that the desire to restore perceptions of financial responsibility is statistically responsible for the effect of the superfluous-spender intervention on increased saving. Consistent with our predictions, those in the superfluous-spender condition indicated a greater desire to restore their perceptions of financial responsibility ( $M = 3.95$ ,  $SD = 1.72$ ) than those in the baseline condition ( $M = 3.44$ ,  $SD = 1.49$ ;  $t(203) = 2.53$ ,  $p = .025$ ,  $d = .32$ ). Perhaps more importantly, participants' desire to restore their perceptions of financial responsibility mediated the effect of the superfluous-spender intervention (vs. baseline) on saving, as the 95% confidence interval with 10,000 bootstrap resamples excluded zero (1.99, 29.79).

Two pieces of evidence provide clear support for our theory that the superfluous-spender intervention increase saving because it motivates people to restore diminished perceptions of financial responsibility. First, the effect of the superfluous-spender intervention on increased

savings was statistically explained by self-reported motivation to restore perceptions of financial responsibility. Second, the intervention caused people to engage in actions that would restore self-perceptions of financial responsibility specifically (i.e., saving money), as opposed to restoring self-worth more generally (i.e., spending on others or donating money to a charity). In studies 4 and 5, we aim to provide further evidence for our proposed process by following a moderation-of-process approach (Spencer et al. 2005), which is a particularly effective tool for examining psychological processes to establish causal chains.

#### **Study 4: Control Over Past Superfluous Spending**

In study 4, we sought further support for our proposed process by altering the diagnostic value of the superfluous-spender intervention. More specifically, our findings rest on the notion that when participants observe themselves responding at the upper ends of the scale, they infer that they are less financially responsible than they ought to be and are thus not living up to their desired standards. However, people only make inferences about themselves when they observe behaviors that are perceived to be freely chosen (Bem 1972). In this way, endorsing instances of superfluous spending that were *outside* of one's control (e.g., "About how often do you *have to* go out to eat, instead of cook at home") should not offset the positive illusion of financial responsibility and hence should not facilitate saving (H4).

#### ***Participants and Procedure***

Six hundred and two MTurk workers from the U.S. ( $M_{\text{age}} = 36$  years; 45% female) completed the main study for \$0.30. We randomly assigned participants to one of three conditions (superfluous-spender vs. responsible-spender vs. forced-superfluous-spender).

To create the *forced-superfluous-spender condition*, we modified the phrasing of the superfluous-spender items chosen for this sample by emphasizing instances where consumers *had* to spend money. A pre-test confirmed that participants in the forced-superfluous-spender condition reported less perceived control over these financial behaviors as compared to those in the *superfluous-spender condition* and *responsible-spender condition* (see Web Appendix H for full details). In all three conditions, participants indicated how frequently they engaged in each behavior using the same seven-point scale (see Table 1).

To assess savings intent, participants imagined that they received \$100; of this amount, they indicated how much they would put in their savings account at that moment (Garbinsky et al. 2014). The main dependent variable was the amount of money participants indicated they would save ( $M = \$51.03$ ,  $SD = \$33.42$ ). Lastly, participants completed an attention check (“Please tick ‘Disagree’ to show that you are paying attention”) and demographic questions.

Before conducting the analyses, we excluded twenty-three participants (3.8% of the sample) because they failed the attention check. This left us with 579 participants in the final sample.

### ***Results and Discussion***

An omnibus ANOVA revealed the anticipated main effect of experimental condition on saving intentions,  $F(2,576) = 3.97$ ,  $p = .019$ ,  $\eta^2 = .014$ . Conceptually replicating the finding from study 1, participants in the superfluous-spender condition intended to save significantly more of their \$100 windfall ( $M = \$57.06$ ,  $SD = \$31.58$ ) than did their counterparts in the responsible-spender condition ( $M = \$49.20$ ,  $SD = \$34.71$ ),  $t(576) = 2.33$ ,  $p = .020$ ,  $d = .24$ . Next, supporting our hypothesis that the superfluous-spender intervention increases saving intentions only when the spending behaviors are under one’s control and hence diagnostic of the self (H4), participants

in the superfluous-spender condition reported higher savings intentions than participants in the forced-superfluous-spender condition ( $M = \$48.61$ ,  $SD = \$32.88$ ),  $t(576) = 2.52$ ,  $p = .012$ ,  $d = .26$ .

The results of study 4 conceptually replicated and extended the results of the previous studies. When the superfluous-spending behaviors were perceived to be under one's control, and thus were diagnostic of one's irresponsible spending, the superfluous-spender intervention increased savings intentions as compared to a control condition (in this case, a responsible-spending comparison condition). In contrast, and supporting our theorizing, when the superfluous spending behaviors were perceived to be relatively less under one's control, and therefore were relatively less diagnostic of one's irresponsible spending, the superfluous-spender intervention did not increase savings intentions, arguably because perceptions of financial responsibility remained intact.

### **Study 5: Materialism as an Individual Difference Moderator**

Study 5 examined the moderating role of an individual difference variable that predicts variation in the desire to perceive oneself as financially responsible. We hypothesized that individuals who believe that happiness comes from acquiring material goods (i.e., materialistic happiness, a subfactor of materialism) will be less inclined to hold the positive illusion of financial responsibility. A pre-test confirmed that inverse relationship: the more individuals derive happiness from material goods, the less they hold the positive illusion of financial responsibility ( $r(55) = -.286$ ,  $p = .033$ ; see Web Appendix I for complete details).

When people's self-views are threatened, they seek to restore those threatened self-views specifically, but only when the self-views are important (Gollwitzer et al. 2013). If the superfluous-spender intervention increases saving because it spurs people to restore self-views of financial responsibility, then this effect should only be apparent among those who are motivated to view themselves that way (i.e., those who score low on materialistic happiness).

### ***Participants and Procedure***

Six hundred and fifty Prolific Academic workers from the U.S. (57% female,  $M_{\text{age}} = 34$  years) completed this study in exchange for \$0.70. We randomly assigned participants to the *superfluous-spender condition* (see Table 1) or the *control condition*. Those in the control condition reported their frequency of engaging in the same five superfluous spending behaviors in an open-ended format (by typing their answer into a textbox; see pilot study 2).

To assess savings intentions, we relied on the same measure used in study 1 – the amount of money participants indicated they would save divided by their monthly income ( $M = 23.75\%$ ,  $SD = 20.82\%$ ). Participants then completed an attention check measure (i.e., they were instructed to type 'none' in the question box 'what is today's date?').

After the attention check, participants completed the 15-item Materialism scale (Richins 1994). Even though we were only interested in the happiness from materialism subscale, we administered the whole scale given that the happiness subscale was validated within the larger scale. The items for the focal subscale showed acceptable reliability (happiness  $\alpha = .83$ ).

Before conducting the analyses, we excluded the following participants using the same criteria applied in study 1 (which used the same dependent variable): 87 participants (13% of the sample) for failing the attention check, 1 participant (.2% of the sample) for saving more money

than he/she earns, and 46 participants (7% of the sample) for reporting either no monthly income or an unrealistic monthly income. The final sample included 529 participants.

### ***Results and Discussion***

The manipulation did not affect scores on the happiness from materialism scale ( $p = .882$ ). Therefore, we proceeded with testing our hypothesis that the superfluous-spender intervention (vs. control) would increase saving intentions – but only among those scoring low on the happiness from materialism scale.

We regressed percent saved on experimental condition, happiness scores, and the interaction between the two using Hayes' Process Macro (Hayes 2013). There was a main effect of experimental condition ( $\beta = .382$ ,  $t(525) = 2.371$ ,  $p = .018$ ); consistent with studies 1-4, participants in the superfluous-spender (vs. control) condition reported higher savings intentions. As expected, this main effect was qualified by the predicted interaction between materialism happiness scores and experimental condition ( $\beta = -.358$ ,  $t(525) = 2.146$ ,  $p = .032$  (figure 2). Materialism happiness scores were not significantly associated with savings intentions in this model ( $\beta = .101$ ,  $t(526) = 1.630$ ,  $p = .104$ ).

[Insert Figure 2 about here]

Simple effects analyses yielded results that were supportive of our conceptual model. Consistent with H5, the superfluous-spender intervention (vs. control) increased savings intentions among those scoring low on materialistic happiness (-1SD below the mean), ( $\beta = .142$ ),  $t(525) = 2.315$ ,  $p = .021$ . By contrast, and consistent with expectations, the intervention had no effect among those who scored relatively high (+1SD above the mean) on materialistic happiness ( $p = .471$ ). Johnson-Neyman analyses told a similar story. The experimental manipulation increased saving intentions among those scoring at or below 2.694 on the

materialism scale (-.44 SD; 31% of the sample). The results are descriptively unchanged when controlling for the other facets of materialism (for full results see Web Appendix I).

Looked at a different way, in the control condition, materialistic-happiness scores were positively related to saving intentions, ( $\beta = .287$ ),  $t(525) = 2.082$ ,  $p = .038$ . In other words, those who were most inclined to hold the positive illusion of financial responsibility (those scoring low on materialistic happiness) reported the lowest levels of saving intentions. This relationship was then offset by the superfluous-spender intervention ( $\beta = -.085$ ,  $t(525) = 1.403$ ,  $p = .161$ ).

The results of study 5 provide two pieces of supportive evidence for our conceptual model. First, in the control condition, materialistic happiness scores were positively associated with saving intentions. In other words, the participants who were most motivated to perceive themselves as financial responsible were ironically intending to save the least. Second, the tendency to under-save among participants who scored low on materialistic happiness was offset by instilling perceptions of superfluous spending. In other words, the superfluous-spender intervention (vs. control procedure) increased savings intentions among those who were most motivated to perceive themselves as financially responsible (i.e., those scoring low on materialistic happiness).

## **General Discussion**

This research began with the conjecture that the tendency to view one's financial responsibility through rose-colored glasses may contribute to under-saving. If that conjecture is correct, then tempering this positive illusion of financial responsibility may paradoxically help people save more money because it should motivate them to restore this important but

diminished self-view through increased saving. From poor coffee growers in Uganda to students and adults in North America, highlighting people's frequent engagement in superfluous spending (vs. various controls) increased both saving intentions and behavior (studies 1-5). Supporting our conceptual model, the superfluous-spender intervention increased saving because it motivated people to restore diminished perceptions of financial responsibility (study 3). Furthermore, the superfluous-spender intervention increased saving intentions only when spending behaviors were perceived to be under one's control (study 4) and among people who were motivated to perceive themselves as financially responsible (study 5). Notably, effect sizes for the effect of the intervention on savings behavior were larger than the effect sizes for savings intentions, attesting to the fact that in real life, this intervention can make a positive difference for people's saving.

### ***Theoretical Implications***

In addition to contributing a novel answer to the question of why consumers fail to save, it also provides a complementary perspective. Although researchers have identified important reasons for under-saving, such as one's financial status (Bertrand et al. 2006), childhood economic environment (Griskevicius et al. 2013), and cultural influences (Chen 2013), the majority of these reasons represent relatively stable individual differences. In the current research, we identify a self-enhancing bias – the positive illusion of financial responsibility – which undermines saving. As demonstrated in this work, this bias is malleable and can be offset with a simple intervention to increase saving.

Increasing consumer saving is difficult in part because consumers' desire to buy products (especially in the heat of the moment) is often the automatic response that needs to be counteracted by the fallible psychological mechanism of self-control (Vohs and Faber 2007). Indeed, for many people, intentionally saving money is difficult because it is a cold, calculated,

and controlled process, which requires one to give up pleasures in the moment to reap rewards in the future. The superfluous-spender intervention in the current work may be effective in part because it renders saving as the automatic, gut response by eliciting the motivation to restore positive financial self-views through saving.

### ***Managerial Implications: Key Considerations and Caveats for Implementation***

Western society tends to encourage and even indulge positive self-views. Hence, some may find our recommendation to temper inflated perceptions of financial responsibility to be a surprising one. While it may be tempting to think that the savings silver bullet is to make consumers feel better about themselves in the financial domain, the empirical data – from this research and others – suggest otherwise (Fernandes, Lynch Jr., and Netemeyer 2014). For example, an exhaustive review of interventions that were designed to boost positive self-views in order to increase desirable outcomes such as academic success and healthy behaviors found no clear benefits or improved outcomes from those interventions (Baumeister et al. 2003). In some cases, the evidence led to the opposite conclusion, with interventions leading to undesirable consequences through the fostering of narcissism.

Based on these past findings, the aim of this work was to develop an intervention that would encourage a relatively more accurate and realistic view of one's spending behavior. To be clear, we did not set out to make people feel bad about themselves, and the intervention did not do so. Indeed, the results of Pilot Study 2 indicate that participants who received the superfluous intervention still reported perceptions of financial responsibility that were above the midpoint of the scale. In this way, the intervention simply helped people to realize that they have not been acting as financially responsible as they could be which in turn led them to change their behavior accordingly.

While we did not deliver the intervention at a large scale, we do believe this can be done because of its brevity and because technology allows practitioners to deliver questions to consumers for little cost. (Note: we advocate that policymakers obtain consent before proceeding with the intervention.) For example, commercial banks or pension funds could survey a small subset of their clients to gain insight into common and frequent superfluous spending behaviors that are under their clients' control. The results of our pretests for each population we tested (see Web Appendix C) demonstrates that this task is relatively simple and straightforward. Once the stakeholder selects these five behaviors and corresponding scale anchors, customers can be asked if they want to opt in to receiving prompts that encourage them to reflect on their past spending prior to making decisions about their saving. More specifically, banks could deliver the intervention when consumers are opening a savings account, setting a savings goal, or planning for retirement.

In developing countries, the intervention could be delivered through cell phones for subscribers to mobile banking initiatives or through community-based savings and loans organizations. Both savings tools are increasingly prevalent, across urban and rural areas, and have the potential to be delivered at a large scale. Administering this intervention in developing countries may especially be important, as an emerging policy option is to 'shock' struggling households with the provision of large monetary transfers which do or do not have conditions attached (Karlan et al. 2014). While the intentions behind these practices are good, in reality they have less than ideal success (Banerjee et al. 2015). Given that the superfluous-spender intervention increased saving of a monetary windfall, the current work provides a novel monetary tool that policymakers can use to increase saving of monetary assistance.

The intervention may have unintended negative consequences if people do not have the opportunity to save money after receiving the intervention (e.g., because they do not have monetary resources at that time or because they are facing external constraints beyond their control). People who experience uncontrollable situations subsequently give up (Glass, Singer, and Friedman 1969). Thus, if people feel the need to save after receiving the intervention but lack a clear means for doing so, it could potentially demotivate them from saving altogether. For this reason, we encourage those implementing the intervention to consider timing and community external constraints (e.g., whether it is time to harvest or pay for children's education). To maximize chances of success and minimize potential downsides, the intervention should be implemented at a time when contextual or household factors make it feasible to save.

Finally, we should note that while we observed a positive increase in saving as a function of our intervention, we have not tested the effects of the intervention on people's well-being. However, we surmise that for many the effects of the intervention will be positive for well-being. A study on saving and well-being in 38 countries with 50,000 respondents found that as societal poverty increased, well-being decreased (Martin and Paul Hill 2015). Perhaps more important, in that same study, saving was found to greatly improve well-being in high-poverty countries.

### ***Calls for Future Research***

We believe that this research provides several opportunities for future work. First, future research could examine the processes through which the illusion of financial responsibility reduces saving. Better understanding those processes would provide fruitful insight for generating targeted interventions that can help diminish the bias and increase saving. Developing alternative routes to shifting perceptions of financial responsibility would complement and build on the effectiveness of the superfluous-spender intervention over time.

Second, our intervention is based on the assumption that saving is considered a socially desirable attribute. While we did test that assumption in two very different contexts (wealthy North America and Sub-Saharan Africa), some cultures may not view saving as a positive attribute while other cultures may discourage self-enhancement. In those cultures, then, the current intervention is unlikely to be effective. Indeed, in an additional study we conducted, we found that the superfluous-spender intervention did not increase savings when participants were told that saving money was not socially desirable. In this way, the effectiveness of the intervention depends on the broader social norms, given that people are motivated to engage in behaviors that are socially desirable and thus reflect well on the self. Moving forward, we encourage researchers to continue to investigate the link between positive illusions and savings in other cultures. For example, it would be interesting to examine whether, at the national level, there is a relationship between self-enhancement and personal-savings rates.

Third, future research could investigate dependent variables above and beyond saving. Our conceptual model predicts that threatening perceptions of financial responsibility causes consumers to restore their threatened (financial) self-view. Although saving money is a primary action associated with financial responsibility (see pretest in Web Appendix G), other financial behaviors (such as getting an extra job or selling off unwanted goods) could also enable consumers to restore this particular self-view. In this way, our superfluous-spender intervention could be applied not only to saving, but to any financial behavior that enables one to restore perceptions of being financially responsible.

Lastly, examining how our intervention compares to or complements other interventions aimed to increase saving could be a worthwhile investigation. Past research has demonstrated the role of choice architecture in influencing savings decisions. More specifically, it has been shown

that decreasing the number of funds offered in a 401(k) makes people more likely to participate (Sethi-Iyengar, Huberman, and Jiang 2004). Similarly, presenting choices that highlight options for putting money into savings causes people to save a greater portion of their tax refund (Grinstein-Weiss et al. 2017). Future research could investigate whether the administration of the superfluous-spender intervention prior to such choice curations has the potential to increase savings over and above these existing interventions.

### ***Concluding Remarks***

People have a fundamental need to view themselves positively. This bias leads them to pay attention to, encode, and selectively remember information that supports, rather than disconfirms, those positive self-views. Most people's financial reality is not particularly positive nor pleasant, making finance a prime target for positive illusions. Gently correcting people's overly positive illusions of financial responsibility, however, can increase both willingness to save and actual saving over time. In this way, practitioners have the power to improve consumers' long-term well-being by highlighting past instances in which they engaged in regular superfluous spending.

## References

- Alicke, Mark D. and Olesya Govorun (2005), "The Better-Than-Average Effect," in *The Self in Social Judgment*, ed. Mark D. Alicke, David A. Dunning and Justin I. Krueger, New York: Psychology Press, 85-106.
- Aronson, Elliot and J. Merrill Carlsmith (1963), "Effect of the Severity of Threat on the Devaluation of Forbidden Behavior," *The Journal of Abnormal and Social Psychology*, 66 (6), 584-88.
- Banerjee, Abhijit, Esther Duflo, Rachel Glennerster, and Cynthia Kinnan (2015), "The Miracle of Microfinance? Evidence from a Randomized Evaluation," *American Economic Journal: Applied Economics*, 7 (1), 22-53.
- Banerjee, Abhijit V. and Esther Duflo (2007), "The Economic Lives of the Poor," *Journal of Economic Perspectives*, 21 (1), 141-68.
- Baumeister, Roy F. (1998), "The Self," in *The Handbook of Social Psychology*, Vol. 1, ed. Susan T. Fiske Daniel T. Gilbert, and Gardner Lindzey, Hoboken, NJ: John Wiley & Sons, 680-740.
- Baumeister, Roy F., Ellen Bratslavsky, Catrin Finkenauer, and Kathleen D. Vohs (2001), "Bad is Stronger Than Good," *Review of General Psychology*, 5 (4), 323-70.
- Baumeister, Roy F., Jennifer D. Campbell, Joachim I. Krueger, and Kathleen D. Vohs (2003), "Does High Self-Esteem Cause Better Performance, Interpersonal Success, Happiness, or Healthier Lifestyles?," *Psychological Science in the Public Interest*, 4 (1), 1-44.
- Bem, Daryl J. (1972), "Self-Perception Theory," in *Advances in Experimental Social Psychology*, Vol. 6: Elsevier, 1-62.

- Bernartzi, Shlomo (2020), "People Don't Save Enough for Emergencies, but There Are Ways to Fix That," <https://www.wsj.com/articles/people-dont-save-enough-for-emergencies-but-there-are-ways-to-fix-that-11581951601>.
- Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir (2006), "Behavioral Economics and Marketing in Aid of Decision Making among the Poor," *Journal of Public Policy & Marketing*, 25 (1), 8-23.
- Carlsson, Fredrik, Haoran He, and Peter Martinsson (2013), "Easy Come, Easy Go," *Experimental Economics*, 16 (2), 190-207.
- Carver, Charles S. and Michael F. Scheier (1998), *On the Self-Regulation of Behavior*, Cambridge: Cambridge University Press.
- (2001), *On the Self-Regulation of Behavior*: Cambridge University Press.
- Chen, M. Keith (2013), "The Effect of Language on Economic Behavior: Evidence from Savings Rates, Health Behaviors, and Retirement Assets," *American Economic Review*, 103 (2), 690-731.
- Cooper, Joel and Russell H. Fazio (1984), "A New Look at Dissonance," *Advances in Experimental Social Psychology*, 17, 229-68.
- Critcher, Clayton R., Erik G. Helzer, and David Dunning (2011), "Self-Enhancement Via Redefinition: Defining Social Concepts to Ensure Positive Views of the Self," *Handbook of Self-Enhancement and Self-Protection*, 69-91.
- Dunn, Elizabeth W., Lara B. Aknin, and Michael I. Norton (2008), "Spending Money on Others Promotes Happiness," *Science*, 319 (5870), 1687-88.
- (2014), "Prosocial Spending and Happiness: Using Money to Benefit Others Pays Off," *Current Directions in Psychological Science*, 23 (1), 41-47.

- Dunn, Elizabeth W. and Michael I. Norton (2014), *Happy Money: The Science of Happier Spending*: Simon and Schuster.
- Fernandes, Daniel, John G. Lynch Jr., and Richard G. Netemeyer (2014), "Financial Literacy, Financial Education, and Downstream Financial Behaviors," *Management Science*, 60 (8), 1861-83.
- Ferron, John M., Kristin Y. Hogarty, Robert F. Dedrick, Melinda R. Hess, Jonhn D. Niles, and Jeffrey D. Kromrey (2008), "Reporting Results From Multilevel Analyses," in *Multilevel Modeling of Educational Data*, Charlotte: Information Age Publishing Inc., 391-426.
- Festinger, Leon (1957), *A Theory of Cognitive Dissonance*, Vol. 2, Stanford, CA: Stanford University Press.
- Garbinsky, Emily N., Anne Kathrin Klesse, and Jennifer Aaker (2014), "Money in the Bank: Feeling Powerful Increases Saving," *Journal of Consumer Research*, 41 (3), 610-23.
- Glass, David C., Jerome E. Singer, and Lucy N. Friedman (1969), "Psychic Cost of Adaptation to an Environmental Stressor," *Journal of Personality and Social Psychology*, 12 (3), 200-10.
- Gollwitzer, Peter M. and Oliver Kirchhof (1998), *The Willful Pursuit of Identity*, New York, NY: Cambridge University Press.
- Gollwitzer, Peter M., Michael K. Marquardt, Michaela Scherer, and Kentaro Fujita (2013), "Identity-Goal Threats: Engaging in Distinct Compensatory Efforts," *Social Psychological and Personality Science*, 4 (5), 555-62.
- Graham, Luke (2017), "Europeans Aren't Saving Enough, Warns ING Report," <https://www.cnbc.com/2017/01/24/europeans-arent-saving-enough-warns-ing-report.html>.

- Grinstein-Weiss, Michal, Cynthia Cryder, Mathieu R. Despard, Dana C. Perantie, Jane E. Oliphant, and Dan Ariely (2017), "The Role of Choice Architecture in Promoting Saving at Tax Time: Evidence From a Large-Scale Field Experiment," *Behavioral Science & Policy*, 3 (2), 20-38.
- Griskevicius, Vladas, Joshua M. Ackerman, Stephanie M. Cantú, Andrew W. Delton, Theresa E. Robertson, Jeffrey A. Simpson, Melissa Emery Thompson, and Joshua M. Tybur (2013), "When the Economy Falters, Do People Spend or Save? Responses to Resource Scarcity Depend on Childhood Environments," *Psychological Science*, 24 (2), 197-205.
- Hayes, Andrew F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*: Guilford Press.
- Higgins, E. Tory (1997), "Beyond Pleasure and Pain," *American Psychologist*, 52 (12), 1280-300.
- Horowitz, Leonard M. and Bulent Turan (2008), "Prototypes and Personal Templates: Collective Wisdom and Individual Differences," *Psychological Review*, 115 (4), 1054-68.
- Johnson, Angela (2013), "76% of Americans are Living Paycheck-to-Paycheck," <http://money.cnn.com/2013/06/24/pf/emergency-savings/index.html>.
- Karlan, Dean, Aishwarya Lakshmi Ratan, and Jonathan Zinman (2014), "Savings By and For the Poor: A Research Review and Agenda," *Review of Income and Wealth*, 60 (1), 36-78.
- Kay, Aaron C., Danielle Gaucher, Ian McGregor, and Kyle Nash (2010), "Religious Belief as Compensatory Control," *Personality and Social Psychology Review*, 14 (1), 37-48.
- Kruglanski, Arie W. (1996), "Goals as Knowledge Structures," in *Linking Cognition and Motivation to Behavior: The Psychology of Action* ed. Peter M. Gollwitzer and John A. Bargh, New York, NY: Guilford Press, 599–618.

- Locke, Edwin A. and Gary P. Latham (2002), "Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35-Year Odyssey," *American Psychologist*, 57 (9), 705-17.
- Martin, Kelly D. and Ronald Paul Hill (2015), "Saving and Well-being at the Base of the Pyramid: Implications for Transformative Financial Services Delivery," *Journal of Service Research*, 18 (3), 405-21.
- Mead, Nicole L. and Vanessa M. Patrick (2016), "The Taming of Desire: Unspecific Postponement Reduces Desire For and Consumption of Postponed Temptations," *Journal of Personality and Social Psychology*, 110 (1), 20-35.
- Moskowitz, Gordon B., Peizhong Li, Courtney Ignarri, and Jeff Stone (2011), "Compensatory Cognition Associated with Egalitarian Goals," *Journal of Experimental Social Psychology*, 47 (2), 365-70.
- Nelson, Leif D. and Evan L. Morrison (2005), "The Symptoms of Resource Scarcity: Judgments of Food and Finances Influence Preferences for Potential Partners," *Psychological Science*, 16 (2), 167-73.
- Oppenheimer, Daniel M., Tom Meyvis, and Nicolas Davidenko (2009), "Instructional Manipulation Checks: Detecting Satisficing to Increase Statistical Power," *Journal of Experimental Social Psychology*, 45 (4), 867-72.
- Papp, Lauren M., E. Mark Cummings, and Marcie C. Goeke-Morey (2009), "For Richer, for Poorer: Money as a Topic of Marital Conflict in the Home," *Family Relations*, 58 (1), 91-103.

- Park, Lora E. and Jon K. Maner (2009), "Does Self-Threat Promote Social Connection? The Role of Self-Esteem and Contingencies of Self-Worth," *Journal of Personality and Social Psychology*, 96 (1), 203-17.
- Richins, Marsha L (1994), "Special Possessions and the Expression of Material Values," *Journal of Consumer Research*, 21 (3), 522-33.
- (2004), "The material values scale: Measurement properties and development of a short form," *Journal of consumer Research*, 31 (1), 209-19.
- Robins, Richard W. and Jennifer S. Beer (2001), "Positive Illusions About the Self: Short-Term Benefits and Long-Term Costs," *Journal of Personality and Social Psychology*, 80 (2), 340-52.
- Schwarz, Norbert (1999), "Self-Reports: How the Questions Shape the Answers," *American Psychologist*, 54 (2), 93-105.
- Schwarz, Norbert, Hans-J Hippler, Brigitte Deutsch, and Fritz Strack (1985), "Response Scales: Effects of Category Range on Reported Behavior and Comparative Judgments," *Public Opinion Quarterly*, 49 (3), 388-95.
- Sedikides, Constantine and Mark D. Alicke (2012), "Self-Enhancement and Self-Protection Motives," in *The Oxford Handbook of Human Motivation*, ed. R.M. Ryan: Oxford University Press.
- Sethi-Iyengar, Sheena, Gur Huberman, and Wei Jiang (2004), "How Much Choice is Too Much? Contributions to 401 (k) Retirement Plans," *Pension Design and Structure: New Lessons From Behavioral Finance*, 83, 84-87.

- Shah, James Y. and Arie W. Kruglanski (2000), "Aspects of Goal Networks: Implications for Self-Regulation," in *Handbook of Self-Regulation*, ed. M. Boekaerts, P.R. Pintrich and M. Zeidner: Elsevier, 85-110.
- Sherman, David K. and Geoffrey L. Cohen (2006), "The Psychology of Self-Defense: Self-Affirmation Theory," *Advances in Experimental Social Psychology*, 38, 183-242.
- Sherman, Steven J. and Larry Gorkin (1980), "Attitude Bolstering When Behavior is Inconsistent with Central Attitudes," *Journal of Experimental Social Psychology*, 16 (4), 388-403.
- Steele, Claude M. (1988), "The Psychology of Self-Affirmation: Sustaining the Integrity of the Self," *Advances in Experimental Social Psychology*, 21 (2), 261-302.
- Stone, Jeff, Andrew W. Wiegand, Joel Cooper, and Elliot Aronson (1997), "When Exemplification Fails: Hypocrisy and the Motive for Self-Integrity," *Journal of Personality and Social Psychology*, 72 (1), 54-65.
- Sussman, Abigail B. and Rourke L. O'Brien (2016), "Knowing When to Spend: Unintended Financial Consequences of Earmarking to Encourage Savings," *Journal of Marketing Research*, 53 (5), 790-803.
- Tajfel, Henri and John C. Turner (1979), "An Integrative Theory of Intergroup Conflict," in *Organizational Identity: A Reader*, 56-65.
- Tanner, Robin J. and Kurt A. Carlson (2009), "Unrealistically Optimistic Consumers: A Selective Hypothesis Testing Account for Optimism in Predictions of Future Behavior," *Journal of Consumer Research*, 35 (5), 810-22.
- Taylor, Shelley E. and David A. Armor (1996), "Positive Illusions and Coping with Adversity," *Journal of Personality*, 64 (4), 873-98.

- Taylor, Shelley E. and Jonathon D. Brown (1988), "Illusion and Well-Being: A Social Psychological Perspective on Mental Health," *Psychological Bulletin*, 103 (2), 193-210.
- (1994), "Positive Illusions and Well-Being Revisited: Separating Fact from Fiction," *Psychological Bulletin*, 116 (1), 21-27.
- Taylor, Shelley E., Rebecca L. Collins, Laurie A. Skokan, and Lisa G. Aspinwall (1989), "Maintaining Positive Illusions in the Face of Negative Information: Getting the Facts Without Letting Them Get To You," *Journal of Social and Clinical Psychology*, 8 (2), 114-29.
- Taylor, Shelley E., Margaret E. Kemeny, Geoffrey M. Reed, Julienne E. Bower, and Tara L. Gruenewald (2000), "Psychological Resources, Positive Illusions, and Health," *American Psychologist*, 55 (1), 99-109.
- Thompson, Derek (2016), "Why Don't Americans Save More Money?," <https://www.theatlantic.com/business/archive/2016/04/why-dont-americans-save-money/478929/>.
- Vohs, Kathleen D. and Ronald J. Faber (2007), "Spent Resources: Self-regulatory Resource Availability Affects Impulse Buying," *Journal of Consumer Research*, 33 (4), 537-47.
- Zanna, Mark P. and Joel Cooper (1974), "Dissonance and the Pill: An Attribution Approach to Studying the Arousal Properties of Dissonance," *Journal of Personality and Social Psychology*, 29 (5), 703-09.

**Table 1:**  
**Superfluous-Spender Intervention**

<b>Studies 1 and 4: North American Adults</b>	<b>Study 2: Ugandan Coffee Growers</b>	<b>Study 3: North American Students</b>	<b>Study 5: North American Adults</b>
Choose to eat at a more expensive restaurant instead of cheaper one	Buy a soda or soft-drink instead of drinking water	Buy something you want but do not need (e.g., clothes, accessories for dorm, etc.) instead of forgo the purchase?	Go out to eat instead of cook at home
Buy something at full price instead of waiting for it to go on sale	Borrow money from friends/family instead of waiting and saving	Buy something at full price instead of wait for it to go on sale	Purchase a branded product instead of a generic one
Buy something you want instead of forgoing the purchase	Visit a local restaurant for lunch/dinner instead of cooking at home	Buy new products instead of buy used ones	Buy something to drink instead of use a water fountain
Purchase a more expensive brand instead of a cheaper one (e.g., store brand)	Give discretionary money to partner/children instead of using for savings	Purchase a more expensive brand instead of a cheaper one (e.g., store brand)	Buy something at full price instead of wait for it to go on sale
Go out to eat instead of cook at home	Catch a boda instead of walking to travel locally	Order takeout from a restaurant (that does not accept flex points) instead of use your meal plan	Buy a lunch instead of pack one
<p style="text-align: center;"><b>Response Scale:</b></p> 1 = Once every 18 months (or less) 2 = Once every 15 months 3 = Once every 12 months 4 = Once every 9 months 5 = Once every 6 months 6 = Once every 3 months 7 = Once a month (or more)	<p style="text-align: center;"><b>Response Scale:</b></p> 1 = Once a year or less 2 = 2-3 times a year 3 = 4-5 times a year 4 = 6-7 times a year 5 = 8-9 times a year 6 = 10-11 times a year 7 = 12+ times a year	<p style="text-align: center;"><b>Response Scale:</b></p> 1 = Never 2 = Once a month 3 = 2 times a month 4 = 3 times a month 5 = 4 times a month	<p style="text-align: center;"><b>Response Scale:</b></p> 1 = Never 2 = Once a year 3 = 2 times a year 4 = 3 times a year 5 = 4 times a year 6 = 5 times a year 7 = 6+ times a year